eliwell™
by **Schneider** Electric

REFRIGERATION
SOLUTIONS
CATALOGUE

Catalogue
Refrigeration solutions

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ELECTRONIC CONTROLS

Eliwell controllers are the ideal solution for new-generation refrigeration systems and equipment. Developed using the most recent technologies, they are compatible with a wide range of low GWP refrigerants that help to reach sustainability and efficiency targets for refrigeration equipment.

They guarantee quality and safety in the preservation of fresh and frozen food, ensuring optimal refrigeration system efficiency in terms of energy savings and low maintenance.

The vast range of formats available makes Eliwell controllers fully adaptable to a vast range of applications.

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Solution for retail stores

Connectible controllers for commercial businesses with high-efficiency refrigeration equipment

> Universal, easy to install
> Compatible with new and natural refrigerants
> HACCP report from mobile devices

Watch the video

New Eliwell AIR APP: explore all the advantages!

ARE YOU A REFRIGERATION TECHNICIAN?
CONFIGURE ELIWELL CONTROLLERS QUICKLY

View probe values and load statuses in real time
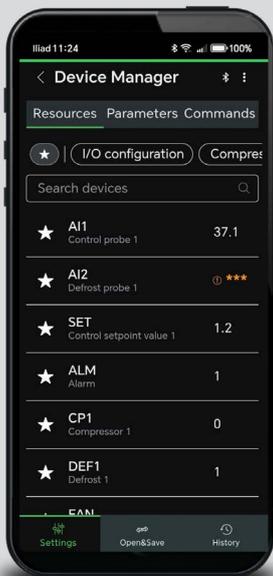
Change the configuration of the adjustment parameters safely
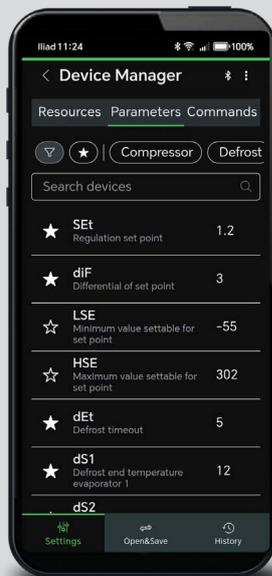
Send commands to the controller
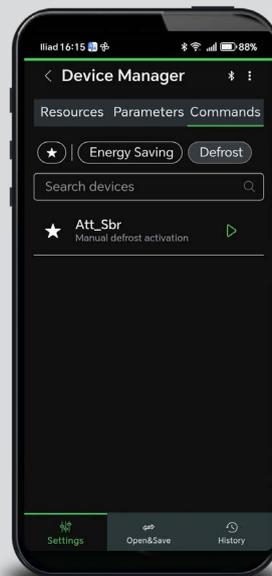
Save, upload and share parameter configurations
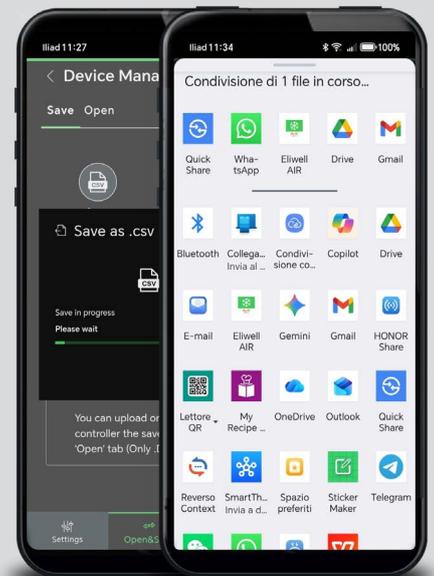
ARE YOU THE OWNER?
RECORD YOUR REFRIGERATOR DATA

Choose the data to be recorded and the recording interval
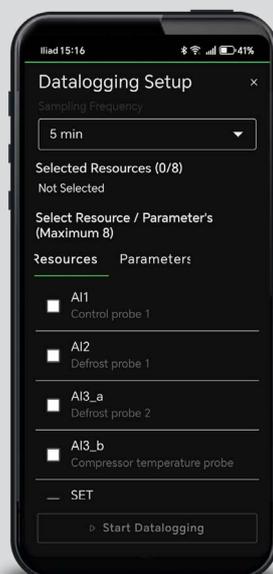
View the recorded data on your phone

Download the recorded data to your phone (CVS, EXCEL, PDF)
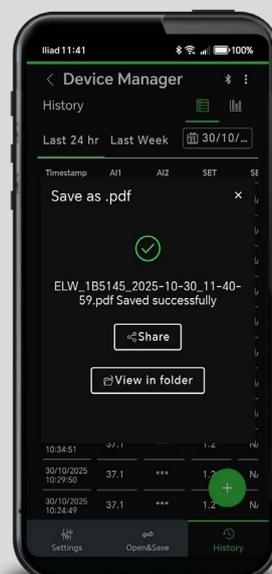
IDNext 902 – IDNext 961

The new-generation controller for refrigeration equipment

Code	Description	Relay rating	Power supply
IDN902P6D103Z00	IDNext 902 P	10A	12 Vac/dc
IDN902P6D107Z00	IDNext 902 P	10A	230 Vac
IDN961P7D103Z00	IDNext 961 P	12A	12 Vac/dc
IDN961P7D107Z00	IDNext 961 P	12A	230 Vac

Accessories

Code	Description
ADBT50005110H0	HACCP Module for Bluetooth connectivity
NEXTACCWA00000	Wide Adapter without display
NEXTACCWA20000	Wide Adapter with pre-connection for switches
CC0S00A00M000	Standard Copy Card
CCA0BHT00UU00	Unicard USB/TTL

For further details concerning Accessories and Connectivity, please refer to the relevant sections

Environmental Data Program

Find out more

Description and main functions

IDNext controllers are new-generation devices with a thin and flat design, featuring a built-in seal which prevents dirt from entering and water from leaking in. They **can be connected** to the TelevisGo monitoring system and, thanks to the HACCP Module, can be used to download temperatures and alarms onto a smartphone via the Eliwell AIR app.
One-step devices IDNext902 and IDNext961 are suitable for both heating and cooling applications in static units at normal temperature.
The IDNext series is suitable for use in applications which utilise **flammable refrigerants** in category A2L or A3, such as R290 or R600.
The four touch keys and the large display with the relevant icons make the instrument **easy to configure**, as does the user interface which is a distinguishing feature of Eliwell controllers.

Technical data	IDNext 902	IDNext 961
Dimensions	front panel 81x35 mm, depth 60 mm	
Appearance	UNIBODY front panel with built-in seal	
Installation	panel-mounted, 71x29 mm	
Display range	-99.9…99.9 °C | -999…999 °C	
Display	LED 3 figures + sign	
Analogue inputs	1x PTC or NTC or Pt1000	
Digital inputs	1x SELV	
Connectivity	TTL port for connection to UNICARD, HACCP Module, TelevisGo and Modbus RTU systems	
Digital outputs	1x SPDT 10(6)A 230 Vac	1x SPST 2 hp 12(8)A 230 Vac
Measurement range	NTC: -50.0…110.0 °C | PTC: -55.0…140.0 °C | Pt1000: -55.0...150.0 °C	
Accuracy	• NTC, PTC: better than 0.5 % of integral scale + 1 digit • Pt1000 [-55.0…70.0 °C]: better than 0.5 % of integral scale + 1 digit • Pt1000 [70.0…150.0 °C]: better than 1.0 % of integral scale + 1 digit	
Resolution	0.1 °C	
Power supply and Consumption	12 Vac/dc: 3 VA - 1.5 W 230 Vac: 5 VA	12 Vac/dc: 5 VA - 2.5 W 230 Vac: 5.5 VA
Operating temperature	-5...55 °C	
Storage temp.	-30…85 °C	
Ambient humidity	10…90 % RH (non-condensing)	

Wiring diagrams

IDNext 902 P - 12 Vac/dc models

IDNext 902 P - 230 Vac models

IDNext 961 P - 12 Vac/dc models

IDNext 961 P - 230 Vac models

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IDNext 971 – IDNext 974

The new-generation controller for refrigeration equipment

A2L·A3 COMPATIBLE

AIR

Code	Description	Relay rating	Pow. supp.	Notes
IDN971P9D303Z00	IDNext 971 P/B	12A/8A	12 Vac/dc	/B = Buzzer present
IDN971P9D307Z00	IDNext 971 P/B	12A/8A	230 Vac	/B = Buzzer present
IDN974PED303Z00	IDNext 974 P/B	12A/8A/5A	12 Vac/dc	/B = Buzzer present
IDN974PED307Z00	IDNext 974 P/B	12A/8A/5A	230 Vac	/B = Buzzer present
IDN974PED507Z00	IDNext 974 P/C	12A/8A/5A	230 Vac	/C = RTC present
IDN974PND527Z00	IDNext 974 P/CI	VSC/10A/8A	230 Vac	/C = RTC present; /I = Open Collector output for variable speed compressor

Find out more

Environmental Data Program

Accessories

Code	Description
ADBT50005110H0	HACCP Module for Bluetooth connectivity
NEXTACCWA00000	Wide Adapter without display
NEXTACCWA20000	Wide Adapter with pre-connection for switches
CC0S00A00M000	Standard Copy Card
CCA0BHT00UU00	Unicard USB/TTL

For further details concerning Accessories and Connectivity, please refer to the relevant sections

Description and main functions

IDNext controllers are new-generation devices with a thin and flat design, featuring a built-in seal which prevents dirt from entering and water from leaking in. They **can be connected** to the TelevisGo monitoring system and, thanks to the HACCP Module, can be used to download temperatures and alarms onto a smartphone via the Eliwell AIR app.
IDNext971 and IDNext974 are mainly suitable for use in cooling applications in static and ventilated units at normal or low temperature. IDNext 974 P/CI features a frequency output to control variable speed compressors.
The IDNext series is suitable for use in applications which utilise **flammable refrigerants** in category A2L or A3, such as R290 or R600.
The six touch keys and the large display with the relevant icons make the instrument **easy to configure**, as does the user interface which is a distinguishing feature of Eliwell controllers.

Technical data	IDNext 971	IDNext 974 P/B - IDNext 974 P/C	IDNext 974 P/CI
Dimensions	front panel 81x35 mm, depth 60 mm		
Appearance	UNIBODY front panel with built-in seal		
Installation	panel-mounted, 71x29 mm		
Display range	-99.9…99.9 °C | -999…999 °C		
Display	LED 3 figures + sign		
Analogue inputs	2x PTC or NTC or Pt1000		
Digital inputs	1x SELV		
Connectivity	TTL port for connection to UNICARD, HACCP Module, TelevisGo and Modbus RTU systems		
Digital outputs	1x SPST 2 hp 12(8)A 230 Vac 1x SPDT 0.5 hp 8(4)A 230 Vac	1x SPST 2 hp 12(8)A 230 Vac 1x SPDT 0.5 hp 8(4)A 230 Vac 1x SPST 5(2)A 230 Vac	1x O.C. VSC: 16 Vdc (min. 1500 ohm) 1x SPDT 0.5 hp 8(4)A 230 Vac 1x SPST 1.5 hp 10(6)A 230 Vac
Measurement range	NTC: -50.0…110.0 °C | PTC: -55.0…140.0 °C | Pt1000: -55.0...150.0 °C		
Accuracy	• NTC, PTC: better than 0.5 % of integral scale + 1 digit • Pt1000 [-55.0…70.0 °C]: better than 0.5 % of integral scale + 1 digit • Pt1000 [70.0...150.0 °C]: better than 1.0 % of integral scale + 1 digit		
Resolution	0.1 °C		
Power supply and Consumption	12 Vac/dc: 5 VA - 2.5 W 230 Vac: 5.5 VA		230 Vac: 5.5 VA
Buzzer	present	available for IDNext 974 P/B	not present
Clock	not present	available for IDNext 974 P/C	present
Variable speed compressor	not present		present
Operating temperature	-5...55 °C		
Storage temp.	-30…85 °C		
Ambient humidity	10…90 % RH (non-condensing)		

Wiring diagrams

IDNext 971 P/B - 12 Vac/dc models

IDNext 971 P/B - 230 Vac models

IDNext 974 P/B - 12 Vac/dc models

IDNext 974 P/B - 230 Vac models

IDNext 974 P/C - 230 Vac models

IDNext 974 P/CI - 230 Vac models

IDNext 978

The new-generation controller for refrigeration equipment

A2L-A3 COMPATIBLE | AIR

Code	Description	Relay rating	Pow. supp.	Notes
IDN978P4D307Z00	IDNext 978 P/B	10A/8A/5A/5A	230 Vac	/B = Buzzer present
IDN978P4D507Z00	IDNext 978 P/C	10A/8A/5A/5A	230 Vac	/C = RTC present
IDN978P3D527Z00	IDNext 978 P/CI	VSC/10A/8A/5A	230 Vac	/C = RTC present; /I = Open Collector output for variable speed compressor

Accessories

Code	Description
ADBT50005110H0	HACCP Module for Bluetooth connectivity
NEXTACCWA00000	Wide Adapter without display
NEXTACCWA20000	Wide Adapter with pre-connection for switches
CC0S00A00M000	Standard Copy Card
CCA0BHT00UU00	Unicard USB/TTL

For further details concerning Accessories and Connectivity, please refer to the relevant sections

Environmental Data Program

Find out more

Description and main functions

IDNext controllers are new-generation devices with a thin and flat design, featuring a built-in seal which prevents dirt from entering and water from leaking in. They **can be connected** to the TelevisGo monitoring system and, thanks to the HACCP Module, can be used to download temperatures and alarms onto a smartphone via the Eliwell AIR app.
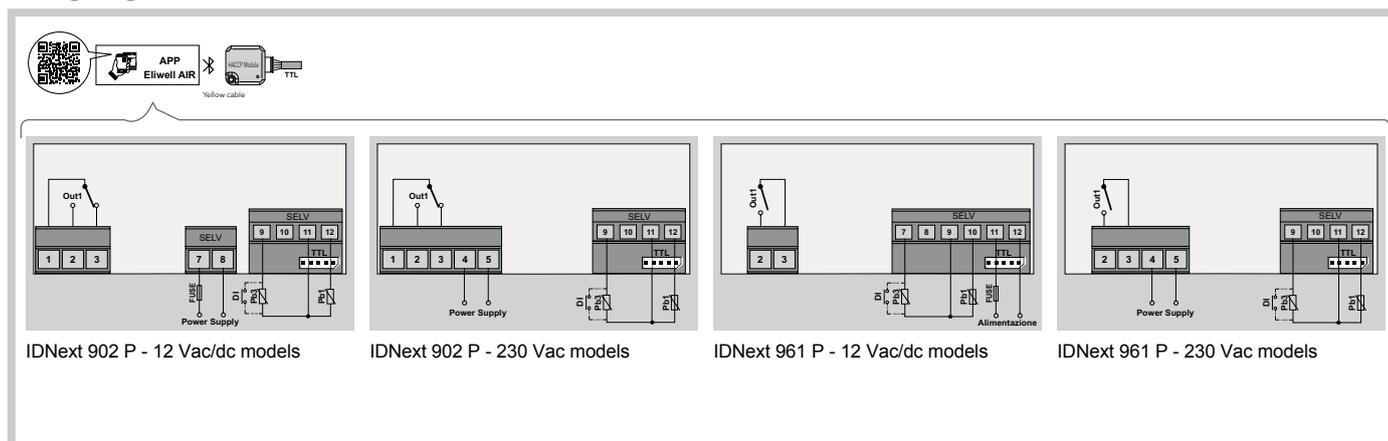**IDNext978 is suitable for use in cooling applications in static and ventilated units at normal or low temperature where high energy performance is required. IDNext 978 P/CI features a frequency output to control variable speed compressors.**
The IDNext series is suitable for use in applications which utilise **flammable refrigerants** in category A2L or A3, such as R290 or R600.
The six touch keys and the large display with the relevant icons make the instrument **easy to configure**, as does the user interface which is a distinguishing feature of Eliwell controllers.

Technical data	IDNext 978 P/B - IDNext 978 P/C	IDNext 978 P/CI
Dimensions	front panel 81x35 mm, depth 60 mm	
Appearance	UNIBODY front panel with built-in seal	
Installation	panel-mounted, 71x29 mm	
Display range	-99.9…99.9 °C | -999…999 °C	
Display	LED 3 figures + sign	
Analogue inputs	2x PTC or NTC or Pt1000	
Digital inputs	1x SELV	
Connectivity	TTL port for connection to UNICARD, HACCP Module, TelevisGo and Modbus RTU systems	
Digital outputs	1x SPST 1.5 hp 10(6)A 230 Vac 1x SPDT 0.5 hp 8(4)A 230 Vac 2x SPST 5(2)A 230 Vac	1x O.C. VSC: 16 Vdc (min. 1500 ohm) 1x SPDT 0.5 hp 8(4)A 230 Vac 1x SPST 1.5 hp 10(6)A 230 Vac 1x SPST 5(2)A 230 Vac
Measurement range	NTC: -50.0…110.0 °C | PTC: -55.0…140.0 °C | Pt1000: -55.0...150.0 °C	
Accuracy	• NTC, PTC: better than 0.5 % of integral scale + 1 digit • Pt1000 [-55.0…70.0 °C]: better than 0.5 % of integral scale + 1 digit • Pt1000 [70.0…150.0 °C]: better than 1.0 % of integral scale + 1 digit	
Resolution	0.1 °C	
Power supply and Consumption	230 Vac: 5.5 VA	
Buzzer	available for IDNext 978 P/B	not present
Clock	available for IDNext 978 P/CI	present
Variable speed compressor	not present	present
Operating temperature	-5...55 °C	
Storage temp.	-30…85 °C	
Ambient humidity	10…90 % RH (non-condensing)	

Wiring diagrams

IDNext 978 P/B - 230 Vac models

IDNext 978 P/C - 230 Vac models

IDNext 978 P/CI - 230 Vac models

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IDNext 1000

New-generation universal controllers for cutting-edge refrigerated cabinets

A2L·A3 COMPATIBLE • **AIR**

IDNext 1385

IDNext 1485

Code	Description	Relay rating	Pow. supp.	Notes
IDN1385310D80Z0	IDNext 1385 SBCL UNI	10A/10A/8A/5A	100...240 Vac	/S = RS485 present
IDN1385310180Z0	IDNext 1385 SBCL PH UNI	10A/10A/8A/5A	100...240 Vac	/B = buzzer present
IDN1485150D80Z0	IDNext 1485 SBCL UNI	10A/10A/8A/5A	12 Vac	/C = RTC present
IDN1485150180Z0	IDNext 1485 SBCL PH UNI	10A/10A/8A/5A	12 Vac	/L = field bus present /I = humidity probe, 0/10
IDN1385314D80Z0	IDNext 1385 SBCIL PRO	10A/10A/8A/5A	100...240 Vac	Vdc analogue output, Open Collector for VSC
IDN1385314180Z0	IDNext 1385 SBCIL PH PRO	10A/10A/8A/5A	100...240 Vac	PH = removable UNI = universal PRO = professional

Accessories

Code	Description
ADBT50005110H0	HACCP Module BTLE
AEBW00T0001100	Air Edge WIFI
RXB01000E0000	Refrigeration Expert up to 20 controllers
NEXTACCWA00000	Wide Adapter without display
NEXTACCWA20000	Wide Adapter with pre-connection for switches
EH000080V7000	ECNext remote display
SN5PRS01A020M	EWHS 284 1.5 m humidity probe

For further details concerning Accessories and Connectivity, please refer to the relevant sections

Find out more

Environmental Data Program

Description and main functions

The three fundamental principles on which the **new family of IDNext 1000 controllers** is based are: Simplicity, Universality and Connectivity. Simplicity comes from the fact that the range consists of only two models: the **Universal** – the natural successor to the ID985 – and the **Professional**, which also offers combined temperature and humidity control plus modulation of variable-speed loads such as VSC and FSC compressors and fans. The Professional model includes a wide range of control strategies, supports combined heating and cooling management (both neutral zone and in separate modes), proportional control up to four steps and a 0–10 V analogue output that can work in both hot and cold mode. The range covers the widest spectrum of applications, from plug-in counters to remote units, with TEV valve management. **It supports natural refrigerants** in category A2L or A3, such as R290 or R600. Connectivity reaches the pinnacle of flexibility thanks to the **scalable communication options** on offer: an integrated RS485 for communication with the TLV GO, REX or third-party systems and a Wi-Fi module for interfacing with Air Edge, enabling interaction via Bluetooth and data storage in the cloud.

Technical data	IDNext 1385 SBCL/IDNext 1485 SBCL UNIVERSAL	IDNext 1385 SBCIL PROFESSIONAL
Dimensions	front panel 81x35 mm, depth 90 mm	
Container	UNIBODY front panel with built-in seal	
Installation	panel-mounted, 71x29 mm	
Display range	199.9..+199.9 °C | -1999+1999 °C	
Display	LED 3 figures + sign	
Analogue inputs	2x NTC or PTC or Pt1000 + 2x PTC or NTC or Pt1000 or digital inputs	3x NTC or PTC or Pt1000 + 1x NTC or PTC or Pt1000 or 4...20 mA or digital input
Digital inputs	1x SELV	
Open Collector / Analogue output	not present	1x 0... 10 Vdc, 1x PWM
Connectivity	1x TTL serial port | 1x RS485 serial port (NOT ISOLATED) | 1x Field Bus	
Digital outputs	OUT1=10(6) A - 5 A (70 A inrush, 2.5 ms) OUT2=NO 8(4) A / NC 6(3) A / CO 6 A resistive OUT3=10(6) A - 5 A (70 A inrush, 2.5 ms) OUT4=5(2) A - 1 A (25 A inrush, 2.5 ms)	OUT1=10(6) A - 5 A (70 A inrush, 2.5 ms), Zero crossing OUT2=NO 8(4) A / NC 6(3) A / CO 6 A resistive OUT3=10(6) A - 5 A (70 A inrush, 2.5 ms) OUT4=5(2) A - 1 A (25 A inrush, 2.5 ms)
Measurement range	NTC: -50.0…110.0 °C | PTC: -55.0…140.0 °C | Pt1000: -55.0…150.0 °C	
Accuracy	• NTC: -50.0..+110.0 °C • PTC: -55.0..+140.0 °C • Pt1000: -80.0…+150.0 °C Current: 0…20 mA / 4...20 mA	
Resolution	1 °C/°F or 0.1 °C/°F	
Power consumption	3.0 W / 4.5 VA for 12 Vac SELV models 3.5 W / 8.5 VA for SMPS 100...240 Vac models	
Power supply	12 Vac	100...240 Vac
Operating temperature	20...55 °C	
Storage temp.	-30…85 °C	
Ambient humidity	10…90 % RH (non-condensing)	

Wiring diagrams

IDNext 1485 SBCL (12 Vac SELV)

IDNext 1385 SBCL (SMPS 100...240 Vac)

IDNext 1385 SBCIL (SMPS 100...240 Vac)

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EWRC 300 NT – EWRC 500 NT – EWRC 5000 NT

Connectible controllers for cold rooms

Code	Description	Notes
RCNS3HDLX2*700 ❶	EWRC 300 NT 2HP BUZZER AIR	Buzzer/AIR
RCNS3UDLX2*700	EWRC 500 NT 2HP BUZZER AIR	Buzzer/AIR
RCNS3UDTX2*700	EWRC 500 NT 2HP RTC HACCP BUZ AIR	HACCP/BUZZER/RTC/AIR
RCNA3UDLX2*700	EWRC 500 NT 2HP BUZZER 4DIN AIR	Buzzer/DIN rail/AIR
RCNA3UDTX2*700	EWRC 500 NT 2HP RTC HACCP BUZ 4DIN AIR	HACCP/BUZZER/RTC/DIN RAIL/AIR
RCNA3UDRX2*700	EWRC 500 NT 2HP BUZ 4D W\B AIR	Buzzer/DIN rail with switch/AIR
RCNA3UDSX2*700	EWRC 500 NT 2HP RTC HACCP BUZ 4D W\B AIR	HACCP/Buzzer/RTC/DIN rail with switch/AIR
KP00Q1S0	RS485 Plugin 40x49 mm screw terminals	Optional module
ADBT50005110H0	HACCP Module for Bluetooth connectivity	Optional accessory
RCNH300DTX*700 ❷	EWRC 5000 NT HACCP BZ AIR	HACCP/BUZZER/RTC/AIR Large Cover
ADBT50005110H0	HACCP Module for Bluetooth connectivity	Optional accessory

*The number or letter in this position indicates the language available for the code: 1: ITA + ENG; F: FRA; G: GER; O: POL; R: RUS; S: SPA; T: TUR; U: Arabic; W: SWE; Z: BRA

Description and main functions

EWRC controllers are designed to fully control cold rooms. They can manage the **compressor, defrost heaters, evaporator/condenser fans and lights** directly via live voltage output relays. A voltage-free relay output is also available for alarm signalling.

The **dual display** shows both the temperature of the cold room and the setpoint, and the installer can see the resource type and its value at the same time.

Some of the most important EWRC functions include **various types of defrost** (at intervals, with heaters, with hot gas), **management of two evaporators** with independent defrosts, **cooling management even in the event of a faulty cold room probe** and compressor operation configuration during **pump down** periods.

EWRC controllers **can be connected to the HACCP Module**, which can be used to configure parameters, record temperatures and alarms and download them onto your smartphone via the **Eliwell AIR app**. Additionally, EWRC controllers can be connected to:

- **AIR Edge WiFi** (Silent Guardian). One AIR Edge WiFi is required for each EWRC, which can be aggregated into a single Cloud account for remote monitoring. No 485 network and no complex IT requirements.
- **REX and TelevisGo** for supervision of multiple controllers via the 485 network.
- Third-party systems, thanks to integration via Modbus RTU.

Range certified to the European directives applicable to low voltage electrical panels for machine-side applications (EN61439 - EN60204)

Technical data	EWRC 300 NT	EWRC 500 NT	EWRC 500 NT BREAKER	EWRC 5000 NT
Dimensions	213x318x102 mm		221x318x107 mm	450x380x160 mm
Container	PC + ABS			
Enclosure rating	IP65			
Installation	wall			
Display range	NTC: -50.0…110.0 °C | PTC: -55.0…150.0 °C			
Display	3 digits + sign and 4 digits			
Resolution	0.1 °C			
Analogue inputs	3(2) x NTC / PTC*			3 x NTC / PTC*
Digital inputs	2(3) voltage free			2 voltage-free inputs
Digital outputs (default config. *) Compressor	12(12) A 2 HP 250 Vac SPST			
Defrost	8(8) A 1 HP 250 Vac SPST			
Evaporator fan	8(4) A ½ HP 250 Vac SPST			
Light	-	8(8) A 1 HP 250 Vac SPST		
Alarm	-	8(4) A ½ HP 250 Vac SPDT		
Connections	screw terminals			
RTC Clock	optional			present
HACCP	optional			present
Connectivity	TTL and RS-485** port for connection to Unicard, HACCP Module, AIR Edge WFi, Refrigeration Expert and Modbus RTU systems			
Power supply and Consumption	230 Vac: 11 VA			
Breaking capacity	-		230 Vac Icn 4500 A 2P	-
Nominal current	-		In = 16 A	-
Rated impulse withstand voltage	-		4 KV	-
Operating temperature	-5…50 °C			
Storage temp.	-20…85°C			
Ambient humidity for operating and storage	10...90% RH (non-condensing)			

* configurable by the user ** with optional plug-in accessory

Wiring diagrams

APP Eliwell AIR
Yellow cable
TTL

EWRC 300-500 NT

UNICARD
RS485 (optional)
DISPLAY
Only for EWRC 500 NT

EWRC 500 NT BREAKER

UNICARD
RS485 (optional)
DISPLAY

EWRC 5000 NT

RS485 (optional)
DISPLAY

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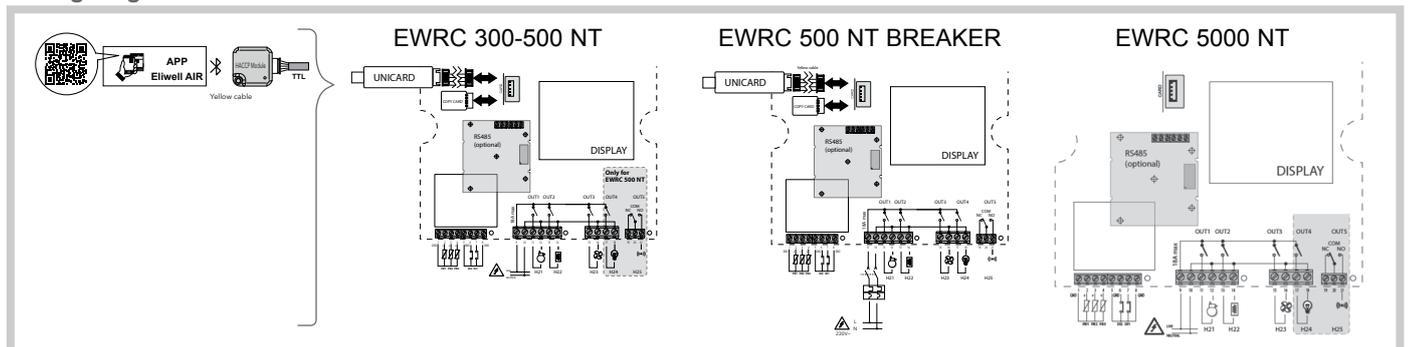
IDNext Panel 978

Connectible single-phase and three-phase electrical panels for cold rooms

Code	Description	Notes
ELNP300DSX0700	IDNext Panel 978 5.5-8A 230 Vac AIR	HACCP/Buzzer
ELNP301DSX0700	IDNext Panel 978 8-11A 230 Vac AIR	HACCP/Buzzer
ELNP302DSX0900	IDNext Panel 978 3.7-5.5A 400 Vac AIR	HACCP/Buzzer
ELNP303DSX0900	IDNext Panel 978 5.5-6A 400 Vac AIR	HACCP/Buzzer
ELNP303DSXU900	IDNext Panel 978 AR/EN 5.5-6A 400 Vac AIR	HACCP/Buzzer
ADBT50005110H0	HACCP Module for Bluetooth connectivity	Optional accessory

Description and main functions

Connectible electrical panels for complete control of cold rooms, single- or three-phase, with direct management of the compressor with adjustable thermal protection, evaporator fan, defrost heater and cold room light. With the TTL port on the IDNext 978 controller, it is possible to connect the HACCP Module to connect to the Eliwell AIR app, which allows quick and easy control configuration.

Range certified to the European directives applicable to low voltage electrical panels for machine-side applications (EN61439 - EN60204)

Technical data	IDNext Panel 978 5.5-8A 230 Vac	IDNext Panel 978 8-11A 230 Vac	IDNext Panel 978 3.7-5.5A 400 Vac	IDNext Panel 978 5.5-6A 400 Vac
Dimensions	213x318x102 mm			
Control	IDNext 978 thermoregulator			
Container	PC + ABS			
Installation	wall			
Display range	NTC: -50.0…110.0 °C | PTC: -55.0…140.0 °C | Pt1000: -55.0…150.0 °C			
Display	3Digits + sign			
Resolution	0.1 °C			
Analogue inputs	2 PTC / NTC /Pt1000*			
Configurable inputs	1 digital (SELV) / analogue (PTC / NTC / Pt1000) / 1 digital (SELV) / serial TTL *			
Command type	single-phase		three-phase	
Compressor	1 PH 5.5 - 8.0 A	1 PH 8.0 - 11.0 A	3 PH 3.7 - 5.5 A	3 PH 5.5 - 6.0 A
Defrost	1 PH 800 W		3 PH 2400 W	
Evaporator fan	1 PH 800 W			
Light	1 PH 800 W			
Connections	screw terminals on DIN rail			
Connectivity	TTL port for connection to UNICARD, HACCP Module, TelevisGo and Modbus RTU systems			
Power supply	230 Vac (phase + neutral + ground)		400 Vac (3-phase + neutral + ground)	
Door lock mains switch	25 A			
Operating temperature	-5...40 °C (Max 40 °C non continuous)			
Storage temp.	-25..70 °C			
Operating humidity	10...90 % RH (non-condensing)			
General protection	fuses			
Motor protection	thermal relay			

* configurable by the user

Functional diagram

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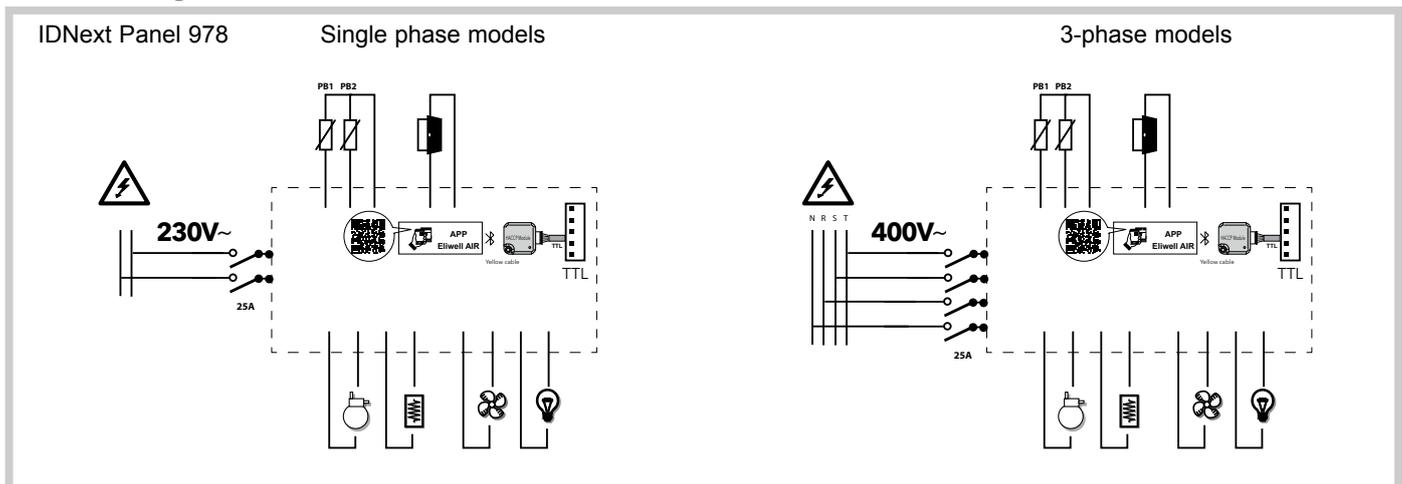
ID 985 /S/E/CK - Echo

32x74 refrigeration thermostats

Code	Description	Relay rating	Power supply
ID34DR2SCDH00	ID 985/S/E/CK	3 x 5A 1 x 8A	100...240 Vac
EH000010VE000	Echo		

Description and main functions

ID 985 controllers are devices suited to both plug-in applications and the remote counters used in supermarkets.

The four relay outputs make it possible to control – in addition to the compressor – evaporator fans, defrost heaters, plus lights, alarm or an auxiliary output.

The switching power supply unit, plus the option of setting events for pre-set time bands and configuring small networks on remote units, ensure optimum refrigeration system efficiency and help to save energy.

The **Echo** display repeater makes the instrument suitable for use in applications such as ice cream cabinets or refrigerated display cabinets, where the end user needs to see the temperature of the counter.

The built-in RS485 means it can easily be integrated into the TelevisGo monitoring system, and into systems based on Modbus protocol.

Technical data	ID 985/S/E/CK	Echo
Container	PC+ABS UL94 V-0 plastic resin casing, polycarbonate window, thermoplastic resin keys	
Installation	panel mounting with 71x29 mm (+0.2/-0.1 mm) drilling template	
Front panel	IP65	
Display range	NTC: -50.0...110.0 °C	PTC: -50.0...140.0 °C	from ID985 instrument
Display	no decimal point * 3 and a half digits + sign	from ID985 instrument
Analogue inputs	3 PTC or NTC *	-
Digital inputs	2 voltage-free inputs	-
Connectivity	TTL and RS-485 port for connection to Copy Card, TelevisGo and Modbus RTU systems	3-way connection (GND, data, 12 V) on quick-connection terminal block
Digital outputs	3 SPST 5(2) A 1/4 hp 250 Vac + 1 SPDT 8(3) A 250 Vac	-
Measurement range	-55...140 °C	-
Accuracy	better than 0.5 % of integral scale + 1 digit	-
Resolution	0.1 °C	1 or 0.1 °C
Power consumption	2.5 W max	-
Power supply	100...240 Vac ±10 % 50/60 Hz	from ID985 instrument
Dimensions	front panel 74x32 mm, depth 66 mm	front panel 48x28.6 mm - depth 15 mm
Installation	panel mounting with 71x29 mm (+0.2/-0.1 mm) drilling template	panel mounting with 45.9x26.4 mm (+0.2/–0.1 mm) drilling template
Output for Echo	present (/E model)	-
Link	present (/CK model)	-
Clock	present (/CK model)	-
Operating temp.	-5…55 °C	
Storage temp.	-30…85 °C	
Ambient humidity for operating and storage	10...90 % RH (non-condensing)	

* selectable by parameter

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ICPlus 902
32x74 cold/hot thermostats

Code	Description	Probe*	Power supply
ICP11D0750000	ICPlus 902 NTC-PTC 230 V	NTC/PTC	230 Vac
ICP11D0650000	ICPlus 902 NTC-PTC 115 V	NTC/PTC	115 Vac
ICP11D0550000	ICPlus 902 NTC-PTC 24 V	NTC/PTC	24 Vac
ICP11D0450000	ICPlus 902 NTC-PTC 12/24 Vac/-	NTC/PTC	12...24 Vac/12...36 Vdc
ICP11D0350000	ICPlus 902 NTC-PTC 12 V	NTC/PTC	12 V AC/DC
ICP1ADB750000	ICPlus 902/A NTC-PTC 230 V BUZ.	NTC/PTC	230 Vac

*selectable by parameter
models with V/I and TC/Pt100 analogue inputs also available

Environmental Data Program

Find out more

Description and main functions

ICPlus 902 controllers are one-step electronic devices in the classic 32x74 format, and can be used in both heating and cooling temperature control. The simple and intuitive menu and the display with icons make it easy to install and use.
They are available with different types of power supply, probe input that can be selected as NTC or PTC via parameter, serial port for USB Unicard connection, for quick system customisation.
ICPlus902/A models with alarm output are also available.
They are compatible with the TelevisGo monitoring system and systems based on Modbus protocol.

Technical data	ICPlus 902 NTC/PTC
Dimensions	front panel 79x37 mm, depth 59 mm
Container	PC+ABS UL94 V-0 plastic resin casing, polycarbonate window, thermoplastic resin keys
Installation	panel mounting with 71x29 mm (+0.2/-0.1 mm) drilling template
Display range	NTC: -50.0...110.0 °C	PTC: -50.0...140.0 °C
Display	no decimal point * 3 and a half digits + sign
Analogue inputs	1 PTC or NTC *
Digital inputs	not available
Connectivity	TTL port for connection to Unicard, TelevisGo and Modbus RTU systems
Digital outputs	1 SPDT 8(4) A 250 Vac
Measurement range	from –50 to 140 °C
Accuracy	better than 0.5 % of integral scale + 1 digit
Resolution	0.1 or 1 °C
Power consumption	• 3 W for 12...24 Vac model • 3 W for 230 Vac model
Power supply	• 12 Vac, 24 Vac, 12...24 Vac/12...36 Vdc (°) ±10 % 50/60 Hz • 115 Vac/230 Vac ±10 % 50/60 Hz
Operating temp.	0…55 °C
Storage temp.	-30…85 °C
Ambient humidity for operating and storage	10...90 % RH (non-condensing)

* selectable by parameter   (°) non-isolated power supply

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ICPlus 915

32x74 cold/hot thermostats

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Environmental
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Code	Description	Probe*	Power supply
ICP22JI750000	ICPlus 915 J/K PT100 230 V	J/K PT100	230 Vac
ICP22JI450000	ICPlus 915 J/K PT100 12/24 Vac/dc	J/K PT100	12...24 Vac/12...36 Vdc
ICP22DI750000	ICPlus 915 NTC-PTC 230 V	NTC/PTC	230 Vac
ICP22DI450000	ICPlus 915 NTC-PTC 12/24 Vac/dc	NTC/PTC	12...24 Vac/12...36 Vdc
ICP22I0750000	ICPlus 915 V/I 230 V	V/I	230 Vac
ICP22I0450000	ICPlus 915 V/I 12/24 Vac/dc	V/I	12...24 Vac/12...36 Vdc

*selectable by parameter

Description and main functions

ICPlus 915 controllers are two-step electronic devices in the classic 32x74 format which can be set as dependent, independent or with neutral zone, used to control temperature, relative humidity and pressure. The simple and intuitive menu and the display with icons make it easy to install and use.
They are available with different types of power supply, probe input that can be selected as NTC or PTC via parameter, TCJ TCK PT100, voltage V and current I, serial port for USB Unicard connection, for quick system customisation. They are compatible with the TelevisGo monitoring system and systems based on Modbus protocol.

Technical data	ICPlus 915 NTC/PTC	ICPlus 915 V/I	ICPlus 915 TC/Pt100
Dimensions	front panel 79x37 mm, depth 59 mm		
Container	PC+ABS UL94 V-0 plastic resin casing, polycarbonate window, thermoplastic resin keys		
Installation	panel mounting with 71x29 mm (+0.2/-0.1 mm) drilling template		
Display range	• NTC: -50.0...110.0 °C • PTC: -50.0…140.0 °C	• -199…199 * • -199.9...199.9 * • -1999...1999 *	• Pt100: -150.0...650.0 °C • TcJ: -40.0...750.0 °C • TcK: -40.0...1350.0 °C
Display	no decimal point * 3 and a half digits + sign		
Analogue inputs	1 PTC or NTC *	1 V-I (0...1 V,0...5 V,0...10 V,0...20 mA,4...20 mA)*	1 Pt100 or 1 TcJ/TcK
Digital inputs	1 clean contact at extra low safety voltage	not available	1 clean contact at extra low safety voltage
Connectivity	TTL port for connection to Unicard, TelevisGo and Modbus RTU systems		
Digital outputs	1 SPDT 8(4) A 250 Vac + 1 SPST 8(4) A 250 Vac		
Measurement range	from –50 to 140 °C	from –999 to 1000 °C	from –150 to 1350 °C
Accuracy	better than 0.5 % of integral scale + 1 digit		Pt100: 0.5 % for whole scale + 1 digit, 0.2 % from -150 to 300 °C TcJ: 0.4 % for whole scale + 1 digit TcK: 0.5 % for whole scale + 1 digit, 0.3 % from -40 to 800 °C
Resolution	0.1 or 1 °C		Pt100: 0.1 °C (0.1 °F) up to 199.9 °C; 1 °C (1 °F) beyond this TcJ: 0.1 °C (0.1 °F) up to 199.9 °C; 1 °C (1 °F) beyond this TcK: 0.1 °C (0.1 °F)
Power consumption	• 3 W for 12...24 Vac model • 3 W for 230 Vac model		
Power supply	• 12 Vac, 24 Vac,12...24 Vac/12...36 Vdc (°) ±10 % 50/60 Hz • 115 Vac/230 Vac ±10 % 50/60 Hz		
Operating temp.	0…55 °C		
Storage temp.	-30…85 °C		
Ambient humidity for operating and storage	10...90 % RH (non-condensing)		

* selectable by parameter   (°) non-isolated power supply

Wiring diagrams

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IC 917/PID (SSR)

PID 32x74 cold/hot thermostats

Code	Description	Probe*	Power supply
IC12DI0TMDZ00	IC 917/PID	NTC/PTC	230 Vac
IC12ZI0TMDZ00	IC 917/PID	TC/Pt100	230 Vac
IC1RDI0TMDZ00	IC 917/PID SSR	NTC/PTC	230 Vac
IC1RZI0TMDZ00	IC 917/PID SSR	TC/Pt100	230 Vac

*selectable by parameter

3 replacing **7** to identify models with 12 Vac/dc power supply

Description and main functions

IC 917 controllers are two-step electronic devices with PID regulation and Autotuning, with a Soft Start function. Hot/cold regulation can be configured with independent, dependent or neutral zone setpoints.
Versions with NTC/PTC inputs or J/K thermocouple and PT100 are available, con with relay or SSR outputs.
They have a TTL serial port for connection to the Copy Card, for quick and easy parameter configuration.

Technical data	IC 917/PID NTC/PTC (SSR)	IC 917/PID TC/Pt100
Dimensions	front panel 74x32 mm, depth 59 mm	
Container	PC+ABS UL94 V-0 plastic resin casing, polycarbonate window, thermoplastic resin keys	
Installation	panel mounting with 71x29 mm (+0.2/-0.1 mm) drilling template	
Display range	NTC: -50...110.0 °C | PTC: -55.0...140.0 °C	Pt100: -150.0...650.0 °C | TcJ: -40.0...750.0 °C TcK: -40...1350 °C
Display	no decimal point * 3 and a half digits + sign	
Analogue inputs	3 and a half digits + sign	
Digital inputs	1 PTC or NTC *	1 Pt100 or 1 TcJ/TcK*
Connectivity	1 clean contact at extra low safety voltage	
Digital outputs	TTL port for connection to Copy Card 1 SPDT 8(3) A 1/2 hp 250 Vac • 1 SPST 8(3) A 1/2 hp 250 Vac	TTL port for connection to Copy Card 2 SPST 8(3) A 1/2 hp 250 Vac
SSR Outputs	see wiring diagram for ratings	
Accuracy	-55 140 °C better than 0.5 % of integral scale + 1 digit	-150...1350 °C Pt100: 0.5 % for whole scale + 1 digit, 0.2 % from -150 to 300 °C TcJ: 0.4 % for whole scale + 1 digit TcK: 0.5 % for whole scale + 1 digit, 0.3 % from -40 to 800 °C
Resolution	0.1 °C (0.1 °F) up to 199.9 °C; 1 °C (1 °F) beyond this	Pt100: 0.1 °C (0.1 °F) up to 199.9 °C; 1 °C (1 °F) beyond this TcJ: 0.1 °C (0.1 °F) up to 199.9 °C; (1 °F) beyond this TcK: 0.1 °C (0.1 °F)
Power consumption	• 1.5 W for 12 Vac model • 3 W for 230 Vac model	
Power supply	• 12 Vac/dc ±10 % 50/60 Hz • 230 Vac ±10 % 50/60 Hz	
Alarm	optional	
Operating temp.	-5…55 °C	
Storage temp.	-30…85 °C	
Ambient humidity for operating and storage	10...90 % RH (non-condensing)	

* selectable by parameter

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EMPlus 600

Temperature, humidity, pressure indicators

Code	Description	Probe*	Power supply
EMP60D0350000	EMPlus 600 NTC-PTC	NTC/PTC	12 V AC/DC
EMP60D0450000	EMPlus 600 NTC-PTC	NTC/PTC	12...24 Vac/dc
EMP60D0750000	EMPlus 600 NTC-PTC	NTC/PTC	230 Vac
EMP60P0350000	EMPlus 600 Pt100/TCJ-K	Pt100/TC	12 V AC/DC
EMP60P0450000	EMPlus 600 Pt100/TCJ-K	Pt100/TC	12...24 Vac/dc
EMP60P0750000	EMPlus 600 Pt100/TCJ-K	Pt100/TC	230 Vac
EMP60I0350000	EMPlus 600 V-I	4...20 mA/0...10 V	12 V AC/DC
EMP60I0750000	EMPlus 600 V-I	4...20 mA/0...10 V	230 Vac

*selectable by parameter

Description and main functions

The **EMPlus 600** is a device for measuring temperature, humidity and pressure in commercial and industrial refrigeration applications.
12 Vac/dc, 12-24 Vac/12-36 Vdc and 230 Vac power supply options are available in three models which differ due to the type of analogue input used (NTC/PTC, V/I, TcJ/TcK/PT100).
They have a TTL serial port for connection to the Copy Card, for quick and easy parameter configuration.

Technical data	EMPlus 600 NTC/PTC	EMPlus 600 V/I	EMPlus 600 TC/Pt100
Dimensions	front panel 79x37 mm, depth 59 mm		
Container	PC+ABS UL94 V-0 plastic resin casing, polycarbonate window, thermoplastic resin keys		
Installation	panel mounting with 71x29 mm (+0.2/-0.1 mm) drilling template		
Display range	• NTC: -50.0...110.0 °C • PTC: -50.0...140.0 °C	• -199...199 * • -199.9...199.9 * • -1999...1999 *	• Pt100: -150.0...650.0 °C • TcJ: -40.0...750.0 °C • TcK: -40.0...1350.0 °C
Display	no decimal point * 3 and a half digits + sign		
Analogue inputs	1 PTC or NTC *	1 V-I (0...1 V,0...5 V,0...10 V,0...20 mA,4...20 mA)*	1 Pt100 or 1 TcJ/TcK
Connectivity	TTL port for connection to Unicard, TelevisGo and Modbus RTU systems		
Measurement range	from –50 to 140 °C	from –999 to 1000 °C	from –150 to 1350 °C
Accuracy	better than 0.5 % of integral scale + 1 digit		Pt100: 0.5 % for whole scale + 1 digit, 0.2 % from -150 to 300 °C TcJ: 0.4 % for whole scale + 1 digit TcK: 0.5 % for whole scale + 1 digit, 0.3 % from -40 to 800 °C
Resolution	0.1 or 1 °C		Pt100: 0.1 °C (0.1 °F) up to 199.9 °C; 1 °C (1 °F) beyond this TcJ: 0.1 °C (0.1 °F) up to 199.9 °C; 1 °C (1 °F) beyond this TcK: 0.1 °C (0.1 °F)
Power consumption	• 3 W for 12...24 Vac model • 3 W for 230 Vac model		
Power supply	• 12 Vac, 24 Vac, 12...24 Vac/12...36 Vdc (°) ±10 % 50/60 Hz • 115 Vac/230 Vac ±10 % 50/60 Hz		
Operating temp.	-5…55 °C		
Storage temp.	-30…85 °C		
Ambient humidity for operating and storage	10...90 % RH (non-condensing)		

* selectable by parameter   (°) non-isolated power supply

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EWTL 300 - EWTL 310 - DST-30
LCD thermometers

Code	Description	Probe cable length
T1M1BT0107	❶ EWTL 300	1.5 m
T1M1BT0109	❷ EWTL 310	1.5 m
T1M1BT0105	❸ DST-30 solar cell thermometer	1 m

Description and main functions

EWTL 300/310 is a range of LCD digital thermometers with temperature probes connected to the instrument via a cable of length 1.5 or 3 metres. They are specifically designed for counters and refrigerated cabinets.
An adapter is available that can be used to replace instruments with a 32x64 mm front panel format (with 24.5x58 mm template hole) with the **EWTL 300** thermometer.
The **DST-30** model is a solar cell thermometer with a temperature probe measuring 1 metre in length.

Technical data	EWTL 300	EWTL 310	DST-30
Dimensions	front panel 48x28.6 mm depth 13 mm	front panel 62.2x29.2 mm depth 16.2 mm	front panel 66x30 mm depth 11.6 mm
Installation	SB series ● SKP 10		
Display range	-50.0...70.0 °C (-58…158 °F)		-20.0...80.0 °C
Display	LCD with 2 and 1/2 digits		LCD 24x14 mm
Resolution	0.1 °C	0.1 °C (1 °C <20 °C)	0.1 °C
Accuracy	±1 °C		
Probe	connected to instrument, cable length 1.5 m		connected to instrument, cable length 1 m
Display refresh	10 seconds	12 seconds	-
Installation	46x26.6 mm	58x25 mm	57x25.6 mm
Power supply	two 1.5V LR 44 batteries or equivalent - duration 12 months		integrated solar cells
Protection rating	-		IP68

Dimensions

EWTL 300

EWTL 310

DST-30

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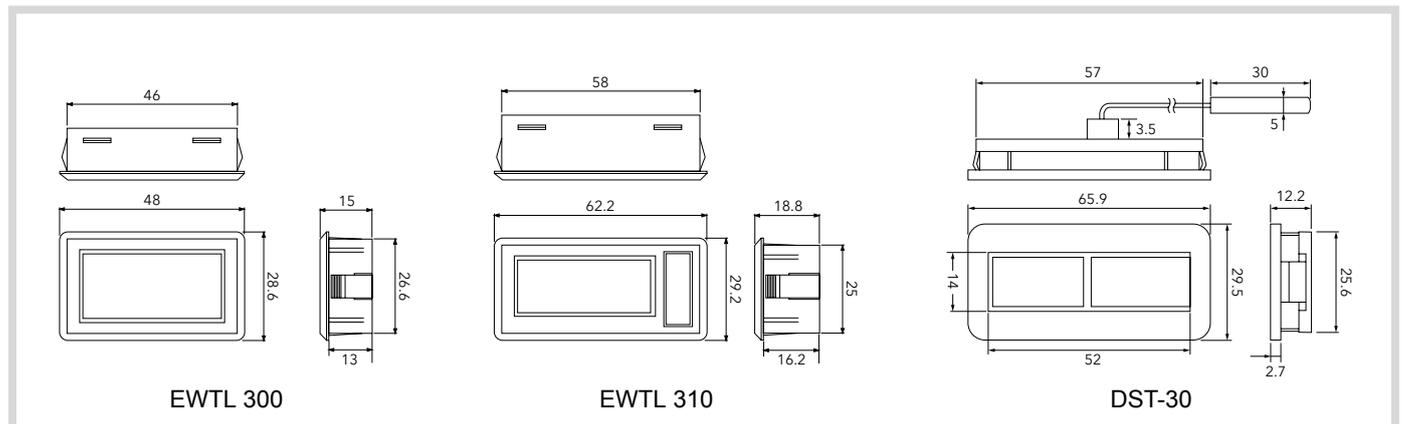
EWDR 981 - EWDR 984

DIN controllers for refrigeration

Code	Description	Probe*	Power supply
DR26DI0TCD700	EWDR 981	NTC/PTC	230 Vac
DR3CDI0TCD700	EWDR 984	NTC/PTC	230 Vac

*selectable by parameter

Description and main functions

The EWDR family features the 4 DIN module format (70x85 mm), which is **ideal for application where it is convenient to install the controller on a DIN rail**, for example in **electrical panels for cold rooms**.
EWDR can be used to **manage the compressor, defrosting, evaporator fans and the light**. If suitably configured, it can be used to **manage 2 evaporators with independent defrosts**. Some of the most important alarm indications include those signalling high/low temperature, faulty probes and an open door.

Technical data	EWDR 981	EWDR 984
Dimensions	front panel 70x85 mm, depth 61 mm	
Container	plastic casing 4 DIN modules	
Installation	on DIN rail or wall mounted	
Display range	NTC: -50.0...110.0 °C | PTC: -55.0...140.0 °C	
Display	no decimal point * 3 and a half digits + sign	
Connections	screw-on terminal block for ≤ 2.5 mm² wires (only one wire per terminal for power connections)	
Analogue inputs	2 PTC or NTC *	3 PTC or NTC *
Digital inputs	2 voltage-free inputs *	
Connectivity	TTL port for connection to Copy Card	
Digital outputs	1 SPDT 15A 1 hp 250 Vac	1 SPDT 8(3)A 250 Vac 1 SPST 15A 1 hp 250 Vac 1 SPST 8(3)A 250 Vac
Analogue outputs	12 Vdc/24 mA output *	
Measurement range	from –55 to 140 °C	
Accuracy	better than 0.5 % of integral scale + 1 digit	
Resolution	1 or 0.1 °C	
Power consumption	5 VA max	
Power supply	230 Vac ±10 % 50/60 Hz	
Operating temp.	-5…55 °C	
Storage temp.	-30…85 °C	
Ambient humidity for operating and storage	10...90 % RH (non-condensing)	

* selectable by parameter

Wiring diagrams

EWDR 983 LX/S - EWDR 985 LX/S/C/K

DIN controllers for remote counters

Code	Description	Probe*	Power supply
DR38DI0TCD700	EWDR 983	NTC/PTC	230 Vac
DR38DF0SCD700	EWDR 983/CS LX	NTC/PTC	230 Vac
DR34DI0TCD700	EWDR 985	NTC/PTC	230 Vac
DR35DR0SCD700	EWDR 985/CS LX BUZ.	NTC/PTC	230 Vac

*selectable by parameter

Description and main functions

The EWDR family features the 4 DIN module format (70x85 mm), which is **ideal for application where it is convenient to install the controller on a DIN rail**, for example in **electrical panels for cold rooms**.

EWDR can be used to **manage the compressor, defrosting, evaporator fans and the light**. If suitably configured, it can be used to **manage 2 evaporators** with independent defrosts. Some of the most important alarm indications include those signalling high/low temperature, faulty probes and an open door.

Certain models also offer **condenser fan management**, compressor management according to a pressure switch input and the creation of an instrument network with up to 8 devices **(1 Master and 7 Slaves) for defrost synchronisation**.

Models with a clock offer **"Day/Night"** mode in order to activate the lowered Setpoint and switch the lights off.

LX models can be connected to the TelevisGo monitoring system via the RS485 serial port.

Technical data	EWDR 983 LX/S	EWDR 985 LX/S/C/K
Dimensions	front panel 70x85 mm, depth 61 mm	
Container	plastic casing 4 DIN modules	
Installation	on DIN rail or wall mounted	
Display range	NTC: -50.0...110.0 °C | PTC: -55.0...140.0 °C	
Display	no decimal point * 3 and a half digits + sign	
Connections	screw-on terminal block for ≤ 2.5 mm² wires (only one wire per terminal for power connections)	
Analogue inputs	3 PTC or NTC *	
Digital inputs	2 voltage-free inputs *	
Connectivity	TTL port for connection to Copy Card LX only: RS-485 for connection to TelevisGo	
Digital outputs	1 SPDT 8(3)A 250 Vac 1 SPDT 15A 1 hp 250 Vac	1 SPST 8(3)A 1/2 hp 250 Vac 1 SPDT 8(3)A 1/2 hp 250 Vac 1 SPST 15A 1 hp 250 Vac 1 SPST 8(3)A 1/2 hp 250 Vac
Analogue outputs	12 Vdc/24 mA output *	
Measurement range	from –55 to 140 °C	
Accuracy	better than 0.5 % of integral scale + 1 digit	
Resolution	1 or 0.1 °C	
Power consumption	5 VA max	
Power supply	230 Vac ±10 % 50/60 Hz	
Link	not available	available
Clock	available	
Operating temp.	-5…55 °C	
Storage temp.	-30…85 °C	
Ambient humidity for operating and storage	10...90 % RH (non-condensing)	

* selectable by parameter

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DR4020

Universal DIN controllers

Code	Description	Probe*	Power supply
E4D12E00BH710	DR4020	Pt100	100...240 Vac
E4D12A00BD710	DR4020	TcJ/TcK	100...240 Vac
E4D12I00BN710	DR4020	V/I	100...240 Vac
E4D12N00BH710	DR4020	NTC/PTC/Pt1000	100...240 Vac
E4D12E00BH410	DR4020	Pt100	12...24 Vac/dc
E4D12A00BD410	DR4020	TC	12...24 Vac/dc
E4D12I00BN410	DR4020	V/I	12...24 Vac/dc
E4D12N00BH410	DR4020	NTC/PTC/Pt1000	12...24 Vac/dc

*selectable by parameter

Description and main functions

The **DR4020** thermoregulators in the Universal Controller series are ideal for all industrial applications requiring highly accurate temperature control, ranging from plastic material moulding and packaging to the control of raw material transformation processes.
They are suitable for installation on electrical panels fitted with a DIN rail and make flexibility their true advantage: switching power supply units in high and low voltage, combined with a range of the most common analogue inputs, makes it possible to support a wide range of industrial applications with a limited number of codes.

Technical data	DR4020
Dimensions	front panel 70x85 mm, depth 61 mm
Container	plastic casing 4 DIN modules
Installation	on Omega DIN rail or panel mounting, with 70x45 mm (+0.2/-0.1 mm) drilling template
Display	no decimal point * 2 displays with 4 digits + sign
Analogue inputs	1 input* (see Probes diagram on Wiring Diagram)
Digital inputs	not available
Connectivity	TTL port for connection to Copy Card and Unicard
Digital outputs	1 SPDT 8(3)A 250 Vac 1 SPST 8(3)A 250 Vac
Analogue output	not available
Measurement range	depends on probe used, refer to Analogue input features table
Accuracy	depends on probe used, refer to Analogue input features table
Resolution	depends on probe used, refer to Analogue input features table
Power consumption	4 W max
Power supply	• 12...24 Vac/12...36 Vdc ±10 % 50/60 Hz • 100...240 Vac ±10 % 50/60 Hz
Operating temp.	-5…55 °C
Storage temp.	-20…85 °C
Ambient humidity for operating and storage	10...90 % RH (non-condensing)

* selectable by parameter

Features of analogue inputs

Probe	Range	Resolution	Accuracy
NTC	-50…110 °C	0.1 °C (0.1 °F)	0.5 % integral scale + 1 digit
PTC	-55…150 °C	0.1 °C (0.1 °F)	0.5 % integral scale + 1 digit
Pt1000	-200…800 °C	0.2 °F	0.5 % integral scale + 1 digit
TcJ	-40…760 °C	0.6 °C (0.7 °F)	0.4 % integral scale + 1 digit
TcK	-40…1350 °C	0.6 °C (0.7 °F)	0.5 % integral scale + 1 digit
Pt100	-200…800 °C	0.1 °C (0.2 °F)	0.5 % integral scale + 1 digit (on the whole scale) 0.2 % integral scale + 1 digit (-150…300 °C)
V-I	0…1 V 0…5 V 0…10 V 0…20 mA 4…20 mA	1 digit with **ndt** = 0 0.1 digit with **ndt** = 1 0.01 digit with **ndt** = 2 0.001 digit with **ndt** = 3	0.5 % integral scale + 1 digit

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DR4022

Universal DIN controllers with serial port

Code	Description	Probe*	Power supply
E4D12EASBH710	DR4022	Pt100	100...240 Vac
E4D12NASBH710	DR4022	NTC/PTC/Pt1000	100...240 Vac
E4D12AASBD710	DR4022	TC	100...240 Vac
E4D12IASBN710	DR4022	V/I	100...240 Vac
E4D12VASBN410	DR4022	V/I	12...24 Vac/dc
E4D12EASBH410	DR4022	Pt100	12...24 Vac/dc

*selectable by parameter

Description and main functions

The **DR4022** thermoregulators in the Universal Controller series are ideal for all industrial applications requiring highly accurate temperature control, ranging from plastic material moulding and packaging to the control of raw material transformation processes.
They are suitable for installation on electrical panels fitted with a DIN rail and make flexibility their true advantage: switching power supply units in high and low voltage, combined with a range of the most common analogue inputs, makes it possible to support a wide range of industrial applications with a limited number of codes.
DR4022 models are equipped with a digital input, voltage/current-mode analogue output and RS485 serial port for connection to monitoring systems.

Technical data	DR4022
Dimensions	front panel 70x85 mm, depth 61 mm
Container	plastic casing 4 DIN modules
Installation	on Omega DIN rail or panel mounting, with 70x45 mm (+0.2/-0.1 mm) drilling template
Display	no decimal point * 2 displays with 4 digits + sign
Analogue inputs	1 input* (see Probes table)
Digital inputs	1 clean contact at extra low safety voltage
Connectivity	TTL port and internal RS-485 for connection to Copy Card, Unicard, TelevisGo and ModBus RTU systems
Digital outputs	1 SPDT 8(3)A 250 Vac 1 SPST 8(3)A 250 Vac
Analogue output	V-I: 0...1 V, 0...5 V, 0...10 V / 0...20 mA, 4...20 mA
Measurement range	depends on probe used, refer to Analogue input features table
Accuracy	depends on probe used, refer to Analogue input features table
Resolution	depends on probe used, refer to Analogue input features table
Power consumption	4 W max
Power supply	• 12...24 Vac/12...36 Vdc ±10 % 50/60 Hz • 100...240 Vac ±10 % 50/60 Hz
Operating temp.	-5…55 °C
Storage temp.	-20…85 °C
Ambient humidity for operating and storage	10...90 % RH (non-condensing)

* selectable by parameter

Features of analogue inputs

Probe	Range	Resolution	Accuracy
NTC	-50…110 °C	0.1 °C (0.1 °F)	0.5 % integral scale + 1 digit
PTC	-55…150 °C	0.1 °C (0.1 °F)	0.5 % integral scale + 1 digit
Pt1000	-200…800 °C	0.2 °F	0.5 % integral scale + 1 digit
TcJ	-40…760 °C	0.6 °C (0.7 °F)	0.4 % integral scale + 1 digit
TcK	-40…1350 °C	0.6 °C (0.7 °F)	0.5 % integral scale + 1 digit
Pt100	-200…800 °C	0.1 °C (0.2 °F)	0.5 % integral scale + 1 digit (on the whole scale) 0.2 % integral scale + 1 digit (-150…300 °C)
V-I	0…1 V 0…5 V 0…10 V 0…20 mA 4…20 mA	1 digit with **ndt** = 0 0.1 digit with **ndt** = 1 0.01 digit with **ndt** = 2 0.001 digit with **ndt** = 3	0.5 % integral scale + 1 digit

Wiring diagrams

Maximum loads that can be driven by the analogue output

0- 1 V	20 mA with minimum load impedance 50 Ohm
0-5 V	20 mA with minimum load impedance 250 Ohm
0-10 V	20 mA with minimum load impedance 500 Ohm
0-20 mA	350 Ohm
4-20 mA	350 Ohm

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EW4820

Universal 48x48 controllers

Code	Description	Probe*	Power supply
E481BI0XBH700	EW4820	V/I/Pt100	100...240 Vac
E481BP0PMH700	EW4820	Pt100/Pt1000/NTC/PTC/TC	100...240 Vac
E481BP0PMH400	EW4820	Pt100/Pt1000/NTC/PTC/TC	12...24 Vac/dc
E481BI0XBN400	EW4820	V/I/Pt100	12...24 Vac/dc

*selectable by parameter

Description and main functions

The **EW4820** thermoregulators in the Universal Controller series are ideal for all industrial applications requiring highly accurate temperature control, ranging from plastic material moulding and packaging to the control of raw material transformation processes.

They are suitable for panel mounting and make flexibility their true advantage: switching power supply units in high and low voltage, combined with a range of the most common analogue inputs, makes it possible to support a wide range of industrial applications with a limited number of codes.
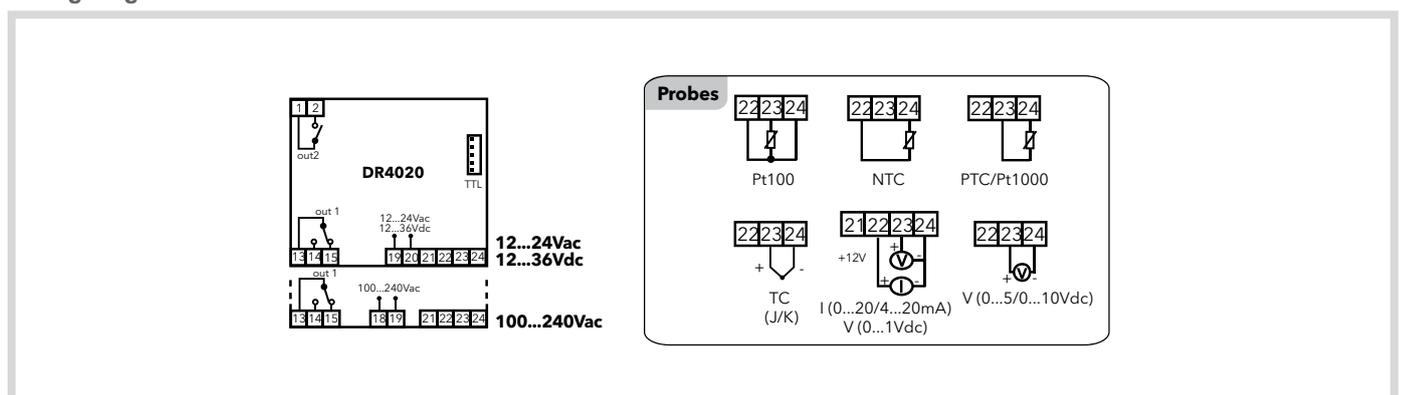
Technical data	EW4820
Dimensions	front panel 48x48 mm, depth 113 mm
Container	PC+ABS UL94 V-0 resin plastic casing, switch keys with adhesive polycarbonate film
Installation	panel mounting with 45x45 mm (+0.2/-0.1 mm) drilling template
Display	no decimal point * 2 displays with 4 digits + sign
Analogue inputs	1 input* (see Probes table)
Digital inputs	not available
Connectivity	TTL port for connection to Copy Card and TelevisGo
Digital outputs	1 SPDT 3A 250 Vac 1 SPST 2A 250 Vac
Analogue output	not available
Measurement range	depends on probe used, refer to Analogue input features table
Accuracy	depends on probe used, refer to Analogue input features table
Resolution	depends on probe used, refer to Analogue input features table
Power consumption	• 2.45 W for 12...24 Vac/12...36 Vdc model • 2.40 W for 100...240 Vac model
Power supply	• 12...24 Vac/12...36 Vdc ±10 % 50/60 Hz • 100...240 Vac ±10 % 50/60 Hz
Operating temp.	-5…55 °C
Storage temp.	-20…85 °C
Ambient humidity for operating and storage	10...90 % RH (non-condensing)

* selectable by parameter

Features of analogue inputs

Probe	Range	Resolution	Accuracy
PTC	-55…150 °C	0.1 °C (0.1 °F)	0.5 % integral scale + 1 digit
NTC	-50…110 °C	0.1 °C (0.1 °F)	0.5 % integral scale + 1 digit
Pt1000	-200…800 °C	0.2 °F	0.5 % integral scale + 1 digit
TcJ	-40…760 °C	0.6 °C (0.6 °F)	0.4 % integral scale + 1 digit
TcK	-40…1350 °C	0.6 °C (0.7 °F)	0.5 % integral scale + 1 digit (on the whole scale) | 0.3 % integral scale + 1 digit (-40…800 °C)
TCS	0…1600 °C	0.6 °C (0.8 °F)	0.5 % integral scale + 1 digit (on the whole scale) | 0.3 % integral scale + 1 digit (-40…800 °C)
TCR	0…1600 °C	0.6 °C (0.7 °F)	0.5 % integral scale + 1 digit (on the whole scale) | 0.3 % integral scale + 1 digit (-40…800 °C)
TCT	-40…350 °C	0.6 °C (0.7 °F)	0.5 % integral scale + 1 digit (on the whole scale) | 0.3 % integral scale + 1 digit (-40…800 °C)
Pt100	-200…800 °C	0.1 °C (0.2 °F)	0.5 % integral scale + 1 digit (on the whole scale) | 0.2 % integral scale + 1 digit (-150…300 °C)
V-I	0…1 V 0…5 V 0…10 V 0…20 mA 4…20 mA	1 digit with **ndt** = 0 0.1 digit with **ndt** = 1 0.01 digit with **ndt** = 2 0.001 digit with **ndt** = 3	0.5 % integral scale + 1 digit

Wiring diagrams

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EW4822

Universal 48x48 controllers with serial port

Code	Description	Probe*	Power supply
E481BIISBH700	EW4822 AO 4...20 mA	V/I/Pt100	100...240 Vac
E481BPIQMH700	EW4822 AO 0...20 mA	Pt1000/Pt100/NTC/PTC/TC	100...240 Vac
E481BPVQMH700	EW4822 AO 0/10 V	Pt1000/Pt100/NTC/PTC/TC	100...240 Vac
E481BPIQMH400	EW4822 AO 0...20 mA	Pt1000/Pt100/NTC/PTC/TC	12...24 Vac/dc

*selectable by parameter

Description and main functions

The **EW4822** thermoregulators in the Universal Controller series are ideal for all industrial applications requiring highly accurate temperature control, ranging from plastic material moulding and packaging to the control of raw material transformation processes.
They are suitable for installation on electrical panels fitted with a DIN rail and make flexibility their true advantage: switching power supply units in high and low voltage, combined with a range of the most common analogue inputs, makes it possible to support a wide range of industrial applications with a limited number of codes.
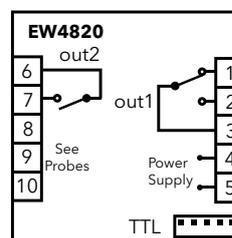**EW4821** models are available with a digital input and configurable analogue output which can either be in either voltage or current mode, while **EW4822** models have a RS485 serial port for connection to monitoring systems and - in mutual exclusion - either a digital input or a voltage-mode analogue output or a current-mode analogue output.

Technical data	EW4822
Dimensions	front panel 48x48 mm, depth 113 mm
Container	PC+ABS UL94 V-0 resin plastic casing, switch keys with adhesive polycarbonate film
Installation	panel mounting with 45x45 mm (+0.2/-0.1 mm) drilling template
Display	no decimal point * 2 displays with 4 digits + sign
Analogue inputs	1 input* (see Probes table)
Digital inputs	1 clean contact at extra low safety voltage
Connectivity	TTL port and RS-485 for connection to Copy Card, TelevisGo and ModBus RTU systems
Digital outputs	1 SPDT 3A 250 Vac 1 SPST 2A 250 Vac
Analogue output	V: 0...1 V, 0...5 V, 0...10 V or I: 0...20 mA, 4...20 mA maximum controllable loads: please see wiring diagrams
Measurement range	depends on probe used, refer to Analogue input features table
Accuracy	depends on probe used, refer to Analogue input features table
Resolution	depends on probe used, refer to Analogue input features table
Power consumption	• 2.80 W for 12...24 Vac/12...36 Vdc model • 2.60 W for 100...240 Vac model
Power supply	• 12...24 Vac/12...36 Vdc ±10 % 50/60 Hz • 100...240 Vac ±10 % 50/60 Hz
Operating temp.	-5…55 °C
Storage temp.	-20…85 °C
Ambient humidity for operating and storage	10...90 % RH (non-condensing)

* selectable by parameter

Features of analogue inputs

Probe	Range	Resolution	Accuracy
PTC	-55…150 °C	0.1 °C (0.1 °F)	0.5 % integral scale + 1 digit
NTC	-50…110 °C	0.1 °C (0.1 °F)	0.5 % integral scale + 1 digit
Pt1000	-200…800 °C	0.2 °F	0.5 % integral scale + 1 digit
TcJ	-40…760 °C	0.6 °C (0.6 °F)	0.4 % integral scale + 1 digit
TcK	-40…1350 °C	0.6 °C (0.7 °F)	0.5 % integral scale + 1 digit (on the whole scale) | 0.3 % integral scale + 1 digit (-40…800 °C)
TCS	0…1600 °C	0.6 °C (0.8 °F)	0.5 % integral scale + 1 digit (on the whole scale) | 0.3 % integral scale + 1 digit (-40…800 °C)
TCR	0…1600 °C	0.6 °C (0.7 °F)	0.5 % integral scale + 1 digit (on the whole scale) | 0.3 % integral scale + 1 digit (-40…800 °C)
TCT	-40…350 °C	0.6 °C (0.7 °F)	0.5 % integral scale + 1 digit (on the whole scale) | 0.3 % integral scale + 1 digit (-40…800 °C)
Pt100	-200…800 °C	0.1 °C (0.2 °F)	0.5 % integral scale + 1 digit (on the whole scale) | 0.2 % integral scale + 1 digit (-150…300 °C)
V-I	0…1 V 0…5 V 0…10 V 0…20 mA 4…20 mA	1 digit with **ndt** = 0 0.1 digit with **ndt** = 1 0.01 digit with **ndt** = 2 0.001 digit with **ndt** = 3	0.5 % integral scale + 1 digit

Wiring diagrams

Probes

PTC/NTC/Pt1000 — Pt100 — TC (J/K/R/S/T) — V (0…1/0…5/0…10V) I (0…20/4…20mA)

EW4822 — out2 — See Probes — RS-485 — See Outputs/D.I. — out1 — Power Supply — TTL

Outputs/D.I. — V - I — D.I.

Maximum loads that can be driven by the analogue output

0- 1 V	20 mA with minimum load impedance 50 Ohm
0-5 V	20 mA with minimum load impedance 250 Ohm
0-10 V	20 mA with minimum load impedance 500 Ohm
0-20 mA	350 Ohm
4-20 mA	350 Ohm

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EW7220

Universal 72x72 controllers

Code	Description	Probe*	Power supply
E7212E0XBH700	EW7220	Pt100	100...240 Vac
E7212A0XBD700	EW7220	TC	100...240 Vac
E7212I0XBH700	EW7220	V/I/Pt100	100...240 Vac
E7212N0XBD700	EW7220	NTC/PTC/Pt1000	100...240 Vac
E7212E0XBH400	EW7220	Pt100	12...24 Vac/dc
E7212A0XBD400	EW7220	TC	12...24 Vac/dc
E7212I0XBH400	EW7220	V/I/Pt100	12...24 Vac/dc
E7212N0XBD400	EW7220	NTC/PTC/Pt1000	12...24 Vac/dc

*selectable by parameter

Description and main functions

The **EW7220** thermoregulators in the Universal Controller series are ideal for all industrial applications requiring highly accurate temperature control, ranging from plastic material moulding and packaging to the control of raw material transformation processes.

They are suitable for panel mounting and make flexibility their true advantage: switching power supply units in high and low voltage, combined with a range of the most common analogue inputs, makes it possible to support a wide range of industrial applications with a limited number of codes.
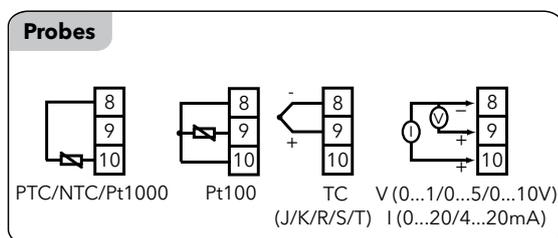
Technical data	EW7220
Dimensions	front panel 72x72 mm, depth 80 mm
Container	PC+ABS UL94 V-0 resin plastic casing, switch keys with adhesive polycarbonate film
Installation	panel mounting with 67x67 mm (+0.2/-0.1 mm) drilling template
Display	no decimal point * 2 displays with 4 digits + sign
Analogue inputs	1 input* (see Probes table)
Digital inputs	not available
Connectivity	TTL port for connection to Copy Card, TelevisGo and ModBus RTU systems
Digital outputs	1 SPDT 8(3)A 250 Vac 1 SPST 8(3)A 250 Vac
Analogue output	not available
Measurement range	depends on probe used, refer to Analogue input features table
Accuracy	depends on probe used, refer to Analogue input features table
Resolution	depends on probe used, refer to Analogue input features table
Power consumption	4 W max
Power supply	• 12...24 Vac/12...36 Vdc ±10 % 50/60 Hz • 100...240 Vac ±10 % 50/60 Hz
Operating temp.	-5…55 °C
Storage temp.	-20…85 °C
Ambient humidity for operating and storage	10...90 % RH (non-condensing)

* selectable by parameter

Features of analogue inputs

Probe	Range	Resolution	Accuracy
PTC	-55…150 °C	0.1 °C (0.1 °F)	0.5 % integral scale + 1 digit
NTC	-50…110 °C	0.1 °C (0.1 °F)	0.5 % integral scale + 1 digit
Pt1000	-200…800 °C	0.2 °F	0.5 % integral scale + 1 digit
TcJ	-40…760 °C	0.6 °C (0.6 °F)	0.4 % integral scale + 1 digit
TcK	-40…1350 °C	0.6 °C (0.7 °F)	0.5 % integral scale + 1 digit (on the whole scale) | 0.3 % integral scale + 1 digit (-40…800 °C)
TCS	0…1600 °C	0.6 °C (0.8 °F)	0.5 % integral scale + 1 digit (on the whole scale) | 0.3 % integral scale + 1 digit (-40…800 °C)
TCR	0…1600 °C	0.6 °C (0.7 °F)	0.5 % integral scale + 1 digit (on the whole scale) | 0.3 % integral scale + 1 digit (-40…800 °C)
TCT	-40…350 °C	0.6 °C (0.7 °F)	0.5 % integral scale + 1 digit (on the whole scale) | 0.3 % integral scale + 1 digit (-40…800 °C)
Pt100	-200…800 °C	0.1 °C (0.2 °F)	0.5 % integral scale + 1 digit (on the whole scale) | 0.2 % integral scale + 1 digit (-150…300 °C)
V-I	0…1 V 0…5 V 0…10 V 0…20 mA 4…20 mA	1 digit with **ndt** = 0 0.1 digit with **ndt** = 1 0.01 digit with **ndt** = 2 0.001 digit with **ndt** = 3	0.5 % integral scale + 1 digit

Wiring diagrams

EW7222

Universal 72x72 controllers with serial port

Code	Description	Probe*	Power supply
E7213PASBH700	Univ. EW7222 - RS485	Pt100/Pt1000/NTC/PTC/TC	100...240 Vac
E7213IASBH700	Univ. EW7222 - RS485	V/I/Pt100	100...240 Vac
E7213PASBH400	Univ. EW7222 - RS485	Pt100/Pt1000/NTC/PTC/TC	12...24 Vac/dc

*selectable by parameter

Description and main functions

The **EW7222** thermoregulators in the Universal Controller series are ideal for all industrial applications requiring highly accurate temperature control, ranging from plastic material moulding and packaging to the control of raw material transformation processes.

They are suitable for installation on electrical panels fitted with a DIN rail and make flexibility their true advantage: switching power supply units in high and low voltage, combined with a range of the most common analogue inputs, makes it possible to support a wide range of industrial applications with a limited number of codes.

EW7222 models are equipped with a digital input, configurable or voltage-mode or current-mode analogue output and RS485 serial port for connection to monitoring systems. They are called universal as one model encompasses Pt100/Pt1000/NTC/PTC/TC and a second model encompasses V/I/Pt100.

Technical data	EW7222
Dimensions	front panel 72x72 mm, depth 80 mm
Container	PC+ABS UL94 V-0 resin plastic casing, switch keys with adhesive polycarbonate film
Installation	panel mounting with 67x67 mm (+0.2/-0.1 mm) drilling template
Display	no decimal point * 2 displays with 4 digits + sign
Analogue inputs	1 input* (see Probes table)
Digital inputs	1 clean contact at extra low safety voltage
Connectivity	TTL port and RS-485 for connection to Copy Card, TelevisGo and ModBus RTU systems
Digital outputs	1 SPDT 8(3)A 250 Vac 1 SPST 8(3)A 250 Vac 1 SPST 5A 250 Vac
Analogue output	V-I: 0...1 V, 0...5 V, 0...10 V / 0...20 mA, 4...20 mA
Measurement range	depends on probe used, refer to Analogue input features table
Accuracy	depends on probe used, refer to Analogue input features table
Resolution	depends on probe used, refer to Analogue input features table
Power consumption	4 W max
Power supply	• 12...24 Vac/12...36 Vdc ±10 % 50/60 Hz • 100...240 Vac ±10 % 50/60 Hz
Operating temp.	-5…55 °C
Storage temp.	-20…85 °C
Ambient humidity for operating and storage	10...90 % RH (non-condensing)

* selectable by parameter

Features of analogue inputs

Probe	Range	Resolution	Accuracy
PTC	-55…150 °C	0.1 °C (0.1 °F)	0.5 % integral scale + 1 digit
NTC	-50…110 °C	0.1 °C (0.1 °F)	0.5 % integral scale + 1 digit
Pt1000	-200…800 °C	0.2 °F	0.5 % integral scale + 1 digit
TcJ	-40…760 °C	0.6 °C (0.6 °F)	0.4 % integral scale + 1 digit
TcK	-40…1350 °C	0.6 °C (0.7 °F)	0.5 % integral scale + 1 digit (on the whole scale) | 0.3 % integral scale + 1 digit (-40…800 °C)
TCS	0…1600 °C	0.6 °C (0.8 °F)	0.5 % integral scale + 1 digit (on the whole scale) | 0.3 % integral scale + 1 digit (-40…800 °C)
TCR	0…1600 °C	0.6 °C (0.7 °F)	0.5 % integral scale + 1 digit (on the whole scale) | 0.3 % integral scale + 1 digit (-40…800 °C)
TCT	-40…350 °C	0.6 °C (0.7 °F)	0.5 % integral scale + 1 digit (on the whole scale) | 0.3 % integral scale + 1 digit (-40…800 °C)
Pt100	-200…800 °C	0.1 °C (0.2 °F)	0.5 % integral scale + 1 digit (on the whole scale) | 0.2 % integral scale + 1 digit (-150…300 °C)
V-I	0…1 V 0…5 V 0…10 V 0…20 mA 4…20 mA	1 digit with **ndt** = 0 0.1 digit with **ndt** = 1 0.01 digit with **ndt** = 2 0.001 digit with **ndt** = 3	0.5 % integral scale + 1 digit

Wiring diagrams

Maximum loads that can be driven by the analogue output

0- 1 V	20 mA with minimum load impedance 50 Ohm
0-5 V	20 mA with minimum load impedance 250 Ohm
0-10 V	20 mA with minimum load impedance 500 Ohm
0-20 mA	350 Ohm
4-20 mA	350 Ohm

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EWTSPlus 990

32x74 timers and counters

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Code	Description	Power supply
ET020I0XTG700	EWTSPlus 990	230 Vac
ET020I0XTG500	EWTSPlus 990	24 Vac
ET020I0XTG300	EWTSPlus 990	12 V AC/DC

Description and main functions

The **EWTSPlus 990** series of digital timers is the ideal measuring solution for all measurable quantities in the commercial refrigeration sector and light industry. The range is used in all applications requiring precision control of processing stages and the management of functions linked to pre-set time intervals.

Technical data	EWTSPlus 990
Dimensions	front panel 79x37 mm, depth 59 mm
Container	PC+ABS UL94 V-0 plastic resin casing, polycarbonate window, thermoplastic resin keys
Installation	panel mounting with 71x29 mm (+0.2/-0.1 mm) drilling template
Display range	9999 hours / 99 hours and 59 minutes / 99 minutes and 59 seconds / 99 seconds and 99 hundredths of a second
Display	no decimal point * 4 digits + sign
Digital inputs	2 clean contacts at extra low safety voltage
Connectivity	TTL port for connection to Copy Card and TelevisGo
Digital outputs	1 SPDT 8(3)A 1/2 hp 250 Vac 1 SPST 8(3)A 1/2 hp 250 Vac
Accuracy	3.6 sec/h
Power consumption	3 VA max
Power supply	12 Vac/dc or 24 Vac or 230 Va ±10 % 50/60 Hz
External battery	• 9 Vdc power supply • battery duration: depends on model, with 9 Vdc/10 mA/h battery duration 1h • instrument absorption when powered by battery 10 mA
Operating temp.	-5…55 °C
Storage temp.	-30…85 °C
Ambient humidity for operation and storage	10...90 % RH (non-condensing)

* selectable by parameter

Wiring diagrams

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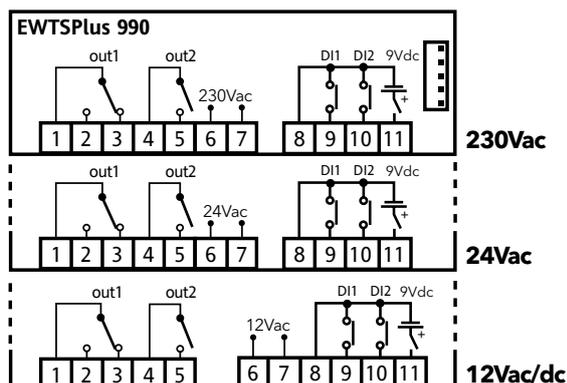
EWCM 400D PRO

Compact controllers for compressor racks

Code	Product	Description
EPDT1PCR2400A	EWCM 436D PRO /A-CRII W/CABLES 1 (DIN)	EWCM 436D PRO specifically for CRII compressors
EPDT1PSTD400A	EWCM 436D PRO /A-STD W/CABLES 1 (DIN)	For compressors: with steps, Digital Scroll and Inverter. Expandable with EXP 455D PRO
EPD01PSTD400A	EWCM 455D PRO /A-STD W/CABLES 1 (DIN)	
EPE01PSTD400A	EWCM 455P PRO /A-STD W/CABLES 1 (Panel)	

Accessories

Code	Product	Description
EP5500000400A	EXP 455D PRO W/CABLES 2	I/O expansion
SKP1000000000	SKP 10	Display / Optional remote keypad
COLV0000E0100	WIRING LV FREE/FLEX 1 m 20 WAY	I/O Wiring
COLV000042100	WIRING WIRING OUT 4WAY 1 m	Analogue output wiring
COLV000035100	WIRING RS485 FREE/FLEX 1 m	RS-485 serial wiring

Description and main functions

The range of controllers for **EWCM 400 PRO** compressor racks is designed to manage central cooling with up to 4 compressors, one of which with variable capacity, of the type CRII, Digital Scroll™, or via inverter.
The controller also manages the condenser fans, modulated via inverter or with up to 4 steps (in /STD models, 2 steps in /CRII models).
Further functions for optimal condensation management include the floating setpoint, which minimises consumption in accordance with the outside environment, and noise reduction management, which can be used to specify a different setpoint at night for the fans.
An additional regulator, which can be configured on analogue or digital output, rounds off the options for flexible control.
For CRII series compressors, a dedicated version is available, EWCM 436D PRO /A-CRII, which directly controls the capacity modulating valves.

Technical data	EWCM 436D PRO	EWCM 455P PRO	EWCM 455D PRO	EXP 455D
Dimensions	front panel 70.2x87 mm, depth 61.6 mm	front panel 74x32 mm, depth 60 mm	front panel 70.2x87 mm, depth 61.6 mm	
Installation	on DIN Omega bar support	panel mounting with 71x29 mm drilling template	on DIN Omega bar support	
Analogue inputs	3 configurable analogue inputs, clean contact digital, NTC 2 configurable analogue inputs, voltage / current mode, clean contact digital inputs			
Digital inputs	6 clean contact digital inputs			
Analogue outputs	1 PWM analogue output (2) low voltage (SELV) 2 analogue outputs 0 ... 10 V, low voltage (SELV) 1 analogue output 0 ... 10 V / 4 ... 20 mA / 0 ... 20 mA, low voltage (SELV)			
Digital outputs	3 relay outputs 2 A - 230 Vac			
TRIAC outputs	2 TRIAC outputs 3 A - 230 Vac	-		
Expansion bus	Bus for expansion module EXP 455D			
User interface	remote keypad SK 10			-
Monitoring	isolated RS-485 serial port with Modbus RTU system protocol			-
Power supply	12/24 Vac 24 Vdc non-isolated			
Power consumption	6 VA			
Operating temp. and humidity	-20…55 °C 10…90 % (non-condensing)			

EWCM 4120 - 4150 - 4180

32x74 controllers for compressor racks

Code	Product	Variant with cables included
EM6A12001EL10	EWCM4120 /C	EM6A12001EL11
EM6A22105EL10	EWCM4150 /C	EM6A22105EL11
EM6A22101EL10	EWCM4180 /C	EM6A22101EL11
Kit Options		
EM6A12001EL13	EWCM 4120/C KIT	for more information, please refer to the kit table
EM6A22101EL16	EWCM 4180/C KIT	for more information, please refer to the kit table

Description and main functions

The **EWCM4000** range, which consists of three different controllers, is the ideal solution for small and medium-sized compressor racks, where **ease of use**, **high control reliability** and **versatility** are essential features for meeting all operational requirements in compressor rack management.

✔ **Control of a single circuit up to 4 compressors, one of which can be modulated via inverter**
✔ **Condensation control with inverter fan or up to 4 digital fans**
✔ **User interface and navigation menu have configurable visibility profiles**

Technical data	EWCM 4120	EWCM 4150	EWCM 4180
Dimensions	front panel 32x74 mm, depth 70 mm		
Installation	panel-mounted, with 71x29 mm hole		
Analogue inputs	2 4...20 mA / ratiometric 0...5 V / 0...10 V / NTC / D.I.*		
Digital inputs	7 SELV contacts		
Analogue outputs	• TRIAC • PWM - Open Collector -	- • 2 PWM - Open Collector • 0...10 V / 4...20 mA / 0...20 mA*	- • 2 PWM - Open Collector • 0...10 V / 4...20 mA / 0...20 mA*
Digital outputs	4 SPST 2A 250 Vac + Open Collector	5 SPST 2A 250 Vac + Open Collector	5 SPST 2A 250 Vac + Open Collector
User interface	4-digit LED display		
Connectivity	TTL port for connection to Copy Card and TelevisGo (via optional module)		
Clock	present		
Power consumption	5 VA max		
Operating temp. and humidity	-5…60 °C 10…90 % RH (non-condensing)		
Power supply	12 Vac ±10 % 50/60 Hz		

* selectable by parameter

KIT

Code	Description	Details
EM6A12001EL13	EWCM 4120/C KIT	1 x EM6A12001EL11 - EWCM 4120/C with cables 1 x TF411225 - transformer 220/12 5VA 50/60 Hz 1 x TD220007B - EWPA 007 4/20mA - 0,5/7 BAR 1/4 SAE MALE Cbl 2M transducer
EM6A22101EL16	EWCM 4180/C KIT	1 x EM6A22101EL11 - EWCM 4180/C with cables 1 x TF411200 - transformer 230/12 5 VA protected 1 x TD420030B - EWPA 030 R 0/5 V 0/30BAR ratiometric transd. 1 x TD420010B - EWPA 010 R 0/5 V 0/10BAR ratiometric transd. 2 x WIRE EWPA 2 m R 0/5 V for ratiometric transd.

Wiring diagrams

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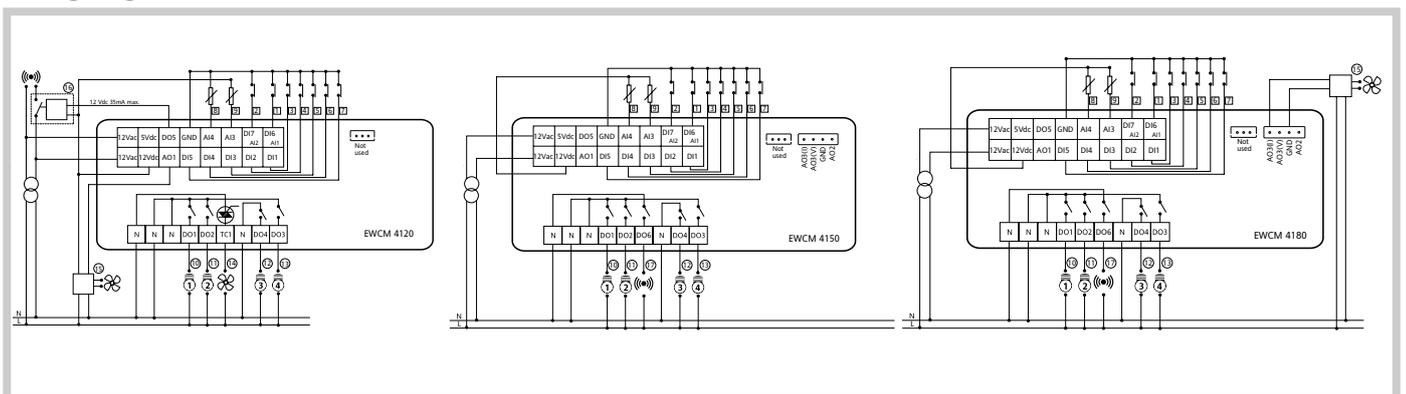
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In the commerce sector, fresh food product sales are definitely where energy is used most. Technologies are now available which can give you substantial power savings – up to 24% of the plant's energy bill.

Energy saving solutions must also satisfy the sector's basic requirements, with special attention for food quality as provided by HACCP regulations and European standards (EN13845- EN12830) governing fresh and frozen food products.

Eliwell, always attentive to the needs of the sector, offers a product range combining energy efficiency with storage quality and excellent presentation of stored products. For Eliwell, eco-sustainability also means offering open solutions capable of integrating a variety of system components, including lighting, air conditioning and domestic water into a single solution, depending on the installation's characteristics and location.

DOMINO
The refrigeration solution

Applications for efficient and sustainable food retail

Up to 25% more efficient

less investment, less space,
less maintenance

**Discover
the solution**

DOMINO CO2 transcritical system

Control solution for transcritical CO2 applications

Code		Description	Notes
EPB01FCTA500	①	EWCM 9000 PRO-HF 42D /CO2T ISOL	Built-in HMI, relay outputs
EPBS1FCTA500		EWCM 9000 PRO-HF 42D SSR /CO2T ISOL	Built-in HMI, relay outputs and SSR
EP4000000B00	③	EXP 4D PRO 14 I/O	Expansion, relay outputs
EP4S0024V500	④	EXP 4D PRO SSR-24 25 I/O	Expansion, relay outputs and SSR 24 V
EP4S00LIV500		EXP 4D PRO SSR-MAINS 25 I/O	Expansion, relay outputs and SSR 250 V
EPKE10000000	②	EVK PRO MONOCHROME DISPLAY -20C	remote HMI
EVEVD2B000500	⑤	EEVD Exp. 2 EEV Bipolar	Expansion for 2 bipolar valve drivers
EVEVDBA000000	⑥	EEVD battery backup	Backup module for 1 valve
EWKRTZX1E00		RTX 600 /V DOMINO ZERO KIT KDEPlus	Kit with keypad, Pulse
EWKRTZX1X00		RTX 600 /V COLD ROOM PANEL KIT 100-240 V	Cold room panel, Pulse
EWKRTZS3E00		RTX 600 /VS DOMINO ZERO P.PACK KIT KDEPlus	Kit with keypad and backup, Stepper
EWKRTZS3X00		RTX 600 /VS POWER-PACK PANEL KIT 100-240 V	Cold room panel with backup, Stepper
RTZX0S1H00	⑦	RTX 600 /V DOMINO ZERO	Controller only, Pulse
RTZS0S3H00	⑧	RTX 600 /VS DOMINO ZERO POWER-PACK	Controller with backup, Stepper
KDE400E004000		KDEPlus 32x74 AMBER SCREW/JST	Keypad, panel mounting
KDX5H0R0000		KDX 500 100-240 V	Small cold room panel
KDX5HDR0000		KDX 500 4D 100-240 V	Small cold room panel, 4 DIN modules
KDX5KDR0000	⑨	KDX 5000 100-240 V	Large cold room panel

Description and main functions

DOMINO is the Eliwell solution **responding to the sustainability and efficiency needs** of all players in the food distribution sector: refrigerator installers, maintenance companies and manufacturers of refrigeration equipment, who are looking for efficient systems that are easy to install and maintain over time with recognised solutions. DOMINO combines evaporation and compression controls to **optimise refrigeration performance**, working at the highest and most stable suction pressure possible and adapting to any climatic zone even with standard compressor rack designs.

✔ **Efficiency for supermarkets and cold stores**
✔ **Integrated Refrigeration and HVAC solution**
✔ **Adaptive control for stable system operation**
✔ **Stable suction pressure improves system reliability**

Functional diagram

EWCM 9000 PRO DOMINO
CO2 Booster/Parallel compression Rack

RTX 600 DOMINO ZERO
Cabinets & Cold Rooms superheat control with Pulse and Stepper EEV

EWCM 9000 PRO DOMINO /CO2T

Controller for transcritical CO2 racks

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Code		Description	Notes
EPB01FCTA500	❶	EWCM 9000 PRO-HF 42D /CO2T ISOL	Built-in HMI, relay outputs
EPBS1FCTA500		EWCM 9000 PRO-HF 42D SSR /CO2T ISOL	Built-in HMI, relay outputs and SSR
EP4000000B00	❸	EXP 4D PRO 14 I/O	14 I/O expansion, relay outputs
EP4S0024V500	❹	EXP 4D PRO SSR-24 25 I/O	Expansion, relay outputs and SSR
EP4S00LIV500		EXP 4D PRO SSR-MAINS 25 I/O	Expansion, relay outputs and SSR (110-230 V)
EPKE10000000	❷	EVK PRO MONOCHROME DISPLAY -20C	remote HMI
EVEVD2B000500	❺	EEVD Exp. 2 EEV Bipolar	Expansion for 2 bipolar valve drivers
EVEVDBA000000	❻	EEVD battery backup	Backup module for 1 valve

Description and main functions

The **EWCM 9000 PRO-HF** controller for compressor racks, along with **RTX 600 DOMINO ZERO** and **TelevisGo**, is part of Eliwell DOMINO, the solution for **sustainable refrigeration systems** based on the use of carbon dioxide (CO2) as a natural refrigerant. EWCM 9000 PRO-HF /CO2T can be completely configured to control transcritical CO2 systems in commercial and industrial applications.

Based on **booster** and **parallel compression configuration**, it can be expanded to control 2 circuits, parallel compression, heat recovery and sub-cooling. EWCM 9000 PRO, with its EVEVD valve and backup drives, is **compact** to save space in the panel, and is also open to controlling the most well-known valve brands.

With up to 3 modulating compressors with inverter, which can be configured for each circuit, EWCM 9000 PRO-HF is designed to **optimise system efficiency and pressure stability**, minimising wear on the mechanical components and the need for maintenance.

Its extensive diagnostic ability makes **EWCM 9000 PRO-HF easy to maintain**, with full **remote management** via TelevisGo, and easy to configure using the tools Device Manager and Free Studio Installer for graphical I/O configuration and fine-tuning.

✔ **2 circuits (LT/NT or NT/NT) up to 9 NT, 8 LT compressors**
✔ **Parallel booster/compression management up to 4 compressors**
✔ **3 modulating compressors with inverter for every circuit**
✔ **Dual compact valve driver with backup**
✔ **Dual modulating heat recovery**
✔ **Sub-cooling with bypass**

Technical data	EWCM 9000 PRO-HF	EWCM 9000 PRO-HF SSR	EVK PRO DISPLAY
Dimensions	front panel 144 x 110 mm, depth 60 mm		front panel 190 x 96 mm, depth 9.9 mm, total depth 29 mm
Power supply	24 Vac / 20...38 Vdc isolated		24 Vac / 24 Vdc
Power consumption	35 VA / 15 W		3 VA / 2 W
Operating temperature	-20…65 °C		-20…55 °C
Analogue inputs	12 configurable inputs: NTC -40..137 °C DI NTC -50..110 °C PT1000 -200..850 °C PTC -55..150 °C 0-20 mA 4-20 mA 0-10 V / 0-5 V 0-5 V ratiometric		-
Digital inputs	10 SELV +24 V ac/dc opto isolator inputs 2 rapid opto isolator inputs, up to 2 kHz		-
Analogue outputs	4 outputs 0-10 V 2 configurable outputs: 0-10 V 4-20 mA Open Collector		-
Digital outputs	10 3 A SPST +250 V a.c. relays 2 1 A SPDT +250 V a.c. relays	8 3 A SPST +250 V a.c. relays 2 1 A SPDT +250 V a.c. relays 2 SSR x 0.5 A +240 V a.c.	-
Display	Graphic backlit LCD 128x64px 4 status LEDs 4 buttons		Graphic backlit LCD 128x64px 3 status LEDs 5 buttons
Connectivity	CAN Bus expansion 2 x RS 485 serial ports, Modbus RTU protocol 1 USB type A (Host) Mass Storage (FAT32) 1 mini USB type B (Device) for connection to PC, 1 Ethernet 10 port, Modbus/TCP and web server protocol		CAN Bus expansion
Memory	MicroSD expansion slot for cards up to 16 GB		-

EWCM 9000 PRO DOMINO /CO2T

Controller for transcritical CO2 racks

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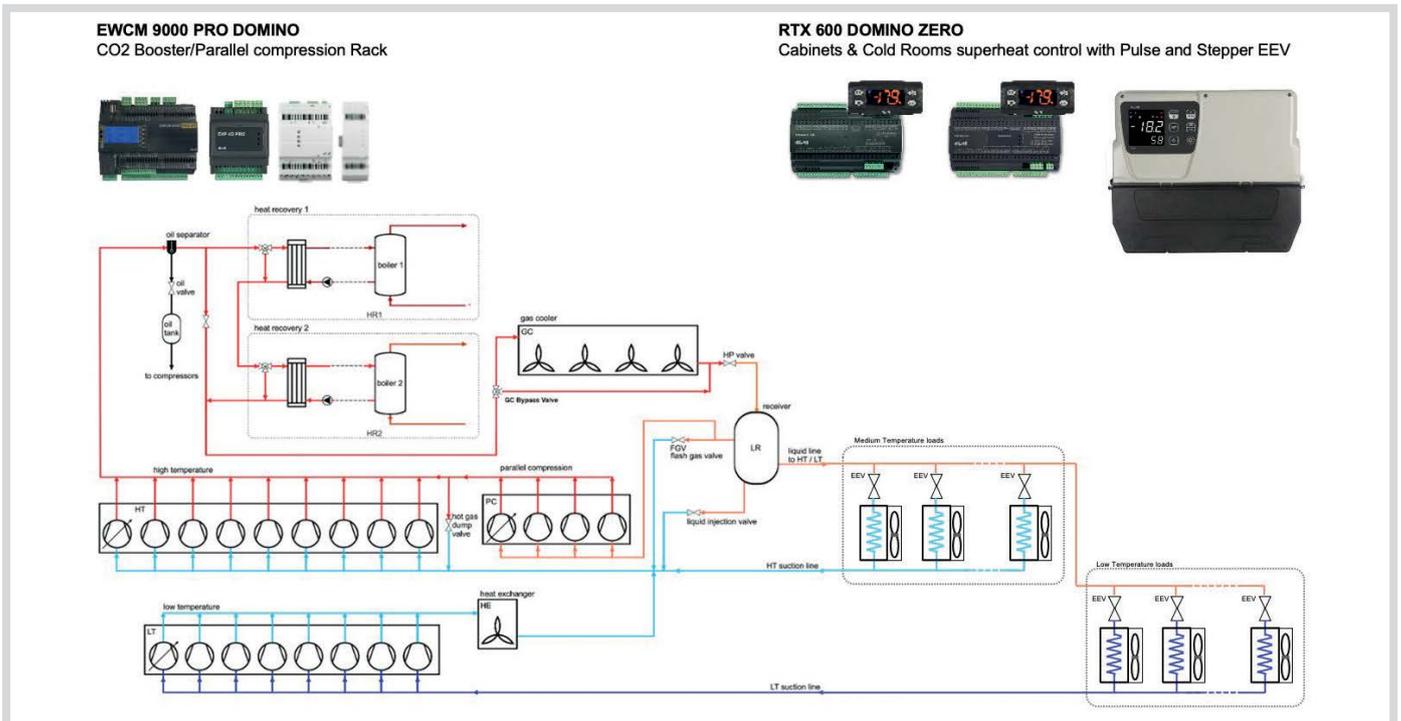| Code		Description	Notes
EPB01FCTA500	❶	EWCM 9000 PRO-HF 42D /CO2T ISOL	Built-in HMI, relay outputs
EPBS1FCTA500		EWCM 9000 PRO-HF 42D SSR /CO2T ISOL	Built-in HMI, relay outputs and SSR
EP4000000B00	❸	EXP 4D PRO 14 I/O	14 I/O expansion, relay outputs
EP4S0024V500	❹	EXP 4D PRO SSR-24 25 I/O	Expansion, relay outputs and SSR
EP4S00LIV500		EXP 4D PRO SSR-MAINS 25 I/O	Expansion, relay outputs and SSR (110-230 V)
EPKE10000000	❷	EVK PRO MONOCHROME DISPLAY -20C	remote HMI
EVEVD2B000500	❺	EEVD Exp. 2 EEV Bipolar	Expansion for 2 bipolar valve drivers
EVEVDBA000000	❻	EEVD battery backup	Backup module for 1 valve

Technical data	EXP 4D PRO	EXP 4D PRO SSR-24/ MAINS	EEVD Exp. 2 EEV Bipolar	EEVD battery backup
Dimensions	front panel 70.2 x 87 mm, depth 61.6 mm	front panel 72 x 110 mm, depth 59 mm	front panel 72 x 110 mm, depth 60 mm	front panel 36 x 110 mm, depth 60 mm
Power supply	24 Vac / 24 Vdc not isolated	24 Vac / 20...38 Vdc isolated		from EEVD Exp
Power consumption	16 VA / 7 W	13 VA / 9 W	35 VA / 30 W	-
Operating temperature	-10…60 °C	-20…65 °C		-20…60 °C
Analogue inputs	4 configurable inputs: NTC -40..137 °C DI NTC -50..110 °C PT1000 -200..850 °C PTC -55..150 °C 4-20 mA 0-10 V / 0-5 V	10 configurable inputs: NTC -40..137 °C DI NTC -50..110 °C PT1000 -200..850 °C PTC -55...150 °C 4-20 mA 0-10 V / 0-5 V	-	
Digital inputs	4 safety extra low voltage SELV	6 safety extra low voltage SELV		-
Analogue outputs	2 x 0-10 V			-
Digital outputs	3 x 3 A SPST +250 V a.c. relays 1 x 1 A SPDT +250 V a.c. relay	4 3 A SPST +250 V a.c. relays 2 SSR with: Mod 24: 0.5 A +240 V a.c. Mod MAINS: 2 A 24 Vac/Vdc		-
Valve driver output	-		2 x bipolar valve	-
Backup capacity	-		maximum 2 backup modules	supports 1 valve
Connectivity	CAN Bus expansion			-

EWCM 9000 PRO DOMINO 42D (HF) (SSR)

Ethernet Port

USB Port

Slot for memory card (Micro SD)

EXP 4D PRO

EVK PRO Display

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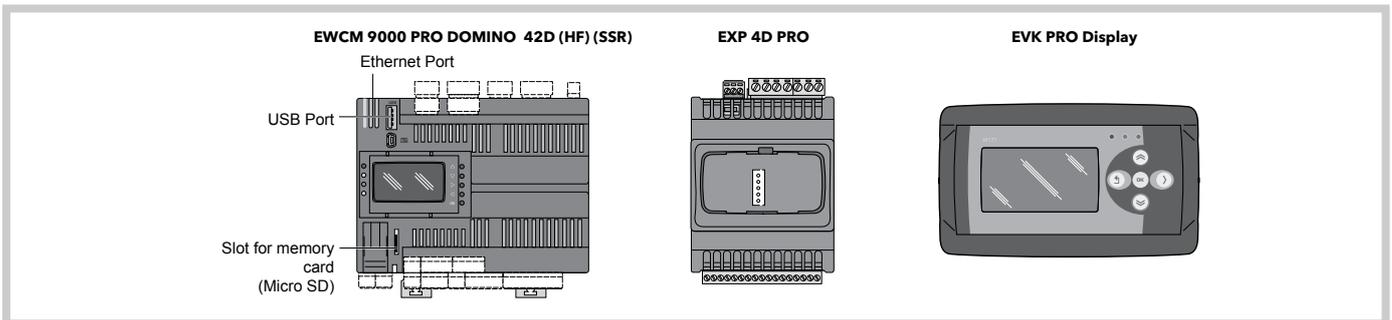
EWCM 8900 - 9100 - 9900 EO

DIN controllers for compressor racks

CO₂ APPLICATIONS

Code		Description	Details
EM32AG2*0GH00	❷	EWCM 8900 EO	13 DIN, traditional refrigerants
EM32AG2*1GH00		EWCM 8900 EO HFO	13 DIN, new set of refrigerants
EM32BH2*0GH00		EWCM 9100 EO	13 DIN, traditional refrigerants
EM32BH2*1GH00		EWCM 9100 EO HFO	13 DIN, new set of refrigerants
EM83CI3*0GH00	❸	EWCM 9900 EO	18 DIN, traditional refrigerants
EM83CI3*1GH00		EWCM 9900 EO HFO	18 DIN, new set of refrigerants
EMK0000B0G000	❶	spare keypad ENG/ITA	
CO000029		3 m keypad-base cable	
CCA0BUI02N000		USB Copy Card	

The letter in this position indicates the languages available for the code:
A: ITA/ENG; B: ENG/ITA; C: FRA/ENG; D: ESP/ENG; F: GER/ENG; O: RUS/ENG; Q:TUR/ENG
Keypad included.

Description and main functions

The new series of controllers for **EWCM EO** (Environmentally Optimised) compressor racks provides **a single solution to temperature control in refrigeration systems**. The external keypad with graphic LCD and the rapid parameter configuration menu offer greater accessibility and make it **easier for the operator to configure parameters and access data**. Energy saving is guaranteed thanks to the dedicated control algorithms.
• Sub-critical CO2 management, glycol, HFC and HFO
• Racks managed in cascade with V910 Plug & Play module
• Advanced management of racks with inverter
• Rapid configuration tool for DeviceManager PC
Updates for glossaries, applications, and the constantly updated list of compatible refrigerants are available in the reserved area of www.eliwell.com.

List of pre-configured refrigerants

• Traditional refrigerants   R22, R134a, R502, R404A, R407C, R507, R717 (Ammonia), R410A, R417a, R744 (CO2), R407A, R407F, R290, R427, R600A, R23
• New set of refrigerants   R434A, R134a, R448A (N40), R404A, R407C, R427A, R717 (Ammonia), R410A, R452A, R744 (CO2), R449A (XP40), R450 (N13), R407A, R513A (XP10),

Technical data	EWCM 8900	EWCM 9100	EWCM 9900
Container	PC+ABS UL94 V-0 plastic resin casing, 13 DIN modules (227.5x110x60 mm)		PC+ABS UL94 V-0 plastic resin casing, 18 DIN modules (315x110x60 mm)
Installation	on DIN Omega bar support		
Analogue inputs	4 NTC/NTC extended/PTC/D.I.+ 2 in high precision current mode (4...20 mA / 0...5 V / 0...10 V)		4 NTC/NTC extended/PTC/D.I.+ 2 in high precision current mode (4...20 mA / 0...5 V / 0...10 V) + 1 in current/voltage mode (4...20 mA / 0...5 V / 0...10 V)
Digital inputs	6 voltage (100...240 Vac)	10 live voltage (100...240 Vac) + 4 configurable voltage-free	14 live voltage (100...240 Vac) + 6 configurable voltage-free
Analogue outputs	2 voltage/current (0...10 V/4...20 mA)		3 voltage/current (0...10 V/4...20 mA)
Digital outputs	6 SPST 5(2)A 250 Vac + 1 SPDT 8(3)A 250 Vac	11 SPST 5(2)A 250 Vac + 2 SPDT 8(3)A 250 Vac	17 SPST 5(2)A 250 Vac + 2 SPDT 8(3)A 250 Vac
Connectivity	• TTL port for connection to CopyCard USB • RS-485 for connection to TelevisGo and Modbus RTU systems • RS-485 EXP for pulse/stepper driver connection (V800/V910)		
Display	LCD on external keypad		
Functions	inverter control both in suction and discharge		
Clock	present		
Power consumption	20 W		
Power supply	100...240 Vac ±10 % 50/60 Hz		
Operating temperature and humidity	-5…55 °C 10…90 % RH (non-condensing)		

Wiring diagrams

EWCM8900/9100

EWCM9900

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Subcritical CO$_2$ cascade system

Motorised electronic valve control

Code	Description		Details
EVD4A31BS2100	V910 V3 EEVD step valve 24 V RS485	❶	EEV driver module with dual PID controller
SKP1000000000	SKP10 - Configuration keypad	❷	Keypad for configuration
DMI100x002000*	Device Manager Interface		

*x=1: End User; x=2: Service; x=3: Manufacturer

Description and main functions

The **V910 driver** for motorised electronic valve control is designed for **optimal control** of heat exchangers in CO2 subcritical cascade systems in combination with HFC and HFO refrigerants.
Its **flexibility** makes it ideal for controlling hot gas bypass systems, compressor discharge temperature / pressure and liquid subcooling.
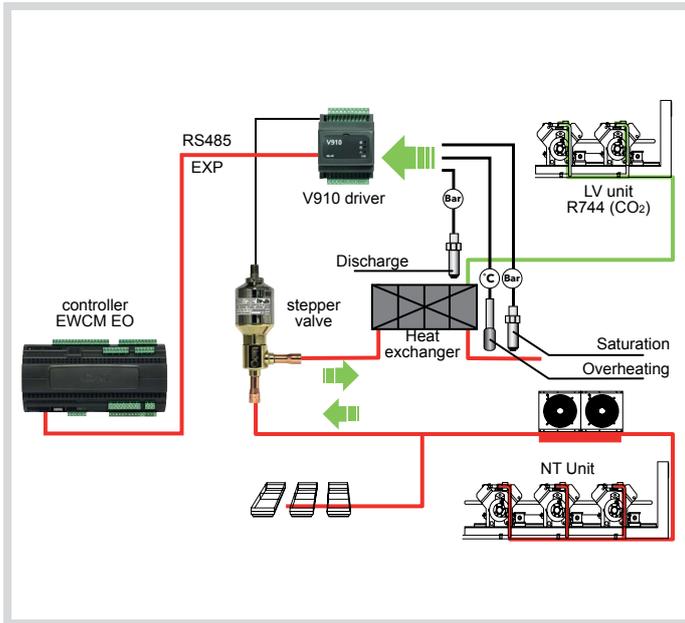
Solution integrated with EWCM 8/9000 EO

The high-precision PID control of the V910 module is integrated with the EWCM 8/9000 EO series controllers through the dedicated serial port to share real-time configuration and heat exchanger control status, also through the TelevisGo supervision system.
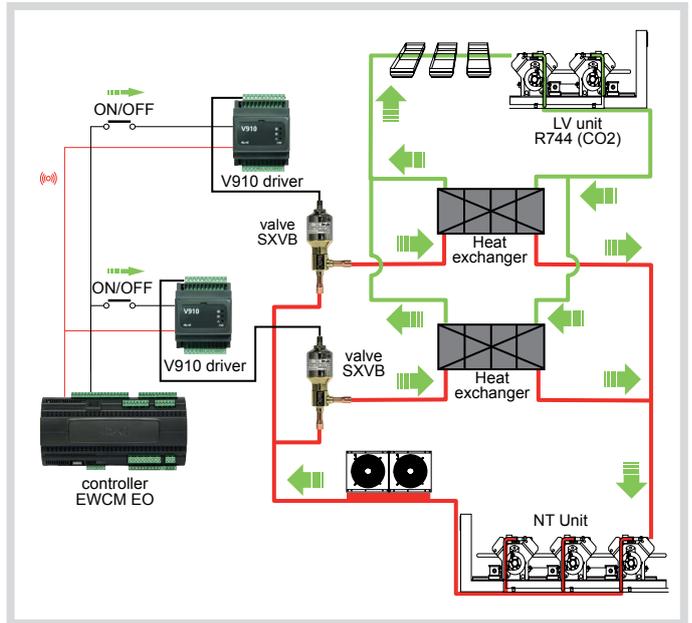
Solution for dual heat exchanger

V910 is also designed for independent operation from the central controller, thus providing the option for configurations with multiple heat exchangers in series or parallel to provide better power modulation and greater safety thanks to a redundant configuration.

Wiring diagram

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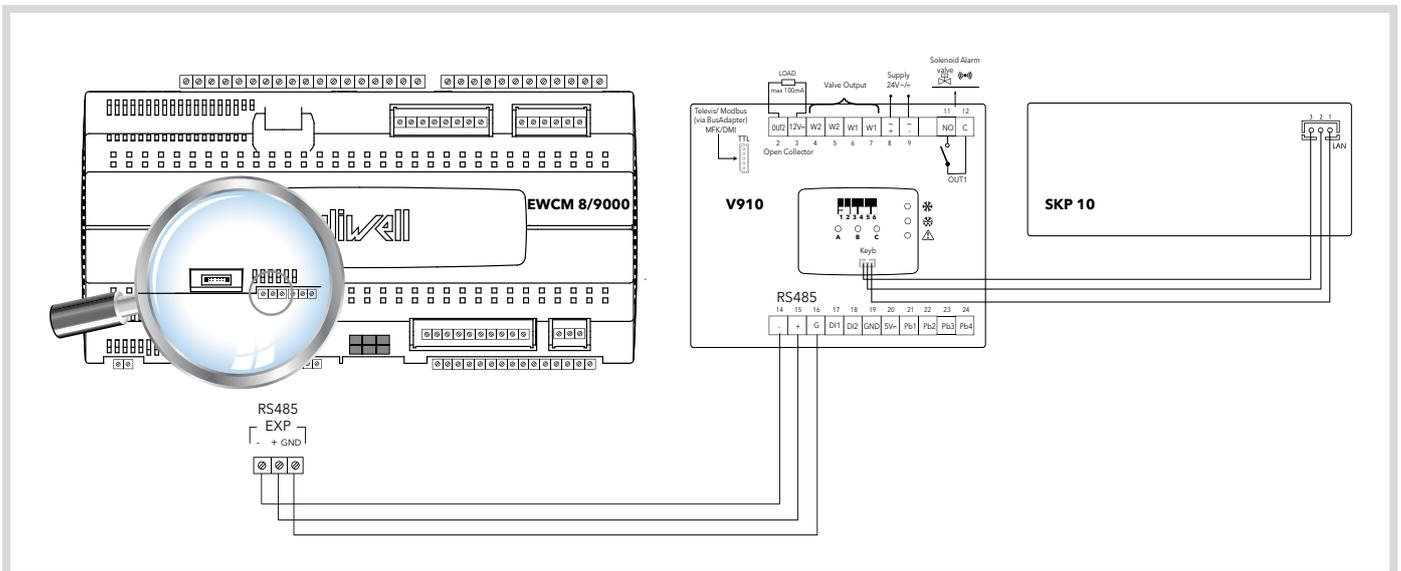
RTX 600 /V DOMINO ZERO - RTD 600 /V DOMINO ZERO

DIN controllers for remote counters and cold rooms with pulse EEV

Code	Product	Description
RTZX0S1H00 ①	RTX 600 /V DOMINO ZERO	Electronic control for refrigerated cabinets
RTZD1S1H00 ②	RTD 600 /V DOMINO ZERO VERT CONN	Electronic control for refrigerated cabinets
Kit Options		
EWKRTZX1E00	RTX 600 /V DOMINO ZERO KIT KDEPlus	Electronic control for refrigerated cabinets + Display
EWKRTZX1X00 ③	RTX 600 /V COLD ROOM PANEL KIT 100-240 V	Cold room kit
Accessories (details and pictures on page 43)		
KDE400E004000	KDEPlus 32x74 AMBER SCREW/JST	Remote display for RTX 600
EH000050V4000	ECHO PLUS AMBER 5 m CABLE	Remote display for RTX 600
KDX5H0R0000	KDX 500 100-240 V	User interface for cold rooms with electronic control, family RTX 600 DOMINO ZERO (/V and /VS)
KDX5HDR0000	KDX 500 4 DIN 100-240 V	User interface for cold rooms with electronic control, family RTX 600 DOMINO ZERO (/V and /VS)

Description and main functions

RTX 600/V DOMINO ZERO and **RTD 600/V DOMINO ZERO** are designed to fully control remote counters and cold rooms with electronic expansion valve in single or multiple evaporator configurations.
The innovative **adaptive control** algorithm of DOMINO ZERO allows operation at low overheating values with all refrigerants (and with flooded evaporators for managing high-efficiency CO2 systems), optimising evaporator usage and reducing energy consumption.
The **smart defrost** functions also help to save energy while improving food storage.
If there are several evaporators, the user can connect different controllers between them via Link2 plug-n-play for quick and easy configuration.
RTX 600/V DOMINO ZERO and RTD 600/V DOMINO ZERO controllers are ideal for Eliwell PXV electronic expansion valves and can be interfaced with KDTPlus and KDEPlus keypads, the ECHO Plus display module and the KDX designed specifically as a control panel for cold rooms.

Technical data	RTX – RTD 600 /V DOMINO ZERO
Container	PC+ABS resin casing, UL94 V-0 **RTX 600/V**: with cover **RTD 600/V**: without cover
Dimensions	10 DIN modules
Installation	on DIN Omega bar support
Display range	NTC: -50.0...110.0 °C | PTC: -55.0...150.0 °C | Pt1000: -60...150.0 °C
Analogue/digital inputs	5 NTC/PTC/Pt1000/D.I.* 1 4...20 mA/D.I.* 1 ratiometric/D.I.* + 1 D.I. voltage-free
Connectivity	• 1 live voltage serial for keypad • 1 live voltage serial for LAN • 1 RS-485 for connection to TelevisGo and Modbus RTU systems • 1 TTL port for connection to Unicard and DeviceManager (via DMI)
Digital outputs	2 SPST 12(5)A max 230 Vac 2 SPDT 12(5)A + 8(4)A max 230 Vac 1 SPST 8(4)A max 230 Vac 1 multifunction O.C.: 12 Vdc 20 mA 1 SSR 100…240 Vac/dc; Imax=300 mA
Analogue outputs	1 D.A.C. multifunction: 0...10 V - 4...20 mA
Accuracy	better by 1.0 %
Resolution	1 or 0.1 °C
Power supply	SMPS 100...240 Vac ±10 % 50/60 Hz
Power consumption	7.5 W max
Operating temperature and humidity	-5…50 °C 10…90 % RH (non-condensing)

* selectable by parameter

Wiring diagrams

RTX 600 /V DOMINO ZERO TP

DIN controller for remote counters and cold rooms with dual pulse EEV

Code	Product
RTZT0S1H02	RTX 600 /V DOMINO ZERO TP

Description and main functions

RTX 600/V DOMINO ZERO TP (Twice Pulse) is a controller designed to control remote counters and cold rooms with dual evaporator with electronic expansion valve.
The **management of the dual evaporator in a single controller** significantly reduces the amount of space required in the electrical panel, as one electronic valve is controlled via the built-in output and a second via an external SSR relay.
RTX 600/V DOMINO ZERO TP is used in conjunction with Eliwell PXV electronic expansion valves (EEVs) and can interface with KDTPlus and KDEPlus keypads, the ECHO Plus display module and the KDX electrical panel, designed specifically as a control panel for cold rooms.

Technical data	RTD 600 /V DOMINO ZERO TP
Container	PC+ABS resin casing, UL94 V-0
Dimensions	10 DIN modules
Installation	on DIN Omega bar support
Display range	NTC: -50.0...110.0 °C | PTC: -55.0...150.0 °C | Pt1000: -60...150.0 °C
Analogue/digital inputs	5 NTC/PTC/Pt1000/D.I.* 1 4...20 mA/D.I.* 1 ratiometric/D.I.* + 1 D.I. voltage-free
Connectivity	• 1 live voltage serial for keypad • 1 live voltage serial for LAN • 1 RS-485 for connection to TelevisGo and Modbus RTU systems • 1 TTL port for connection to Unicard and DeviceManager (via DMI)
Digital outputs	2 SPST 12(5)A max 230 Vac 2 SPDT 12(5)A + 8(4)A max 230 Vac 1 SPST 8(4)A max 230 Vac 1 multifunction O.C.: 12 Vdc 20 mA 1 SSR 100…240 Vac/dc; Imax=300 mA
Analogue outputs	1 D.A.C. multifunction: 0...10 V - 4...20 mA
Accuracy	better by 1.0 %
Resolution	1 or 0.1 °C
Power supply	SMPS 100...240 Vac ±10 % 50/60 Hz
Operating temperature and humidity	-5…50 °C 10…90 % RH (non-condensing)

* selectable by parameter

Wiring diagrams

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RTX600

DIN controllers for counters and cold rooms with thermostatic valve

Code	Product	Description
RTX5HBM0S2H00 ❶	RTX600	Electronic control for refrigerated cabinets
KDE400E004000 ❷	KDEPlus	Remote display for RTX 600
EH000050V4000 ❸	ECPlus	Remote display for RTX 600

Description and main functions

RTX600 is an electronic device specifically designed for plug-in applications, with thermostatic valve. The RTX600 controller can be interfaced with KDEPlus keypads and the ECPlus display module.

The relays with up to 2 hp allow **direct load control**, managing logic for frame heating elements and demisting heaters. Defrosts are managed efficiently via scheduling to improve food storage and save energy.

If there are several evaporators, the user can connect different controllers between them via Link2 plug-n-play for quick and easy configuration.

Technical data	RTX600
Container	PC+ABS resin casing, UL94 V-0
Dimensions	10 DIN modules
Installation	on DIN Omega bar support
Display range	NTC: -50.0...110.0 °C | PTC: -55.0...150.0 °C | Pt1000: -60.0...150.0 °C
Analogue/digital inputs	5 NTC/PTC/Pt1000/D.I.* 3 D.I.* voltage-free
Connectivity	• 1 live voltage serial for keypad • 1 live voltage serial for LAN • 1 RS-485 for connection to TelevisGo and Modbus RTU systems • 1 TTL for connection to Unicard / DeviceManager (via DMI)
Digital outputs	1 SPST 2 hp max 240 Vac 1 SPST + 1 SPDT 1 hp max 250 Vac 1 SPDT 8(4)A max 250 Vac 2 SPST 8(4)A max 250 Vac 1 O.C. 12 VC 20 mA
Analogue outputs	1 D.A.C. 0...10 V - 4...20 mA
Accuracy	better by 1.0 %
Resolution	1 or 0.1 °C
Power supply	SMPS 100...240 Vac ±10 % 50/60 Hz
Power consumption	7.5 W max
Operating temperature and humidity	-5…50 °C 10…90 % RH (non-condensing)

* selectable by parameter

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KDENext - KDEPlus - ECNext - ECHO Plus - KDTPlus - KDX

User interface for RTX, RTD, RTN series controllers

Code		Description
KDE400E004000	❷	KDEPlus AMBER
EH000050V4000	❶	ECHO PLUS AMBER 5 m CABLE
KDT6HB0F17080	❻	KDTPlus STD WHITE
KDT6VBWF17080	❸	KDTPlus
KDX5H0R0000	❾	KDX 500 100-240 V
KDX5HDR0000	❽	KDX 500 4 DIN 100-240 V
KDX5KDR0000	❼	KDX 5000 100-240 V
EH000090V7000	❹	ECNext White 3 m 12 V
KDNP60WA110A180	❺	KDENext P 6 Keys White

Description and main functions

A wide range of interfaces makes it possible to adapt to several applications and allows you to customise the appearance of counters and cold rooms.
The **KDX** series, designed specifically for cold rooms, offers further remote I/Os to integrate multiple functions in an easy-to-use user interface.
The new **KDENext** devices, in addition to their modern design, offer 6 touch keys for direct access to the main functions. A remote display **ECNext** is also available.

Technical data	KDEPlus	ECPlus	KDTPlus STD	KDTPlus	KDENext	ECNext
Container	PC+ABS UL94 V-0 resin casing, poly-carbonate window, thermoplastic resin keys	PC+ABS UL94 V-0 resin casing, polycar-bonate glass	polymethylmethacrylate (PMMA) front panel		UNIBODY front panel with built-in seal	PC+ABS UL94 V-0 resin casing, polycar-bonate glass
Dimensions	front panel 74x32 mm, depth 30 mm	front panel 48x28.6 mm, depth 15 mm	front panel 180x40 mm, depth 1.5 mm	front panel 87x135 mm, depth 1.5 mm	front panel 74x32 mm, depth 30 mm	front panel 48x28.6 mm, depth 15 mm
Installation	panel mounting, with 71x29 mm (+0.2/-0.1 mm) drilling template	panel mounting, with 45.9x26.4 mm drilling template (+0.2/-0.1 mm)	panel mounting, can be set for a distance of up to 100 m, with 150x31 mm drilling template	panel mounting, can be set for a distance of up to 100 m, with 67x120 mm drilling template	panel mounting, with 71x29 mm (+0.2/-0.1 mm) drilling template	panel mounting, with drilling template 45.9x26.4 mm (+0.2/-0.1 mm)
Keys	4 mechanical	-	6 capacitive touch keys		6 touch keys	-
Display	with decimal point ° 3 digits + sign, 8 icons					
Power supply	from power board					

* selectable by parameter ° selectable by parameter (from power board)

Technical data	KDX 500	KDX 500 4 DIN	KDX 5000
Dimensions	front panel 213 x 318 mm, depth 102 mm		front panel 450 x 380 mm, depth 160 mm
Installation	wall-mounted		
Keys	6 mechanical		
Display	1 main display with status icons 1 secondary display with temperature, humidity, %, PPM settings		
Power supply	SMPS 100...240 Vac (±10 %) 50/60 Hz Independent from controller		
Input	1 x analogue input 4…20 mA 2 digital inputs, voltage-free		
Output	Buzzer 1 x SPST Relay 1 x SPDT Relay		

EEV Pulse SYSTEM

EEV Pulse system entry level and for retrofit

Code	Description	Details
EVD2A43BSC000	V800 - P1	See model table
EVD2A53BSC000	V800 - P3	See model table
ID34DR4SCDH00	ID985 /V	See model table
WK1400100N000	IWK /V	See model table
EVK2A43BXC010	Standard kit	See kit table
EVK2A43BXC020	Starter kit	See kit table
DMI100x002000	Device Manager Interface	See accessories table

Description and main functions

The Electronic Expansion Valve (**EEV**) is designed to **maximise the energy saving** and **performance potential** of refrigerated cabinets in retail applications. The complete Eliwell solution consists of the EEV V800 driver, which can be connected to the IWK/V remote display device, and the ID 985/V electronic controller.

Technical data	V800	ID 985/V	IWK/V
Dimensions	front panel 70.2x87 mm, depth 61.6 mm	front panel 74x32 mm, depth 60 mm	front panel 74x32 mm, depth 30 mm
Installation	on DIN Omega bar support	panel mounting with 71x29 mm drilling template	
Display	-	no decimal point * 3 and a half digits + sign	no decimal point * 4 and a half digits + sign
Display range	-	-55.0...140.0 °C	
Analogue inputs	1 NTC/4-20 mA/0-5 V* 1 NTC/4-20 mA*	3 NTC/PTC*	-
Digital inputs	2 voltage-free		-
Connectivity	• TTL port for connection to CopyCard and TelevisGo • TTL port for connection to USB Copy Card and IWK/V • LAN port for connection to ID985/V • RS-485 serial port: Models/P1/P3	• TTL port for connection to CopyCard and TelevisGo • LAN port for connection to V800 • RS-485 serial port	• TTL port for connection to V800
Digital outputs	1 SPDT N.O. 5A 250 Vac, N.C. 2A 250 Vac 1 open collector max current 35 mA	1 SPDT 5(2)A 1/4 hp 250 Vac 3 SPST 3A 250 Vac	-
Analogue outputs	1 0...10 V max current 20 mA	-	
Accuracy	better than 0.5 % of integral scale + 1 digit		
Resolution	1 or 0.1 °C		
Power supply	100...240 Vac ±10 % 50/60 Hz		from V800
Power consumption	3 W max	2.5 W max	<1 W
User interface	10-way DipSwitch	LED display	
Operating temperature and humidity	-5…55 °C 10…90 % RH (non-condensing)		

* selectable by parameter

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EEV Pulse SYSTEM

EEV Pulse system entry level and for retrofit

Models

Code	Description	Details
EVD2A43BSC000	V800 - P1	230 Vac valve control. on-board RS485
EVD2A53BSC000	V800 - P3	230 Vdc valve control. on-board RS485
ID34DR4SCDH00	ID985 /V	Electronic controller with V800 driver control via LAN serial port
WK1400100N000	IWK /V	Remote terminal for parameter config., displ. I/O, alarms, etc.

Kit

Code	Description	Details
EVK2A43BXC010	Standard Kit	Includes: • 1 x ID985 /V • 1 x V800/P2 • 1 NTC 'FAST' probe (SN8P0X3002) • 1 ratiometric probe (TD420030B)
EVK2A43BXC020	Starter Kit	Includes: • 1 x ID985 /V • 1 x V800/P2 • 1 NTC 'FAST' probe (SN8P0X3002) • 1 ratiometric probe (TD420030B) • 1 USB Copy Card (CCA0BUI02N000) • 1 Device Manager CD (DMP1000002000) • 1 Device Manager Interface - DMI

Accessories

Code	Description	Details
DMI100x002000	Device Manager Interface	Hardware interface x=1: End User x=2: Service x=3: Manufacturer

Refrigerant compatibility

R404A - R22 - R410A - R134A - R744 (CO_2) - R507A - R717 (NH_3) - R290 - R407a - R448a - R449a - R450a - R513A

PULSE valve compatibility*

Model	Brand
PXV	Eliwell
AKV10	Danfoss
AKV15	Danfoss
AKV20	Danfoss
AKVA (NH3)	Danfoss
EX2	Standard Kit
HP130	Standard Kit
DS1120	Standard Kit

*if using other valves, contact Eliwell Technical Support

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PXV

Electronic pulse expansion valve

Description and main functions

The PXV solenoid operated expansion valve controls the flow of refrigerant to the evaporator by modulating the opening time of the valve element, allowing a wide range of power variation. Highly precise and reliable control of refrigerant flow increases the efficiency of the entire system. 9 interchangeable orifices are available, with power ratings from 1 kW to 24 kW. This valve must be piloted by a electronic driver. The typical application is in refrigeration systems, especially refrigerated counter displays of the kind used in supermarkets.

Technical data	PXVS	PXVM
System temperature (TS)	-40 °C ... 60 °C (-40 °F ... 140 °F)	-80 °C ... 60 °C (-112 °F ... 140 °F)
Ambient temperature (TA)	-40 °C ... 50 °C (-40 °F ... 122 °F)	-40 °C ... 50 °C (-40 °F ... 122 °F)
Open pressure differential (minimum OPD)	0 bar / 0 psi	
Maximum open pressure differential (MOPD)	Orifice 1-6: 35 bar (508 psi) Orifice 7: 24 bar (348 psi) Orifice 8-9 not available for PXVS models	Orifice 1-6: 37 bar (537 psi) Orifice 7: 35 bar (508 psi) Orifice 8: 30 bar (435 psi) Orifice 9: 25 bar (363 psi)
Maximum operating pressure (PS)	90 bar (1305 psi)	
PED	ART. 4.3 of 2014/68/EU	
Operating principle	PWM	
Minimum operating time	1 second	

Coil technical data	Models	
Voltage tolerance (Vac)	24 Vac model	+10 / -10 %
Voltage tolerance (Vac)	All models 220\230 Vac	+6 / -10 %

Dimensions

PVXM03S
PVXMM0S

PVXM04S
PVXMM2S

PXVS

PXVM

PXV

Electronic pulse expansion valve
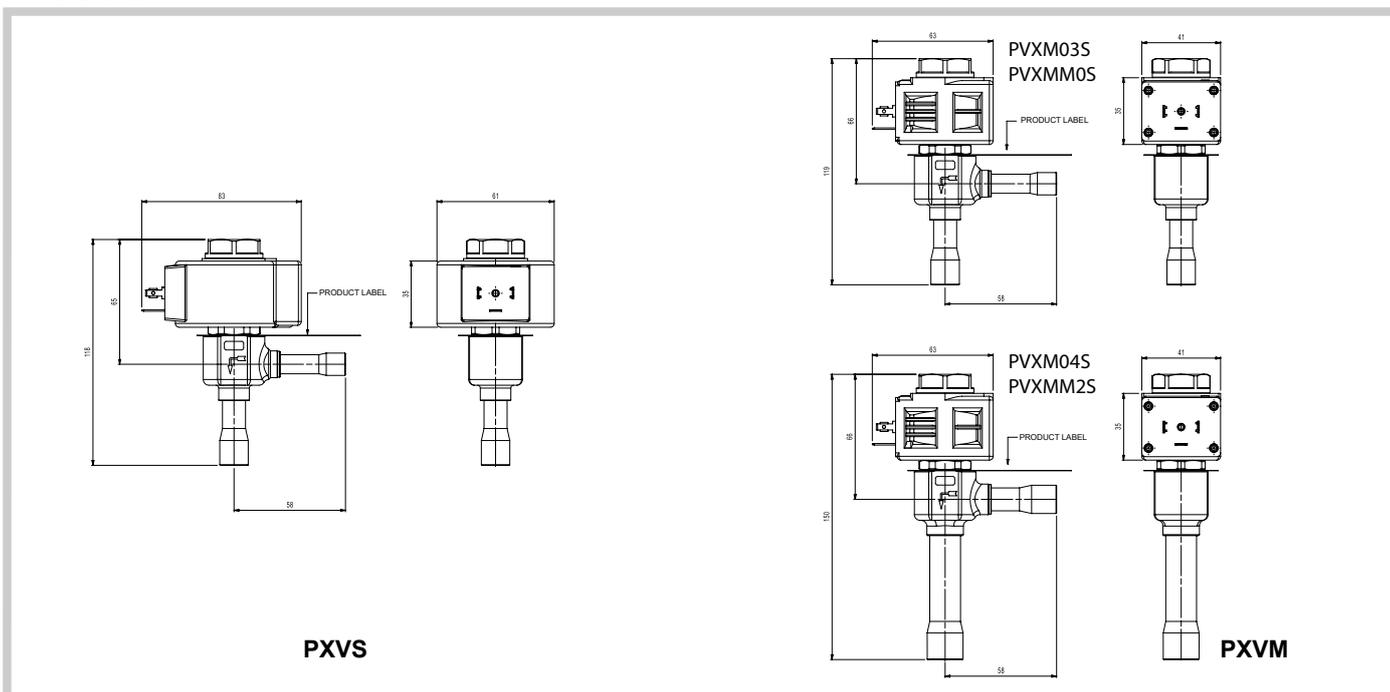
General specifications and cooling capacities of valves (HFO-HFC-HC-CO2 refrigerants)

Code	Orifice type	Orifice hole (mm)	ODS connections (inches)		ODS connections (mm)		Flow factor Kv (m3/h)	Cooling capacity (kW)				
			IN	OUT	IN	OUT		R744 (CO2)	R507	R407C	R410A	R290
PXVM03S010100	1	0.5	3/8"	1/2"	-	-	0.01	1.5	0.77	1.03	1.47	1.1
PXVMM0S01100			-	-	10	12						
PXVM03S020100	2	0.7	3/8"	1/2"	-	-	0.02	1.8	1.6	1.9	2.7	2.2
PXVMM0S02100			-	-	10	12						
PXVM03S030100	3	0.8	3/8"	1/2"	-	-	0.02	2.9	2	2.2	3.4	2.7
PXVMM0S03100			-	-	10	12						
PXVM03S040100	4	1.1	3/8"	1/2"	-	-	0.04	4.9	3	3.5	5.5	4.2
PXVMM0S04100			-	-	10	12						
PXVM03S050100	5	1.3	3/8"	1/2"	-	-	0.07	6.8	5.3	6.2	9.5	7.4
PXVMM0S05100			-	-	10	12						
PXVM03S060100	6	1.7	3/8"	1/2"	-	-	0.11	10.7	7.2	8.4	12.9	10.1
PXVMM0S06100			-	-	10	12						
PXVM04S070100	7	2.3	3/8"	1/2"	-	-	0.2	12.9	11.6	14.2	20.6	16.1
PXVMM2S07100			-	-	10	12						
PXVM04S080100	8	2.5	1/2"	5/8"	-	-	0.23	14.4	13.8	16.4	24.5	19.4
PXVMM2S08100			-	-	12	16						
PXVM04S090100	9	2.7	1/2"	5/8"	-	-	0.25	16.5	15.4	18.1	27.3	21.6
PXVMM2S09100			-	-	12	16						

For CO2, rated cooling capacities refer to: Evaporation temp. Tevap = –25 °C • Condensation temp. Tcond = 0 °C • Temp. of liquid at valve inlet inlet Tliq = –4 °C | For other refrigerants, rated cooling capacities refer to: Evaporation temp. Tevap = 5 °C • Condensation temp. Tcond = 32 °C • Temp. of liquid at valve inlet Tliq = 28 °C

General specifications and cooling capacities of silent multigas PXVS valves (HFO-HFC-HC-CO2 refrigerants)

Code	Orifice type	Orifice hole (mm)	ODS connections (inches)		Kv factor (m3/h)
			IN	OUT	
PXVS03S010100	1	0.5	3/8"	1/2"	0.010
PXVS03S020100	2	0.7	3/8"	1/2"	0.017
PXVS03S030100	3	0.8	3/8"	1/2"	0.023
PXVS03S040100	4	1.1	3/8"	1/2"	0.043
PXVS03S050100	5	1.3	3/8"	1/2"	0.065
PXVS03S060100	6	1.7	3/8"	1/2"	0.113
PXVS03S070100	7	2.3	3/8"	1/2"	0.200

Rated cooling capacities are the same as for equivalent sizes of PXVM models*

Coil technical data

Code	Voltage (Vac) [1]	Valve type	Power supply tolerance (% Vac)	Frequency (Hz)	Power (W)	Insulation class	MOPD for orifice [2]		Electrical connections
							1-4	5-9	
PXVB0ARA60100	220/230	PXVM	+6/-10	50/60	8	F	35	22	IP 65 connector PXVB0AR020100 IP 68 connector PXVB0AR030100
PXVB0ARA20100	24	PXVM	+10/-10	50/60	8	F	35	22	IP 65 connector PXVB0AR020100 IP 68 connector PXVB0AR030100
PXVE0ARA60100	220/230	PXVM	+6/-10	50/60	12	F	>45 <80		IP 65 connector PXVB0AR020100
PXVS0ARA60100	230	PXVS	+10/-5	-	18	F	35 [2]	24 [3]	IP 65 connector PXVB0AR020100 IP 65 connector PXVS0AR02R100

[1] consult the sales office when using other power supplies - [2] up to Orifice 6 - [3] Orifice 7 only - Orifices 8-9 not available for PXVS models

Dimensions and specifications

Coil models PXVEDARA60100, PXUSDARAC0100

Coil models PXV80ARA60100, PXVBOARA20100
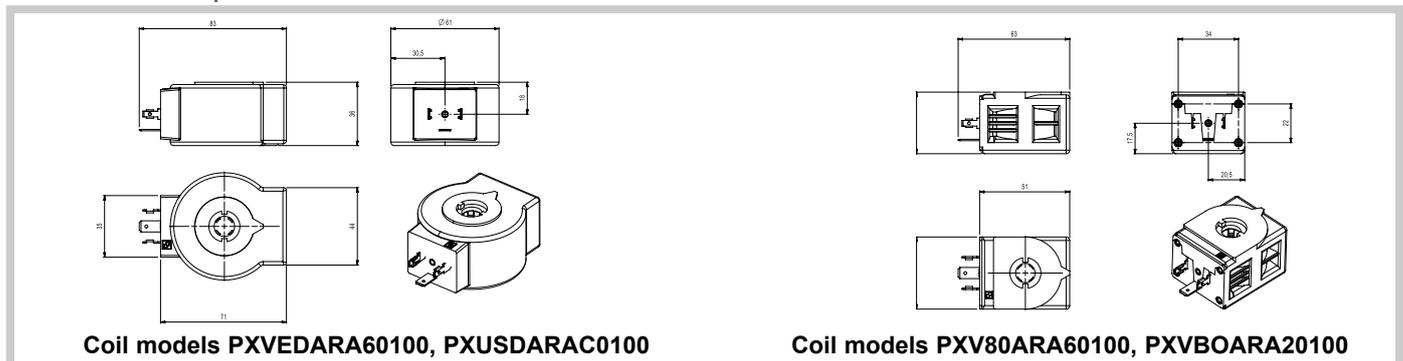
RTX 600/VS DOMINO ZERO

DIN controllers for counters and cold rooms with motorised stepper EEVs

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Code	Description
EWKRTZS3E00	RTX 600 /VS DOMINO ZERO POWER-PACK KIT KDEPlus
RTZS0S3H00 ❶	RTX 600 /VS DOMINO ZERO POWER-PACK
EWKRTZS1E00	RTX 600 /VS DOMINO KIT KDEPlus
EWKRTZS3X00 ❷	RTX 600 /VS POWER-PACK PANEL KIT 100-240 V
KS0000S1	VS POWER-PACK
KDE400E004000	KDEPlus 32x74 AMBER SCREW/JST
EH000050V4000	ECHO PLUS AMBER 5 m CABLE
KDX5H0R0000	KDX 500 100-240 V
KDX5HDR0000	KDX 500 4 DIN 100-240 V
TF111205	TF TRANSF 230/24 35 VA PROT. DIN

Description and main functions

RTX 600/VS DOMINO ZERO is designed to control remote counters and cold rooms in configuration with single or multiple evaporators. Regulation is managed using a **unipolar or bipolar Stepper type electronic expansion valve**, with the option of installing the **Power-Pack** (optional) to shut off the valves in the event of a power supply failure. The innovative adaptive control algorithm of DOMINO ZERO works at low overheating values with all refrigerants and with flooded evaporators for **managing high-efficiency CO_2 systems**.

The RTX 600/V DOMINO ZERO TP controller can control various unipolar or bipolar Stepper valve models and can interface with the KDTPlus and KDEPlus keypads, the ECHO Plus display module and the KDX, designed specifically as a control panel for cold rooms.

Defrosts are managed efficiently via scheduling to improve food storage and save energy.

If there are several evaporators, the user can connect different controllers between them via Link2 plug-n-play for quick and easy configuration.

Technical data	RTX 600 /VS DOMINO ZERO
Dimensions	10 DIN modules
Installation	on DIN Omega bar support
Display range	NTC: -50.0...110.0 °C | PTC: -55.0...150.0 °C | Pt1000: -60.0...150.0 °C
Analogue/digital inputs	5 NTC/PTC/Pt1000/D.I.* 1 4...20 mA/D.I.* 1 ratiometric/D.I.* + 1 D.I. voltage-free
Connectivity	• 1 isolated RS-485 serial port for monitoring • 1 serial port for keypad • 1 serial port for local Link² • 1 TTL for connection to Unicard/Copycard
Digital outputs	• 3 relays 12(5)A – 230 Vac • 2 relays 8(4)A – 230 Vac • 1 Open Collector output (12 Vdc – 20 mA)
Analogue outputs	1 D.A.C. multifunction: 0...10 V - 4...20 mA
Valve driver output	4-way connector for bipolar command
Auxiliary power supply	auxiliary input for driver valve 24 Vac 35 VA max
Accuracy	better by 1.0 %
Resolution	1 or 0.1 °C
Power supply	SMPS 100...240 Vac ±10 % 50/60 Hz
Power consumption	12.5 W max
Operating temperature and humidity	-5…50 °C 10…90 % RH (non-condensing)

* selectable by parameter

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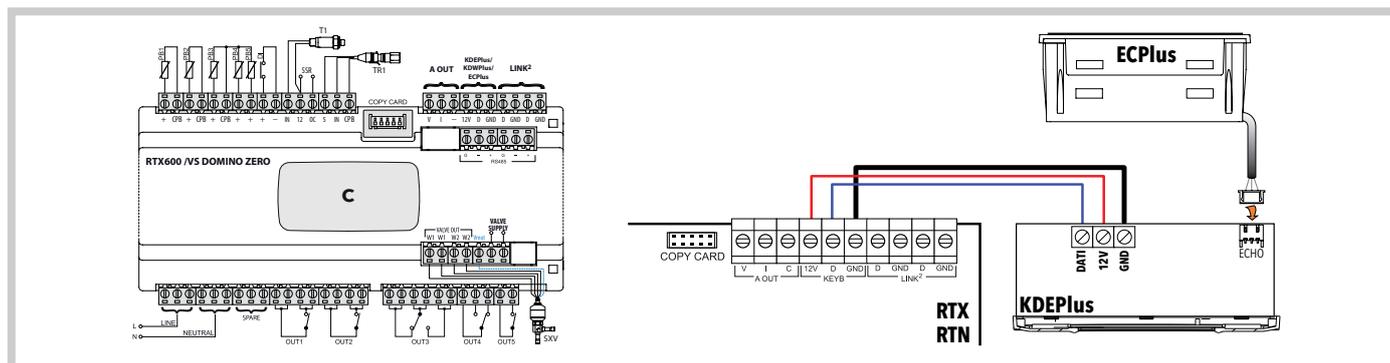
EEV Stepper system
System for motorised stepper EEVs

Code	Description
XVD420H485030 ❶	XVD 420H RS-485
SKP1000000000 ❷	SKP10 Configuration Keypad
DMI100x002000	Device Manager Interface (Hardware interface)
TF111205	230 Vac/24 Vac 35 VA transformer

*x=1: End User; x=2: Service; x=3: Manufacturer

Description and main functions

The **XVD driver** for **unipolar or bipolar Stepper type electronic expansion valves** is designed to **control overheating, with the aim of optimising the energy efficiency and performance** of refrigerated utilities.
Its wide compatibility with the refrigerants and unipolar and bipolar valves available on the market makes this product particularly **flexible**. Plus, the availability of the SKP10 service keypad and the USB interface allow quick and easy configuration.

Technical data	XVD 420H 485	SKP10
Dimensions	front panel 70.2x87 mm, depth 61.6 mm	front panel 74x32 mm, depth 60 mm
Container	PC+ABS plastic resin casing, UL94 V-0	
Installation	on DIN Omega bar support	panel mounting (71x29 mm drilling template)
Display	-	3 and a half digits + sign
Display range	-	-55.0...140.0 °C
Analogue inputs	2x NTC/Pt1000/4...20 mA/0-5 VC/0-10 VC* 2x NTC/Pt1000	-
Digital inputs	2 voltage-free	-
Connectivity	• TTL (Keyb) for connection to Unicard/MFK/DMI • TTL for connection of TelevisGo and Modbus RTU systems • RS485 for connection to TelevisGo and Modbus RTU systems	• Lan port for connection to XVD
Digital outputs	1 SPST: N.O. 5A 250 Vac 1 Open Collector 12 VC max 100 mA	-
Accuracy	better than 0.5 % of end of scale	better than 0.5 % of end of scale
Resolution	0.1 °C	1 or 0.1 °C
Power supply	24 Vac/dc ±10 % 50/60 Hz	100...240 Vac ±10 % 50/60 Hz
Power consumption	30 VA / 25 W	<1 W
Interface	-	LED display
Operating temperature and humidity	-5…55 °C 10…90 % RH (non-condensing)	

* selectable by parameter

STEPPER valve compatibility*

Models	Brand
CEVxx-S1 (xx = 10, 14, 16, 18, 24, 26, 30, 32) with CEC100Y5 stator	Parker-Sporlan
SER / SERI / SEI / SEH	Parker-Sporlan
GC / FGB	Parker-Sporlan
EX4 / EX5 / EX6 / EX7 / EX8	Alco
ETS 12.5 / 25 / 50 / 100	Danfoss

*if using other valves, contact Eliwell Technical Support

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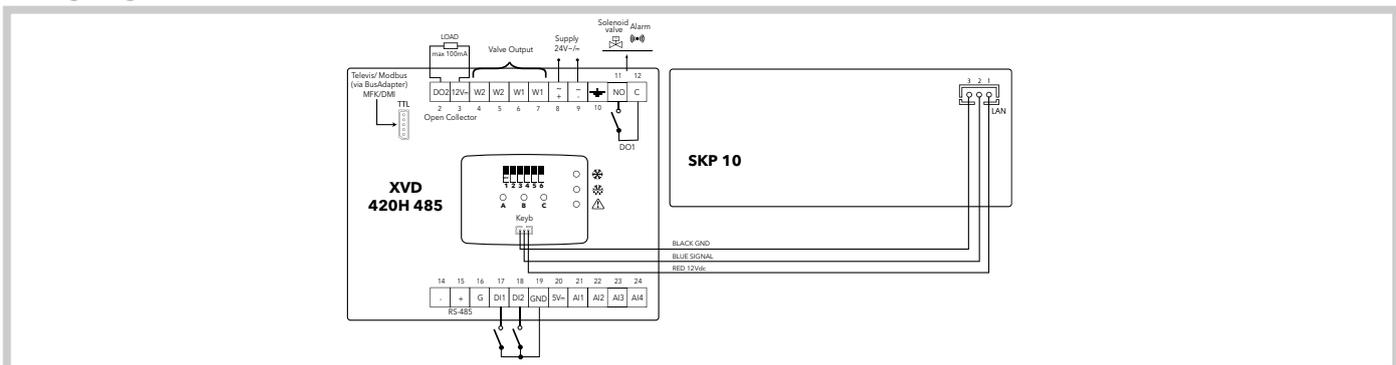
LKDNext
Detection and indication of refrigerant leaks

Refrigerant	Sensor	Code	Code for kit with Bluetooth Dongle
CO2	Built-in	**LKDN67IR00BS**	
	Remote (5 m)	**LKDN67IR00RS**	
R32 and mixtures	Built-in	**LKDN67SC01BS**	
	Remote (5 m)	**LKDN67SC01RS**	
HFC/HFO	Built-in	**LKDN67SC02BS**	Letter K in addition to the product code
	Remote (5 m)	**LKDN67SC02RS**	
HC	Built-in	**LKDN67SC03BS**	
	Remote (5 m)	**LKDN67SC03RS**	
NH3	Built-in	**LKDN67EC04BS**	
	Remote (5 m)	**LKDN67EC04RS**	

Description and main functions

The **LKDNext** series gas sensors are capable of detecting a wide range of gases and refrigerants, depending on the model: **NH3, HFO, HC, HFC and CO2**.
The refrigerant leak detectors can be used as stand-alone devices to control a buzzer, sounder, etc., or integrated with other Eliwell solutions or third-party management systems, thanks to the built-in ModBus.
The dongle provided in the kit can be used to enable **communication via Bluetooth**, which offers simple and intuitive interaction with the sensor via smartphone using **Eliwell AIR** (for Android and iOS).
The main applications are supermarkets, mini-markets, compressor racks, cold rooms and cold stores.

Technical data	LKDNext CO2	LKDNext HFC/HFO	LKDNext HC	LKDNext NH3
Code	LKDN67IR00*S	LKDN67SC0**S	LKDN67SC03*S	LKDN67EC04*S
Dimensions	151.2x193.9x64 mm			
Enclosure rating	IP67			
Sensor type	infrared	semiconductor		electro-chemical
Installation	wall-mounted, height suitable to the type of refrigerant			
Analogue outputs	4...20 mA / 0-10 V/ 1-5 V / 2-10 V, selectable			
Digital outputs	(2x) relay 1A @ 24 Vac/dc			
Connectivity	• TTL port for connection to Eliwell AIR Bluetooth dongle • RS-485 port for connection to Modbus RTU systems			
Measurement range	0…10000 ppm	0…1000 ppm	0…4000 ppm	0…100 ppm
Alarm	buzzer (>72 dB) + LED (3 colours)			
Operating temperature and humidity	-40...50 °C (-20...50 °C with BTLE) 5...90% RH (non-condensing)			
Calibration check or sensor replacement	1 year			
(Typical) sensor life	7 years	5 years		2 years
Power supply	24 Vac ± 20 %, 50/60 Hz			

MONITORING SOLUTIONS

Eliwell offers a complete range of hardware, software and cloud services designed to ensure precise and reliable control of applications of any size: from individual refrigerated counters to the most detailed and complex refrigeration systems.

The platform allows you to monitor performance, consumption and events in real time, improving operational efficiency, continuity of service and ease of management.

Thanks to integrated Bluetooth, Wi-Fi or Ethernet connectivity, access to data is fast and flexible, allowing technicians and operators to intervene remotely, optimise processes and reduce downtime.

Eliwell solutions are developed to ensure scalability, security and compatibility with the brand's entire range of devices, while maintaining an open approach that can be integrated with third-party systems and technologies.

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Customised solutions for every application

> Eliwell AIR HACCP module
On-site HACCP for refrigerated cabinets and cold rooms

> Eliwell AIR Silent Guardian
Remote monitoring for cold rooms and cabinets

> Refrigeration XP Expert
Monitoring and on-site maintenance with remote access for small shops, warehouses and restaurants

> TelevisGo v10
On-site monitoring, maintenance and optimisation with remote access and remote option for supermarkets, shops and medium-large warehouses

Explore the solutions

HACCP Module and Eliwell AIR APP
BTLE interface for commissioning and HACCP records

Code	Description
ADBT50005110H0	HACCP Module - BTLE 5.0

Description and main functions

The HACCP Module allows you to program compatible controllers (IDNext, EWNext, EWRC-AIR, Televis-In/Out, LKDNext) via smartphone using the **Eliwell AIR App**, and to record temperatures and alarms with a configurable frequency, in the context of both **HACCP** and refrigerator maintenance.
The data collected can be viewed as a **table** or a **graph** and downloaded in **CSV**, **EXCEL** or **PDF** format.
Through these functions, **the HACCP Module is becoming a useful instrument for installers and refrigerator owners alike**.

Technical data	HACCP Module
Code	ADBT50005110H0
Operating temperature	-20...65 °C
Storage temperature	-25…50 °C
Ambient humidity	0…90 % RH (non-condensing)
Power supply	3…5 Vdc
Power consumption	< 50 mW
Wireless technology	Bluetooth low energy 5.0
Operating frequency	2402…2480 MHz
Range of transmission	10 m
Datalogging memory	Yes
Memory capacity	10080
No. of serial ports	1
Serial ports	1x TTL
Installation	screw-type
Weight (g) net	20
Dimensions	45x20x45 mm (LxHxP)

WHY CHOOSE HACCP MODULE

The refrigeration technician	The refrigerator owner
Simplify the configuration of Eliwell controllers	**Activate automatic temperature recording**
• Quickly configure Eliwell controllers via smartphone/tablet	• Launch temperature logging directly from the app
• Save your configurations	• Your temperatures are saved within the HACCP Module
• Reuse existing configurations by uploading them to the desired controller	• View the temperature log from the app and download it in PDF/CSV/EXCEL
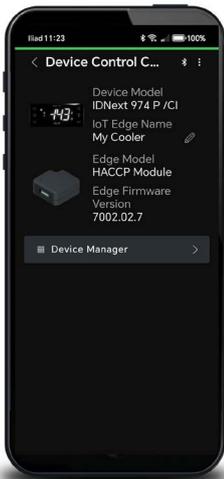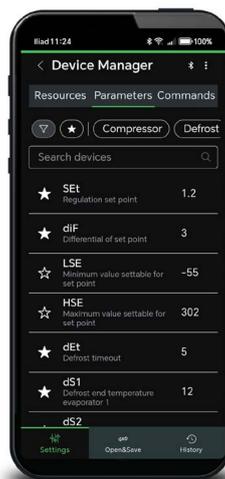
Connect **Configure** **Save/Load configurations** **View recorded temperatures**
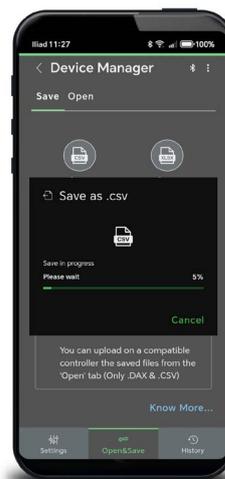
Connect to the compatible controller via the Eliwell AIR APP

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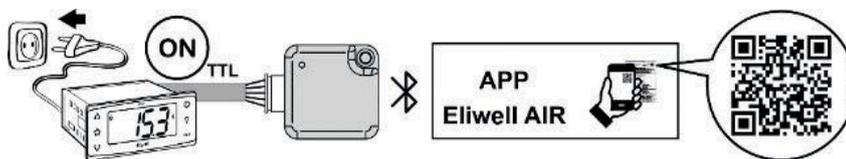
Silent Guardian - monitoring with zero complications

Prevent risks, Protect your business, Comply with regulations
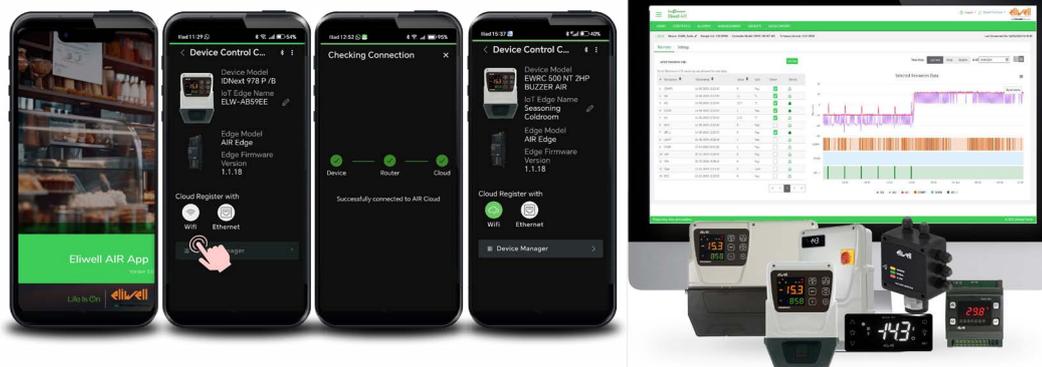
Description and main functions

SIlent Guardian is the Eliwell AIR Cloud platform service that **simplifies the management and monitoring of refrigeration equipment**.
The service is easily activated from a mobile app and allows you to monitor your refrigeration equipment wherever you are by logging into your Eliwell AIR Cloud account.
Registration on Eliwell AIR Cloud **requires only an email address and password**.
Silent Guardian is available in Lite (always included with AIR Edge) and Plus (free for 1 year and renewable by credit card) plans.

WHY CHOOSE SILENT GUARDIAN

The refrigeration technician	The refrigerator owner
• Activate Silent Guardian with the AIR App quickly, with zero complications	• Protect products with push alarm notifications via the Eliwell AIR APP
• Connect with WiFi or Ethernet: you choose	• Take control: change the working setpoint remotely
• Remote diagnosis, to work on systems from wherever you are	• Stay compliant by setting up automatic HACCP reports via email

Functions

USE THE MOBILE APP (iOS & Android) VIA BLUETOOTH (on site) TO:

✔ **Configure the working parameters of the controllers;**

✔ **View the values of the probes, outputs and alarm resources in real time;**

✔ **Send commands to the controller;**

✔ **Save/upload parameter maps between compatible controllers;**

✔ **Quickly launch Silent Guardian.**

MAIN FEATURES WHEN USING ELIWELL AIR CLOUD AIR.ELIWELL.COM (remotely):

✔ **Configure alarm rules, with push notifications on the Eliwell AIR app and emails in the event of anomalies;**

✔ **Configure reports sent periodically by Eliwell AIR cloud to the configured emails;**

✔ **Most recent year of telemetry and alarm history always accessible via Eliwell AIR Cloud;**

✔ **Remote management of device parameters, with the option of reading and changing the service values;**

✔ **Send commands to the controller.**

Find out more

AIR Edge - enable Silent Guardian in a simple and secure way

Prevent risks, Protect your business, Comply with regulations

Code	Description	Connectivity	Power supply
AEBW00T0001100	AIR EDGE WiFi TTL SD 100-240 V	BLE, WiFi	100...240 Vac
AEBWE0T0001100	AIR EDGE WiFi-Ethernet TTL SD 100-240 V	BLE, Ethernet, WiFi	100...240 Vac

Accessories

Code	Description	Connectivity	Power supply
AEBWA00A030000	AIR EDGE Antenna WiFi BLE adhesive, 3 m	BLE, WiFi	
CO000245	WIRING 5 V 0.5 m JST XHP-5 / MOLEX 5263 MULTI-POLAR CABLE	ModBus	
SAM4GW000AA00	4G LTE ROUTER W/ANT PSU RUT 200	Ethernet, WiFi	9…30 Vac

Description and main functions

Eliwell AIR Edge is the cybersecure device for accessing the "Silent Guardian" service; it connects to the TTL port of compatible controllers (IDNext, EWNext, EWRC-AIR, Televis-In/Out, LKDNext).
Silent Guardian is the Eliwell AIR Cloud platform service that simplifies the management and monitoring of refrigeration equipment.
Silent Guardian is available in Lite (always included with AIR Edge) and Plus (free for 1 year and renewable by credit card) plans.

What's in the box

Instruction sheet

0.5 m TTL cable for connection to the controller

AIR Edge

Label with AIR Edge identifier

Removable AIR Edge power supply terminal

Tool for pressing the BT PAIR/RESET key
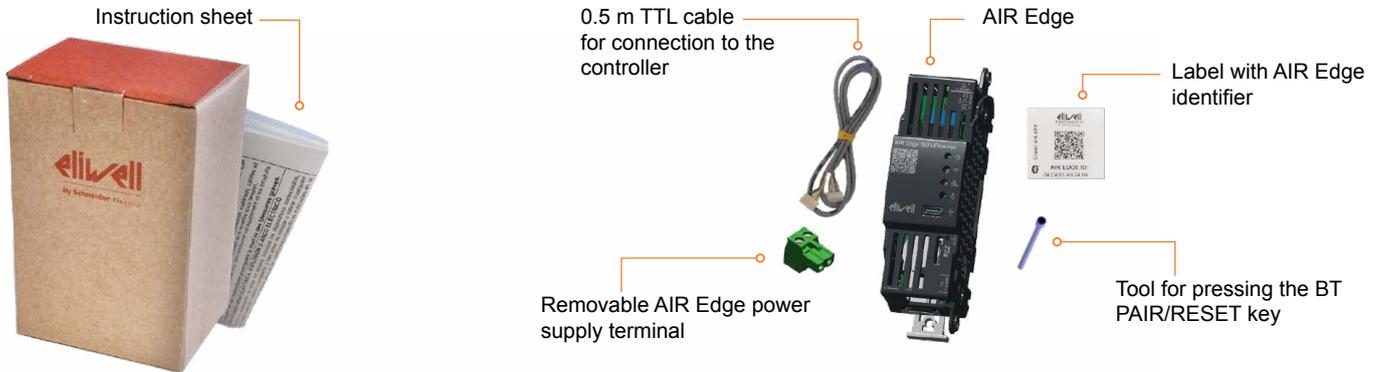
Technical data	AIR EDGE WiFi TTL SD 100-240 V	AIR EDGE WiFi-Ethernet TTL SD 100-240 V
Dimensions	36x110x59.5 mm (WxHxD)	
Container	2 DIN modules	
Installation	DIN-rail mounting or Panel mounting with screws	
Connectivity	TTL port for connection to compatible controllers. Bluetooth for connection to Eliwell AIR App. Dual-band WiFi (2.4 GHz and 5 GHz) for connection to Eliwell AIR CLOUD	TTL port for connection to compatible controllers. Bluetooth for connection to Eliwell AIR app. Dual band WiFi (2.4 GHz and 5 GHz) / Ethernet for connection to Eliwell AIR CLOUD
Power consumption	5 W	5 W
Power supply	100...240 Vac	
Operating temperature	-20...55 °C	
Storage temperature	-30…70 °C	
Ambient humidity	5…95 % RH (non-condensing)	

Eliwell AIR Edge hardware

No.	Description
1	Fixing holes. Use screws with nominal diameter: 3.9...4.2 mm (0.15...0.17 in.)
2	Hook fastening for DIN rail
3	(C**N1**) Ethernet serial port (depending on model)
4	TTL serial port
5	Memory card slot (Micro SD)
6	BT PAIR / RESET button
7	USB port: not used
8	Operating LED ⏻ (Green) = On-Off 📶 (Amber) = WiFi connectivity 🖧 (Amber) = Ethernet connectivity ✻ (Blue) = Bluetooth
9	Image to scan in order to access the section dedicated to **Eliwell AIR APP** on the Eliwell website
10	Connector for external antenna (not supplied)[1]
11	(C**N2**) Antenna + LED configuration jumper. **Note:** without the jumper, the AIR Edge works with the external antenna
12	(C**N4**) Power supply terminal block

[1] The antenna can be ordered using the code AEBWA00A030000 (AIR EDGE Adhesive BLE WiFi Antenna, length = 3 m)

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Refrigeration Expert XP

Ready-to-use monitoring and maintenance for small systems

Environmental Data Program

Find out more

Code	Description
RXB01000E0000	Refrigeration Expert XP
Accessories	
Code	**Description**
ABLM1A24006	POWER SUPPLY 24 V 0.6 A MODULAR
SAM4GWKITAA0	ROUTER 4G KIT RUT 200 RMS VPN

READY-TO-USE MONITORING AND MAINTENANCE FOR SMALL SYSTEMS

Compact but powerful
- One-year history for 200 resources
- Up to 20 fully managed controllers
- Can be used independently or connected remotely

Ready to use
- Built-in RS-485 serial port
- Automatically detects controllers for quick setup
- Direct access to the web interface via USB

Open and secure services
- 4G Router, WiFi and connectivity package
- Centralisation of Eliwell AIR systems and message service
- Remote access with open protocol
- Open API data sharing
- Administration and monitoring of user access

Improved user experience

✔ **Quick dashboards and trend analysis**

✔ **One-click access to maintenance tasks**

Active & Proactive

✔ **Alarm notifications**

✔ **HACCP reporting**

✔ **Performance monitoring**

✔ **Remote maintenance**
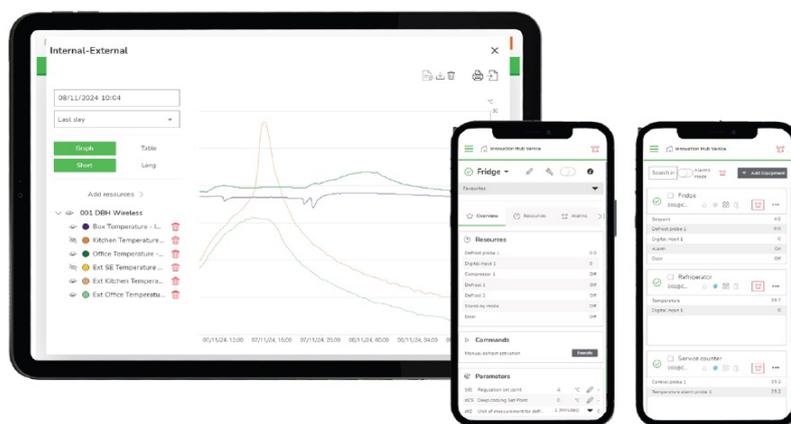
Flexible

✔ **Compatible with Eliwell and third-party controllers**

Find out more

IDNext   LKDNext   TelevisIn   EWRC NT

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TelevisGo v10

Monitoring and maintenance systems via web

Code	Description	Applications
TGOFXE103E00K	TelevisGo V10 C /10 KIT*	Algorithms, 10 controllers
TGOFXE303E00K	TelevisGo V10 C /30 KIT*	Algorithms, 30 controllers
TGOFXE603E00K	TelevisGo V10 C /60 KIT*	Algorithms, 60 controllers
TGOFXE2H3E00K	TelevisGo V10 C /224 KIT*	Algorithms, 224 controllers
TGOFXE103ER0K	TelevisGo V10 C LE /10 KIT*	10 controllers
TGOFXE303ER0K	TelevisGo V10 C LE /30 KIT*	30 controllers
TGOFXE603ER0K	TelevisGo V10 C LE /60 KIT*	60 controllers

* contains 1 SerialAdapter, 12 V PSU and RS232 serial cable with power supply

Description and main functions

TelevisGo v10: the comprehensive, quick and easy solution for monitoring, remote maintenance and optimisation of refrigeration systems.
TelevisGo v10 makes it possible to receive relevant and prompt notifications from each piece of equipment, to intervene remotely in order to mitigate malfunctioning with just a few clicks, to collect information in order to plan targeted on-site work and to configure the system from the comfort of the office.

Advanced functions

✔ **Datalogging**

✔ **Alarm management and notification**

✔ **Customisable view of the equipment through reusable profiles**

✔ **Generation and transmission of HACCP and operational reports**

✔ **Quick access to all data and frequently used instruments**

✔ **Viewing, operation and quick configuration on the same screen**

✔ **Automation of recurring procedures for equipment (e.g. lights on and off)**

✔ **Advanced system efficiency, thanks to programmable algorithms**

✔ **Advanced system layout customisation with "layout designer"**

ADVANTAGES

- Televis**Go v10** is **sustainable and efficient**; through the Floating Evaporation Algorithm it supports the DOMINO solution with control of the EWCM 9000 PRO-HF rack for transcritical CO2 systems and RTX 600 DOMINO ZERO evaporation control.

- Televis**Go v10** is a **flexible and high-performance system**, thanks to its quick configuration, native communication with Modbus RTU and Modbus TCP controllers, and the option of subdividing and extending the serial network into multiple zones connected via a network with EthernetAdapter.

- Televis**Go v10** is an **open system**:
  - it communicates with third-party PLCs and controls using Modbus RTU and TCP protocol;
  - it integrates into BMSs with Modbus TCP protocol, with customised mapping of the resources shared in reading and writing;
  - it is natively integrated into the EcoStruxure Integrated Management Platform system for multi-system centralisation of energy management, maintenance and building performance.

- Televis**Go v10** is a **secure device**, designed and manufactured in accordance with stringent I.T. security practices as specified in IEC 62443-4-2 standard, Security Level 2 (SL2).

Technical data	TelevisGo
User interface	from web browser
Browsers supported	• Micosoft EDGE • Google Chrome • Mozilla Firefox
User language interfaces pre-loaded	IT – EN – FR – DE – ES – PT – PL – NL – TR – RU – CN
Operative System	Microsoft Windows 10 IoT core 64 bit LTSC 2021
Power supply	12 VC with external power supply unit 100...240 Vac ±10 %
Power consumption	15 W max
Connections	4 USB ports 2 x RS-232 ports (for modem) 2 x RS-232 ports (for SerialAdapter) 2 x RJ45 Ethernet ports 2 x HDMI and DP monitor ports

Find out more

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Monitoring and maintenance systems via web

Accessories

❶ ❷

Modem for SMS notifications

Code	Description	Details
SAM4G0S00AA00	4G LTE modem W/ANT PSU TRB 142	USB/RS-232 modem for SMS notifications

Field connectivity

Code	Description	Details
SAT1AMM1000AK	SerialAdapter 12 V KIT	RS-232/RS-485 with 12 V power supply unit and RS-232 cable
AVS00GW080501 ❶	EthernetAdapter	Modbus TCP / Modbus RTU Gateway 24 V

I/O modules

Code	Description	Details
TAMOD602RS700	TelevisOut 100-240 Vac	Alarm and command module
TAMID152RS700 ❷	TelevisIn 100-240 Vac	Analogue / digital input module

Application diagram

Integrated solution
EcoStruxure
Building Operation

Monitoring and management
TelevisGo v10

Alarm module
TelevisOut

Building management system
EcoStruxure Building Operation

Compressor rack
EWCM 400 PRO   EWCM 9000 PRO   ALTIVAR

Cold rooms
ColdFace

Detection of refrigerant leaks
FREE Optima & KDX-HF   LKD Next

Temperature monitoring
TelevisIn

Efficient extended connectivity with Modbus TCP
EthernetAdapter

Refrigerated cabinets with EEV
RTX 600/V DOMINO ZERO

Energy reading
iEM32

SerialAdapter - EthernetAdapter

RS-232 / RS-485 and Ethernet / RS-485 adapters for TelevisGo

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Code	Description
SAT1AMM1000AK	**Serial**Adapter 12V KIT
AVS00GW080501	**Ethernet**Adapter

Description and main functions

SerialAdapter and **EthernetAdapter** are RS-232/RS-485 and Ethernet/RS-485 adapters dedicated to TelevisGo for **connection of controllers to the network**.
The galvanic insulation used in the **Serial**Adapter protects TelevisGo from accidental overvoltages or those caused by controller faults that may occur along the serial line.
TelevisGo can manage up to 2 SerialAdapters and up to 16 EthernetAdapters to **simplify and strengthen the network installation**.
EthernetAdapter, which can be used with TelevisGo v10, can be used to address serial communication via the LAN divide the network into multiple sub-networks, increasing data acquisition speed.

Technical data	SerialAdapter	EthernetAdapter
Container	plastic, 2 DIN modules	plastic, 4 DIN modules
Installation	on DIN Omega bar support	
Power supply	12 Vdc via Televis**Go** serial port	24 Vac ±10 % 50/60 Hz 20...38 Vdc (UL/CSA) 24 Vdc (IEC)
Ambient operating temperature	-5...55 °C	-20...55 °C
Ambient humidity for operating and storage	10...90 % RH (non-condensing)	5...95% RH (non-condensing)
Connectivity	• RS-485 port for connection of controller network • RS-232 port for connection to TelevisGo	• RS-485 port for connection of controller network • LAN Ethernet RJ45 port for connection to TelevisGo • mini-B USB emulation LAN Ethernet RNDIS port for configuration • USB A port for reset

Connectivity
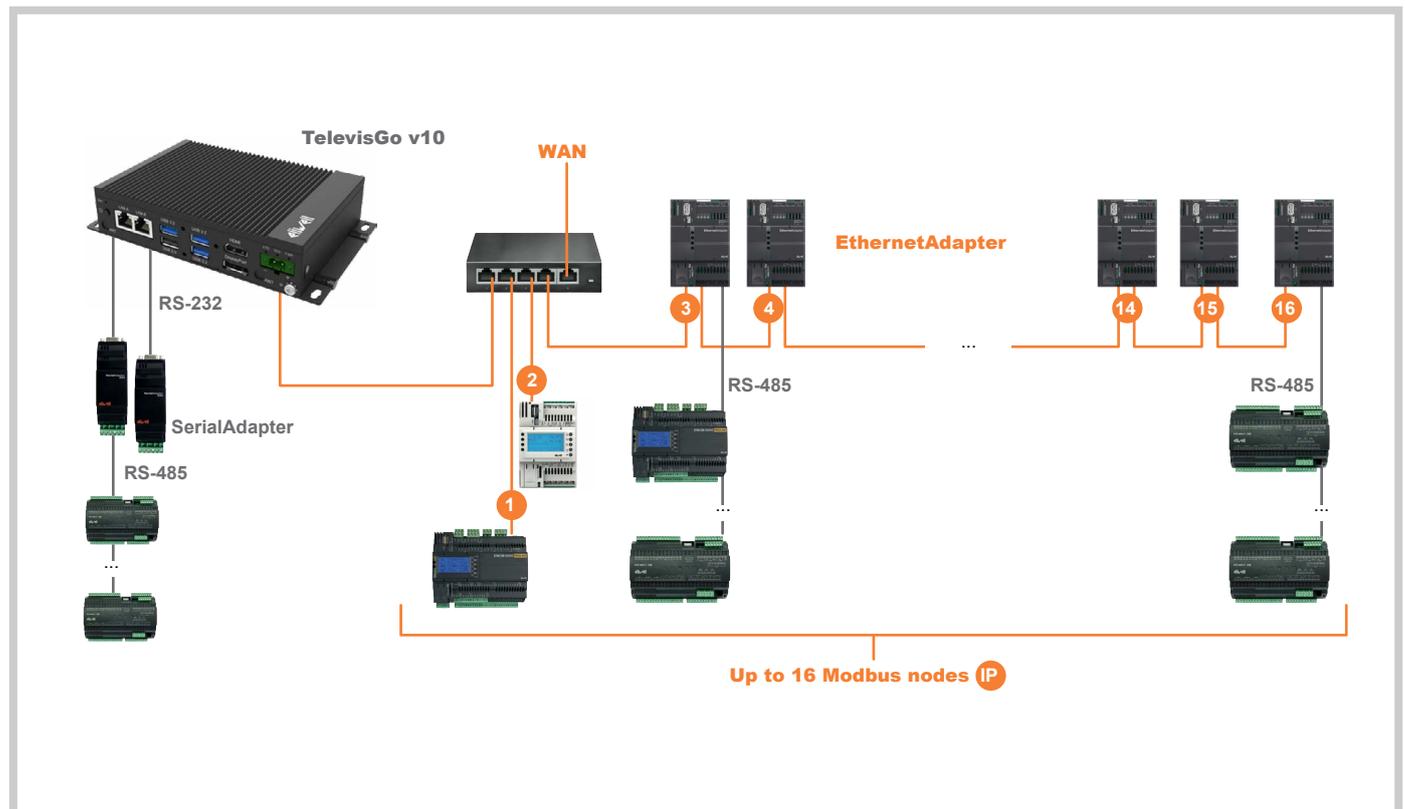
BusAdapter 130 - 150

RS-485 serial adapter for controllers with TTL port

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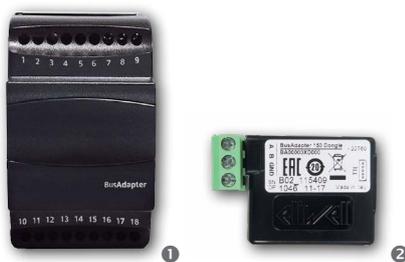
Code		Description	Details
BA11250N3700	❶	BusAdapter 130	1.0 m cable
BA10000R3700		BusAdapter 150	1.0 m cable
BA00000XD000	❷	BusAdapter 150 DONGLE	30 cm cable

Description and main functions

BusAdapter is a family of devices used to connect Eliwell controllers - with TTL ports only - to wired RS-485 supervision and monitoring serial networks.
130 models have an auxiliary 12 V (5 VA) output for powering the controller.
BusAdapter DONGLE is extremely compact and is powered directly from the controller.

Technical data	BusAdapter 130	BusAdapter 150	BusAdapter 150 DONGLE
Container	3 DIN modules		47x31x22 mm (LxHxD)
Installation	on DIN Omega bar support		free
Power supply	230 Vac +/-10 % 50/60 Hz		-
Power consumption	6 W	1.5 W	-
Insulation class	II		-
Terminals	screw-on terminal block for the connection of electric cables with a cross-section of max. 2.5 mm^2 (one wire per terminal for power connections)		screw-on terminal block for the connection of electric cables with a cross-section of max. 2.5 mm^2
Connectivity	• dual RS-485 port • TTL for connection to instruments		• RS-485 port • TTL for connection to instruments
Baud rate	2400…19200 bps		
Auxiliary output	12 Vac/dc ±10 % 50/60 Hz		-
Ambient operating temperature	-5...55 °C	-5...60 °C	-20...60 °C
Ambient storage temperature	-30...75 °C		-30...85 °C
Ambient humidity for operating and storage	10...90 % RH (non-condensing)		

Wiring diagrams
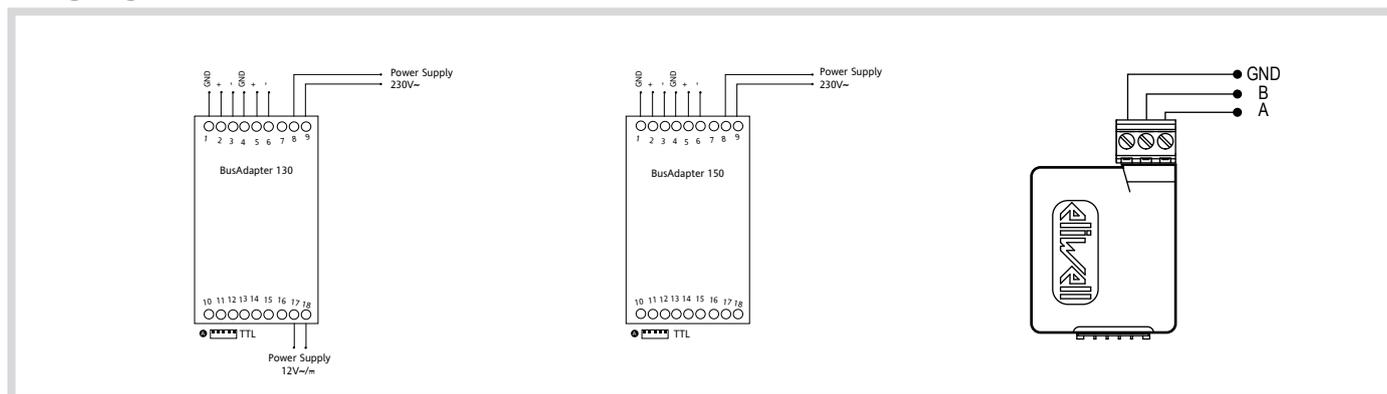
TelevisIn / TelevisOut

Data acquisition, alarm indication and actuator modules

Code	Description	Power supply
TAMID152RS700	❶ TelevisIn	100...240 Vac
TAMOD602RS700	❷ TelevisOut	100...240 Vac

Description and main functions

TelevisIn and **TelevisOut** are **data acquisition, alarm signalling and utility control modules** which can be connected to TelevisGo or third-party systems using the Modbus protocol selected via the parameter. The Televis **In** controller, connected to specific probes, enables the acquisition of temperature, humidity and pressure data, as well as digital signals. It will also calculate dew points. Televis**Out** is a specific module with alarm signalling and utility control functions. It can be used to connect warning devices or telephone diallers and, in combination with the supervisor, to deliver energy savings, manage lights and other utilities.

Technical data	TelevisIn	TelevisOut
Dimensions	4 DIN modules	
Installation	on DIN Omega bar support	
Display range	• NTC: -50.0...110.0 °C • PTC: -55.0...140.0 °C • Pt1000: -55.0...400.0 °C • Vin: 0-1 V, 0-5 V and 0-10 V • Ain: 0..20 mA and 4...20 mA	
Analogue inputs	3 x NTC/PTC/Pt1000/DI inputs +1 V (0-1 V / 0-5 V / 0-10 V) input + 1 I (0...20 mA / 4...20 mA) input	-
Digital inputs	2 digital inputs (DI1 / DI2)	2 clean contact digital inputs (DI1 / DI2) also configurable as safety extra low voltage analogue outputs
Digital outputs	1 SPST 2A 250 Vac	2 (SELV) Open Collector: PWM 3 SPST 2A 250 Vac 1 SPDT 2A 250 Vac
Connectivity	• 1 x RS-485 for connection to TelevisGo supervisor and Modbus RTU systems • 1 TTL for connection to Eliwell Unicard USB, Copycard and DMI interface for DeviceManager	
Connectors	disconnectable screw terminals	
Applications	**AP1**=Temperature; **AP2**=Analogue Inputs; **AP3**=Digital Inputs; **AP4**=Dewpoint; **AP5...8**=Free	**AP1**=Alarm Signalling; **AP2...8**=Free
Power consumption	5 W	
Power supply	SMPS 100...240 Vac ±10 % 50/60 Hz	

Wiring diagrams
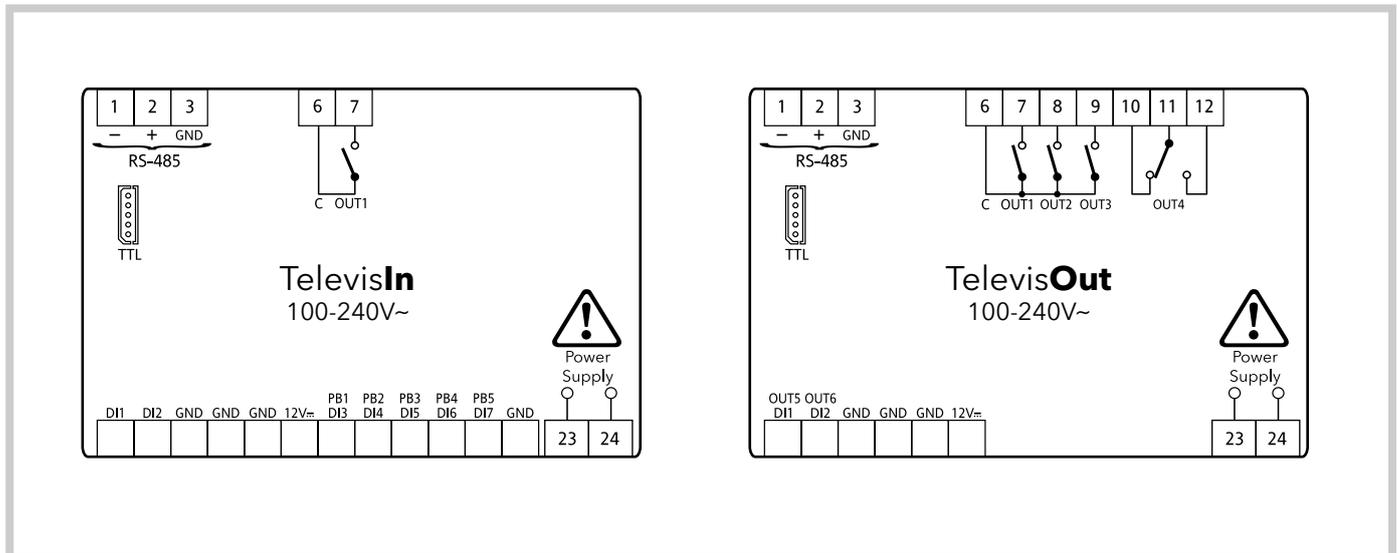
Modem / Router and VPN

Modem, Router and secure connectivity

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Internet connectivity and secure remote access options

Code	Description
SAM4GWKITAA0	4G ROUTER KIT RUT 200 RMS VPN Includes: power supply unit, 4G antennas, WiFi antenna, DIN support, 50 cm power cable, Teltonika RMS service with 150 GB VPN traffic To activate the RMS / VPN service, contact Eliwell Technical Support (Techsuppeliwell@schneider-electric.com), including the S/N of the router in your message.
SAM4GW000AA00	4G LTE ROUTER W/ANT PSU RUT 200 Includes: power supply unit, 4G antennas, WiFi antenna

Applications

The router can be used to connect to the internet via a 4G mobile network. It has a dual Ethernet port (WAN/LAN) and WiFi that can be configured as Access Point or local network connection.
Requires a data SIM to utilise 4G connectivity.

Code	Description
SAM4G0S00AA00	4G LTE MODEM W/ANT PSU TRB 142 Teltonika TRB 142 modem - model TRB1420 03000 Includes: power supply unit, magnetic antenna with 3 m cable, USB cable

Applications

The 4G modem can be used to send text messages and for backup connectivity. Requires a data SIM with SMS service enabled.

ELECTROMECHANICAL COMPONENTS

Eliwell is expanding its range of high quality and extremely reliable electromechanical products.

Pressure switches, thermostats, reversing valves, plus temperature, humidity and pressure probes: devices designed to allow increasingly high levels of productivity in terms of the user's work.

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Fixed setting sealed mini pressure switches

Components for HVACR systems
suited to high operating temperatures and pressures

> Compact, light and easy to install
> Compatible with low GWP gases
> Certified UL, VDE and PED category IV

Discover the solution

NSD

Fixed setting pressure switches

Ex dc IIA Gc

CE ⟨Ex⟩ II 3G

FEATURES

- Compatibility with natural refrigerants (A2L & A3)
- Updating of PED and PESR certificate category IV with higher PS and TS
- NSD family, fully certified UL (as a Protective device) and VDE (including plastic tests)
- Updated flammable gas compatibility: tested enclosed break device in accordance with IEC 60079-0:2017 Clause 26.8, Clause 26.9 and IEC 60079-1:2014 Clause 15.5

Description and main functions

The NSD range of electromechanical pressure switches with fixed setting are compact, lightweight and easy to install.
With their simple construction technology and stainless steel diaphragm welding process, NSDs are a simple and reliable solution to install, with high sealing to protect and control HVAC/R systems from critical conditions by setting high or low pressure limit values. Having updated the PED category IV certificate, the NSD pressure switch can work at higher temperatures and pressures, making it interesting in applications with high delivery temperatures, which can be used in heat recovery systems integrated or otherwise into the machine (e.g. R32 machines). The NSD range is fully certified UL as a safety device and VDE with plastics tests (GWT, PTI and BPT). This offers the manufacturer a quick, simplified machine certification at a lower cost. Finally, the NSD range is compatible with flammable gases including propane (R290), an ultra-low GWP refrigerant.

Technical data			NSD
The product also complies with the following harmonised standards			EN 60730-1 / EN 60730-2-6 / EN 12263
Device construction			built-in device
Device purpose			pressure control device (VDE) - pressure control device (UL)
Type of action			manual reset: 2.C (UL) - 1.B (VDE) - automatic reset: 2.B (UL) - 1.B (VDE)
Contacts configuration			SPST-NO, SPST-NC, SPDT
Protection rating provided by outer casing			IP67 (versions with cable)
Pollution class			3 (UL) - 2 (VDE)
Overvoltage category			II
Rated impulsive voltage			4'000 V (UL) - 2'500 V (VDE)
Refrigerants			see List of compatible refrigerants*
Environmental operating conditions			0…80 °C (32 ... 176 °F) (UL) - 0…85 °C (32 ... 185 °F) (VDE)
Transportation and storage conditions			-40 ... 60 °C (-40 ... 140 °F) (UL) - 25 ... 60 °C (-13 ... 140 °F)
System temperature TS (Fluid temperature)	< 1.5 bar (22 psi)		-54 ... 135 °C (-65.2 ... 275 °F)
	1.5 ... 55 bar (22 ... 798 psi) 120...175 bar (1740...2538 psi)		-54 ... 150 °C (-65.2 ... 302 °F)
Reset mode			automatic or manual
Transient pressure increase (Pmax)			$1.1 \times PS$
Range pressure	-	Automatic reset	0.2 ... 55 bar (2.9 ... 798 psi)
		Manual reset	10 ... 55 bar (145 ... 798 psi)
		CO2 applications	120 ... 175 bar (1740 ... 2538 psi)
Maximum system pressure PS	CUT OUT Pressure	< 1.5 bar - (< 22 psi)	28 bar (406 psi)
		1.5 ... ≤ 43 bar - (22 ... ≤ 623 psi)	50 bar (725 psi)
		> 43 … 55 bar - (> 623 ... 798 psi)	1.1 x (CUT OUT + 2 bar)
		120 … 175 bar - (> 1740 ... 2538 psi)	1.1 x (CUT OUT + 2 bar)
Burst pressure test	Operating range	0.2 … 55 bar - (2,9 ... 798 psi)	345 bar (5000 psi)
		120 … 175 bar (1740 ... 2538 psi)	Pmax x 4
Standard electrical connections [1]			Faston 6.35 mm / 0.25 in. - 1.0 m (3.28 ft) cable UL1015 (0.82 mm² / 18 AWG) other types of electrical connection on request
Standard pressure fitting			7/16-20 UNF with depressor other types of connection on request
Certification / Trademarks			• UL - VDE - PED and PESR category IV • CO2 models: UL - PED and PESR category IV
Compatibility with flammable gases			Tested as enclosed break device according to IEC 60079-0:2017 Clause 26.8, Clause 26.9 and IEC 60079-1:2014 Clause 15.5
Vibration resistance			8 g's from 50 to 2000 Hz

* consult the NSD Technical Data Sheet, available on the Eliwell website
[1] refer to the technical drawing for the specific p/n.

Contacts configuration

SPST-NO — PRESSURE RISING

SPST-NC — PRESSURE RISING

SPDT FASTON — PRESSURE RISING

SPDT CABLE — PRESSURE RISING

NSD
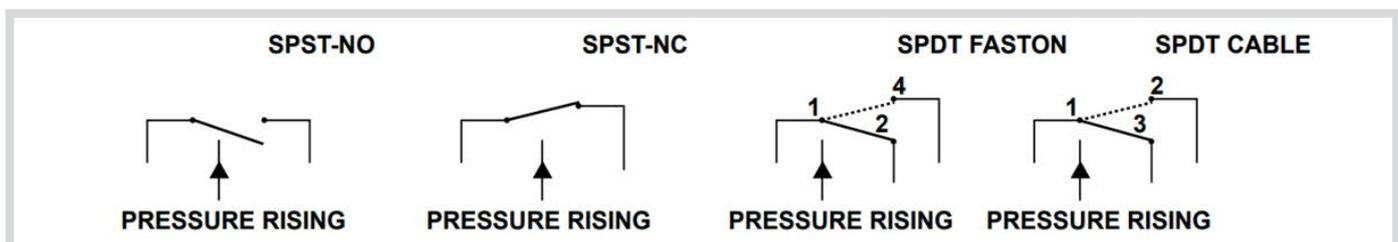
Fixed setting pressure switches

Models	Contact type	Reset	UL	VDE
NSDM	SPST	Manual Reset	Control device: 3 A inductive 250 Vac 125 VA 24 Vac pilot duty 375 VA 120/240 Vac pilot duty Protection device: 6FLA 36LRA 120/240 Vac	6 A resistive 125/250 Vac
NSDM2	SPDT	Manual Reset	Protection device: NC: 6FLA 36LRA 250 Vac NO: 3FLA 18LRA 250 Vac	NC: 6A resistive 125/250 Vac NO: 3A resistive 125/250 Vac
NSD01H - NSD03H NSD01L - NSD03L	SPST	Automatic Reset	Protection device: 6A inductive 250 Vac 3A resistive 36 Vdc 125 VA 24 Vac pilot duty 375 VA 120/240 Vac pilot duty 6FLA 36LRA 120/250 Vac	6A resistive 250 Vac
NSD01CA - NSD03CA			Control device: 6A inductive 250 Vac	-
NSD01H2 - NSD03H2 NSD01L2 - NSD03L2	SPDT	Automatic Reset	Protection device: NC: 6A resistive 120/250 Vac NO: 3A resistive 120/250 Vac NC: 6FLA 36LRA 120/250 Vac NO: 3FLA 18LRA 120/250 Vac	NC: 6 A resistive 125/250 Vac NO: 3 A resistive 125/250 Vac

Code (*)	Application	Reset	CUT-OUT [bar (psi)]	CUT-IN [bar (psi)]	Contact configuration	UL Model
NSDHA00B39101		automatic	18 (261)	13 (188)	SPST - NC	NSD03H
NSDHM00C39006		manual	18 (261)	13 (188)	SPST - NC	NSDM
NSDHA00B39107		automatic	24 (348)	18 (261)	SPST - NC	NSD03H
NSDHA00B39102	High Pressure	automatic	26 (377)	20 (290)	SPST - NC	NSD03H
NSDHA00B39103		automatic	28 (406)	21 (304)	SPST - NC	NSD03H
NSDHM00C39007		manual	28 (406)	21 (304)	SPST - NC	NSDM
NSDHA00B39104		automatic	42 (609)	33 (479)	SPST - NC	NSD03H
NSDHM00C39008		manual	42 (609)	33 (479)	SPST - NC	NSDM
NSDLA00A39100	Low Pressure	automatic	1.7 (24.66)	2.7 (39.16)	SPST - NO	NSD03L
NSDLA00A39114		automatic	2.5 (36.25)	4.2 (60.91)	SPST - NO	NSD03L
NSDHF00A39103	Fan control	automatic	8.5 (123)	11 (159)	SPST - NO	NSD03H
NSDHF00A39104		automatic	13 (188)	16 (232)	SPST - NO	NSD03H
NSDCA11B32300	CO2 high pressure	automatic	125 (1812)	90 (1305)	SPST - NC	NSDCA

* Standard codes with 1 m cable length, and ¼ SAE female connection with depressor

Dimensions

D16P

PED and PESR adjustable single pressure controllers, category IV
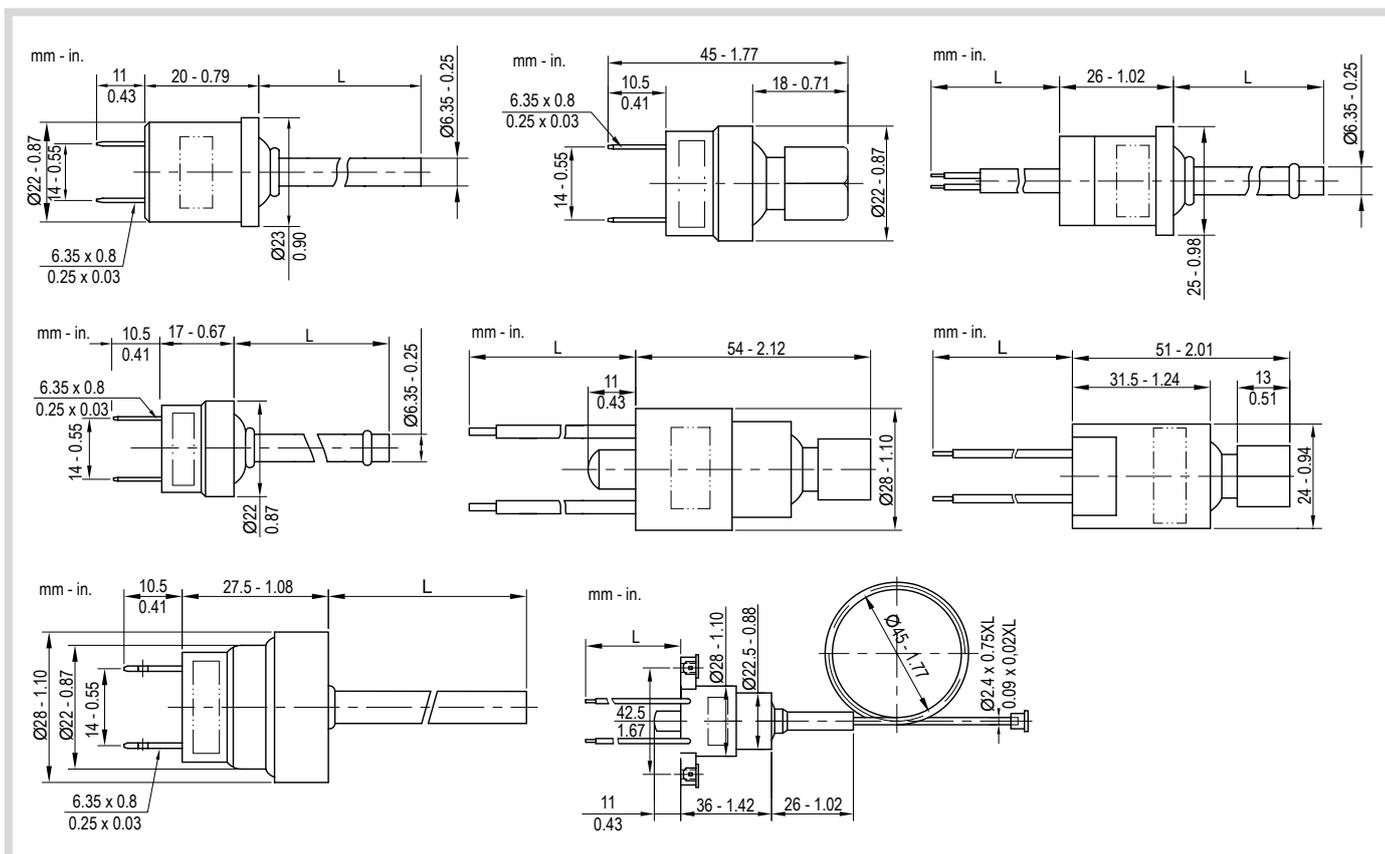
Mod. D16P30A / D16P45A

Mod. D16P30M / D16P45M

Description and main functions

D16P is the new range of electromechanical adjustable safety pressure switches equipped with a SPDT switch that opens or closes when the pressure increases or decreases. They are used to protect the refrigeration system against critical high pressure conditions.
PED and PESR category IV certification available, plus certification in accordance with IEC Standards 60730-1, IEC 60730-2-6 and EN 12263.

Technical data	D16P	
Compatible refrigerants	R22,R134a, R404A, R407A, R407C, R407F, R422B, R422D, R438A, R448A, R449A, R507, R450A, R452A, R507A, R513A, R410A **	
System temperature (TS)	-40...120 °C (-40...248 °F)	
Environmental operating conditions	-30...65 °C (-22...149 °F) / 10...90 % RH	
Transportation and storage conditions	-40…70 °C (-40...158 °F) / 10...90 % RH (non-condensing)	
Contact configuration	SPDT	
Electrical load and nominal current	changeover: AC1-16 A / 400 V - AC3 - 16 A / 400 V - AC15-10 A / 400 V - DC-16 A / 24 V	
Protection rating provided by outer casing	IP44 with automatic reset and upper cover IP30 with manual reset and no upper cover	
Maximum system pressure (PS)	**RANGE** 6 … 32 bar (87 ... 464 psi) 8 … 42 bar (116 ... 609 psi)	**PS** 35 bar (507 psi) 45 bar (652 psi)
Burst Pressure	**RANGE** -0.5 … 7 bar (-7 ... 101 psi) 6 … 32 bar (87 ... 464 psi) 8 … 42 bar (116 ... 609 psi)	**BURST PRESSURE** > 66 bar (> 957 psi) > 140 bar (> 2030 psi) > 180 bar (> 2610 psi)
Installation	4 x threaded holes for screws M4x5 on the back of the casing	
Regulation	round head and cross head screws, for range and differential	

** Contact the Eliwell Sales Office for non-listed refrigerants.

D16P

PED and PESR adjustable single pressure controllers, category IV

CO₂ APPLICATIONS

Code	Type	Pressure range bar (psi)	Differential bar (psi)	Reset	Connectors	Accessories included in the standard single pack
D16P30A02MS100	High-pressure safety controller with automatic reset	6...32 (87... 464)	Adjustable 4…15 (58…217.5)	Automatic	Male 7/16-20UNF	Upper cover, instruction sheet
D16P45A02MS100	High-pressure safety controller with automatic reset	8…42 (116…609)	Adjustable 5…15 (72.5…217.5)	Automatic	Male 7/16-20UNF	Upper cover, instruction sheet
D16P30M02MS100	High-pressure safety controller with manual reset	6...32 (87... 464)	Fixed 4 (58)	Manual	Male 7/16-20UNF	Instruction sheet
D16P45M02MS100	High-pressure safety controller with manual reset	8…42 (116…609)	Fixed 5 (72,5)	Manual	Male 7/16-20UNF	Instruction sheet

Dimensions

D16P30A - D16P45A

7/16-20UNF
1/4 horn

D16P30M - D16P45M

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D17P

PED and PESR adjustable dual pressure controllers, category IV

Mod. D17P30AA / D17P45AA

Mod. D17P30AM / D17P45AM

Description and main functions

D17P is the new range of electromechanical adjustable safety pressure switches equipped with a SPDT switch that opens or closes when the pressure increases or decreases. They are used to protect the refrigeration system against critical high and low pressure conditions.
PED and PESR category IV certification available, plus certification in accordance with IEC Standards 60730-1, IEC 60730-2-6 and EN 12263.

Technical data	D17P	
Compatible refrigerants	R22,R134a, R404A, R407A, R407C, R407F, R422B, R422D, R438A, R448A, R449A, R507, R450A, R452A, R507A, R513A, R410A **	
System temperature (TS)	-40...120 °C (-40...248 °F)	
Environmental operating conditions	-30...65 °C (-22...149 °F) / 10...90 % RH	
Transportation and storage conditions	-40…70 °C (-40...158 °F) / 10...90 % RH (non-condensing)	
Contact configuration	2 x SPDT	
Electrical load and nominal current	changeover: AC1-16 A / 400 V - AC3 - 16 A / 400 V - AC15-10 A / 400 V - DC-16 A / 24 V	
Protection rating provided by outer casing	IP44 with automatic reset and upper cover IP30 with manual reset and no upper cover	
Maximum system pressure (PS)	**RANGE** -0.5 … 7 bar (-7 ... 101 psi) 6 … 32 bar (87 ... 464 psi) 8 … 42 bar (116 ... 609 psi)	**PS** 16.5 bar (239 psi) 35 bar (507 psi) 45 bar (652 psi)
Burst Pressure	**RANGE** -0.5 … 7 bar (-7 ... 101 psi) 6 … 32 bar (87 ... 464 psi) 8 … 42 bar (116 ... 609 psi)	**BURST PRESSURE** > 66 bar (> 957 psi) > 140 bar (> 2030 psi) > 180 bar (> 2610 psi)
Installation	4 x threaded holes for screws M4x5 on the back of the casing	
Regulation	round head and cross head screws, for range and differential	

** Contact the Eliwell Sales Office for non-listed refrigerants.

D17P
PED and PESR adjustable dual pressure controllers, category IV

CO_2
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Code	Type	Pressure range bar (psi)	Differential bar (psi)	Reset	Connectors	Accessories included in the standard single pack
D17P30AA2MS100	Dual pressure controller with auto-auto reset	-0.5...7; 6...32 (-7…101; 87…464)	Adjustable LP 0.7…5 (10…72.5); Fixed HP 5 (72.5)	Automatic - Automatic	Male 7/16-20UNF	Upper cover, instruction sheet
D17P45AA2MS100	Dual pressure controller with auto-auto reset	-0.5...7; 8…42 (-7…101; 116…609)	Adjustable LP 0.7…5 (10…72.5); Fixed HP 6 (87)	Automatic - Automatic	Male 7/16-20UNF	Upper cover, instruction sheet
D17P30AM2MS100	Dual pressure controller with auto-manual reset	-0.5...7; 6...32 (-7…101; 87…464)	Adjustable LP 0.7…5 (10…72.5); Fixed HP 5 (72.5)	Automatic - Manual HP	Male 7/16-20UNF	Instruction sheet
D17P45AM2MS100	Dual pressure controller with auto-manual reset	-0.5...7; 8…42 (-7…101; 116…609)	Adjustable LP 0.7…5 (10…72.5); Fixed HP 6 (87)	Automatic - Manual HP	Male 7/16-20UNF	Instruction sheet

Dimensions

D17P30AA - D17P45AA

7/16-20UNF
1/4 horn

D17P30AM - D17P45AM
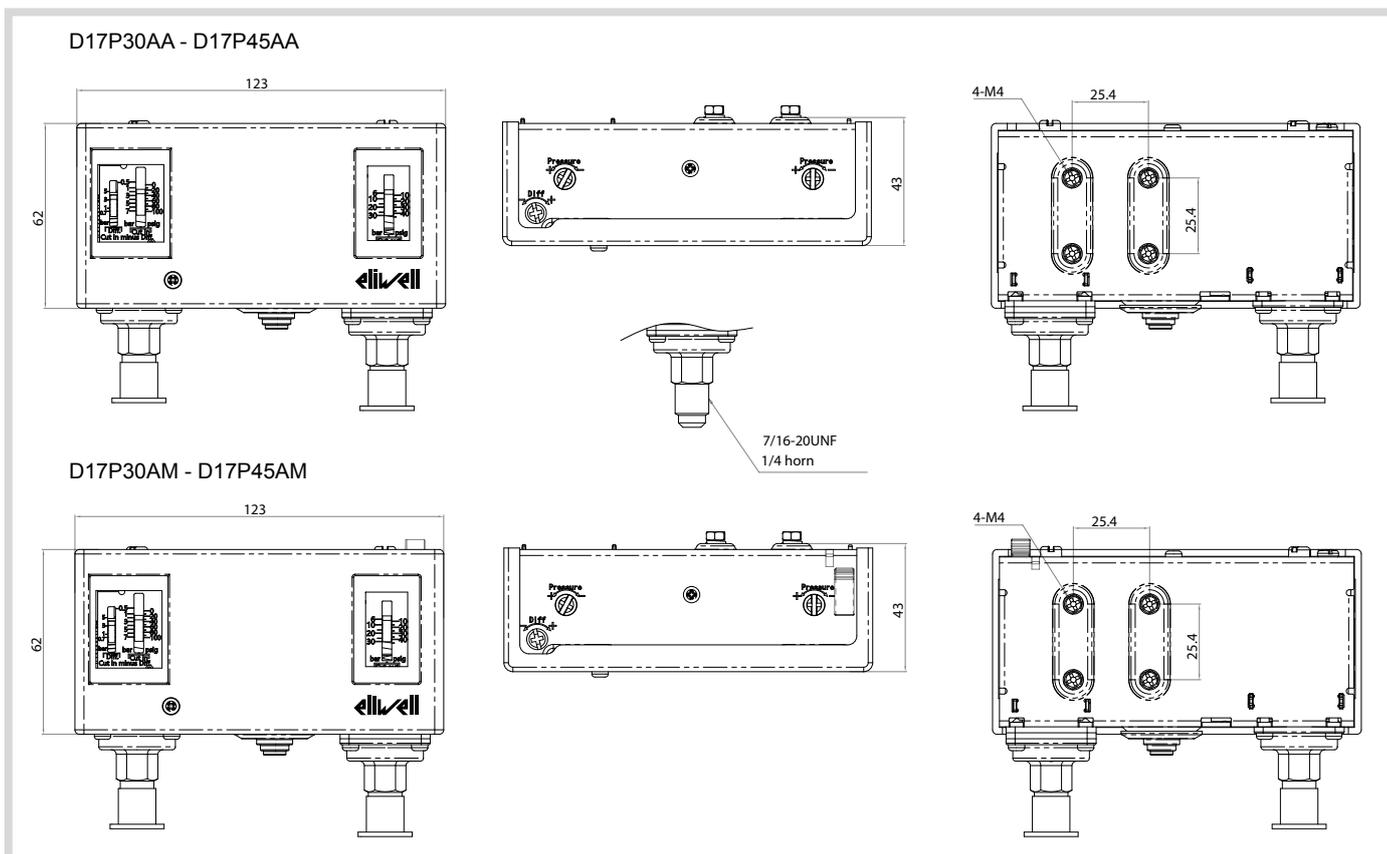
D16P
Single adjustable pressure controllers

Description and main functions
D16P instruments are adjustable electromechanical pressure controllers for high and low pressure, equipped with an SPDT switch that closes and opens as the pressure increases or decreases.
Implemented switch that allows easier and faster wiring.

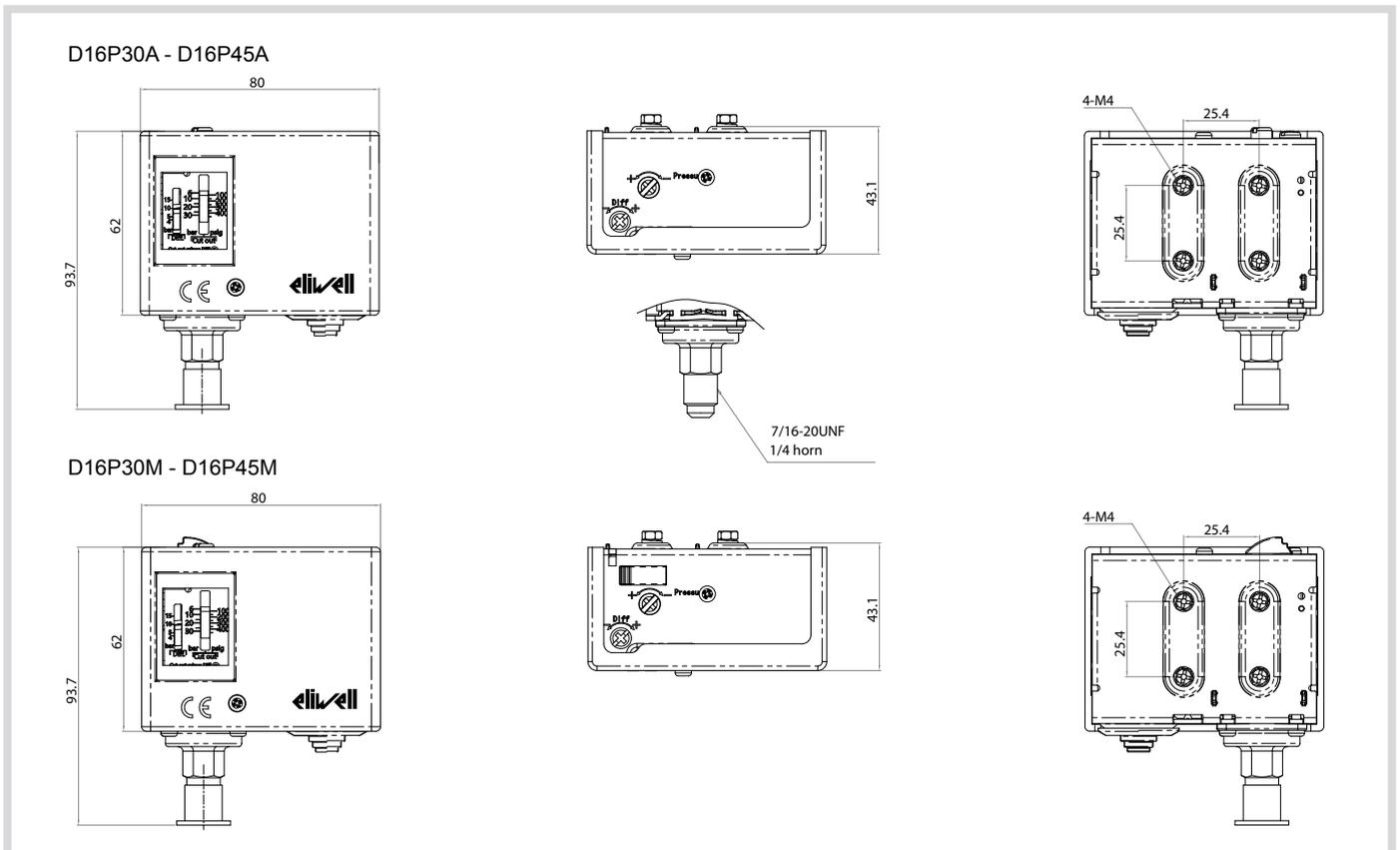| Technical data	D16P	
Compatible refrigerants	R22, R407A, R407C, R134a, R404A, R410A, R448A, R450A, R452A, R507A, R744 **	
Maximum system temperature (TS)	120 °C (248 °F)	
Environmental operating conditions	-40...55 °C (-40...131 °F) / 10...90 % RH	
Transportation and storage conditions	-40...70 °C (-40...158 °F) / 10...90% RH (non-condensing)	
Contact configuration	SPDT	
Electrical load and nominal current	**EUROPE** 16 (16) A 240 Vac	**AMERICA** 16 FLA - 96 LRA 240 Vac 3 hp 240 Vac 2 hp 120 Vac
Protection rating provided by outer casing	IP44 with automatic reset and upper cover IP30 with manual reset and upper cover IP20 without upper cover	
Maximum system pressure (PS)	**RANGE** -0.3... 7 bar (-4.3... 101 psi) 7... 20 bar (101... 290 psi) 7... 31 bar (101... 449 psi)	**PS** 17 bar (246 psi) 25 bar (362 psi) 35 bar (507 psi)
Burst pressure	**RANGE** -0.3... 7 bar (-4.3... 101 psi) 7... 20 bar (101... 290 psi) 7... 31 bar (101... 449 psi)	**BURST PRESSURE** 80 bar (1160 psi) 100 bar (1450 psi) 140 bar (2030 psi)
Installation	No. 4 x threaded holes for M4x5 screws on the back of the casing	
Regulation	hex head and cross head screws, for range and differential	

** Contact the Eliwell Sales Office for non-listed refrigerants.

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D16P

Single adjustable pressure controllers

Old code	New code	Type	Pressure range [bar (psi)]	Differential [bar (psi)]	Reset	Connectors	Accessories included in the standard single pack
D16P07A01MS200	D16P07A01MN200	Low-pressure controller with automatic reset	-0.3...7 (-4.3…101)	Adjustable 0.6...4 (9…58)	Automatic	Male 7/16-20UNF	Upper cover, knob, instruction sheet
D16P07A01CS200	D16P07A01CN200	Low-pressure controller with automatic reset	-0.3...7 (-4.3…101)	Adjustable 0.6...4 (9…58)	Automatic	Capillary and countersunk nut 1 m	Upper cover, knob, instruction sheet
D16P07M01MS200	D16P07M01MN200	Low-pressure controller with manual reset	-0.3...7 (-4.3…101)	Fixed ≤ 1 (14)	Manual	Male 7/16-20UNF	Upper cover, knob, instruction sheet
D16P20A01MS200	D16P20A01MN200	Fan controller with automatic reset	7...20 (101…290)	Adjustable 1.5...6 (22…87)	Automatic	Male 7/16-20UNF	Upper cover, knob, instruction sheet
D16P20A01CS200	D16P20A01CN200	Fan controller with automatic reset	7...20 (101…290)	Adjustable 1.5...6 (22…87)	Automatic	Capillary and countersunk nut 1 m	Upper cover, knob, instruction sheet
D16P30A01MS200	D16P30A01MN200	High-pressure controller with automatic reset	7...31 (101…450)	Adjustable 2...8 (29…116)	Automatic	Male 7/16-20UNF	Upper cover, knob, instruction sheet
D16P30M01MS200	D16P30M01MN200	High-pressure controller with manual reset	7...31 (101…450)	Fixed ≥ 2 (29)	Manual	Male 7/16-20UNF	Upper cover, knob, instruction sheet

Dimensions
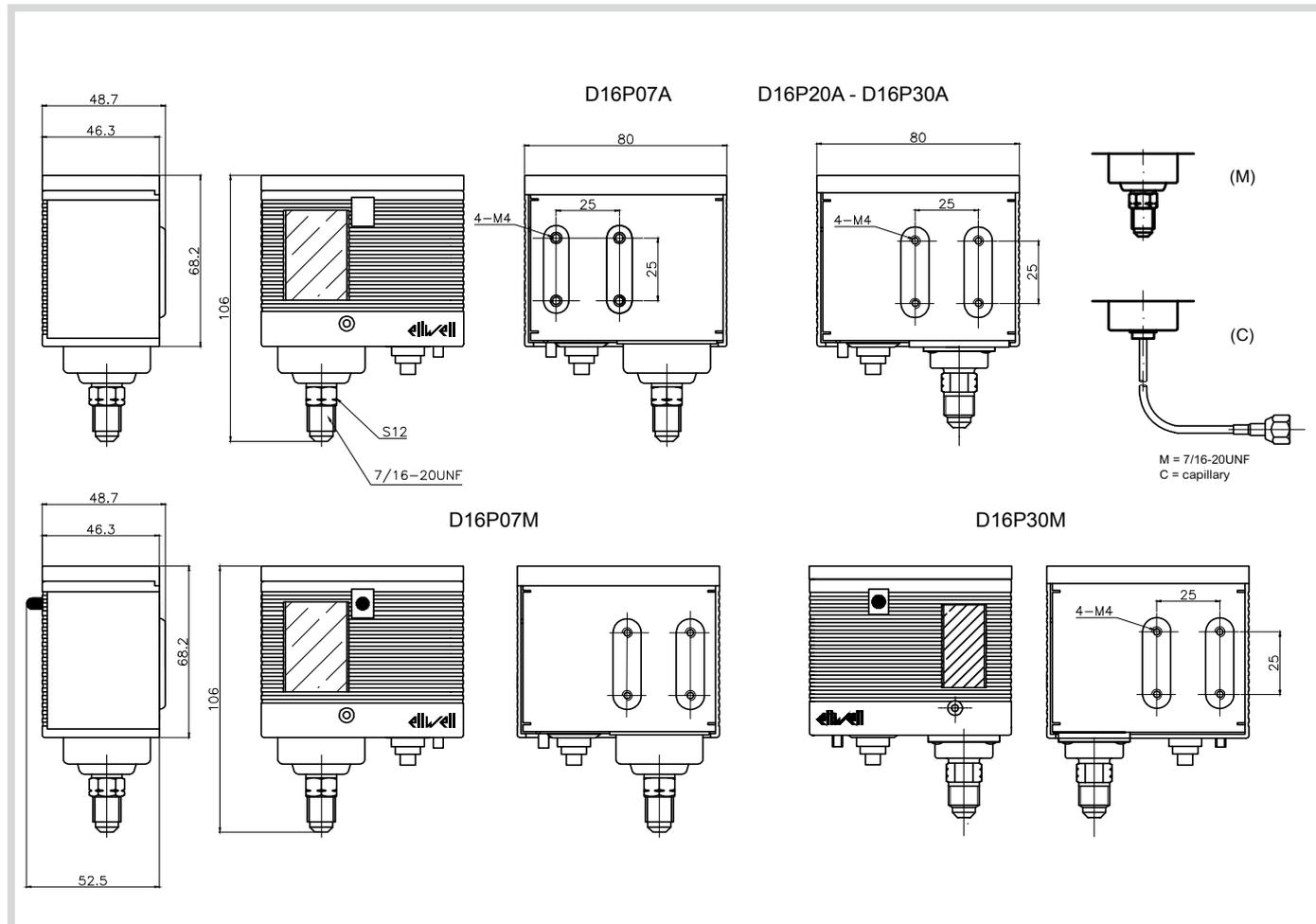
D17P

Adjustable dual pressure controllers

Description and main functions

D17P instruments are adjustable electromechanical pressure controllers for high and low pressure, equipped with 2 independent SPDT switches that close and open as the pressure increases or decreases.
Implemented switch that allows easier and faster wiring.

| Technical data	D17P	
Compatible refrigerants	R22, R407A, R407C, R134a, R404A, R410A, R448A, R450A, R452A, R507A, R744 **	
Maximum system temperature (TS)	120 °C (248 °F)	
Environmental operating conditions	-40...55 °C (-40...131 °F) / 10...90 % RH	
Transportation and storage conditions	-40...70 °C (-40...158 °F) / 10...90% RH (non-condensing)	
Contact configuration	2 x SPDT	
Electrical load and nominal current	**EUROPE** 16 (16) A resistive inductive 240 Vac	**AMERICA** 16 FLA - 96 LRA 240 Vac 3 hp 240 Vac 2 hp 120 Vac
Protection rating provided by outer casing	IP44 with automatic reset and upper cover IP30 with manual reset and upper cover IP20 without upper cover	
Maximum system pressure (PS)	**RANGE** -0.3... 7 bar (-4.3... 101 psi) 7... 31 bar (101... 449 psi)	**PS** 17 bar (246 psi) 35 bar (507 psi)
Burst pressure	**RANGE** -0.3... 7 bar (-4.3... 101 psi) 7... 31 bar (101... 449 psi)	**BURST PRESSURE** 80 bar (1160 psi) 140 bar (2030 psi)
Installation	4 x threaded holes for screws M4x5 on the back of the casing	
Regulation	hex head and cross head screws, for range and differential	

** Contact the Eliwell Sales Office for non-listed refrigerants.

D17P

Adjustable dual pressure controllers

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Old code	New code	Type	Pressure range bar (psi)	Differential bar (psi)	Reset	Connectors	Accessories included in the standard single pack
D17P30AA1MS200	D17P30AA1MC200	Dual pressure controller with auto-auto reset	-0.3...7; 7...31 (-4.3…101; 101…450)	Adjustable LP 0.6...4 (9…58); Adjustable HP 2...8 (29...116)	Automatic - Automatic	Male 7/16-20UNF	Upper cover, knob, instruction sheet
D17P30AA1CS200	D17P30AA1CC200	Dual pressure controller with auto-auto reset	-0.3...7; 7...31 (-4.3…101; 101…450)	Adjustable LP 0.6...4 (9…58); Adjustable HP 2...8 (29...116)	Automatic - Automatic	Capillary and countersunk nut 1 m	Upper cover, knob, instruction sheet
D17P30AM1MS200	D17P30AM1MC200	Dual pressure controller with auto-manual reset	-0.3...7; 7...31 (-4.3…101; 101…450)	Adjustable LP 0.6...4 (9…58); Fixed HP ≥ 2 (29)	Automatic - Manual HP	Male 7/16-20UNF	Upper cover, knob, instruction sheet
D17P30MM1MS200	D17P30MM1MC200	Dual pressure controllers with manual-manual reset	-0.3...7; 7...31 (-4.3…101; 101…450)	Fixed LP ≤ 1 (14); Fixed HP ≥ 2 (29)	Manual - Manual	Male 7/16-20UNF	Upper cover, knob, instruction sheet

Dimensions

D17P30AA

D17P30AM - D17P30MM

(M)

(C)

M = 7\16-20UNF
C = capillary
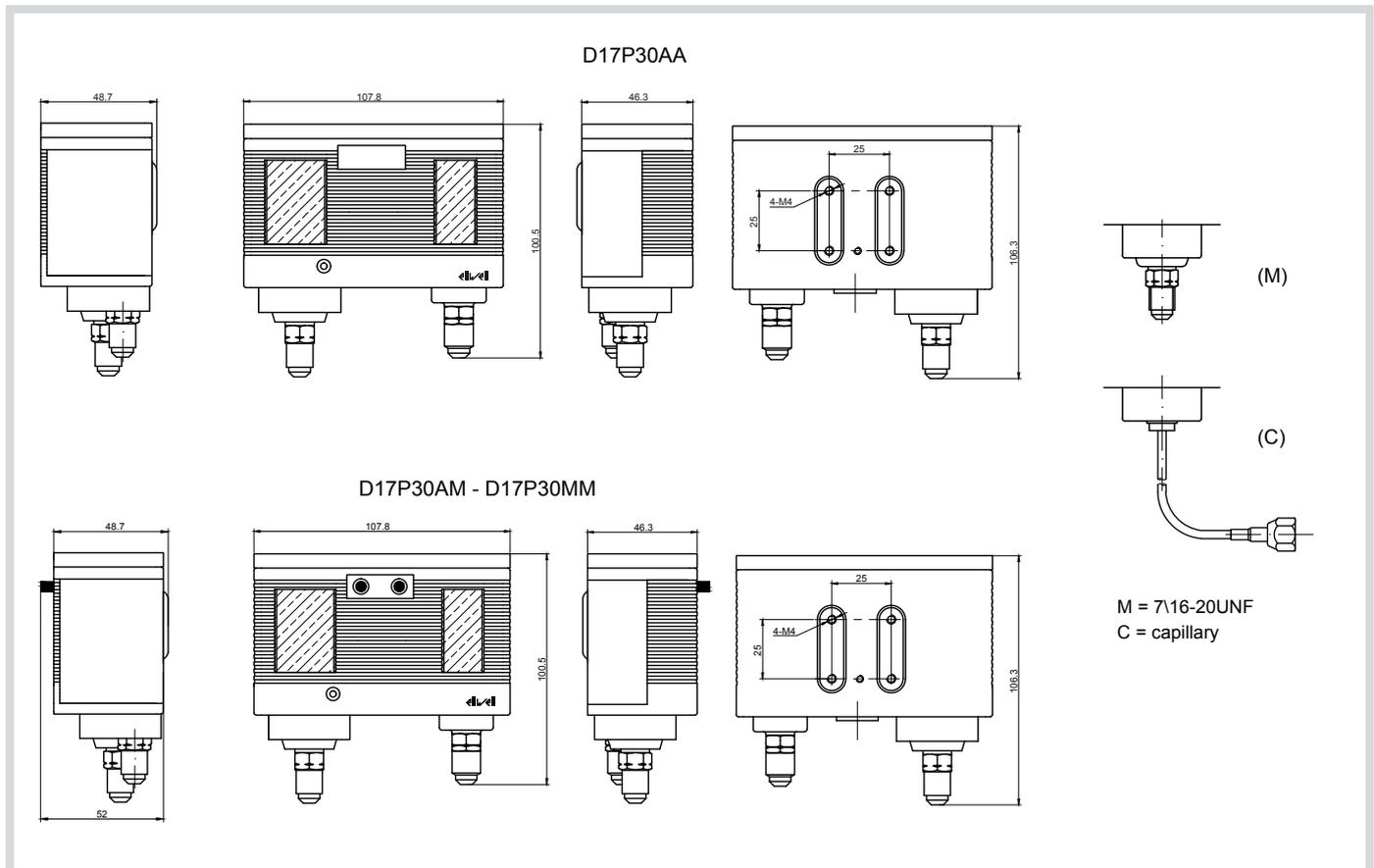
D16T
Adjustable temperature controllers

Description and main functions

D16T instruments are adjustable electromechanical temperature controllers equipped with a SPDT switch that opens or closes when the temperature increases or decreases.
Implemented switch that allows easier and faster wiring.

| Technical data	D16T	
Environmental operating conditions	-40...55 °C (-40...131 °F) / 10...90 % RH	
Transportation and storage conditions	-40...70 °C (-40...158 °F) / 10...90% RH (non-condensing)	
Contact configuration	SPDT	
Electrical load and nominal current	**EUROPE** 16 (16) A resistive inductive 240 Vac	**AMERICA** 16 FLA - 96 LRA 240 Vac 3 hp 240 Vac 2 hp 120 Vac
Protection rating provided by outer casing	IP44 with automatic reset and upper cover IP30 with manual reset and upper cover IP20 without upper cover	
Available temperature range and differential for automatic reset models	**Temperature range** -20…15 °C (-4…59 °F) -10…25 °C (14...77 °F) -40…-5 °C (-40…23 °F)	**Differential (as an absolute value)** Fix 2 °C (3.6 °F) - Adj 2…10 °C (3.6...18 °F) - Fix 5 °C (9 °F) - Adj 5…10 °C (9...18 °F) Adj 2…10 °C (3.6…18 °F)
Available temperature range and differential for manual reset	**Temperature range** -20…15 °C (-4…59 °F)	**Differential (as an absolute value)** Fix 2 °C (3.6 °F)
Installation	4 x threaded holes for M4x5 screws on the back of the casing	
Regulation	hex head and cross head screws, for range and differential	

Dimensions

D16T05AA - D16T15AA - D16T15AF - D16T25AA - D16T25AF - D16T40AA

D16T15MF

C = capillary
A = ambient
T = end with coil
B = bulb
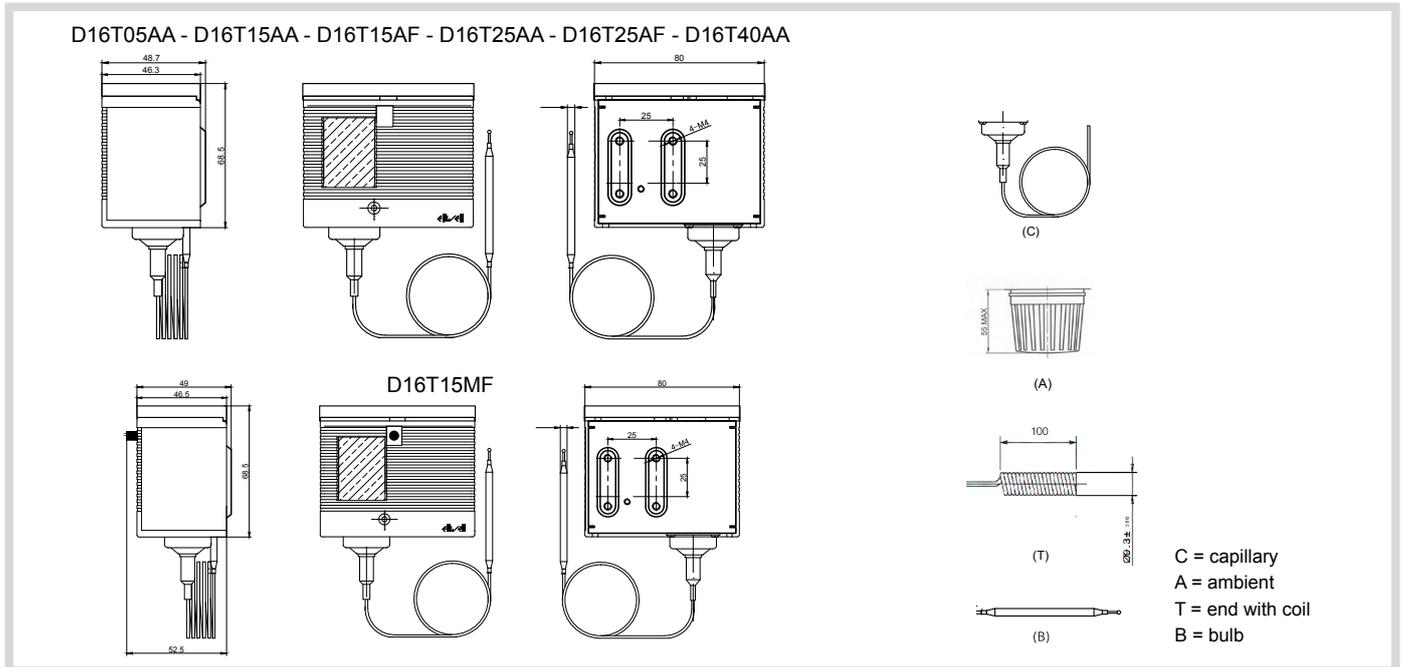
D16T

Adjustable temperature controllers

Old code	New code	Type	Temperature range °C (°F)	Differential °C (°F)	Reset	Sensor type	Sensor length	Accessories included in the standard single pack
D16T15AAC2S200	D16T15AAC2N200	Temperature controller with automatic reset	-20...15 (-4...59)	Adjustable 2…10 (3.6…18)	Automatic	Straight capillary	2 m	Upper cover, knob, instruction sheet
D16T15AFC6S200	D16T15AFC6N200	Temperature controller with automatic reset	-20...15 (-4...59)	Fixed 2 (3,6)	Automatic	Straight capillary	6 m	Upper cover, knob, instruction sheet
D16T15MFC2S200	D16T15MFC2N200	Temperature controller with manual reset	-20...15 (-4...59)	Fixed 2 (3,6)	Manual	Straight capillary	2 m	Upper cover, knob, instruction sheet
D16T15MFC6S200	D16T15MFC6N200	Temperature controller with manual reset	-20...15 (-4...59)	Fixed 2 (3,6)	Manual	Straight capillary	6 m	Upper cover, knob, instruction sheet
D16T15AAT2S200	D16T15AAT2N200	Temperature controller with automatic reset	-20...15 (-4...59)	Adjustable 2…10 (3.6…18)	Automatic	End with coil Ø 9.3x100 mm	2 m in total	Upper cover, knob, instruction sheet
D16T15AAB2S200	D16T15AAB2N200	Temperature controller with automatic reset	-20...15 (-4...59)	Adjustable 2…10 (3.6…18)	Automatic	Bulb Ø 6x70 mm	2 m in total	Upper cover, knob, instruction sheet
D16T15AAA0S200	D16T15AAA0N200	Temperature controller with automatic reset	-20...15 (-4...59)	Adjustable 2…10 (3.6…18)	Automatic	Enclosure Ø 40 mm	40 mm	Upper cover, knob, instruction sheet
D16T15AFA0S200	D16T15AFA0N200	Temperature controller with automatic reset	-20...15 (-4...59)	Fixed 2 (3,6)	Automatic	Enclosure Ø 40 mm	40 mm	Upper cover, knob, instruction sheet
D16T25AAC2S200	D16T25AAC2N200	Temperature controller with automatic reset	-10...25 (14...77)	Adjustable 5…10 (9…18)	Automatic	Straight capillary	2 m	Upper cover, knob, instruction sheet
D16T25AAT2S200	D16T25AAT2N200	Temperature controller with automatic reset	-10...25 (14...77)	Adjustable 5…10 (9…18)	Automatic	End with coil Ø 9.3x100 mm	2 m in total	Upper cover, knob, instruction sheet
D16T25AAB2S200	D16T25AAB2N200	Temperature controller with automatic reset	-10...25 (14...77)	Adjustable 5…10 (9…18)	Automatic	Bulb Ø 6x70 mm	2 m in total	Upper cover, knob, instruction sheet
D16T25AAA0S200	D16T25AAA0N200	Temperature controller with automatic reset	-10...25 (14...77)	Adjustable 5…10 (9…18)	Automatic	Enclosure Ø 40 mm	40 mm	Upper cover, knob, instruction sheet
D16T25AFA0S200	D16T25AFA0N200	Temperature controller with automatic reset	-10...25 (14...77)	Fixed 5 (9)	Automatic	Enclosure Ø 40 mm	40 mm	Upper cover, knob, instruction sheet
D16T05AAT2S200	D16T05AAT2N200	Temperature control auto reset	-40...-5 (-40...23)	Fixed 2 (3,6)	Automatic	End with coil Ø 9.3x100 mm	2 m in total	Upper cover, knob, instruction sheet

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Accessories for D controllers

Accessories for D pressure and temperature controllers
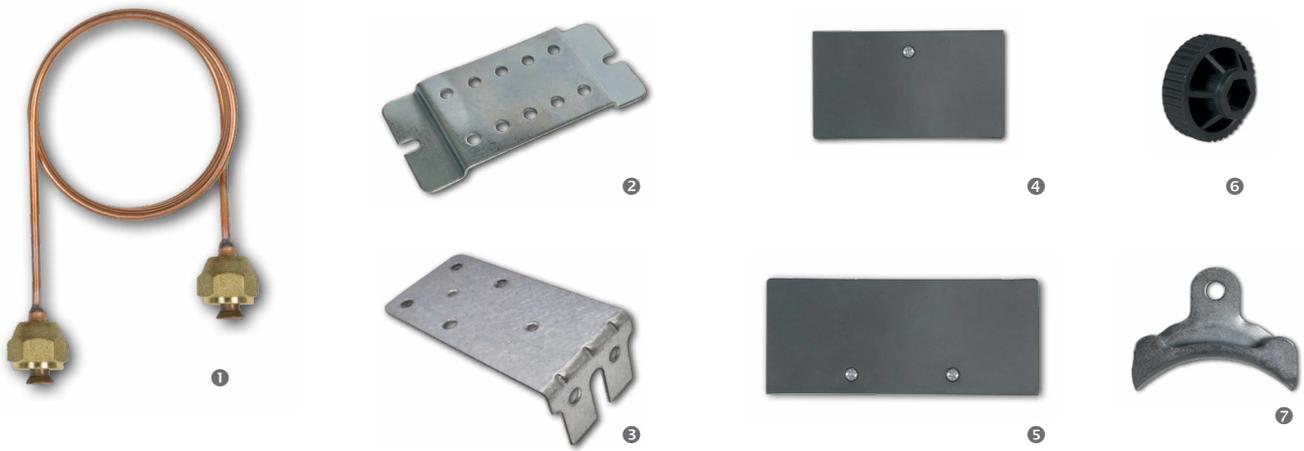
Code		Description	Note
D00P00FN110200	❶	Coupling for 1.0 m D controllers without valve	D16P-D17P only
D00P00FN115200		Coupling for 1.5 m D controllers without valve	D16P-D17P only
D00A00BF100200	❷	Flat mounting bracket for D controllers	
D00A00BA100200	❸	Angled mounting bracket for D controllers	
D00A00TC116200	❹	Upper cover for D16	
D00A00TC117200	❺	Upper cover for D17	
D00A00KN100200	❻	D controller adjustment knob	
D00T0MCC100200	❼	Metal clamp for D controller capillary	Only D16T

Contact the Eliwell Sales Office for availability.

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RV

4-way reversing valves
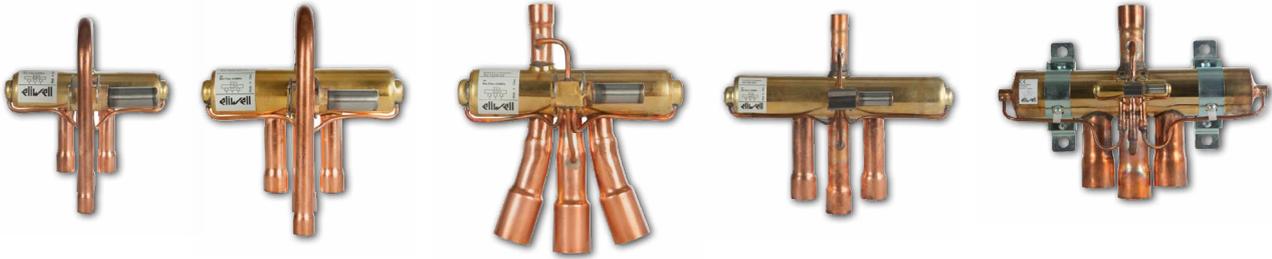
Description and main functions

The RV series 4-way reversing valves are the key component to provide heating and cooling in a climate controlled space by reversing the refrigerant. They are used for air conditioning individual rooms, centralised air conditioning plants, monobloc air conditioners and CR units for defrosting applications.
Reversing valves are designed for systems with capacities from 1 kW up to 265 kW.
The valves are suitable for use with refrigerants HC, HCFC, HFC, and HFO, including those in category A2L.
The valve design also guarantees minimum pressure drop and very low leakage. The available models offer a wide range of connections, configurations and capacities for specific applications.
The valves are certified PED (EU Directive 2014/68/EU category 2 module D1) and have UL and European type-approvals.
All models and individually packaged to ensure maximum flexibility for purchasing and usage.

List of permitted refrigerants:
R407C / R410A / R404A / R134a / R22 / R32 / R1234yf / R1234ze / R452B / R450A / R445A / R454A / R454B / R454C / R455A / R1233zd / R1336mzz / R290

Direct action models

		MIN - MAX CAPACITY (conditions 1)									
		Evaporation 7.2 °C; subcooling 5.0 °C; condensation 55 °C; overheating 5 °C; load loss 0.014 MPa									
Code	Description	R407C kW		R410A kW		R32 kW		R134A kW		R290 kW	
		min	max.	min	max.	min	max.	min	max.	min	max.
RV00BD06050000	REV VALVE 0.5 UST 3/8 - 5/16 U DISCH	1.32	3.10	1.53	3.86	1.65	4.25	1.13	2.38	1.29	3.33
RV01AD06060000	REV VALVE 1 UST 3/8 - 3/8	1.39	4.62	1.73	6.01	1.87	6.61	1.39	3.91	1.48	5.17
RV01AD06050000	REV VALVE 1 UST 3/8 - 5/16	1.39	4.62	1.73	6.01	1.87	6.61	1.39	3.91	1.48	5.17
RV01AD08050000	REV VALVE 1 UST 1/2 - 5/16	1.39	4.62	1.73	6.01	1.87	6.61	1.39	3.91	1.48	5.17
RV01BD06050000	REV VALVE 1 UST 3/8 - 5/16 U DISCH	1.39	4.62	1.73	6.01	1.87	6.61	1.39	3.91	1.48	5.17
RV01BD06060000	REV VALVE 1 UST 3/8 - 3/8 U DISCH	1.39	4.62	1.73	6.01	1.87	6.61	1.39	3.91	1.48	5.17
RV01AD08060000	REV VALVE 1 UST 1/2 - 3/8	1.39	4.62	1.73	6.01	1.87	6.61	1.39	3.91	1.48	5.17
RV01BD08060000	REV VALVE 1 UST 1/2 - 3/8 U DISCH	1.39	4.62	1.73	6.01	1.87	6.61	1.39	3.91	1.48	5.17
RV02AD08060000	REV VALVE 2 UST 1/2 - 3/8	2.79	6.35	3.17	7.70	3.42	8.47	2.44	4.95	2.76	6.65
RV02BD08060000	REV VALVE 2 UST 1/2 - 3/8 U DISCH	2.79	6.35	3.17	7.70	3.42	8.47	2.44	4.95	2.76	6.65
RV02CD10060000	REV VALVE 2 UST 5/8 - 3/8	3.85	7.10	4.54	8.81	4.90	9.69	3.14	5.63	3.69	7.76
RV02DD10060000	REV VALVE 2 UST 5/8 - 3/8 U DISCH	3.85	7.10	4.54	8.81	4.90	9.69	3.14	5.63	3.70	7.76
RV03ED10080000	REV VALVE 3 UST 5/8 - 1/2	3.85	9.55	4.54	11.98	4.90	13.18	3.14	7.42	3.70	10.34
RV03ED12080000	REV VALVE 3 UST 3/4 - 1/2	3.85	9.90	4.54	12.35	4.90	13.59	3.14	7.78	3.70	11.08
RV03CD10080000	REV VALVE 3 UST 5/8 - 1/2 CENT DISCH	3.85	9.55	4.54	11.98	4.90	13.18	3.14	7.42	3.70	10.34
RV03DD10080000	REV VALVE 3 UST 5/8 - 1/2 U DISCH	3.85	9.55	4.54	11.98	4.90	13.18	3.14	7.42	3.70	10.34
RV06AD12080000	REV VALVE 6 UST 3/4 - 1/2	3.85	19.02	4.54	23.95	4.90	26.35	3.14	14.81	3.70	20.69
RV06AD14080000	REV VALVE 6 UST 7/8 - 1/2	3.85	19.02	4.54	23.95	4.90	26.35	3.14	14.81	3.70	20.69
RV06AD14100000	REV VALVE 6 UST 7/8 - 5/8	3.85	19.02	4.54	23.95	4.90	26.35	3.14	14.81	3.70	20.69
RV06AD14120000	REV VALVE 6 UST 7/8 - 3/4	3.85	19.02	4.54	23.95	4.90	26.35	3.14	14.81	3.70	20.69
RV10AD14080000	REV VALVE 10 UST 7/8 - 1/2	11.22	33.11	13.01	41.88	14.05	46.07	9.82	26.05	11.08	36.56
RV10AD14120000	REV VALVE 10 UST 7/8 - 3/4	11.22	33.11	13.01	41.88	14.05	46.07	9.82	26.05	11.08	36.56
RV10AD141200S0	REV VALVE 10 UST 7/8 - 3/5	11.22	33.11	13.01	41.88	14.05	46.07	9.82	26.05	11.08	36.56
RV10AD14140X00	REV VALVE 10 UST 7/8 - 7/8 FREE	11.22	33.11	13.01	41.88	14.05	46.07	9.82	26.05	11.08	36.56
RV10AD180M0000	REV VALVE 10 UST 1-1/8 - METRIC	17.21	37.67	19.71	47.51	21.29	52.26	14.41	32.36	16.62	41.36
RV10AD18120000	REV VALVE 10 UST 1-1/8 - 3/4	17.21	37.67	19.71	47.51	21.29	52.26	14.41	32.36	16.62	41.36
RV10AD18140000	REV VALVE 10 UST 1-1/8 - 7/8	17.21	37.67	19.71	47.51	21.29	52.26	14.41	32.36	16.62	41.36
RV10AD181400S0	REV VALVE 10 UST 1-1/8 - 7/9	17.21	37.67	19.71	47.51	21.29	52.26	14.41	32.36	16.62	41.36
RV12FD220T0000	REV VALVE 12 UST 1-3/8	22.83	46.82	26.35	58.94	28.46	64.83	18.97	36.96	22.16	51.7
RV15AD18140000	REV VALVE 15 UST 1-1/8 - 7/8	15.81	54.54	15.81	61.58	17.07	67.74	12.28	40.83	16.6	55.4

R290 COMPATIBLE

RV

4-way reversing valves

R290 COMPATIBLE

Direct action models

Code	Description	MIN - MAX CAPACITY (conditions 1) Evaporation 4.4 °C; subcooling 0 °C; condensation 38 °C; overheating 5 °C; load loss 0.01 MPa									
		R407C kW		R410A kW		R32 kW		R134A kW		R290 kW	
		min	max.	min	max.	min	max.	min	max.	min	max.
RV00BD06050000	REV VALVE 0.5 UST 3/8 - 5/16 U DISCH	1.43	3.37	1.66	4.20	1.80	4.62	1.23	2.59	1.40	3.62
RV01AD06060000	REV VALVE 1 UST 3/8 - 3/8	1.51	5.02	1.88	6.53	2.03	7.19	1.51	4.25	1.61	5.62
RV01AD06050000	REV VALVE 1 UST 3/8 - 5/16	1.51	5.02	1.88	6.53	2.03	7.19	1.51	4.25	1.61	5.62
RV01AD08050000	REV VALVE 1 UST 1/2 - 5/16	1.51	5.02	1.88	6.53	2.03	7.19	1.51	4.25	1.61	5.62
RV01BD06050000	REV VALVE 1 UST 3/8 - 5/16 U DISCH	1.51	5.02	1.88	6.53	2.03	7.19	1.51	4.25	1.61	5.62
RV01BD06060000	REV VALVE 1 UST 3/8 - 3/8 U DISCH	1.51	5.02	1.88	6.53	2.03	7.19	1.51	4.25	1.61	5.62
RV01AD08060000	REV VALVE 1 UST 1/2 - 3/8	1.51	5.02	1.88	6.53	2.03	7.19	1.51	4.25	1.61	5.62
RV01BD08060000	REV VALVE 1 UST 1/2 - 3/8 U DISCH	1.51	5.02	1.88	6.53	2.03	7.19	1.51	4.25	1.61	5.62
RV02AD08060000	REV VALVE 2 UST 1/2 - 3/8	3.03	6.90	3.45	8.37	3.72	9.21	2.65	5.38	3.00	7.22
RV02BD08060000	REV VALVE 2 UST 1/2 - 3/8 U DISCH	3.03	6.90	3.45	8.37	3.72	9.21	2.65	5.38	3.00	7.22
RV02CD10060000	REV VALVE 2 UST 5/8 - 3/8	4.18	7.72	4.93	9.58	5.33	10.53	3.41	6.12	4.01	8.43
RV02DD10060000	REV VALVE 2 UST 5/8 - 3/8 U DISCH	4.18	7.72	4.93	9.58	5.33	10.53	3.41	6.12	4.02	8.43
RV03ED10080000	REV VALVE 3 UST 5/8 - 1/2	4.18	10.38	4.93	13.02	5.33	14.32	3.41	8.07	4.02	11.24
RV03ED12080000	REV VALVE 3 UST 3/4 - 1/2	4.18	10.76	4.93	13.42	5.33	14.77	3.41	8.46	4.02	12.04
RV03CD10080000	REV VALVE 3 UST 5/8 - 1/2 CENT DISCH	4.18	10.38	4.93	13.02	5.33	14.32	3.41	8.07	4.02	11.24
RV03DD10080000	REV VALVE 3 UST 5/8 - 1/2 U DISCH	4.18	10.38	4.93	13.02	5.33	14.32	3.41	8.07	4.02	11.24
RV06AD12080000	REV VALVE 6 UST 3/4 - 1/2	4.18	20.67	4.93	26.03	5.33	28.64	3.41	17.59	4.02	22.48
RV06AD14080000	REV VALVE 6 UST 7/8 - 1/2	4.18	20.67	4.93	26.03	5.33	28.64	3.41	17.59	4.02	22.48
RV06AD14100000	REV VALVE 6 UST 7/8 - 5/8	4.18	20.67	4.93	26.03	5.33	28.64	3.41	17.59	4.02	22.48
RV06AD14120000	REV VALVE 6 UST 7/8 - 3/4	4.18	20.67	4.93	26.03	5.33	28.64	3.41	17.59	4.02	22.48
RV10AD14080000	REV VALVE 10 UST 7/8 - 1/2	12.20	35.99	14.14	45.52	15.27	50.07	10.67	28.32	12.04	39.74
RV10AD14120000	REV VALVE 10 UST 7/8 - 3/4	12.20	35.99	14.14	45.52	15.27	50.07	10.67	28.32	12.04	39.74
RV10AD141200S0	REV VALVE 10 UST 7/8 - 3/5	12.20	35.99	14.14	45.52	15.27	50.07	10.67	28.32	12.04	39.74
RV10AD14140X00	REV VALVE 10 UST 7/8 - 7/8 FREE	12.20	35.99	14.14	45.52	15.27	50.07	10.67	28.32	12.04	39.74
RV10AD180M0000	REV VALVE 10 UST 1-1/8 - METRIC	18.71	40.95	21.42	51.64	23.14	56.81	15.66	35.17	18.07	44.96
RV10AD18120000	REV VALVE 10 UST 1-1/8 - 3/4	18.71	40.95	21.42	51.64	23.14	56.81	15.66	35.17	18.07	44.96
RV10AD18140000	REV VALVE 10 UST 1-1/8 - 7/8	18.71	40.95	21.42	51.64	23.14	56.81	15.66	35.17	18.07	44.96
RV10AD181400S0	REV VALVE 10 UST 1-1/8 - 7/9	18.71	40.95	21.42	51.64	23.14	56.81	15.66	35.17	18.07	44.96
RV12FD220T0000	REV VALVE 12 UST 1-3/8	24.82	50.89	28.64	64.07	30.93	70.47	20.62	40.17	24.08	56.20
RV15AD18140000	REV VALVE 15 UST 1-1/8 - 7/8	17.18	59.28	17.18	66.93	18.56	73.63	13.35	44.38	18.04	60.22

Models with pilot

Code	Description	MIN - MAX CAPACITY (conditions 1) Evaporation 7.2 °C; subcooling 5.0 °C; condensation 55 °C; overheating 5 °C; load loss 0.014 MPa									
		R407C kW		R410A kW		R32 kW		R134A kW		R290 kW	
		min	max.	min	max.	min	max.	min	max.	min	max.
RV20AP20160000	REV VALVE 20 UST 1-1/4 - 1	17.56	72.48	17.59	81.64	19.00	89.80	13.69	54.19	18.47	73.86
RV20AP22180000	REV VALVE 20 UST 1-3/8 - 1-1/8	17.56	72.48	17.59	81.64	19.00	89.80	13.69	54.19	18.47	73.86
RV30AP24200000	REV VALVE 30 UST 1-1/2 - 1-1/4	26.35	108.72	26.36	122.44	28.47	134.68	20.36	81.28	27.68	110.79
RV40AP28240000	REV VALVE 40 UST 1-3/4 - 1-1/2	35.14	144.95	35.16	163.25	37.97	179.58	27.03	108.36	36.92	147.71
RV40AP26240000	REV VALVE 40 UST 1-5/8 - 1-1/2	35.14	144.95	35.16	163.25	37.97	179.58	27.03	108.36	36.92	147.71
RV50AP34240000	REV VALVE 50 UST 2-1/8 - 1-1/2	35.14	181.13	35.21	203.99	38.03	224.39	27.03	135.40	36.93	184.64
RV60AP42260000	REV VALVE 60 UST 2-5/8 - 1-5/8	38.30	197.43	38.38	222.35	41.45	244.59	29.46	147.59	40.26	201.26

Code	Description	MIN - MAX CAPACITY (conditions 1) Evaporation 4.4 °C; subcooling 0 °C; condensation 38 °C; overheating 5 °C; load loss 0.01 MPa									
		R407C kW		R410A kW		R32 kW		R134A kW		R290 kW	
		min	max.	min	max.	min	max.	min	max.	min	max.
RV20AP20160000	REV VALVE 20 UST 1-1/4 - 1	19.09	78.78	19.12	88.74	20.65	97.61	14.88	58.90	20.08	80.28
RV20AP22180000	REV VALVE 20 UST 1-3/8 - 1-1/8	19.09	78.78	19.12	88.74	20.65	97.61	14.88	58.90	20.08	80.28
RV30AP24200000	REV VALVE 30 UST 1-1/2 - 1-1/4	28.64	118.17	28.65	133.09	30.94	146.40	22.13	88.35	30.08	120.42
RV40AP28240000	REV VALVE 40 UST 1-3/4 - 1-1/2	38.20	157.55	38.22	177.45	41.27	195.19	29.38	117.78	40.13	160.56
RV40AP26240000	REV VALVE 40 UST 1-5/8 - 1-1/2	38.20	157.55	38.22	177.45	41.27	195.19	29.38	117.78	40.13	160.56
RV50AP34240000	REV VALVE 50 UST 2-1/8 - 1-1/2	38.20	196.88	38.27	221.73	41.33	243.90	29.38	147.17	40.14	200.70
RV60AP42260000	REV VALVE 60 UST 2-5/8 - 1-5/8	41.63	214.60	41.72	241.68	45.05	265.85	32.02	160.42	43.76	218.77

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RV

4-way reversing valves

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Coils

Code	Description	Power supply	Frequency	Power at 50/60 Hz (W)	Cable length mm	inches
RVCKA702400000	COIL 24 Vac without cable	24 Vac	50/60 Hz	5/4	-	-
RVCKA612000000	COIL 120 Vac without cable	120 Vac	50/60 Hz	5/4	-	-
RVCKA723000000	COIL 230 Vac without cable	230 Vac	50/60 Hz	5/4	-	-
RVCKD001200000	COIL 12 Vdc without cable	12 Vdc	-	10	-	-
RVCKD002400000	COIL 24 Vdc without cable	24 Vdc	-	10	-	-
RVCLA702404800	COIL 24 Vac with 48" cable	24 Vac	50/60 Hz	5/4	1200	48
RVCLA612004800	COIL 120 Vac with 48" cable	120 Vac	50/60 Hz	5/4	1200	48
RVCLA723004800	COIL 230 Vac with 48" cable	230 Vac	50/60 Hz	5/4	1200	48
RVCLD001204800	COIL 12 Vdc with 48" cable	12 Vdc	-	10	1200	48
RVCLD002404800	COIL 24 Vdc with 48" cable	24 Vdc	-	10	1200	48

other cable lengths are available on request

Accessories

Code	Description	Cable length mm	inches
RVCC0W29048000	48" cable for RVCK coil	1200	48
RV00H7-60A0000	Coil screw	-	-

Panel
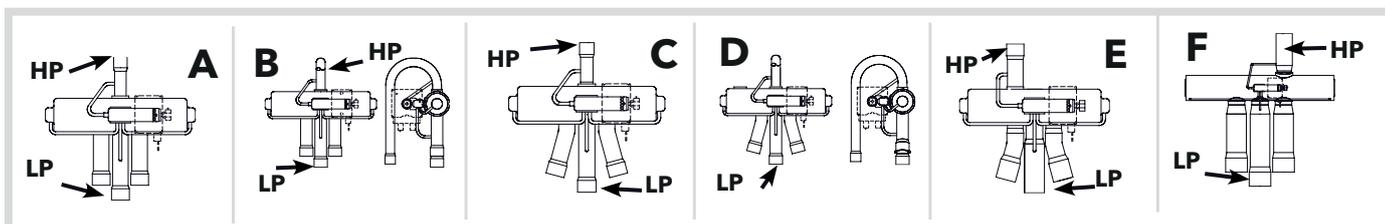
CONDITIONS 1
The capacities indicated are based on the following conditions:

✔ **evaporation temperature: 7.2 °C;**
✔ **condensation temperature: 55 °C;**
✔ **sub cooling: 5.0 °C;**
✔ **superheat: 5.0 °C;**
✔ **pressure drop: 0.014 MPa**

CONDITIONS 2
The capacities indicated are based on the following conditions:

✔ **evaporation temperature: 4.4 °C;**
✔ **condensation temperature: 38 °C;**
✔ **sub cooling: 0 °C;**
✔ **superheat: 5.0 °C;**
✔ **pressure drop: 0.01 MPa**

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PTC Probes

New series of PTC temperature probes

PTC

Code	Description	Capsule material	Capsule dimensions (mm)(ØxL)	Cable type	Level of protection	Operating range	Probe length
SNXAAE43002AH0	PTC 6X40 steel 3 m screened silicone cable grey	AISI 304	6x40	Screened silicone	IP67	-50...120°C	3.0 m
SNXDAC12002A60	PTC 4x40 steel 2 m TPE FAST cable green	AISI 304	4x40	Thermoplastic rubber (outer) Polypropylene (inner)	IP67	-50...110°C	2.0 m
SNXDAE11502C00	PTC 6x20 steel 1.5 m TPE cable black	AISI 304	6x20	Thermoplastic rubber (outer) Polypropylene (inner)	IP68	-50...110°C	1.5 m
SNXDAF12802A4M	PTC to pierce food at 90° MOCA 2.8 m TPE cable black	AISI 304	conical 100	Thermoplastic rubber (outer) Polypropylene (inner)	IP67	-50...110°C	2.8 m
SNXDED11502C00	PTC 5x20 TPE 1.5 m TPE cable black	Thermoplastic rubber	5x20	Thermoplastic rubber (outer) Polypropylene (inner)	IP68	-50...110°C	1.5 m
SNXSAE41502A00	PTC 6x40 steel 1.5 m silicone cable grey	AISI 304	6x40	Silicone	IP67	-50...120°C	1.5 m
SNXSAE41502GH0	PTC 6x40 steel 1.5 m silicone cable grey -50+150°C	AISI 304	6x40	Silicone	IP67	-50...150°C	1.5 m

NTC Probes

NTC semi-conductor temperature probes

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NTC co-moulded with double insulation

Code	Description	Capsule material	Capsule dimensions (mm)(ØxL)	Cable type	Level of protection	Dielectric strength	Operating range	Probe length
SN8PCL1002	NTC with double insulation	nylon	7X26	PVC	IP67	4000 V	-30…80 °C	1.0 m
SN8SAA1500	NTC with double insulation	AISI304	6X40	Silicone	IP67	4000 V	-40…105 °C	1.5 m

NTC co-moulded with double insulated cable

Code	Description	Capsule material	Capsule dimensions (mm)(ØxL)	Cable type	Level of protection	Dielectric strength	Operating range	Probe length
SN8T6H1502	NTC co-moulded with double insulated cable	Thermoplastic rubber	5X20	Thermoplastic rubber	IP68	2000 V	-50...110 °C	1.5 m
SN8T6H1505	NTC co-moulded with double insulated screened cable	Thermoplastic rubber	5X20	Thermoplastic rubber	IP68	2000 V	-50...110 °C	1.5 m
SN8DED11502C0	NTC co-moulded with double insulated cable	Thermoplastic rubber	5X20	Thermoplastic rubber (Outer) Polypropylene (Inner)	IP68	2000 V	-50...110 °C	1.5 m
SN8DED13002C0	NTC co-moulded with double insulated cable	Thermoplastic rubber	5X20	Thermoplastic rubber (Outer) Polypropylene (Inner)	IP68	2000 V	-50...110 °C	3.0 m
SN8DAE11502C0	NTC co-moulded with double insulated cable	AISI304	6X20	Thermoplastic rubber (Outer) Polypropylene (Inner)	IP68	2000 V	-50...110 °C	1.5 m
SN8DAE13002C0	NTC co-moulded with double insulated cable	AISI304	6X20	Thermoplastic rubber (Outer) Polypropylene (Inner)	IP68	2000 V	-50...110 °C	3.0 m
SN8T6N1502	NTC co-moulded with double insulated cable	AISI304	6X50	Thermoplastic rubber	IP68	2000 V	-50...110 °C	1.5 m

Special probes

Code	Description	Capsule material	Capsule dimensions (mm)(ØxL)	Cable type	Level of protection	Dielectric strength	Operating range	Probe length
SN8DEB21502C0	NTC clamp-on	Thermoplastic rubber	6X20	Thermoplastic rubber (Outer) Polypropylene (Inner)	IP68	2000 V	-50...110 °C	1.5 m
SN8DEB23002C0	NTC clamp-on	Thermoplastic rubber -	6X20	Thermoplastic rubber (Outer) Polypropylene (Inner)	IP68	2000 V	-50...110 °C	3.0 m
SN8DNB11502A0	NTC probe with arm IP67 High-speed response	Copper	4X16	Thermoplastic rubber (Outer) Polypropylene (Inner)	IP67	1500 V	-50...110 °C	1.5 m
SN8DAC11502AV	NTC probe High-speed response	AISI304	4X40	Thermoplastic rubber (Outer) Polypropylene (Inner)	IP67	2000 V	-50...110 °C	1.5 m
SN8DAC13002AV	NTC probe High-speed response	AISI304	4X40	Thermoplastic rubber (Outer) Polypropylene (Inner)	IP67	2000 V	-50...110 °C	3.0 m
SN8DEP15002C0	NTC probe product simulation	Thermoplastic rubber -	Ø 110	Thermoplastic rubber (Outer) Polypropylene (Inner)	IP68	2000 V	-50...110 °C	5.0 m

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EWPA

Pressure transducers 4…20 mA

R290 COMPATIBLE   A2L·A3 COMPATIBLE

- Complies with DIN EN 60335-2-40 and DIN EN 60335-2-89

- This device has been tested in accordance with section 22.112 of IEC 60335-2-89, as it is considered not to be a source of ignition caused by arcs/sparks

- This device has been tested with a surface temperature not exceeding the limit defined in point 22.114 of IEC 60335-2-89 and point 22.117 of IEC 60335-2-40, according to the criteria of chapter 11 (normal operation) and chapter 19 (abnormal operation)

Description and main functions

EWPA 4...20 mA pressure transducers are sensors capable of transmitting a signal by means of a current output to the measuring instruments to which they are connected.
The new series features:
- Metri Pack 150 electrical connection (black for range < 30 bar – grey for 30 bar pressure)
- 1/4 MALE gas - 1/4 MALE SAE - 1/4 FEMALE SAE pressure connections - Pipe Ø 6 mm
- relative pressure range: -1 ... 7 bar and 0 ... 10 – 150 bar
- transducer only (codes ending with P) or transducer and cable accessory (codes ending with C) available
- UL certification is available in accordance with UL 61010-1 & CSA-C22.2 No. 61010-1

Technical data	EWPA 007	EWPA 009	EWPA 010	EWPA 011	EWPA 015	EWPA 030	EWPA 050	EWPA 090	EWPA 150
Operating range (relative)	-0.5...7 bar	-1…9 bar	0...10 bar	-0.5...11 bar	-1…15 bar	0...30 bar	0...50 bar	0...90 bar	0...150 bar
Output signal	2 wires 4...20 mA								
Overload	3 x fs								
Breakage pressure	6 x fs Welding tube with pressure range ≥90 bar: max. 600 bar								
Refrigerants	NH3, CO2 and safety class A2L and A3 refrigerants								
Power supply	8 ... 32 Vdc								
Accuracy	0.75% FS max (linearity, hysteresis, repeatability at 25 °C, 24 Vdc)								
Electrical connection	Metri-Pack 150: range -1...29 bar black, range 30...150 bar grey								
Pressure connection	Pipe Ø 6 mm - male connection/female connection ¼ SAE (7/16"-20UNF) - 1/4" male gas								
Operating conditions	Ambient temperature: -40...85°C Storage temperature: -40...100°C Refrigerant temperature -40...120°C								
Response time	< 5 ms (typ. 2 ms)								
Material exposed to environment	Pressurised connection: stainless steel 1.4301 / AISI 304 Welded connection: CuDHP / CW024A Measuring element: stainless steel 1.4016								
Enclosure rating	IP67								

EWPA

Pressure transducers 4…20 mA

Code	Description	Electrical connection	Pressurised connection	Type of connection	Min Pressure [bar]	Max pressure [bar]
TD500030P	EWPA 030 4/20 mA 0/30 BAR Packard tube	Metri-Pack grey	tube Ø 6 mm	-	0	30
TD500030PC	EWPA 030 4/20 mA 0/30 BAR Packard tube cable	Metri-Pack grey	tube Ø 6 mm	-	0	30
TD500050P	EWPA 050 4/20 mA 0/50 BAR Packard tube	Metri-Pack grey	tube Ø 6 mm	-	0	50
TD500050PC	EWPA 050 4/20 mA 0/50 BAR Packard tube cable	Metri-Pack grey	tube Ø 6 mm	-	0	50
TD260009P	EWPA 009 4/20 mA -1/9 BAR 1/4 male gas Packard	Metri-Pack black	G ¼ sealed	Male	-1	9
TD260009PC	EWPA 009 4/20 mA -1/9 BAR 1/4 male gas Packard cable	Metri-Pack black	G ¼ sealed	Male	-1	9
TD260030P	EWPA 030 4/20 mA 0/30 BAR 1/4 male gas Packard	Metri-Pack grey	G ¼ sealed	Male	0	30
TD260030PC	EWPA 030 4/20 mA 0/30 BAR 1/4 male gas Packard cable	Metri-Pack grey	G ¼ sealed	Male	0	30
TD260150P	EWPA 150 4/20 mA 0/150 BAR 1/4 male gas Packard	Metri-Pack grey	G ¼ sealed	Male	0	150
TD260150PC	EWPA 150 4/20 mA 0/150 BAR 1/4 male gas Packard cable	Metri-Pack grey	G ¼ sealed	Male	0	150
TD360007P	EWPA 007 4/20 mA -0.5/7 BAR 1/4 SAE female Packard	Metri-Pack black	¼ SAE (7/16"-20UNF)	Female	-0.5	7
TD360007PC	EWPA 007 4/20 mA -0.5/7 BAR 1/4 SAE female Packard cable	Metri-Pack black	¼ SAE (7/16"-20UNF)	Female	-0.5	7
TD360009P	EWPA 009 4/20 mA -1/9 BAR 1/4 SAE female Packard	Metri-Pack black	¼ SAE (7/16"-20UNF)	Female	-1	9
TD360009PC	EWPA 009 4/20 mA -1/9 BAR 1/4 SAE female Packard cable	Metri-Pack black	¼ SAE (7/16"-20UNF)	Female	-1	9
TD360010P	EWPA 010 4/20 mA 0/10 BAR 1/4 SAE female Packard	Metri-Pack black	¼ SAE (7/16"-20UNF)	Female	0	10
TD360010PC	EWPA 010 4/20 mA 0/10 BAR 1/4 SAE female Packard cable	Metri-Pack black	¼ SAE (7/16"-20UNF)	Female	0	10
TD360015P	EWPA 015 4/20 mA -1/15 BAR 1/4 SAE female Packard	Metri-Pack black	¼ SAE (7/16"-20UNF)	Female	-1	15
TD360015PC	EWPA 015 4/20 mA -1/15 BAR 1/4 SAE female Packard cable	Metri-Pack black	¼ SAE (7/16"-20UNF)	Female	-1	15
TD360030P	EWPA 030 4/20 mA 0/30 BAR 1/4 SAE female Packard	Metri-Pack grey	¼ SAE (7/16"-20UNF)	Female	0	30
TD360030PC	EWPA 030 4/20 mA 0/30 BAR 1/4 SAE female Packard cable	Metri-Pack grey	¼ SAE (7/16"-20UNF)	Female	0	30
TD360050P	EWPA 050 4/20 mA 0/50 BAR 1/4 SAE female Packard	Metri-Pack grey	¼ SAE (7/16"-20UNF)	Female	0	50
TD360050PC	EWPA 050 4/20 mA 0/50 BAR 1/4 SAE female Packard cable	Metri-Pack grey	¼ SAE (7/16"-20UNF)	Female	0	50
TD360090P	EWPA 090 4/20 mA 0/90 BAR 1/4 SAE female Packard	Metri-Pack grey	¼ SAE (7/16"-20UNF)	Female	0	90
TD360090PC	EWPA 090 4/20 mA 0/90 BAR 1/4 SAE female Packard cable	Metri-Pack grey	¼ SAE (7/16"-20UNF)	Female	0	90
TD290007P	EWPA 007 4/20 mA -0.5/7 BAR 1/4 SAE male Packard	Metri-Pack black	¼ SAE (7/16"-20UNF)	Male	-0.5	7
TD290007PC	EWPA 007 4/20 mA -0.5/7 BAR 1/4 SAE male Packard	Metri-Pack black	¼ SAE (7/16"-20UNF)	Male	-0.5	7
TD290011P	EWPA 011 4/20 mA -0.5/11 BAR 1/4 SAE male Packard	Metri-Pack black	¼ SAE (7/16"-20UNF)	Male	-0.5	11
TD290011PC	EWPA 011 4/20 mA -0.5/11 BAR 1/4 SAE male Packard cable	Metri-Pack black	¼ SAE (7/16"-20UNF)	Male	-0.5	11
TD290030P	EWPA 030 4/20 mA 0/30 BAR 1/4 SAE male Packard	Metri-Pack grey	¼ SAE (7/16"-20UNF)	Male	0	30
TD290030PC	EWPA 030 4/20 mA 0/30 BAR 1/4 SAE male Packard cable	Metri-Pack grey	¼ SAE (7/16"-20UNF)	Male	0	30
TD290050P	EWPA 050 4/20 mA 0/50 BAR 1/4 SAE male Packard	Metri-Pack grey	¼ SAE (7/16"-20UNF)	Male	0	50
TD290050PC	EWPA 050 4/20 mA 0/50 BAR 1/4 SAE male Packard cable	Metri-Pack grey	¼ SAE (7/16"-20UNF)	Male	0	50

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EWPA
Ratiometric pressure transducers

R290 COMPATIBLE   A2L·A3 COMPATIBLE

FEATURES

- Complies with DIN EN 60335-2-40 and DIN EN 60335-2-89

- This device has been tested in accordance with section 22.112 of IEC 60335-2-89, as it is considered not to be a source of ignition caused by arcs/sparks

- This device has been tested with a surface temperature not exceeding the limit defined in point 22.114 of IEC 60335-2-89 and point 22.117 of IEC 60335-2-40, according to the criteria of chapter 11 (normal operation) and chapter 19 (abnormal operation)

Description and main functions

EWPA ratiometric pressure transducers are sensors equipped with a voltage output through which they transmit the signal to the measuring instruments to which they are connected.
The new series features:
- Metri Pack 150 electrical connection (black for ranges < 30 bar – grey for pressures ≥ 30 bar)
- pressure connections: 1/4 Gas MALE – 1/4 SAE MALE – 1/4 SAE FEMALE – Ø 6 mm tube
- relative pressure range: –1 … 7 bar and 0 … 10–50 bar
- UL certification according to UL 61010 1 & CSA C22.2 No. 61010 1 Standards available
- available as transducer only (codes ending with P) or transducer with cable accessory (codes ending with C)

Technical data	EWPA 010	EWPA 030	EWPA 050
Operating range (relative)	0...10 bar	0...30 bar	0...50 bar
Output signal	3-wire ratiometric 10…90%		
Overload	3 x fs		
Breakage pressure	6 x fs		
Refrigerants	NH3, CO2 and safety class A2L and A3 refrigerants		
Power supply	2.97 ... 5.5 Vdc		
Accuracy	0.75% FS max (linearity, hysteresis, repeatability at 25 °C, 24 Vdc)		
Electrical connection	Metri-Pack 150: range -1...29 bar black, range 30...50 bar grey		
Pressure connection	Ø 6 mm tube - female connection ¼ SAE (7/16"-20UNF)		
Operating conditions	Ambient temperature: -40..85°C Storage temperature: -40..100°C Refrigerant temperature -40..125°C		
Response time	< 5 ms (typ. 2 ms)		
Material exposed to environment	Pressurised connection: stainless steel 1.4301 / AISI 304 Welded connection: CuDHP / CW024A Measuring element: stainless steel 1.4016		
Enclosure rating	IP67		

Code	Description	Electrical connection	Pressurised connection	Type of connection	Min Pressure [bar]	Max pressure [bar]
TD600010P	EWPA 010 R 0/5 V 0/10 BAR Packard tube	Metri-Pack black	tube Ø 6 mm	-	0	10
TD600010PC	EWPA 0/10 R 0/5 V 0/10 BAR Packard tube cable	Metri-Pack black	tube Ø 6 mm	-	0	10
TD600030P	EWPA 0/30 R 0/5V 0/30 BAR Packard tube	Metri-Pack grey	tube Ø 6 mm	-	0	30
TD600030PC	EWPA 0/30 R 0/5 V 0/30 BAR Packard tube cable	Metri-Pack grey	tube Ø 6 mm	-	0	30
TD460010P	EWPA 010 R 0/5 V 0/10 BAR 1/4 SAE female Packard	Metri-Pack black	¼ SAE (7/16"-20UNF)	Female	0	10
TD460010PC	EWPA 010 R 0/5 V 0/10 BAR 1/4 SAE female Packard cable	Metri-Pack black	¼ SAE (7/16"-20UNF)	Female	0	10
TD460030P	EWPA 030 R 0/5 V 0/30 BAR 1/4 SAE female Packard	Metri-Pack grey	¼ SAE (7/16"-20UNF)	Female	0	30
TD460030PC	EWPA 030 R 0/5 V 0/30 BAR 1/4 SAE female Packard cable	Metri-Pack grey	¼ SAE (7/16"-20UNF)	Female	0	30
TD460050P	EWPA 050 R 0/5 V 0/50 BAR 1/4 SAE female Packard	Metri-Pack grey	¼ SAE (7/16"-20UNF)	Female	0	50
TD460050PC	EWPA 050 R 0/5 V 0/50 BAR 1/4 SAE female Packard cable	Metri-Pack grey	¼ SAE (7/16"-20UNF)	Female	0	50

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EWHS 2840 - 3040 - 3140 - 3140/S - 284

Humidity probes
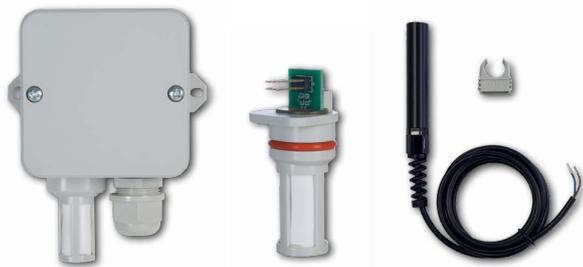
Code	Description	Notes
SH5NPM100I400	EWHS 2840/W probe RH% 4…20 mA	RH%
SH3NPM100Y400	EWHS 3040 probe RH% 4..20mA + NTC	RH% + NTC
SH0NPM100I400	EWHS 3140 probe RH% - T°C 4..20mA	RH% + TEMP
SN5PRS01A020M	EWHS 284 1,5 m humidity probe	Cable length 1.5 m
SN5PRS033020M	EWHS 284 3,0 m humidity probe	Cable length 3 m

Description and main functions

The humidity probes of the **EWHS 2840 – 3040 – 3140 – 3140/S** series are sensors designed to be connected to humidity or humidity/temperature measuring instruments, or to high-security monitoring systems such as TelevisGo or Modbus RTU.
The humidity probes of the **EWHS 284** series are sensors with a 4–20 mA output, designed to be connected to humidity measuring instruments.

Technical data	EWHS 2840	EWHS 3040	EWHS 3140	EWHS 3140/S	EWHS 284
Protection rating	IP65				IP68 cable gland | IP54 probe
Installation	wall-mounted via 2 external slots				wall-mounted using a mounting bracket
Electrical connections	screw terminals				1.5 m or 3 m cable with 2 wires
Number of conductors for wiring	2	4	5		2
Dimensions	80x80x52 mm				L = 100 mm + coil, Ø 16 mm
Power supply	9...28 Vdc		9...28 Vac o 9...40 Vdc		9...30 Vdc
Power consumption	20 mA max		50 mA max	35 mA max	20 mA
Maximum load	150 Ohm		350 Ohm	-	100 ... 200 Ohm (typical)
Reverse polarity protection	at diode				
Ambient operating temperature	-40...60 °C				-30 ... 70 °C
Storage temperature	-40...70 °C				-30 ... 80 °C
Humidity measurement range	0..100 UR%				
Output current for humidity measurement	4...20 mA				
Typical humidity measurement accuracy (at 25°C)	5%	3%		2%	2,8%
RH calibration	0% a 4 mA 100% a 20 mA				
Temperature sensor	-	NTC 10k 25°C	digital		-
Temperature measurement range	-40...60 °C				-
Output for temperature measurement	-	passive	4...20mA	serial	-
Temperature measurement accuracy (at 0°C and 23°C)	-	1%	+/-0,6 °C	+/-0,3 °C	-
Long-term drift (within the normal RH operating range)	-				typical < 0.25 < 0.5 %RH/yr
Response time under constant conditions (68%) at 23°C	typically 10 s				
Recovery time from saturation without condensation	depends on the air flow rate				15 seconds
Maximum air speed	20m/s				
Air filter	PTFE				-
Dew point calculation	-		present		-
RS-485 serial interface	-		Modbus RTU		-

ACCESSORIES

Eliwell supplies a number of accessories to complete its line of instruments.

The connectivity modules and a wide range of transformers, to memory devices, for easy set-up, transferring parameters quickly and updating controller firmware.

Devices designed to give the user all those instruments enabling greater work quality and productivity.

DeviceManager

Software for quick controller configuration

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Code	Description
DMP1000002000	CD DeviceManager
DMI1001002000	DMI 100-1 End User
DMI1002002000	DMI 100-2 Service
DMI1003002000	DMI 100-3 Manufacturer
CO111127	TTL Cable
COLV000016200	USB-A/A extension cable

Description and main functions

DeviceManager is a Windows software used to manage Eliwell devices, and for their initial installation. The software can be used to create and save parameter maps and transfer them to and from the controller in just a few clicks.

DeviceManager requires the USB communication interface **Device**Manager Interface (DMI) to communicate directly with controllers and is compatible with the Unicard USB and Multi Function Key devices for the transferral of parameter maps and firmware updates for the controllers. For information concerning compatibility and the functions available with each controller family, please check the compatibility table in the restricted area of **www.eliwell.com**

System requirements	DeviceManager
Operating systems	• Windows 10 Professional, Windows 10 Home, 32 bit / 64 bit versions, Italian-English
Software components required in addition to operating system	• .NET Framework 2.0
Minimum hardware	• graphics resolution 1024x768 • 700 MHz CPU • RAM 256 MB • HD 1GB • mouse or equivalent pointing device
Space required on disk	approx. 500 Mbyte for normal installation (2 languages, 50 models)

Accessories

Code	Description	Details
CO111127	TTL cable	Reinforced cable length 1 m
COLV000016200	USB-A/A 2 M extension lead	Length 2 m

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Unicard - USB Copy Card - Copy Card - Multi Function Key

Memory for quick configuration and updating of controller software
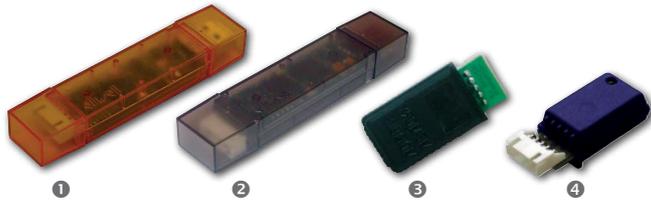
Code		Notes
CCA0BHT00UU00	❶	UNICARD USB/TTL
CCA0BUI02N000	❷	USB Copy Card
COLV000016200		Extension cable for USB Copy Card
CC0S00A00M000	❸	Standard Copy Card
MFK100T000000	❹	Multi Function Key 100

Description and main functions

The USB/TTL Unicard is a memory device for rapid parameter configuration/duplication, specifically designed for controllers in the IDPlus family.
By downloading the **Device**Manager software from the www.eliwell.com website, maps for instruments in the ID and IDPlus families can be read and written on the Unicard device without having to use other interfaces/licences.
Copy Card and USB Copy Card are memory devices for rapid Eliwell controller parameter configuration/duplication. Multi Function Key is used with **Device**Manager to transfer maps, parameters and controller firmware updating.

Use	Copy Card	Multi Function key	Unicard	USB Copy Card
IDNext - EWNext	•	-	•	-
EWPlus (EO LVD) - IDPlus - ICPlus	•	-	•	-
EMPlus 600	-	-	•	-
IC - ID	•	-	-	-
EW	•	-	•	-
EM300	•	-	-	-
DR 4020 - DR4022	•	-	•	-
EW4820 - EW4822	•	-	-	-
EW7220 - EW7222	•	-	-	-
EWTSPlus 990	•	-	-	-
EWRC 300 - EWRC 500 NT	•	-	•	-
EWDR	•	-	-	-
EWRC 5000 - 5010 - 5030 NT	•	-	•	-
IWC	•	-	-	-
IWP 750	•	-	•	-
Televis**In** - Televis**Out**	•	-	• / F	-
RTN	-	•	• / F	-
RTX - RTD	-	•	• / F	-
ID 985/V	•	-	•	-
V800 Pulse EEV driver	-	-	-	•
V910 - XVD Step EEV Driver	-	•	• / F	-
EWCM 8000…9000 EO	-	-	-	• / F / L / D
EWCM 4000	•	•	-	-
EWBC 800	•	-	•	-
EWBC 1400	-	•	-	-

KEY •: Reading/writing maps parameters **F**: Updating Firmware **L**: Updating Interface Languages **D**: Download Data/Alarms

Examples of powering the controller via Unicard

power supply
Unicard - controller

Unicard
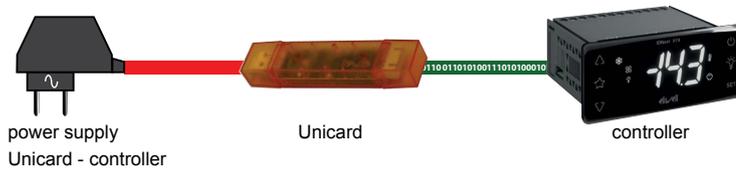
controller

Field power supply examples

Unicard

controller

controller power supply

Unicard power supply

Unicard

controller

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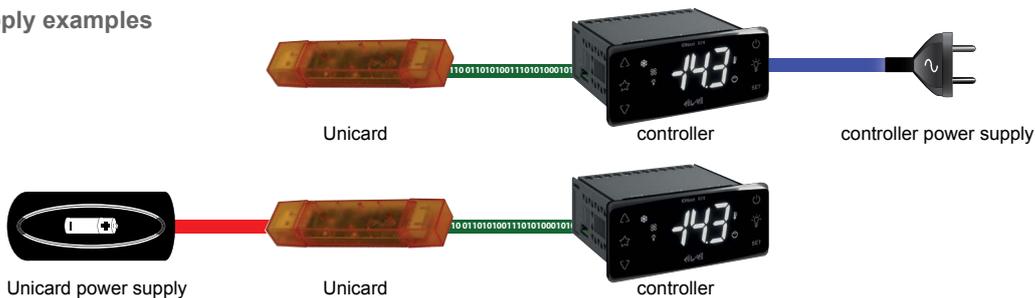
Drip protection - Plexiglass protection

Protections for 32x74 controllers

Description and main functions

These accessories can be used with devices in the ID, IC, IDPlus, EW, EWPLus, IDNext and EWNext series.

The drip protection, applied to the rear of the instrument, are a valid support in protecting electrical connectors against dripping liquid.

The plexiglass accessory, equipped with a surface easy to clean, is particularly suitable for use in outdoor environments or characterized by a high degree of dirt.

Code		Description	Details
ZZ000270	❶	Drip protection	Pack of 20
ZZ000272	❷	Plexiglass protection for 32x74 controllers	Pack of 10

Wide Adapter

Adapters for Next series controllers

Code		Description
NEXTACCWA00000	❶	Wide Adapter without display
NEXTACCWA20000	❷	Wide Adapter with pre-connection for switches
IN111111		DOUBLE POLE RED SWITCH 220 V - Colour RED
IN111112		DOUBLE POLE RED SWITCH 220 V - Colour GREEN
IN111113		DOUBLE POLE YELLOW SWITCH 220 V - Colour YELLOW

Technical data	NEXTACCWA000000	NEXTACCWA200000
Dimensions (mm)	180x39.5	180x39.5
Drilling template (mm)	150x31	150x31

EW BOX - INOX BOX - EWBOX NT

EW BOX - INOX BOX - EWBOX NT

Description and main functions

EW Boxes and INOX Boxes are a range of plastic and stainless steel containers for the wall mounting of instruments designed for panel mounting.

Code		Description
SM000000		EW box without front panel
SM000005		Front panel without holes in ABS for EW box
SM000010	❶	Front panel in ABS for EW vertical box with one hole for standard instrument 32x74 and two holes for switch
SM000013		Front panel in ABS for EW horizontal box with one hole for standard instrument 32x74 and one hole for switch
SM000020	❷	Front panel in ABS for EW vertical box with two holes for standard instrument 32x74 and two holes for switch
SM000030	❸	Front panel in ABS for EW horizontal box with two holes for standard instrument 32x74 and two holes for switch
SM111111		INOX Box with one hole for standard instrument 32x74
SM111112		INOX Box with two holes for standard instruments 32x74
RCX101B001000	❹	PC-ABS box without holes
RCX1A1B001000		PC-ABS box with one hole for standard instrument 32x74
RCX1F1B001000	❺	PC-ABS box with one hole for keypads 68x138 (EWK1000 \ EVP3000)
RCX1M1B001000	❻	PC-ABS box with one hole for vertical KDT keypads with rounded corners

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TF Transformers

Transformers
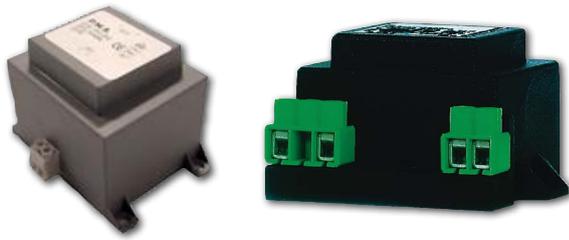
Description and main functions

TF transformers are resin-coated in plastic containers with fixing tabs and screw terminals for wires ≤ 2.5 mm^2.
Models with different power supply voltages are available.

Code	Models	Details
TF511113	TF 100...115...120 V	115/12 V 3 VA - cert. UL
TF111145	TF 100...115...120 V	115/12 V 3 VA
TF111115	TF 12...24...48 V	24/12V 3VA
TF111173	TF 200...250 V	230/12 V 3 VA
TF411200	TF 200...250 V	230/12 V - 5 VA protected
TF411173	TF 200...250 V	230/12 V 3 VA - approved VDE
TF411205	TF 200...250 V	230/12 V - 6 VA protected
TF411210	TF 200...250 V	230/12 V - 11 VA protected
TF111202	TF 200...250 V	230/24 V 25 VA
TF111205	TF 200...250 V	230/24 V 35 VA

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OEM PRODUCTS

Eliwell supplies a wide range of products and solutions that stand out for high quality and reliability. This is the result of 25 years experience and know how acquired collaborating with the main commercial refrigeration equipment manufacturers.

For manufacturers (OEM) Eliwell supplies a series of standard and customisable products. These are based on consolidated, easy-to-adapt platforms.

Controllers for OEM are only supplied in industrial packaging, with electronic documentation and in minimum lots depending on product type.

OEM controller customisation may go from definition of a customised parameter map, to including a logo or creation of specific functions.

The following pages list the main controller families for OEM where standard solutions are available for manufacturers. Please contact an Eliwell agent to assess the specific solution for your needs.

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EWNext 1000

EWNext 1385

Dry aging cabinets

Refrigerated cabinets

Refrigerated display cases

Refrigerated showcases

Remote refrigeration units

Serve over counters

Vertical freezers and chillers

> Advanced features to cover a wide range of applications

> Combined temperature and humidity control

> Fast and intuitive commissioning and HACCP management via Eliwell AIR app

> Compatible with A2L & A3 natural refrigerants

**Explore
the solution**

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EWNext 1000

A step forward for high-efficiency remote refrigerated counters and plug-ins

R290 COMPATIBLE · A2L-A3 COMPATIBLE

Find out more

Environmental Data Program

✔ The product is compatible with new natural refrigerants A2L-A3
✔ Conforms to standard IEC/UL61810-1 for the control of LEDs and electronic fans
✔ A model that manages applications with both plug-in and remote TEVs, thanks to the fieldbus
✔ Power compressor relay with Zero crossing function to increase its life and reduce maintenance costs
✔ Temperature/humidity management
✔ Simultaneous piloting of variable speed compressors (VSCs) and modulating fans
✔ Built-in RS485 for connection to supervision systems such as TelevisGo and Refrigeration Expert
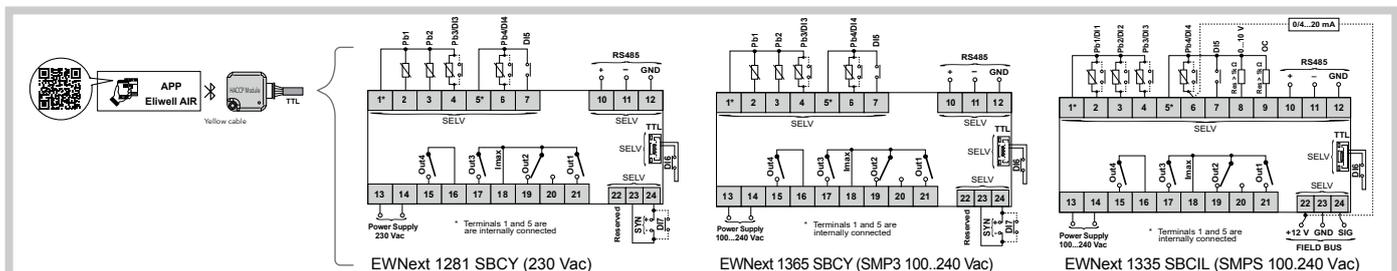✔ Compatible with Eliwell AIR

Description and main functions

EWNext **1281 and 1385 technology** is a step forward to help achieve the highest objectives in terms of energy efficiency and sustainability in the cooling sector.
EWNext 1000 is a new platform that combines design with ease of installation and use; it is able to manage the most up-to-date and sustainable technologies in commercial refrigeration applications, such as TEVs for plug-ins and remote desks, plus humidity management, with **maximum scalability in terms of connectivity**.
The design of the EWNext 1000 is in line with **the look and feel of the Next platform, with a larger display and 6 configurable touch keys**.
EWNext 1281 and 1385 can be connected through the latest Eliwell management and monitoring systems: TelevisGo, Refrigeration Expert and Eliwell AIR, designed for small food retail applications.

Model	Power supply	Inputs	Analogue outputs	Relay	Connec-tors	AVAILABLE OPTIONS						Depth
						Buzzer	RTC	RS485	DEFROST SYNCHRO-NISATION	FIELD BUS	AIR	
EWNext 1281 SBCY	230 Vac	3x NTC 1x DI or NTC 1x DI 1x DI in TTL		1x 1.5 HP (70 A In-rush 2500 us) SPST 1x 10 A (70 A Inrush 2500 us) SPST 1x 8 A SPDT 1x 5 A (25 A Inrush 2500 us) SPST	Screw-type or removable	✓	✓	✓	✓		✓	90 mm
EWNext 1385 SBCY	100…240 Vac	3x NTC 1x DI or NTC 1x DI 1x DI in TTL		1x 1.5 HP (70 A In-rush 2500 us) SPST Zero Crossing 1x 1.5 HP (70 A In-rush 2500 us) SPST 1x 8 A SPDT 1x 5 A (25 A Inrush 2500 us) SPST	Screw-type or removable	✓	✓	✓	✓		✓	90 mm
EWNext 1385 SBCIL	100…240 Vac	2x NTC 1x NTC or 4…20 mA 1x DI or NTC 1x DI 1x DI in TTL	1x 0…10 V 1x PWM open collector	1x 1.5 HP (70 A In-rush 2500 us) SPST Zero Crossing 1x 1.5 HP (70 A In-rush 2500 us) SPST 1x 8 A SPDT 1x 5 A (25 A Inrush 2500 us) SPST	Screw-type or removable	✓	✓	✓		✓	✓	90 mm

Technical data	EWNext1000
Dimensions	Front panel 81x35 mm, depth 90 mm
Container	UNIBODY front panel with built-in seal
Installation	Panel-mounted, 71x29 mm
Display range	-199.9…199.9 °C | -1999…1999 °C
Display	LED 3 figures 1/2 + sign
Connectivity	1x TTL port 1x RS485 port (NOT ISOLATED) 1x Field Bus
Measurement range	NTC: -50.0…110.0 °C Input current: 0...20 mA / 4...20 mA
Accuracy	NTC: -50...-30 °C (-58...-22 °F): better than ±2.4 °C (±4.3 °F) ±1 digit. | -30...110 °C (-22...230 °F): better than ± 1.6 °C (±2.9 °F) ±1 digit. Input current: ±0.2 mA
Resolution	1 °C/°F or 0.1 °C/°F
Power consumption	5.5 W / 6.5 VA @230 Vac | 3.5 W / 8.5 VA @100...240 Vac
Operating temperature	-20...55 °C
Storage temperature	-30…85 °C
Ambient humidity	10…90 % RH (non-condensing)

Wiring diagrams

EWNext 1281 SBCY (230 Vac)

EWNext 1365 SBCY (SMP3 100..240 Vac)

EWNext 1335 SBCIL (SMPS 100.240 Vac)

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EWNext Performance R

The new solution for high-efficiency refrigeration equipment

Find out more

Environmental
Data Program

✔ Conforms to standard **IEC/UL61810-1** for the control of LEDS and electronic fans

✔ Advanced control algorithms for energy saving with no need to modify counter structure

✔ The product is compatible with the new ecological refrigerants R290 and R600, in compliance with IEC 60079-15-2005

✔ Integrated seal IP65

✔ 3 easily selectable, pre-loaded configurations with default setting reset

✔ Ability to directly manage capacitive loads

Description and main functions

The new **EWNext** range of controllers is being expanded to include the new **Performance/R** models, designed specifically to manage LED power supplies and electronic valves.

For commercial plug-in refrigerators and coolers, models with 1 inrush relay (**EWNext 971, EWNext 974**) are sufficient, while more demanding applications, such as combined or monobloc counters, require the **EWNext 978** model with 2 inrush relays.

The new EWNext series design, which is flat and thin with a built-in seal, prevents dirt from entering and water from leaking in.

Model	Power supply	Inputs	Relay	Connectors	AVAILABLE OPTIONS			
					Buzzer	RTC	AIR	Depth
EWNEXT 971 P/R	230 Vac or 115 Vac	2 x NTC 1 x DI or third NTC 1 x DI in TTL	1 x 2 hp SPST 1 x 2A (70A Inrush 2500 μs) SPST[1]	Screw or removable	✔ ***	✔ ***	✔	60 mm
EWNEXT 974 P/R	230 Vac or 115 Vac	2 x NTC 1 x DI or third NTC 1 x DI in TTL	1 x 2 hp SPST 1 x 8A SPDT 1 x 1A (25A Inrush 2500 μs) SPST[1]	Screw or removable	✔ ***	✔ ***	✔	60 mm
			2 x 1.5 hp SPST (70A Inrush 2500 μs) SPST[1] 1 x 8A SPDT	Screw or removable			✔	60 mm
EWNEXT 978 P/R	230 Vac or 115 Vac	2 x NTC 1 x DI or third NTC 1 x DI in TTL	1 x 1.5 hp SPST 1 x 8A SPDT 2 x 1A (25A Inrush 2500 μs) SPST[1]	Screw or removable	✔ *	✔	✔	60 mm
		2 x NTC 1 x DI or third NTC 1 x DI in TTL 2 x DI side connector	1 x 1.5 hp SPST 1 x 8A SPDT 1A (25A Inrush 2500 μs) SPST[1] 2A (70A Inrush 2500 μs) SPST[1]	Screw or removable	✔ *	✔ **	✔	75 mm

[1] According to standard IEC/UL61810-1, Clause D.3 special loads with inrush current
* Buzzer or third NTC probe as an alternative ** As an alternative to the 2 side digital inputs *** Buzzer or RTC as an alternative

Technical data	EWNext Performance R
Dimensions	front panel 81x35 mm, depth 60 mm (EWNext 971/974 P/R) | 75 mm (EWNext 978 P/R)
Appearance	UNIBODY front panel with built-in seal
Installation	panel-mounted, 71x29 mm
Display range	-99.9…99.9 °C | -999…999 °C
Display	LED 3 figures + sign
Connectivity	TTL port for connection to Unicard, BTLE AIR Dongle, TelevisGo and Modbus RTU systems
Measurement range and Accuracy	NTC: -50.0…110.0 °C | better than 0.5 % of integral scale + 1 digit
Resolution	0.1 °C
Power consumption	5 VA - 2.5 W 5.5 VA
Operating temperature	-5...55 °C
Storage temp.	-30…85 °C
Ambient humidity	10…90 % RH (non-condensing)

Wiring diagrams

EWNext 971 P/R (115 Vac - 230 Vac)

EWNext 974 P/R (2 hp/8A/5A) (115 Vac - 230 Vac)

EWNext 974 P/R (1.5 hp/1.5 hp/8A) (115 Vac)

EWNext 978 P/R (115 Vac - 230 Vac)

EWNext 978 P/RC (230 Vac)

Products for manufacturers > The new solution for high-efficiency refrigeration equipment > **EWNext Performance R**

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EWNext Performance

The new high energy saving connectible solution

A2L·A3 COMPATIBLE   AIR

✔ **Advanced control algorithms for energy saving with no need to modify counter structure**

✔ **Self-adaptation of the energy saving functions based on the operating conditions of the refrigerator**

✔ **The product is compatible with the new ecological refrigerants R290 and R600, in compliance with IEC 60079-15-2005**

✔ **Modular defrost management**

✔ **Management of variable speed compressors VSC (depending on the model)**

✔ **3 easily selectable, pre-loaded configurations with default setting reset**

✔ **Synchronised defrost from digital input (depending on the model)**

Find out more

Environmental Data Program

Description and main functions

EWNext series controllers are new-generation devices with a thin and flat design, featuring a built-in seal which prevents dirt from entering and water from leaking in. The **EWNext961** one-step models ar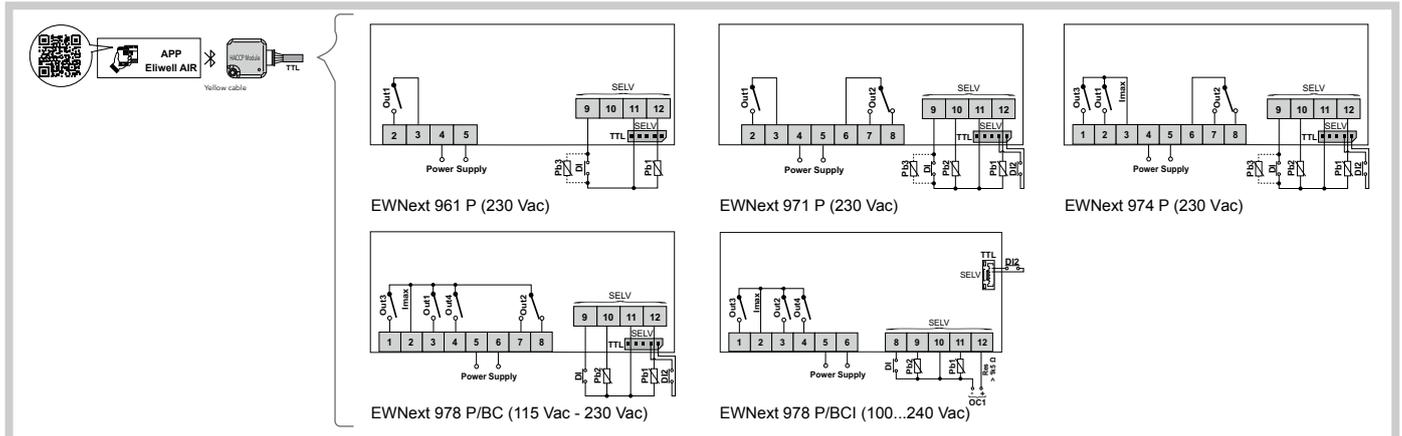e suitable for use in applications for heating (heated tables, food warmers, saladettes) and cooling in static units at normal temperature (refrigerated tables, cockpit or front-of-house refrigerators).
The **EWNext971, EWNext974 and EWNext978** models are mainly suitable for use in cooling applications in static and ventilated units at normal or low temperature (drinks coolers, refrigerated cabinets, refrigerated islands).

Model	Power supply	Inputs	Relay	Connectors	AVAILABLE OPTIONS					
					Buzzer	VSC	LVD	RTC	AIR	IDNext connections
EWNext 961 P	230 Vac or 115 Vac	1 x NTC 1 x DI	1 x 2 hp SPST	Screw or removable	✔		✔ **		✔ **	✔
EWNext 971 P	230 Vac or 115 Vac	2 x NTC 1 x DI 1 x DI in TTL	1 x 2 hp SPST 1 x 8A SPDT	Screw or removable	✔ *		✔ **		✔ **	✔
EWNext 974 P	230 Vac or 115 Vac	2 x NTC 1 x DI 1 x DI in TTL	1 x 2 hp SPST 1 x 8A SPDT 1 x 5A SPST	Screw or removable	✔ *		✔ **	✔	✔ **	✔
EWNext 978 P	230 Vac or 115 Vac	2 x NTC 1 x DI 1 x DI in TTL	1 x 1.5 hp SPST 1 x 8A SPDT 2 x 5A SPST	Screw or removable	✔ *			✔	✔	✔
	SMPS 100-240 Vac	2 x NTC 1 x DI 1 x DI in TTL	1 x VSC frequency 2 x 1.5 hp SPST *** 1 x 5A SPST	Screw or removable	✔ *	✔		✔	✔	✔

* When there is no buzzer, the DI can be configured as an additional probe ** Codes with the LVD option are not compatible with AIR *** Suitable for LED lights or ECM fans

Technical data	EWNext Performance
Dimensions	front panel 81x35 mm, depth 60 mm
Appearance	UNIBODY front panel with built-in seal
Installation	panel-mounted, 71x29 mm
Display range	-99.9…99.9 °C | -999…999 °C
Display	LED 3 figures + sign
Connectivity	TTL port for connection to Unicard, BTLE AIR Dongle, TelevisGo and Modbus RTU systems
Measurement range and Accuracy	NTC: -50.0…110.0 °C | better than 0.5 % of integral scale + 1 digit
Resolution	0.1 °C
Power consumption	5 VA - 2.5 W 5.5 VA
Operating temperature	-5...55 °C
Storage temp.	-30…85 °C
Ambient humidity	10…90 % RH (non-condensing)

Wiring diagrams

APP Eliwell AIR

EWNext 961 P (230 Vac)

EWNext 971 P (230 Vac)

EWNext 974 P (230 Vac)

EWNext 978 P/BC (115 Vac - 230 Vac)

EWNext 978 P/BCI (100...240 Vac)

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EWNext Performance Dispenser

Solutions for connectible refrigerated dispensers / beer taps

A2L-A3 COMPATIBLE   AIR

Find out more

✔ **Electronic temperature control**

✔ **Electronic ice level control with single and dual sensor**

✔ **Ice sensor sensitivity configured via parameter**

✔ **Pump management**

✔ **Compatible with hydrocarbon applications (R290, R600a)**

✔ **Advanced control algorithms for energy saving with no need to modify the application structure**

Environmental Data Program

Description and main functions

EWNext Performance Dispenser is a controller designed to offer a **compact, efficient solution** for controlling the refrigeration of dispensers used for beverages such as beer and soft drinks. Thanks to platform **versatility** and a **library of available** functions, Eliwell has integrated temperature and ice level control into a single controller that can be parametrised from the keypad to easily adapt to the various application configurations.

| | | | | | AVAILABLE OPTIONS | |
| | | | | | RTC | AIR |
Model	**Power supply**	**Inputs**	**Relay**	**Connectors**		
EWNext 961 P Dispenser	230 Vac or 115 Vac	1 x NTC 2 x ice sensor 1 x DI in TTL	1 x 2 hp SPST	Screw or removable		✓
EWNext 971 P Dispenser	230 Vac or 115 Vac	1 x NTC 2 x ice sensor 1 x DI in TTL	1 x 2 hp SPST 1 x 8A SPDT	Screw or removable	✓	✓

Technical data	**EWNext Performance Dispenser**
Dimensions	front panel 81x35 mm, depth 60 mm
Appearance	UNIBODY front panel with built-in seal
Installation	panel-mounted, 71x29 mm
Display range	-99.9…99.9 °C | -999…999 °C
Display	LED 3 figures + sign
Connectivity	TTL port for connection to Unicard, BTLE AIR Dongle, TelevisGo and Modbus RTU systems
Measurement range and Accuracy	NTC: -50.0…110.0 °C | better than 0.5 % of integral scale + 1 digit
Resolution	0.1 °C
Power consumption	5 VA - 2.5 W 5.5 VA
Operating temperature	-5...55 °C
Storage temp.	-30…85 °C
Ambient humidity	10…90 % RH (non-condensing)

Wiring diagrams

EWNext 971 P/CD (115 Vac - 230 Vac)

EWNext 961 P/BD (230 Vac)

EWNext Optimized
The new compatible connectible solution with natural refrigerants

✔ **The product is compatible with the new ecological refrigerants R290 and R600, in compliance with IEC 60079-15-2005**

✔ **Modular defrost management**

✔ **3 easily selectable, pre-loaded configurations with default setting reset**

✔ **Direct load management up to 2 hp and power supply of 230 Vac or 115 Vac**

✔ **Use of removable/screw connectors for quick, versatile wiring**

Find out more

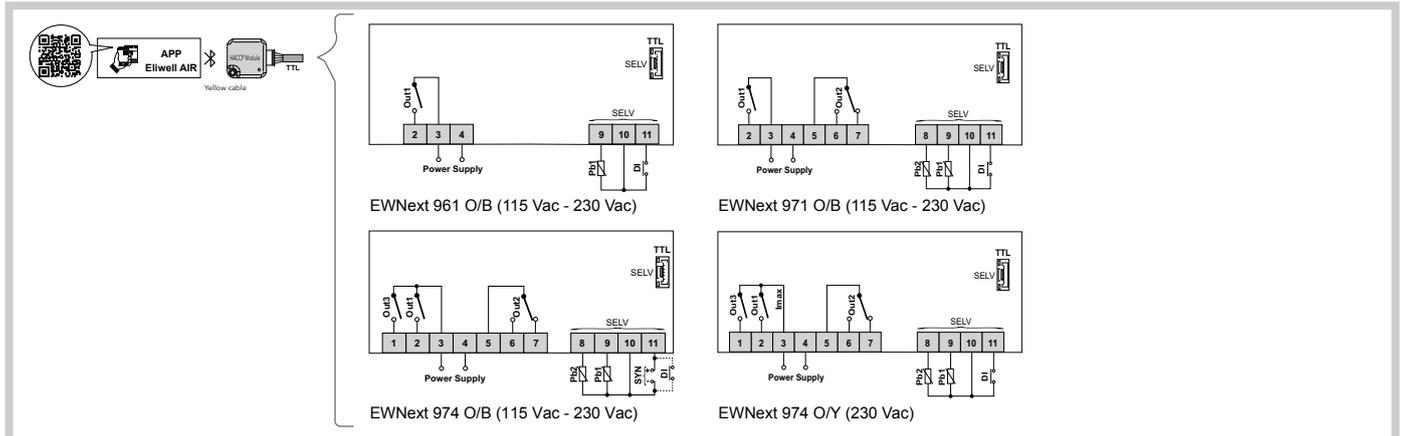Environmental Data Program

Description and main functions

EWNext Optimized is the new range of controllers for commercial plug-in refrigerators and coolers, responding to the latest technological needs of the market; with a completely refreshed design, it has a wider display, 4 touch keys and a built-in seal to guarantee a protection rating of IP65 on the front panel. EWNext Optimized controllers are designed to **combine energy savings with maximum ease of installation and use**, and can easily replace controllers from previous series.

Model	Power supply	Inputs	Relay	Connectors	AVAILABLE OPTIONS	
					RTC	AIR
EWNext 961 O *	230 Vac or 115 Vac	1 x NTC 1 x DI	1 x 2 hp SPST	Screw or removable	✓	✓
EWNext 971 O *	230 Vac or 115 Vac	2 x NTC 1 x DI	1 x 2 hp SPST 1 x 8A SPDT	Screw or removable	✓	✓
EWNext 974 O *	230 Vac or 115 Vac	2 x NTC 1 x DI	1 x 2 hp SPST 1 x 8A SPDT 1 x 5A SPST	Screw or removable	✓	✓

* Also suitable for beverage dispensers with temperature-only control

Technical data	EWNext Optimized
Dimensions	front panel 81x35 mm, depth 60 mm
Appearance	UNIBODY front panel with built-in seal
Installation	panel-mounted, 71x29 mm
Display range	-99.9…99.9 °C | -999…999 °C
Display	LED 3 figures + sign
Connectivity	TTL port for connection to Unicard, BTLE AIR Dongle, TelevisGo and Modbus RTU systems
Measurement range and Accuracy	NTC: -50.0…110.0 °C | better than 0.5 % of integral scale + 1 digit
Resolution	0.1 °C
Power consumption	5 VA - 2.5 W 5.5 VA
Operating temperature	-5...55 °C
Storage temp.	-30…85 °C
Ambient humidity	10…90 % RH (non-condensing)

Wiring diagrams

EWNext 961 O/B (115 Vac - 230 Vac)

EWNext 971 O/B (115 Vac - 230 Vac)

EWNext 974 O/B (115 Vac - 230 Vac)

EWNext 974 O/Y (230 Vac)

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EWEPlus -HC Series

The range of OEM entry level controllers

✔ **Direct load management up to 2 hp and wide range of power supplies**

✔ **Simple, intuitive menu for fast learning**

✔ **Compatibility with flammable gases HFC and HFO, category A3 and A2L**

✔ **ENEC, UL, NSF certifications (check on the device label)**

✔ **Screw terminals**

✔ **Buzzer, depending on model**
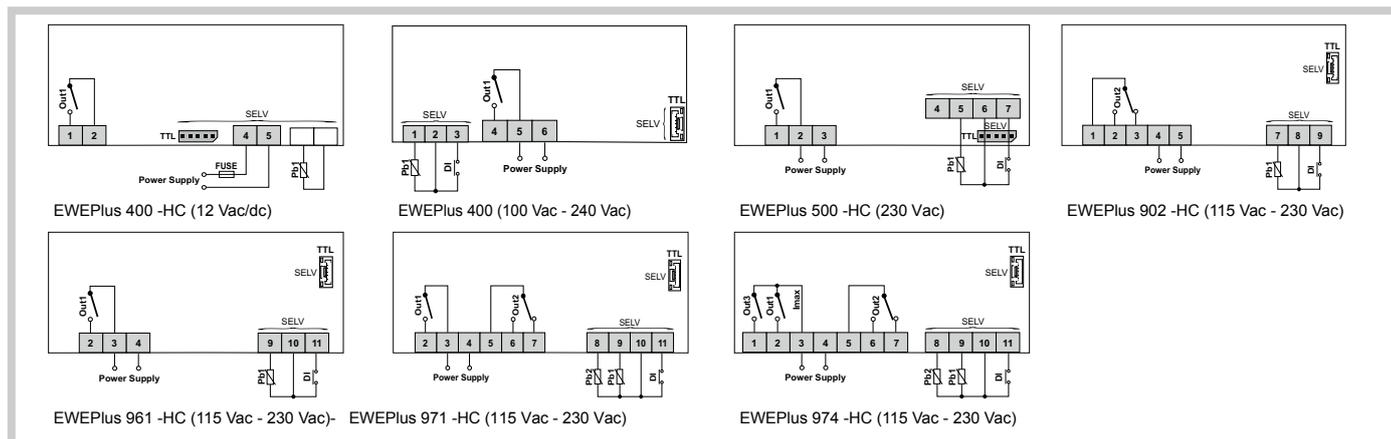
Environmental
Data Program

Find out more

Description and main functions

EWEPlus -HC is a family of electronic controllers for managing refrigerated cabinets, display cabinets and static and ventilated refrigerating units.
Thanks to the platform **versatility** and a **library of available functions**, Eliwell is the best answer for manufacturers seeking custom solutions for **energy saving** and the **simplification of production processes**.

Technical data	EWEPlus400	EWEPlus500	EWEPlus902	EWEPlus961	EWEPlus971	EWEPlus974
Front panel dimensions	78.6x37 mm					
Depth	30 mm 50 mm	50 mm	59 mm			
Installation	panel-mounted, 71x29 mm					
Display range	-99.9…99.9 °C | -999…999 °C					
Display	LED 3 figures + sign					
Analogue inputs	1x NTC				2x NTC	
Digital inputs	- 1x SELV	1x SELV				
Connectivity	TTL port for connection to Unicard, TelevisGo and Modbus RTU systems					
Digital outputs	1x 1.5 hp SPST 1x 2 hp SPST	1x 2 hp SPST	1x 10A SPDT	1x 2 hp SPST	1x 2 hp SPST 1x 8A SPDT	1x 2 hp SPST 1x 8A SPDT 1x 5A SPST
Measurement range and Accuracy	NTC: -50.0…110.0 °C | better than 0.5 % of integral scale + 1 digit					
Resolution	0.1 °C					
Consumption @ 230 Vac Power Supply	5.5 VA					
Power supply	12 Vac/dc 100...240 Vac	230 Vac	115 Vac-230 Vac			
Operating temperature	-5...55 °C					
Storage temp.	-30…85 °C					
Ambient humidity	10…90 % RH (non-condensing)					

Wiring diagrams

EWEPlus 400 -HC (12 Vac/dc)

EWEPlus 400 (100 Vac - 240 Vac)

EWEPlus 500 -HC (230 Vac)

EWEPlus 902 -HC (115 Vac - 230 Vac)

EWEPlus 961 -HC (115 Vac - 230 Vac)-

EWEPlus 971 -HC (115 Vac - 230 Vac)

EWEPlus 974 -HC (115 Vac - 230 Vac)

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EWPlus EO series

High energy saving solutions

✔ **Advanced control algorithms** contribute to an energy saving of up to 39 %* with no counter structure modification required

✔ **Self-adaptation of the energy saving functions** based on the operating conditions of the refrigerator - Smart Control function

✔ The product is **compatible with the new ecological refrigerants R290 and R600**, in compliance with IEC 60079-15-2005

✔ **Integrated protection of loads against voltage fluctuations** controlled via parameter- LVD models

✔ Use of removable/faston/screw connectors for quick, versatile wiring

✔ Voluntary certification: ENEC/UL (check on device label)

✔ 4 easy-to-select configurations pre-loaded on a single controller

✔ **RTC and internal buzzer** (depending on the model)

✔ **Extended range versions** for applications up to -80 °C Ultra Low Temperature

Find out more
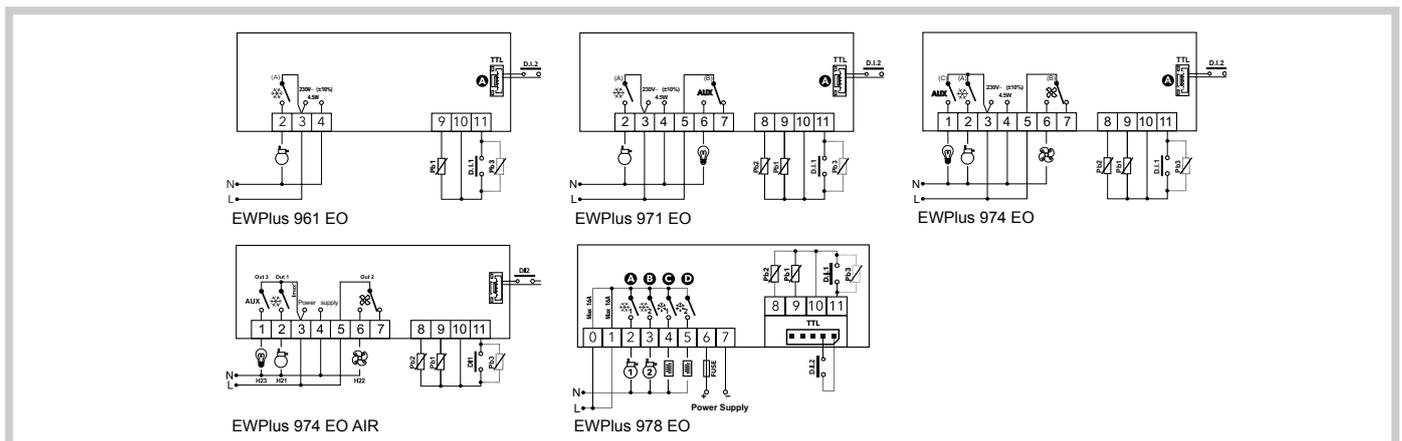
Environmental Data Program

Description and main functions

EWPlus EO series controllers are designed to combine **high energy savings** with **maximum ease of installation and use**, and are also easily applicable when replacing previous series of controllers.

Thanks to the **versatility** of the platform and a **library of available functions**, Eliwell can design custom solutions to suit energy saving requirements while simplifying production processes.

Technical data	EWPlus961 EO	EWPlus971 EO	EWPlus974 EO	EWPlus978 EO
Front panel dimensions	78.6x37 mm			
Depth	59 mm			
Installation	panel-mounted, 71x29 mm			
Display range	-99.9…99.9 °C | -999…999 °C			
Display	LED 3 figures + sign			
Analogue inputs	1x NTC	2x NTC		
Analogue/digital inputs	1x SELV / 1x NTC			
Connectivity	TTL port for connection to Unicard, BTLE AIR Dongle (in some models), TelevisGo and Modbus RTU systems / 2nd digital input			
Digital outputs	1x 2 hp SPST	1x 2 hp SPST 1x 8A SPDT	1x 2 hp SPST 1x 8A SPDT 1x 5A SPST	2x 1.5 hp SPST 1x 8A SPDT 1x 5A SPST
Measurement range and Accuracy	NTC: -50.0…110.0 °C | better than 0.5 % of integral scale + 1 digit			
Resolution	0.1 °C			
Power consumption	5.5 VA/2.5 W with SMPS			
Power supply	115 Vac-230 Vac 100…240 Vac (AIR versions)			
Operating temperature	-5...55 °C			
Storage temp.	-30...85 °C			
Ambient humidity	10…90 % RH (non-condensing)			

* in relation to electromechanical controllers

Wiring diagrams

EWPlus 961 EO

EWPlus 971 EO

EWPlus 974 EO

EWPlus 974 EO AIR

EWPlus 978 EO

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EWPlus 978

Solutions for dual evaporator and dual compressor

✔ **Solution for combined counters, dual evaporator or dual compressor**

✔ **Compact solution for control of small-sized monoblocs**

✔ **Suited to applications with hydrocarbons**

✔ **Unicard USB for customising even small lots**

Environmental
Data Program

Find out more

Description and main functions

EWPlus 978 series controllers are designed to combine **high energy savings** with **maximum ease of installation and use**, and are also easily applicable when replacing previous series of controllers.

Thanks to the **versatility of the platform** and a **library of available functions**, Eliwell can design custom solutions to suit energy saving requirements while simplifying production processes.

Technical data	EWPlus978
Front panel dimensions	78.6x37 mm
Depth	59 mm
Installation	panel-mounted, 71x29 mm
Display range	-99.9…99.9 °C | -999…999 °C
Display	LED 3 figures + sign
Analogue inputs	2x NTC
Analogue/digital inputs	1x SELV / 1x NTC
Connectivity	TTL port for connection to Unicard, TelevisGo and Modbus RTU systems / 2nd digital input
Digital outputs	4x 16A SPST
Measurement range and Accuracy	NTC: -50.0…110.0 °C | better than 0.5 % of integral scale + 1 digit
Resolution	0.1 °C
Power consumption	2.5 W
Power supply	12 V AC/DC
Operating temperature	-5...55 °C
Storage temp.	-30…85 °C
Ambient humidity	10…90 % RH (non-condensing)
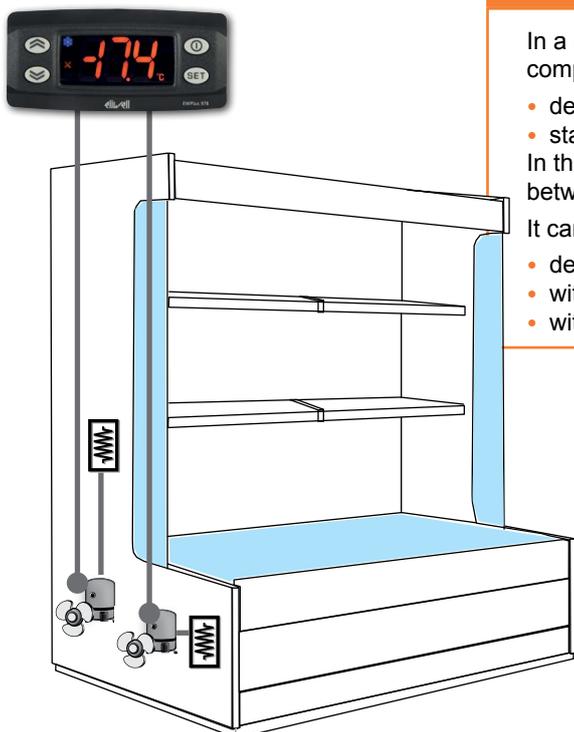
APPLICATION EXAMPLES

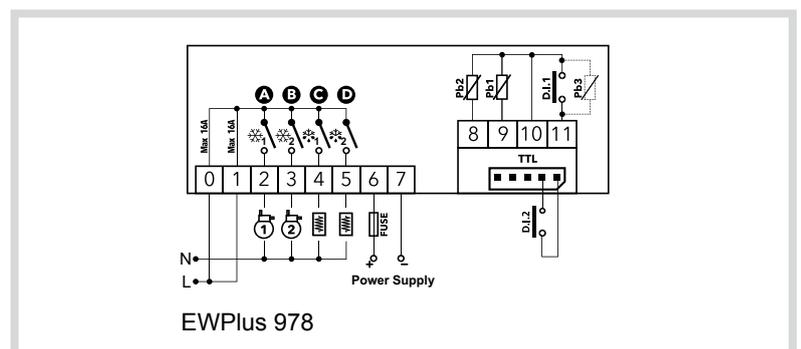In a combined refrigerated cabinet, **EWPlus 978** can manage the dual compressor with:

• delayed startup
• startup based on differentiated temperature threshold and delay
In this case, the controller can manage the set sequence or rotation between two compressors.

It can also manage dual defrosting:

• delayed
• with independent defrost end temperatures
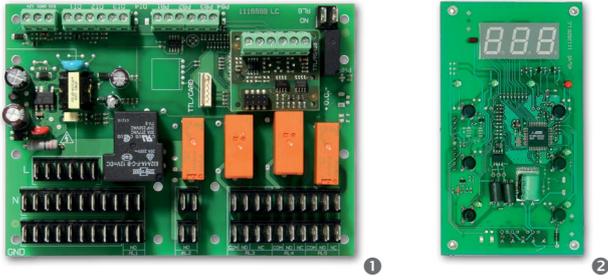• with common defrost time-out

EWPlus 978

Wiring diagrams

EWPlus 978

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IWP 750

Solutions for monoblocs

❶ ❷

✔ **Specific customisable solution for monoblocs with keypad for panel mounting with polycarbonate**

✔ **Faston type connection for all loads and screw connection for all signals**

✔ **Keypad can be set for a distance of up to 100 m**

✔ **Board for RS-485 connectivity optional plug-in**

✔ **Availability of models compatible with flammable gases HFC and HFO, category A3 and A2L**

Description and main functions

IWP 750 controllers are designed to combine high energy savings with maximum ease of installation and use, and are also easily applicable when replacing previous series of controllers.
Thanks to the platform versatility, the product can be configured in various relay combinations in order to adapt better to the monobloc features.

Model		Description	Details	Application
IWP 750	❶	Power board	• 3 temperature probes and 3 configurable digital inputs • 5 configurable relay outputs	Monoblocs
IWK Open	❷	Bare keypad from panel	• compressor control up to 2 hp • power supply SMPS 100…240 Vac	

APPLICATION EXAMPLES

Environmental sustainability

The IWP devices offer a wide range of machine configuration options, predominantly thanks to the vast array of relays, available with power levels of up to 2 hp and used to control two separate compressors directly.

Easy to use

The minimised wiring with on-board power relay, quick connections, simple, intuitive remote user interface and support tools allow for straightforward customisation, even on the production line. The IWK remote keypad is available in reduced depth format so that its can even be used in areas where installation conditions are particularly limited.
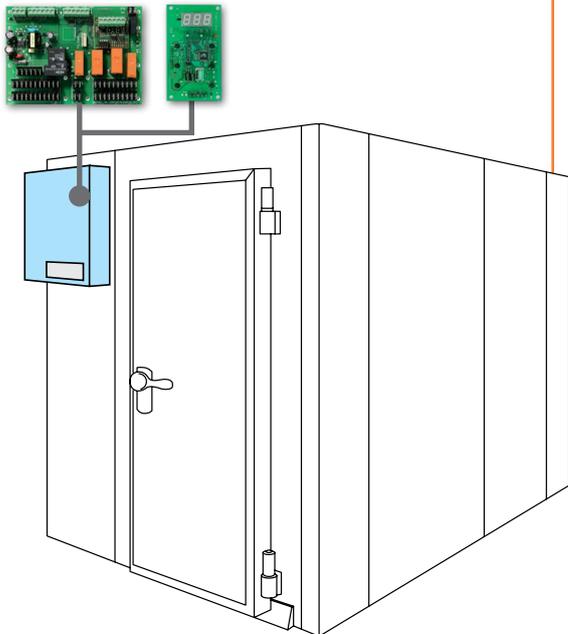
IWP 750 - IWK

IWC 700 series

Controllers for professional applications / catering

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✔ **Solutions for professional counters, normally used to store fresh and frozen foods**

✔ **Can be connected to remote ECHO display (depending on the model)**

✔ **Models with dual temperature setpoint management available**

✔ **Common Line versions for quicker and easier wiring**

Description and main functions

IWC 720-730 controllers are suitable for applications on ventilated refrigeration units for normal or low temperatures
IWC750 Twin is designed specifically to control dual independent temperature refrigeration systems, normally used for the preservation of fresh and frozen foods.
IWC730/E Twin, with two setpoints, is ideal for catering applications, and can be connected to the Echo remote display.

| Technical data	IWC720	IWC730	IWC740	IWC750
Front panel dimensions	180x37 mm			
Depth	48 mm/69 mm	45 mm/48 mm/69 mm	69 mm	
Container	PC+ABS UL94 V-0 resin plastic, polycarbonate window, thermoplastic resin keys			
Installation	panel-mounting with 150x31 mm (+0.2/-0.1 mm) drilling template			
Display range	-50.0…110.0 °C | -58…230 °F			
Display	LED with 3 and a half digits + sign			
Analogue inputs	1x NTC	2x NTC	1x NTC	
Digital inputs	1x SELV			
Connectivity	TTL port for connection to CopyCard and TelevisGo, depending on model			
Digital outputs*	2	3	4	5
Measurement range and Accuracy	NTC: -50.0…110.0 °C | NTC: better than 0.5 % of integral scale + 1 digit			
Resolution	0.1 °C			
Power consumption	4 VA to 9 VA depending on model			
Power supply	230 Vac or 12 Vac/dc depending on model			
Operating temperature	-5...55 °C			
Storage temp.	-30…85 °C			
Ambient humidity	10…90 % RH (non-condensing)			
Optional	Buzzer	Buzzer/ECHO/TWIN	Buzzer/Common Line	Buzzer/TWIN/Common Line

* Ratings and optional extras depending on model

APPLICATION EXAMPLES

In a catering counter, the **IWC 750 TWIN** controller can be set with two separate preservation temperatures, thanks to its dual integrated regulator.
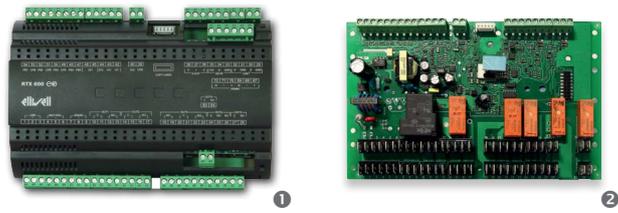
Using the **IWC 730/E TWIN** model, temperatures can also be displayed on the front of the refrigerated cabinet, thanks to the remote Echo display.

IWC 700 series
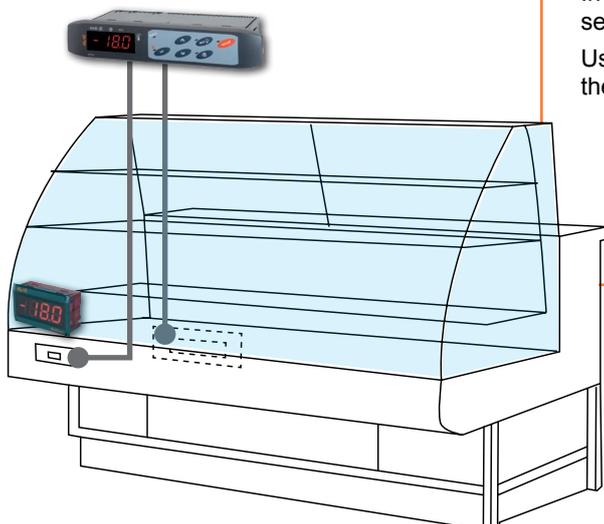
RTX600 - RTN600 series

Controllers for supermarket counters

✔ **Compact (10 DIN) unit and direct load control up to 2 hp**

✔ **Compressor and fan load protection**

✔ **Optimisation of defrost (smart electrical defrost, advanced clock and temperature management)**

✔ **Quick and easy to install and configure**

Description and main functions

Electronic controllers **RTX600** and **RTN600** have energy saving functions for use in supermarkets and commercial food distribution and storage applications.
RTX600 and RTN600 combine optimised defrost cycle management, dewpoint-based heating and anti-condensation element modulation and cold room set point modulation, with automatic identification of open/closed operational time bands.
Configuration has been simplified by introducing pre-set profiles for 8 separate applications that can be easily selected through the **KDEPlus** and **KDWPlus** user terminals.
The **ECPlus** remote display is used to view displayed data at a distance of up to 100 m, differentiating it from the data displayed on KDEPlus and KDWPlus terminals.

Code	Model	Description	Details	Application
RTX5HBM0S2H00	**RTX600 5P/D/O/S/C** ❶ Power board in plastic box		• 3 temperature probes and 3 configurable digital inputs • 6 configurable outputs with direct load control up to 2 hp • power supply SMPS 100…240 Vac	Supermarket counters
RTN5HBE1M2H00	**RTN600 5P/D/O/S/C** ❷ Bare board for panel-mounting			

RS485

APPLICATION EXAMPLES

RTX600 and RTN600 can be used for different applications.

In a **plug-in counter**, for example, RTX600 or RTN600 are used to control compressor, lights and fan connected to the monitoring system via RS-485 network. With RTN600 you need the optional RS-485 connectivity board.

RTX600 - RTN600

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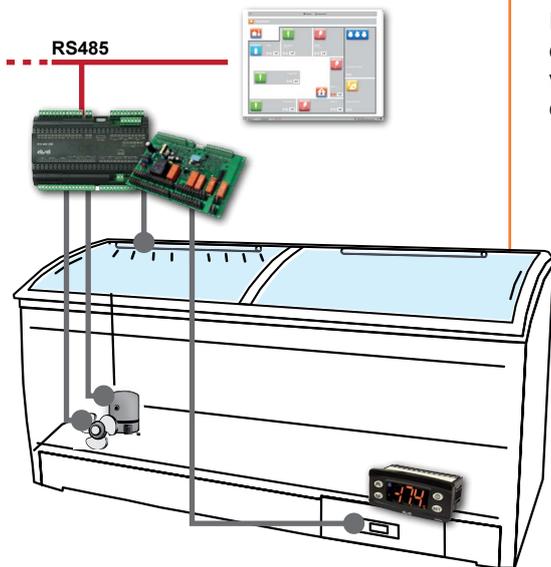
RTN400 - RTN400 SM series

Controllers for plug-in supermarket counters

✔ Single or dual compressor control
✔ Advanced electrical heater defrost
✔ Evaporator fan control in Night&Day mode
✔ Fixed duty cycle frame heater control
✔ Pre-programmed, easy-to-select configurations
✔ Adaptive control for variable speed compressors
✔ Availability of models compatible with flammable gases HFC and HFO, category A3 and A2L

Description and main functions

The **RTN400** controller is designed for plug-in and multi-evaporator remote counters with thermostatic valve control.
RTN400 controllers are compact and stand out for their high performance and flexibility, with energy saving algorithms and direct control of compressor and fans.
RTN400 SM provides energy savings in supermarkets and commercial food distribution and storage applications; it is suitable for controlling EMBRACO VNEU and SECOP CCD variable speed compressors, exploiting their full potential through an operating parameter self-learning algorithm. It also combines optimised defrost cycle management, dewpoint-based heating and anti-condensation element modulation and cold room set point modulation, with automatic identification of open/closed operational time bands.
RTN400 controllers can be interfaced with **KDEPlus** and **KDWPlus** keypads and with the **ECPlus** display module.

Model	Description	Details	Application
RTN400	Bare board with fast power connections, faston type	• compact dimensions (121x92 mm) • 5 temperature probes and 1 configurable digital input • 4 configurable relay outputs with direct load control up to 2 hp • power supply SMPS 100…240 Vac	Supermarket counters
RTN400 SM			Supermarket counters with variable speed compressor
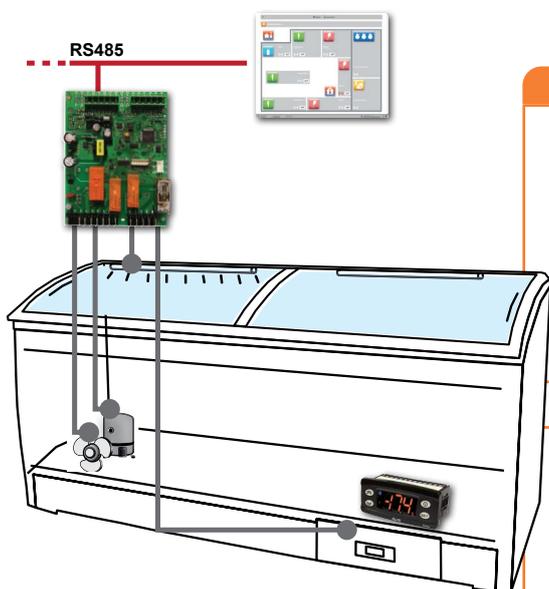
RS485

APPLICATION EXAMPLES

In a **plug-in counter**, RTN400 is used to control compressor, lights and fans connected to a monitoring system via RS-485 network (the optional board is needed for RS-485 connectivity).

RTN400

Plug-in R290 tank with variable speed compressor

RTN 400 SM can control all aspects of the application, including compressor, fans, lights and defrosting.

The innovative self-learning algorithm for control of variable speed compressors significantly reduces the time required for commissioning, ensuring maximum energy efficiency in all conditions and a longer motor life.

The advantages of this type of application are:
• Smaller compressor
• Reduced refrigerant charge
• Continuous control of cooling capacity
• Fewer compressor start-ups and consequently longer compressor life

RTN400 SM

KDENext & Plus, ECNext & Plus series user interfaces

User interfaces for RT family

ECPlus

KDEPlus

ECNext

KDENext

KDWPlus

KDTPlus STD

KDTPlus

✔ **ECPlus, ECNext, KDEPlus, KDENext, KDWPlus:** compatible with controllers in the RT series (RTX, RTD, RTN)

✔ **KDTPlus:** keypads with touch technology, compatible with controllers in the RT series (RTX, RTD, RTN)

✔ **KDTPlus:** customisable for OEM temperature solutions

Description and main functions

KDEPlus and **KDWPlus** are user terminals for all displaying and programming of controllers for multi-evaporator remote and plug-in refrigerated cabinets. Each power board can be connected to a single KDWPlus keypad and, if required, to an ECPlus module for remote display.

The **ECPlus** remote display is used to view displayed data at a distance of up to 100 m, differentiating it from the data displayed on KDEPlus and KDWPlus terminals. The **KDTPlus** keypads, made using backlit screen-printed Plexiglass, are used for all operations currently available with membrane and standard 32x74 keypads, but with a perfectly smooth and easy-to-clean surface, combined with a modern design and the natural feeling of touch-sensitive keys with light and sound feedback. The special construction of the keypads, with their glued-on fitting option, offers reduced installation times, precise positioning and a protection rating of IP65. The simplicity of the KDTPlus keypads is the result of Eliwell's experience in designing solutions for easy design and installation.

The new **KDENext** devices, in addition to their modern design, offer 6 touch keys for direct access to the main functions. A remote display **ECNext** is also available.

Technical data	KDTPlus STD	KDTPlus	KDEPlus	KDENext	KDWPlus	ECPlus	ECNext
Container	polymethylmeth-acrylate (PMMA) front panel	polymethylmeth-acrylate (PMMA) front panel	PC+ABS UL94 V-0 resin casing, polycarbonate window, thermo-plastic resin keys	UNIBODY front panel with built-in seal	PC+ABS UL94 V-0 resin casing, polycarbonate window, thermo-plastic resin keys	body and window in polycarbonate	PC+ABS UL94 V-0 resin casing, polycarbonate glass
Dimensions	front panel 180x40 mm, depth 1.5 mm	front panel 87x135 mm, depth 1.5 mm	front panel 74x32 mm, depth 30 mm		front panel 180x37 mm, depth 23 mm	front panel 48x28.6 mm, depth 15 mm	
Installation	panel mounting, can be set for a distance of up to 100 m, with 150x31 mm drilling template	panel mounting, can be set for a distance of up to 100 m, with 67x120 mm drilling template	panel mounting with 71x29mm drilling template (+0.2/-0.1 mm)		panel mounting, with drilling template 150x31 mm (+0.2/-0.1 mm)	panel mounting, with 45.9x26.4 mm drilling template (+0.2/-0.1 mm)	
Display	3 digits+sign, 8 coloured icons colours can selected from: amber/red/blue/white, 6 capacitive touch keys		with decimal point ° 3 digits + sign, different colours				
Display range	-		see power board				
Connectivity	-		• screw terminals for power board connection • JST for ECPlus display connection	• screw terminals for power board connection • JST for ECNext display connection	• screw terminals for power board connection • JST for ECPlus display connection	Different cable lengths with quick connector	
Power supply	-		from power board				
Power consumption	-		max 15 mA				
Ambient operating temperature	-		-5...55 °C				
Storage ambient temperature	-		-30...85 °C				
Ambient operation and storage humidity	-		10...90 % RH (non-condensing)				

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EWBC 800 series - KDT BC

Solutions for blast chillers

✔ **Display with LEDs and icons and 8 self-explanatory easy-to-use capacitive touch keys (KDT BC) or integral touch colour graphic interface (TGI)**

✔ **Main blast chilling functions selectable directly from touch key**

✔ **3-wire base-keypad connection also suitable for mounting to blast chiller doors**

✔ **Positive/negative, timer/core probe and hard/soft chill control**

✔ **UV management (sterilisation with germicidal lamp), core probe extraction and door frame heater**

✔ **Removable terminals and quick connections**

✔ **Device Manager configuration tool**

✔ **Controlled temperature food defrosting management EWBC 875 only)**

✔ **Low temperature cooking management (EWBC 875 only)**

✔ **HACCP with recording of the 10 most recent events (EWBC 875 only)**

Description and main functions

Blast chillers are used for rapid cooling of hot foods from their cooking temperature to a core temperature of 3 °C in less than 90 minutes, so that the product can then be stored in a freezer or refrigerator.
This treatment extends the average shelf-life of food as the cold inhibits bacterial growth (bacteria multiply more quickly between
8 °C and 68 °C).
The **EWBC 800** controllers, developed by Eliwell specifically for blast chillers, are designed in a split format to ensure maximum installation flexibility.
EWBC 800s are used in conjunction with the **KDT BC** user interface, consisting of 8 capacitive touch keys and an LED display, and are particularly suited to stylistic customisation.

Technical data	EWBC 854	EWBC 875
Size	121x92 mm	195x124 mm
Display	• Via LINK²: KDT BC touch keypad (3 digits with LEDs and 8 icons) • Via RS485: with TGI integral touch graphic interface with 3.5", 4.3" or 7" screen	
Power supply	SMPS 100-240 Vac ±10 % 50/60 Hz	
Digital outputs	4 outputs: 1x 2 hp, 1x 1 hp, 2x 8(4)A	6 outputs: 1x 2 hp, 2x 1 hp, 3x 8(4)A
Analogue outputs	1x Open Collector	1x Open Collector + 1x DAC
Digital inputs	1 x multifunction, voltage-free D.I.	3 x multifunction, voltage-free D.I.
Analogue inputs	4x configurable NTC/PTC/PT1000/D.I.	5x configurable NTC/PTC/PT1000/D.I.
Connectivity	TTL port for connection to Copy Card and Unicard	

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EWBC 1400

Solutions for blast chillers

✔ **Compact and economical controller for entry-level applications, with LED display and 4 buttons**

✔ **Positive/negative, timer/core probe chill control**

✔ **UV management (sterilisation with germicidal lamp), core probe extraction and defrost on shutdown**

✔ **Removable terminals and quick connections**

✔ **Device Manager configuration tool**

Description and main functions

Blast chillers are used for rapid cooling of hot foods from their cooking temperature to a core temperature of 3 °C in less than 90 minutes, so that the product can then be stored in a freezer or refrigerator.
This treatment extends the average shelf-life of food as the cold inhibits bacterial growth (bacteria multiply more quickly between 8 °C and 68 °C).
The **EWBC 1400** blast chiller controller consists of an open frame circuit board, designed to ensure cost-effective machine control. On request, Eliwell can supply a standard version of the external polycarbonate, which is easy to customise to individual requirements.

Technical data	EWBC 1400
Size	95x105 mm
Display	3-digit LED
Power supply	230 Vac ±15 % 50/60 Hz
Digital outputs	4 configurable outputs: 4 x 5A 250 V
Digital inputs	1 x voltage-free digital input with contact closure to ground
Analogue inputs	4 inputs: 1 x non-configurable input set as core probe needle 2 x configurable input, NTC 103AT / PTC KTY 83-121 1 x configurable input, NTC 103AT / PTC KTY 83-121 / D.I.
Connectivity	TTL port for connection to Multi Function Key

EWBC 400

Entry level controllers for blast chillers

✔ **Compact and economical flush-mounted controller for "entry level" applications, with LED display and 4 buttons**

✔ **Positive/negative/deep negative, timer/core probe chill control**

✔ **Availability of models compatible with flammable gases HFC and HFO, category A3 and A2L**

✔ **Removable terminals for quick connections**

✔ **Device Manager configuration tool**

Description and main functions

Blast chillers are used for rapid cooling of hot foods from their cooking temperature to a core temperature of 3 °C in less than 90 minutes,
so that the product can then be stored in a freezer or refrigerator.
This treatment extends the average shelf-life of food as the cold inhibits bacterial growth (bacteria multiply more quickly between 8 °C and 68 °C).
EWBC 400 are electronic controllers developed in 32x74 format, maximum mounting flexibility at competitive costs.
With a view to increasing the product quality standards, Eliwell supplies MOCA-certified core probes on request.

Technical data	EWBC 432	EWBC 433
Size	32x74 depth 60 mm	
Display	3 digits + sign, white display	
Power supply	230 Vac (±10 %) 50/60 Hz	
Digital outputs	3 outputs: 2 hp, 8A, 5A @250 Vac	3 outputs: 2 hp, 6A, 3A @250 Vac
Analogue inputs	1 NTC chamber probe -50...110 °C 1 NTC core probe -55...150 °C	1 NTC chamber probe -50...110 °C 1 NTC core probe -55...150 °C 1 NTC defrost end probe -50...110 °C
Digital inputs	1 door switch	1 door switch with adapter CO000037
Terminals	removable - female not included	
Connectivity	1 TTL port	

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FREE Way
Programmable platform

FREE Optima

FREE Panel

FREE Advance
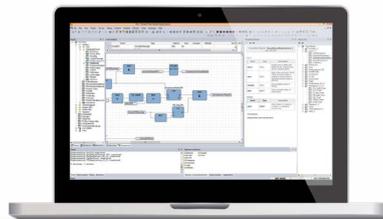
FREE Studio Plus

FREE Way is the range of logic controllers developed by Eliwell, including **FREE Optima, FREE Panel** and **FREE Advance**.

FREE Studio Plus is the universal programming software for automated machinery with Free Way logic controllers. This software simplifies every machine design and commissioning phase:

• 1 single, simple and flexible software suite for the entire **Free Way** range
• Compatible with the 5 standard programming languages (IEC 61131-3) to cover all requirements in terms of graphic or text-based languages
• Advanced debug and simulation options available, as well as a comprehensive and effective online guide
• Instruments to make commissioning easier
• Advanced communication functions such as remote control and downloading
• Creation of Web pages via the software

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FREE Optima
Programmable platform

The **FREE Optima** controller, for simple and compact applications, has an expanded internal memory of 1 MB, numerous connection options and 22 configurable I/O.
FREE Optima is available in 4 DIN format (**OTD** with display, blank **OTB**), or in the consolidated 32x74 mm format for panel mounting (**OTF**); with 24 Vac/dc or 230/110 Vac power supply (available only for OTD and OTB). OTD is also available with integrated valve driver (**OTDE**).

Environmental Data Program

Find out more

FEATURES

- 22 configurable I/O
- **FREE Optima OTD** 4 DIN with two-line touch display **FREE Optima OTB** 4 DIN without display (blank)
- **FREE Optima OTF** in flush-mount version 32x74 mm
- Can be connected to RS-485, Modbus RTU master and slave or using CANopen
- USB-c port with host and device functions
- TTL connector for remote display
- Bus for connection to Secure Interface plug-in
- Integrated valve driver

FREE Panel
Programmable platform

The **FREE Panel** range includes controllers that, in a single device, have a programmable graphic interface and a programmable controller with connectivity, for remote connection and management of the distributed control.
FREE Panel Advance (AVP) is a high-performing programmable colour touchscreen interface with an attractive design.
Available for wall and panel mounting, it is suited to any kind of application.
The version for wall mounting includes a temperature sensor, temperature and humidity sensor or temperature, humidity and presence sensor, while the panel-mounting version is available in grey or white.
Both series include a Modbus SL RS485 port that can be configured as Master or Slave.

Environmental Data Program

Find out more

FEATURES

- FREE Panel EVP system controller, with gateway functions and backlit LCD graphic display, for panel or wall mounting
- FREE Panel AVP zone controller with backlit colour graphic touch display, for wall or panel mounting, with built-in temperature, humidity and presence sensors
- High connectivity: can be integrated in industrial systems and micro BMS
- Connects to standard Eliwell and third-party peripheral devices

FREE Advance
Programmable platform

The **FREE Advance** controller for connected or connectible machines of any size, is the top of the programmable controller range, designed to manage more demanding applications. Available for mounting on DIN rail, it is fully scalable, with different formats and a wide range of I/O expansion modules.

FREE Advance is equipped with two RS485 ports for Modbus SL (master or slave) or BACnet MS/TP (B-AAC profile, certified BTL).

Inputs and outputs are fully configurable for any type of HVAC sensor (0-10 V, 4-20 mA, 0-20 mA, NTC, PTC, PT1000...) and actuators to maximise the adaptability of the unit to any system.

Environmental
Data Program

Find out more

FEATURES

- Fully customisable graphic user interface

- Available in 4 DIN and 8 DIN formats FREE Advance AVD with backlit graphic LCD and FREE Advance AVC without display

- Superior connectivity as standard for integration in industrial systems and BMS without optional modules

- Scalable solution with a wide range of start / end points: from 7 to 42 I/Os

- Can be connected with standard Eliwell peripherals (including FREE Smart) to any network, including Modbus SL, BACnet MS/TP, Modbus TCP, BACnet IP or LonWorks.

- A slot for a micro SD memory card which can be used to record data or for storage on the Webserver

- USB programming ports:

- Type A USB port used to transfer programmes with a USB key.

- Type B port used to connect to a PC for programming

Secure Interface
Programmable platform

Secure Interface is an Edge device in the Free Way family, used to enable IoT connectivity in an efficient, intuitive and competitive cyber-safe mode.
Secure Interface not only connects to FREE Way PLCs, but also to any device equipped with Modbus bus on RS485, collecting data and transferring it to the Cloud, where specific applications analyse the data and enable predictive maintenance. It is also equipped with a client to open a VPN for immediate and safe remote access to the machine. All protocols in the Secure Interface are in cyber-safe version. It can be used as a simple Modbus gateway or for more complex connectivity operations, with different programming levels.

Environmental
Data Program

Find out more

FEATURES

- Linux embedded PC, extremely compact (72 x 110 x 60 mm)

- Two Ethernet ports with switch function

- Programmable using the software Free Studio based on the standard IEC 61131

- Configurable via web app

- Protocols: HTTPs, FTPs, SMTPs, MQTT, SNMP, Modbus TCP/IP and RTU

- Slot for micro SD card, can be used to record data or for storage on the Webserver

- USB programming ports:

  - Type A USB port used to transfer programs with a USB drive

  - Type B port used to connect to a PC for programming

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Temperature Probe Tables
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NTC probe table

Ambient temperature	Resistance (kOhm)
(°C)	103AT
-50	329.50
-45	247.70
-40	188.50
-35	144.10
-30	111.30
-25	86.43
-20	47.77
-15	53.41
-10	42.47
-5	33.90
0	27.28
5	22.05
10	17.96
15	14.69
20	12.09
25	10.00
30	8.313
35	6.940
40	5.827
45	4.911
50	4.160
55	3.536
60	3.020
65	2.588
70	2.228
75	1.924
80	1.668
85	1.451
90	1.266
95	1.108
100	0.9731
105	0.8572
110	0.7576

NTC probe table - Extended range

Ambient temperature	Resistance (kOhm)		
(°C)	Minimum	Standard	Maximum
-40	321.654	333.562	345.877
-35	233.032	241.072	249.364
-30	170.611	176.082	181.710
-25	126.176	129.925	133.773
-20	94.221	96.807	99454
-15	71.015	72.809	74.640
-10	54.004	55.253	56.525
-5	41.419	42.292	43.179
0	32.028	32.640	33260
5	24.962	25.391	25.824
10	19.601	19.902	20.205
15	15.504	15.713	15.924
20	12.348	12.493	12.639
25	9.900	10.000	10.100
30	7.962	8.055	8.150
35	6.444	6.530	6.616
40	5.247	5.325	5.403
45	4.296	4.367	4.438
50	3.537	3.601	3.665
55	2.928	2.985	3.042
60	2.436	2.487	2.538
65	2.037	2.082	2.127
70	1.711	1.751	1.792
75	1.444	1.480	1.516
80	1.224	1.256	1.288
85	1.042	1.070	1.099
90	0.890	0.916	0.941
95	0.764	0.786	0.810
100	0.658	0.678	0.699
105	0.569	0.587	0.605
110	0.493	0.510	0.526
115	0.429	0.444	0.459
120	0.375	0.388	0.402
125	0.328	0.340	0.353
130	0.289	0.299	0.310
135	0.254	0.264	0.274
140	0.224	0.234	0.243
145	0.199	0.207	0.215
150	0.177	0.184	0.192

Temperature Probe Tables
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Pt100 probe table

Ambient temperature (°C)	Resistance (Ohm)	Ambient temperature (°C)	Resistance (Ohm)	Ambient temperature (°C)	Resistance (Ohm)	Ambient temperature (°C)	Resistance (Ohm)	Ambient temperature (°C)	Resistance (Ohm)
-200	18.52	20	107.79	230	186.84	440	260.78	650	329.64
-190	22.83	30	111.67	240	190.47	450	264.18	660	332.79
-180	27.10	40	115.54	250	194.10	460	267.56	670	335.93
-170	31.34	50	119.40	260	197.71	470	270.93	680	339.06
-160	35.54	60	123.24	270	201.31	480	274.29	690	342.18
-150	39.72	70	127.08	280	204.90	490	277.64	700	345.28
-140	43.88	80	130.90	290	208.48	500	280.98	710	348.38
-130	48.00	90	134.71	300	212.05	510	284.30	720	351.46
-120	52.11	100	138.51	310	215.61	520	287.62	730	354.53
-110	56.19	110	142.29	320	219.15	530	290.92	740	357.59
-100	60.26	120	146.07	330	222.68	540	294.21	750	360.64
-90	64.30	130	149.83	340	226.21	550	297.49	760	353.67
-80	68.33	140	153.58	350	229.72	560	300.75	770	366.70
-70	72.33	150	157.33	360	233.21	570	304.01	780	369.71
-60	76.33	160	161.05	370	236.70	580	307.25	790	372.71
-50	80.31	170	164.77	380	240.18	590	310.49	800	375.70
-40	84.27	180	168.48	390	243.64	600	313.71	810	378.68
-30	88.22	190	172.17	400	247.09	610	316.92	820	381.65
-20	92.16	200	175.86	410	250.53	620	320.12	830	384.60
-10	96.09	210	179.53	420	253.96	630	323.30	840	387.55
0	100.00	220	183.19	430	257.38	640	326.48	850	390.48
10	103.90								

Pt1000 probe table

Ambient temperature (°C)	Resistance (Ohm)	Ambient temperature (°C)	Resistance (Ohm)	Ambient temperature (°C)	Resistance (Ohm)	Ambient temperature (°C)	Resistance (Ohm)	Ambient temperature (°C)	Resistance (Ohm)
-200	185.281	20	1077.936	230	1868.465	440	2608.235	650	3297.246
-190	228.327	30	1116.731	240	1904.843	450	2642.196	660	3328.790
-180	271.029	40	1155.411	250	1941.106	460	2676.042	670	3360.219
-170	313.408	50	1193.976	260	1977.254	470	2709.773	680	3391.533
-160	355.484	60	1232.426	270	2013.287	480	2743.389	690	3422.731
-150	397.277	70	1270.961	280	2049.205	490	2776.889	700	3453.815
-140	432.903	80	1308.981	290	2085.007	500	2810.275	710	3484.783
-130	480.081	90	1347.085	300	2120.695	510	2843.545	720	3515.637
-120	521.127	100	1385.075	310	2156.267	520	2876.701	730	3546.375
-110	561.954	110	1422.949	320	2191.725	530	2909.741	740	3576.998
-100	602.578	120	1460.709	330	2227.067	540	2942.666	750	3607.506
-90	643.012	130	1498.353	340	2262.294	550	2975.476	760	3637.899
-80	683.267	140	1535.882	350	2297.406	560	3008.171	770	3668.177
-70	723.355	150	1573.296	360	2332.403	570	3040.751	780	3698.340
-60	763.286	160	1610.595	370	2367.285	580	3073.216	790	3728.387
-50	903.068	170	1647.779	380	2402.052	590	3105.565	800	3758.320
-40	842.71	180	1684.848	390	2436.703	600	3137.800	810	3788.137
-30	882.218	190	1721.801	400	2471.240	610	3169.919	820	3917.840
-20	921.6	200	1758.640	410	2505.661	620	3201.924	830	3847.427
-10	960.859	210	1795.363	420	2539.968	630	3233.813	840	3876.899
0	1000	220	1831.972	430	2574.159	640	3265.587	850	3906.256
10	1039.025								

Temperature Probe Tables

Appendix

TCJ probe table

Temp.	0 °C	-10 °C	-20 °C	-30 °C	-40 °C	-50 °C	-60 °C	-70 °C	-80 °C	-90 °C
-200 °C	-7.890	-8.095	-	-	-	-	-	-	-	-
-100 °C	-4.633	-5.037	-5.426	-5.801	-6.159	-6.500	-6.821	-7.123	-7.403	-7.659
0 °C	0.000	-0.501	-0.995	-1.482	-1.961	-2.431	-2.893	-3.344	-3.786	-4.215
	10 °C	**20 °C**	**30 °C**	**40 °C**	**50 °C**	**60 °C**	**70 °C**	**80 °C**	**90 °C**	**100 °C**
0 °C	0.000	0.507	1.019	1.537	2.059	2.585	3.116	3.650	4.187	4.726
100 °C	5.269	5.814	6.360	6.909	7.459	8.010	8.562	9.115	9.669	10.224
200 °C	10.779	11.334	11.889	12.445	13.000	13.555	14.110	14.665	15.219	15.773
300 °C	16.327	16.881	17.434	17.986	18.538	19.090	19.642	20.194	20.745	21.297
400 °C	21.848	222.400	22.952	23.504	24.059	243610	24.164	25.720	26.276	26.834
500 °C	27.393	27.953	28.516	29.080	29.647	30.216	30.788	31.362	31.939	32.519
600 °C	33.102	33.689	34.279	34.873	35.470	36.071	36.675	37.284	37.896	38.512
700 °C	39.132	39.755	40.382	41.012	41.645	42.281	42.919	43.559	44.203	44.848
800 °C	45.494	46.141	46.786	47.431	48.074	48.715	49.353	49.989	50.622	51.251
900 °C	51.877	52.500	53.119	53.735	54.347	54.956	55.561	56.164	56.763	57.360
1000 °C	57.953	58.545	59.134	59.721	60.307	60.890	61.473	62.054	62.634	63.214
1100 °C	63.792	64.370	64.948	65.525	66.102	66.679	67.255	67.831	68.406	68.980
1200 °C	69.553	-	-	-	-	-	-	-	-	-

TCK probe table

Temp.	0 °C	-10 °C	-20 °C	-30 °C	-40 °C	-50 °C	-60 °C	-70 °C	-80 °C	-90 °C
-200 °C	-5.730	-6.035	-6.158	-6.262	-6.344	-6.404	-6.441	-6.458	-	-
-100 °C	-3.554	-3.852	-4.138	-4.411	-4.669	-4.913	-5.141	-5.354	-5.550	-5.730
0 °C	0.000	-0.392	-0.778	-1.156	-1.527	-1.889	-2.243	-2.587	-2.920	-3.243
	10 °C	**20 °C**	**30 °C**	**40 °C**	**50 °C**	**60 °C**	**70 °C**	**80 °C**	**90 °C**	**100 °C**
0 °C	0.000	0.397	0.798	1.203	1.612	2.023	2.436	2.851	3.267	3.682
100 °C	4.096	4.509	4.920	5.328	5.735	6.138	6.540	6.941	7.340	7.739
200 °C	8.138	8.539	8.940	9.343	9.747	10.153	10.561	10.971	11.382	11.795
300 °C	12.209	12.624	13.040	13.457	13.874	14.1293	14.713	15.133	15.554	15.975
400 °C	16.397	16.820	17.243	17.667	18.091	18.516	18.941	19.366	19.792	20.218
500 °C	20.644	21.071	21.497	21.924	22.350	22.776	23.203	23.629	24.055	24.480
600 °C	24.905	25.330	25.755	26.179	26.602	27.025	27.447	27.869	28.289	28.710
700 °C	29.129	29.548	29.965	30.382	30.798	31.213	31.628	32.041	32.453	32.865
800 °C	33.275	33.685	34.093	34.501	34.908	35.313	35.718	36.121	36.524	36.925
900 °C	37.326	37.725	38.124	38.522	38.918	39.314	39.708	10.101	40.490	40.885
1000 °C	41.276	41.665	42.053	42.440	42.826	43.211	43.595	43.978	44.359	44.740
1100 °C	45.119	45.497	45.873	46.249	26.623	46.995	47.367	47.737	48.105	48.473
1200 °C	48.838	49.202	49.565	49.926	50.286	50.644	51.000	51.355	51.708	52.060
1300 °C	52.410	52.759	53.106	53.451	53.795	54.138	54.479	54.819	-	-

ELECTRONIC CONTROLS

SOLUTIONS FOR SUPERMARKETS

MONITORING SOLUTIONS

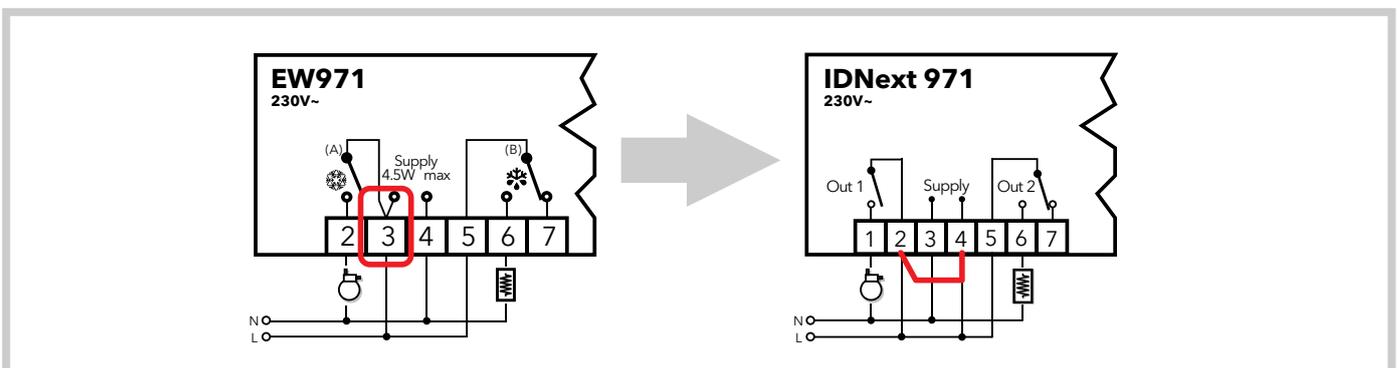ELECTROMECHANICAL COMPONENTS

ACCESSORIES

OEM PRODUCTS

APPENDIX

IDNext vs IDPlus, EW and ID, ICPlus vs IC compatibility
Compatibility tables

IDNext models	IDPlus models	IC - ID	EWPC - EWTC - EWPX	EW - EWPlus*	EWNext
IDNext 902 Output: 10A SPDT	IDPlus 902 Output: 8A SPDT	IC 901 IC 902 ID 961 ID 961LX	EWPC 901 EWPC 902 EWPC 961 EWTC 101 EWPX 161	EW 902 EWPlus 902	-
IDNext 961 Output: 2Hp SPST	IDPlus 961 Output: 2Hp SPST	IC 901 IC 902 ID 961 ID 961LX	EWPC 901 EWPC 902 EWPC 961 EWTC 101 EWPX 161	EW 961 EWPlus 961	EWNext 961
IDNext 971 Outputs: 2Hp + 8A	IDPlus 971 Outputs: 2Hp + 8A	ID 961/A ID 970 ID 970LX ID 971 ID 971LX	EWPC 970 EWPC 971 EWPX 161AR EWPX 170 EWPX 171	EW 971 EWPlus 971	EWNext 971
IDNext 974 Outputs: 2Hp + 8A + 5A	IDPlus 974 Outputs: 2Hp + 8A + 5A	ID 974 ID 974 LX	EWPC 974 EWPX 174	EW 974 EWPlus 974	EWNext 974
IDNext 978 Outputs: 1.5Hp + 8A + 5A (2x)	IDPlus 978 Outputs: 1.5Hp + 8A + 5A (2x)	ID 975LX ID 983 ID 985 ID 983LX (no C/K/S) ID 985LX (no C/K/S)	EWPX 174AR EWPX 174AX EWPX 185 EWPX 190	EWPlus 978	EWNext 978
IDNext 1485 SBCL Outputs: 1,5hP+1,5hP+8A+5A	-	ID 985LX CKE	-	-	-
IDNext 1385 SBCL Outputs: 1,5hP+1,5hP+8A+5A	-	ID 985 /S/C/E/K	-	-	EWNext 1385 SBCL

ICPlus models	IC	EWPC - EWTC
ICPlus 902/A	IC 901/A	-
ICPlus 902	IC 901 IC 902 IC 912 (no LX) IC 912LX V/I	EWPC 901 EWPC 902 EWTC 101
ICPlus 915	IC 912LX (no V/I) IC 915 IC 915LX	EWPC 905

*NB - Controllers in the series for OEM EW / EWPlus include a connection between power supply and loads that is not found in the IDNext series.
It is therefore necessary to jumper the load line and the controller power supply, see example below:

SOLUTIONS FOR SUPERMARKETS MONITORING SOLUTIONS ELECTROMECHANICAL COMPONENTS ACCESSORIES OEM PRODUCTS APPENDIX

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Rethink the Food Retail sector with
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Notes

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Since 1980, Eliwell has been developing and manufacturing control systems, solutions and services for both commercial and industrial refrigeration units. It embodies the success story of an Italian company that has brought Made in Italy technological developments to the world for over 45 years. In 2014, it became part of the Schneider Electric group and remains its centre of excellence for HVACR applications. Together with Schneider Electric, Eliwell is now the global partner providing efficient and sustainable solutions and services for food storage and distribution systems, and for integrated resource control of environmental comfort installations.