

device for **INDOOR APPLICATIONS**
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CONSIDER THE ENVIRONMENT

EN ENGLISH

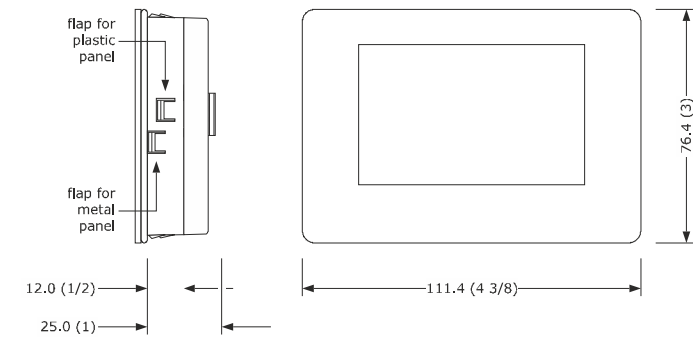
- panel or wall mounting with or without back-slot for in-wall box (according to the model)
- 12 VAC/DC power supply not insulated or 115... 230 VAC power supply (according to the model)
- one or two NTC external analog inputs (according to the model)
- two digital outputs rated 1 res. A @ 250 VAC (according to the model)
- alarm buzzer
- incorporated temperature and humidity sensor (according to the model)
- incorporated Bluetooth Low Energy sensor (according to the model)
- INTRABUS port or RS-485 port with INTRABUS communication protocol (according to the model)
- **device for indoor applications.**

Purchasing codes	Installation mode	Power supply	External analog inputs	Digital outputs	Incorporated temperature and humidity sensor	Incorporated Bluetooth Low Energy sensor
EVJD900N2	panel mounted (black front)	12 VAC/DC	no	no	no	no
EVJD900N2VW	wall mounted (white front)	12 VAC/DC	1	no	no	no
EVJD900N2VWTX ⁽¹⁾			1	no		no
EVJD900N2VWIV			1	no		yes
EVJD920N2VW			1	no		no
EVJD920N2VWIV	wall mounted with back-slot for flush mounting box (white front)	115... 230 VAC	2	2	no	yes
EVJD902N9VP			2	2		no
EVJD902N9PPIV			2	2		yes
EVJD922N9VP			2	2		no
EVJD922N9PPIV			2	2	yes	yes

⁽¹⁾ with RS-485 with INTRABUS communication protocol

1 MEASUREMENTS AND INSTALLATION | Measurements in mm (in)

1.1 Models for panel mounting

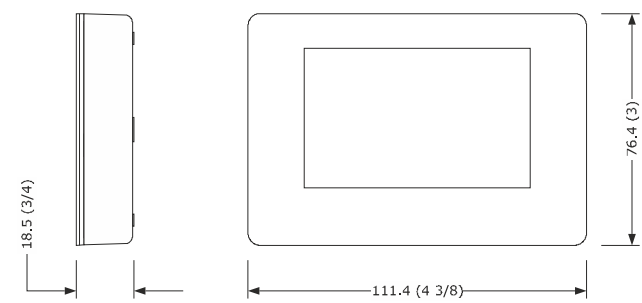


To be fitted to a panel, with elastic holding flaps.

N.B.

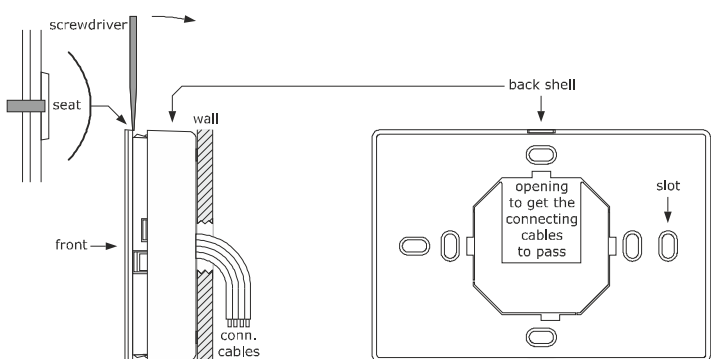
- the thickness of a metal panel must be between 0.8 and 1.5 mm (1/32 and 1/16 in), while that for a plastic panel must be between 0.8 and 3.4 mm (1/32 and 1/8 in)
- the measurements of drilling template must be 107.6 x 72.6 mm (3 15/16 x 2 7/8 in), with rounded corners R 3.0 mm (1/8 in).

1.2 Models for wall mounting

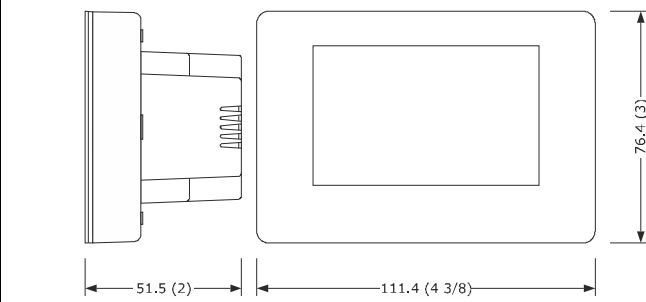


Wall mounting (with bolts and fastening screws) or in the most common flush mounting boxes (with fastening screws).

- Unhook the back shell from the front through a screwdriver and the proper seat.
- In case of wall mounting:
 - Lean the back shell against the wall in a position suitable to get the connecting cable to pass through the proper opening.
 - Use the slots of the back shell as template to drill 4 holes having a diameter suitable to the bolt. 5.0 mm (3/16 in) diameter bolts are suggested.
 - Insert the bolts in the holes drilled in the wall.
 - Fasten the back shell at the wall with 4 screws. Countersunk head screws are suggested.
- In case of flush mounting box, fasten the back shell at the box with 4 screws. Countersunk head screws are suggested.
- Make the electrical connection as shown in the section **ELECTRICAL CONNECTION** without powering up the device.
- Fasten the front of the device at the back shell.

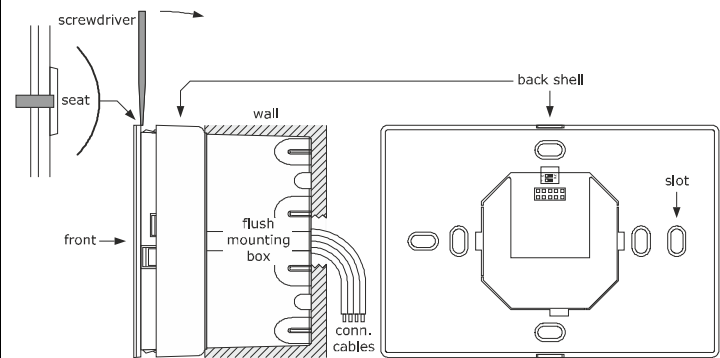


1.3 Models for wall mounting with back-slot for in-wall box



Wall mounting in the most common flush mounting boxes (with fastening screws).

- Unhook the back shell from the front through a screwdriver and the proper seat.
- Fasten the back shell at the box with 4 screws. Countersunk head screws are suggested.
- Make the electrical connection as shown in the section **ELECTRICAL CONNECTION** without powering up the device.
- Fasten the front of the device at the back shell.



INSTALLATION PRECAUTIONS

- Ensure that the working conditions are within the limits stated in the **TECHNICAL SPECIFICATIONS** section
- Do not install the device close to heat sources, equipment with a strong magnetic field, in places subject to direct sunlight, rain, damp, excessive dust, mechanical vibrations or shocks
- In compliance with safety regulations, the device must be installed properly to ensure adequate protection from contact with electrical parts. All protective parts must be fixed in such a way as to need the aid of a tool to remove them.

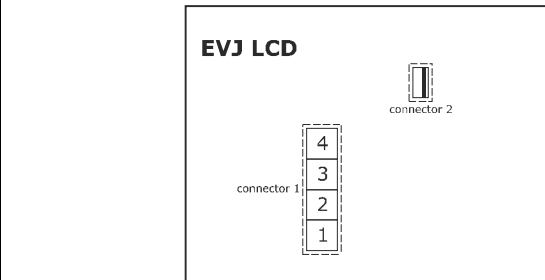
2 ELECTRICAL CONNECTION

N.B.

- Use cables of an adequate section for the current running through them
- To reduce any electromagnetic interference connect the power cables as far away as possible from the signal cables and connect to an INTRABUS network by using a twisted pair.

2.1 Models for panel mounting

2.1.1 Connectors and parts



Connector 1

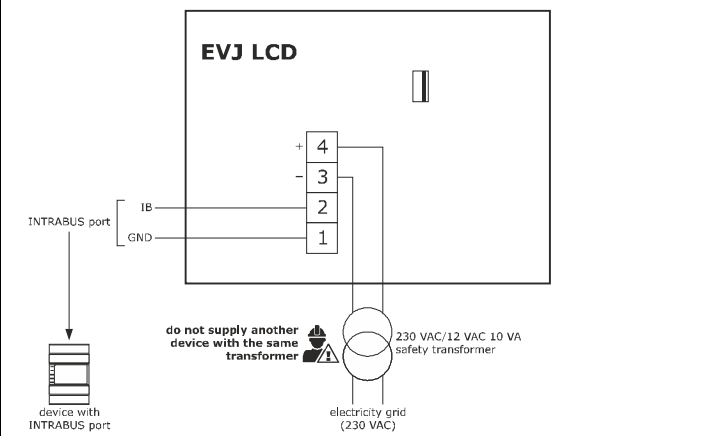
N.	DESCRIPTION
1	INTRABUS port reference (GND)
2	INTRABUS port data (IB)
3	device power supply (12 VAC/DC). If the device is fed by DC power, connect terminal minus
4	device power supply (12 VAC/DC). If the device is fed by DC power, connect terminal plus

Connector 2: reserved EVCO.

2.1.2 Electrical connection with independent power supply

N.B.

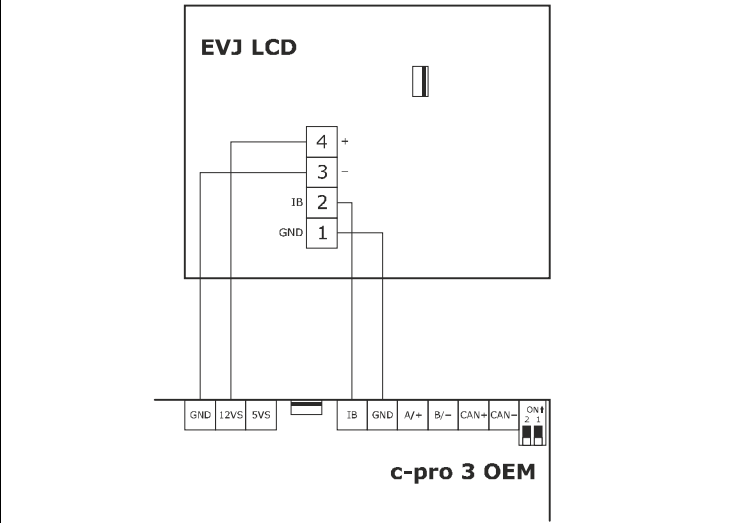
- Do not supply another device with the same transformer
- The maximum permitted length for connection cables of the INTRABUS port is 30 m (98.4 ft).



2.1.3 Electrical connection with device powered by a controller (for example c-pro 3 OEM)

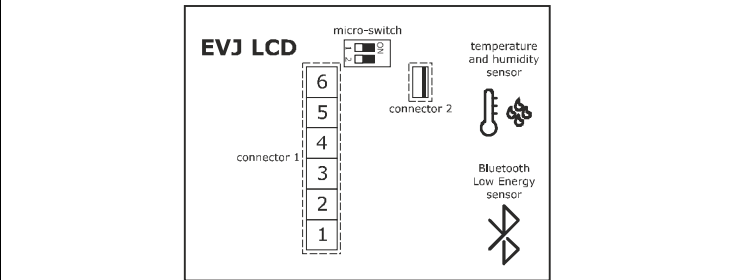
N.B.

- Make sure that the current supplied by the controller is within the limits stated in the **TECHNICAL SPECIFICATIONS** section
- The maximum permitted length for connection cables of the INTRABUS port is 10 m (32.8 ft).



2.2 Models for wall mounting

2.2.1 Connectors and parts



Connector 1

No.	DESCRIPTION
1	INTRABUS port reference (GND) or RS-485 signal B (-) (according to the model)
2	INTRABUS port data (IB) or RS-485 signal A (+) (according to the model)
3	device power supply (12 VAC/DC). If the device is fed by DC power, connect terminal minus
4	device power supply (12 VAC/DC). If the device is fed by DC power, connect terminal plus
5	A14 analog input (NTC)
6	A14 analog input reference (GND)

Connector 2: reserved EVCO.

Micro-switch: in models with RS-485 port, to insert the RS-485 port termination resistor (not present otherwise).

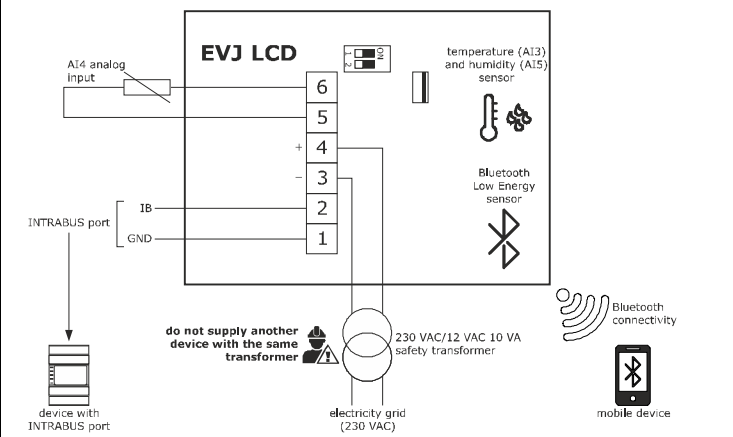
Temperature (AI3) and humidity (AI5) sensor: according to the model.

Bluetooth Low Energy sensor: according to the model.

2.2.2 Electrical connection with independent power supply

N.B.

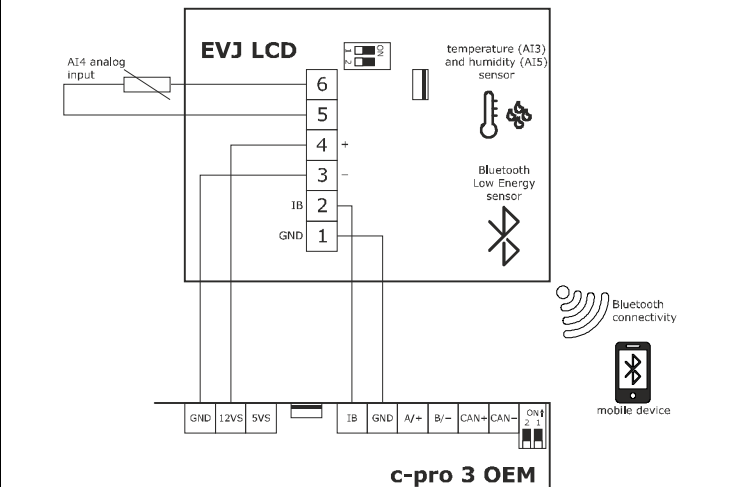
- Do not supply another device with the same transformer
- The maximum permitted length for connection cables of the INTRABUS port is 30 m (98.4 ft), 1,000 m (3,280 ft) in models with RS-485 with INTRABUS communication protocol.



2.2.3 Electrical connection with device powered by a controller (for example c-pro 3 OEM)

N.B.

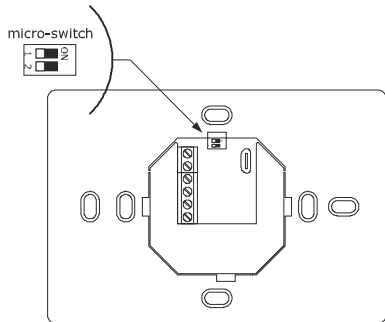
- Make sure that the current supplied by the controller is within the limits stated in the **TECHNICAL SPECIFICATIONS** section
- The maximum permitted length for connection cables of the INTRABUS port is 10 m (32.8 ft).



2.2.4 Insertion of the RS-485 port termination resistor

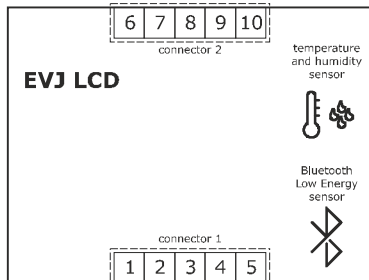
To insert the RS-485 port termination resistor, place micro-switch 2 in position ON. Micro-switch 1 is reserved EVCO.

The micro-switch is at the back of the device.



2.3 Models for wall mounting with back-slot for in-wall box

2.3.1 Connectors and parts



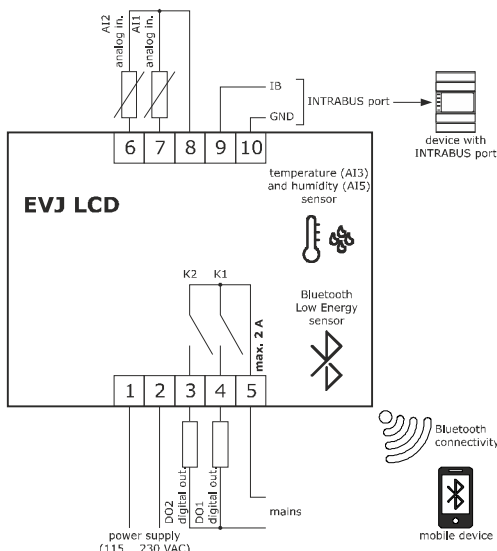
No.	DESCRIPTION
1	device power supply (115... 230 VAC)
2	device power supply (115... 230 VAC)
3	DO2 digital output normally open contact (1 A res. @ 250 VAC)
4	DO1 digital output normally open contact (1 A res. @ 250 VAC)
5	DO1 and DO2 digital outputs common contact (max. 2 A)

No.	DESCRIPTION
6	AI2 analog input (NTC)
7	AI1 analog input (NTC)
8	AI1 and AI2 analog inputs reference (GND)
9	INTRABUS port data (IB)
10	INTRABUS port reference (GND)

Temperature (AI3) and humidity (AI5) sensor: according to the model.

Bluetooth Low Energy sensor: according to the model.

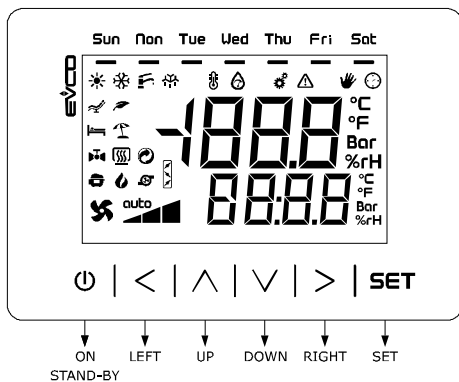
2.3.2 Electrical connection



PRECAUTIONS FOR ELECTRICAL CONNECTION

- If using an electrical or pneumatic screwdriver, adjust the tightening torque
- If the device has been moved from a cold to a warm place, the humidity may have caused condensation to form inside. Wait about an hour before switching on the power. Make sure that the supply voltage, electrical frequency and power are within the set limits. See the section **TECHNICAL SPECIFICATIONS**
- Disconnect the power supply before doing any type of maintenance
- Do not use the device as safety device
- For repairs and for further information, contact the EVCO sales network; possible returns without label data will not be accepted.

3 USER INTERFACE



3.1 Device configuration

N.B.	Turn off the power after changing the configuration.
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Accessing the procedure.

1.	SET	Touch the SET key for 7 s.
The display will show:		
Upper line	Mnu	
Lower line	InF	

Accessing the menu.

2.		Touch the UP or DOWN key to select a menu.
The display will show:		
Upper line	Mnu	
Lower line	menu name.	
3.	SET	Touch the SET key.
The display will show:		
Upper line	the parameter	
Lower line	the parameter value	

Setting configuration parameters of menu "PAR".

3.	SET	Touch the SET key.
The display will show:		
Upper line	PSU	
Lower line	0000	
4.	SET	Touch the SET key again.
The display will show:		
Upper line	PSU	
Lower line	a value flashing	
5.		Touch the UP or DOWN key to set *-019* .
6.	SET	Touch the SET key.
7.		Touch the UP or DOWN key to select a parameter.
The display will show:		
Upper line	the parameter	
Lower line	the parameter value	
8.	SET	Touch the SET key.
The display will show:		
Upper line	the parameter	
Lower line	the parameter value flashing	
9.		Touch the UP or DOWN key to set the value.
10.	SET	Touch the SET key.
Returning to the previous displays.		
11.		Touch the ON/STAND-BY key a few times.

4 CONFIGURATION PARAMETERS

N.	PAR.	DEF.	*InF* MENU (READ ONLY)	MIN... MAX.
1	Prn	-	project number	-
2	Pru	-	project version	-
3	Prr	-	project revision	-
4	FUu	-	firmware version	-
5	FUr	-	firmware revision	-
6	FUS	-	firmware subversion	-
7	HUu	-	hardware version	-
8	HUr	-	hardware revision	-
9	bKU	15	backlight intensity	0... 100 fixed value 30 in the models with incorporated temperature and humidity sensor
10	bKt	30	backlight timeout	0... 255 s fixed value 30 in the models with incorporated temperature and humidity sensor
11	bKM	time	backlight mode	off = off on = on (not used in the models with incorporated temperature and humidity sensor) time = with bKt
12	EU3	OFF	enable compatibility with Vled 3	On... OFF
13	nOd	4	*nEt > Itb* MENU (READ ONLY) INTRABUS node	1... 127 if EU3C = On, nOdE = 3
14	StA	-	INTRABUS status communication	OK... Err
15	nrH	-	number of received INTRABUS packages	0... 999
16	ntH	-	number of transmitted INTRABUS packages	0... 999
17	nEr	-	number of INTRABUS receipts in error	0... 999
18	bAu	-	INTRABUS baud rate	19200
19	Stb	1	INTRABUS bit stop number	0... 2
20	PtY	2	INTRABUS parity	0... 2
21	StA	-	*NET > BLE* MENU (READ ONLY; AVAILABLE IN THE MODELS WITH INCORPORATED TEMPERATURE AND HUMIDITY SENSOR)	On... OFF
22	nrH	-	number of BLE packages received	0... 999
23	ntH	-	number of BLE transmitted received	0... 999
24	nEr	-	number of intercepted BLE errors	0... 999
25	bAu	-	BLE baud rate	19200
26	Stb	1	BLE bit stop number	0... 2
27	PtY	2	BLE parity	0... 2
28	MEm	-	*dIA* MENU (READ ONLY) EEPROM memory status	OK... Err
29	PSU	-	power supply voltage status	OK... Err
30	PSU	-	*dEb* MENU power supply voltage value	MIN... MAX.
31	P1U	-	AI1 analog input reading	-
32	P2U	-	AI2 analog input reading	-
33	P3U	-	reserved	-
34	P4U	-	AI4 analog input reading	-
35	tEm	-	incorporated sensor temperature reading (AI3)	-
36	Hr	-	incorporated sensor humidity reading (AI5)	-
37	dO1	-	*nEt > unL* MENU DO1 digital output status	On... OFF
38	dO2	-	DO2 digital output status	On... OFF
39	BLE	-	*CrF* MENU (READ ONLY) Bluetooth availability	On... OFF
40	iPb	-	incorporated sensor	t rH = temperature and humidity none = no sensor
41	EhT	-	back-slot for flush mounting box	On... OFF

5 TECHNICAL SPECIFICATIONS

Purpose of the control device:	Function controller.
Construction of the control device:	Built-in electronic device.
Container:	White, self-extinguishing.
Category of heat and fire resistance:	D.
Measurements:	Models for panel mounting 111.4 x 76.4 x 25.0 mm (4 3/8 x 3 x 1 in)

Models for wall mounting	111.4 x 76.4 x 18.5 mm (4 3/8 x 3 x 3/4 in)
Models for wall mounting with back-slot for flush mounting box	111.4 x 76.4 x 51.5 mm (4 3/8 x 3 x 2 in).
Mounting methods for the control device:	According to the model, panel mounting (with elastic holding flaps), wall mounting (with bolts and fastening screws) or in the most common flush mounting box (with fastening screws).
Degree of protection provided by the covering:	IP30 (IP65 in case of panel mounting).
Connection method	Models for panel mounting: Removable screw terminal blocks for wires up to 1 mm ² Models for wall mounting with or without back-slot for in-wall box: Fixed screw terminal blocks for wires up to 1 mm ²
Maximum permitted length for connection cables:	
Power supply: 10 m (32.8 ft)	Analogue inputs: 10 m (32.8 ft)
Digital outputs: 10 m (32.8 ft)	INTRABUS port: 10 m (32.8 ft) if the device is powered by a controller, 30 m (98.4 ft) otherwise
RS-485 MODBUS port: 1,000 m (3,280 ft).	
Operating temperature:	From 0 to 40 °C (from 32 to 104 °F).
Storage temperature:	From -20 to 70 °C (from -4 to 158 °F).
Operating humidity:	Relative humidity without condensate from 5 to 95%.
Pollution status of the control device:	2.
Compliance:	
RoHS 2011/65/EC	WEEE 2012/19/EU
REACH (EC) Regulation no. 1907/2006	EMC 2014/30/UE RED 2014/53/UE.
Power supply:	Models for panel or wall mounting: 12 VAC (±15%), 50/60 Hz (±3 Hz), max. 2 VA not insulated or 12 VDC (±15%), max. 1 W not insulated (independent power supply or by a controller). Models for wall mounting with back-slot for flush mounting box: 115... 230 VAC (+10% -15%), 50/60 Hz (±3 Hz), max. 3 VA insulated.
Earthing methods for the control device:	None.
Rated impulse-withstand voltage:	Models for panel or wall mounting: 330 V Models for wall mounting with back-slot for flush mounting box: 2.5 KV.
Over-voltage category:	Models for panel or wall mounting: I Models for wall mounting with back-slot for flush mounting box: II.
Software class and structure: A.	
Analogue inputs:	Models for panel mounting: none Models for wall mounting: 1 for NTC probes Models for wall mounting with back-slot for flush mounting box: 2 for NTC probes.
NTC probes:	Measurement field: from -40 to 110 °C (from -58 to 230 °F) Resolution: 0.1 °C (1 °F).
Digital outputs:	Models for panel or wall mounting: none Models for wall mounting with back-slot for flush mounting box: 2 with electromechanical relay (K1 and K2 relay).
K1 relay:	SPST, 1 res. A @ 250 VAC
K2 relay:	SPST, 1 res. A @ 250 VAC.
Type 1 or Type 2 Actions:	Type 1.
Additional features of Type 1 or Type 2 actions:	C.
Displays:	Two rows and function icons LCD display.
Alarm buzzer:	Built-in.
Incorporated sensors:	
temperature and humidity (according to the model)	Bluetooth Low Energy (according to the model).
Working range incorporated temperature and humidity sensor:	
0... 40 °C (32... 104 °F)	10... 70 % of relative humidity.
Communications ports:	1 INTRABUS port or RS-485 port with INTRABUS communication protocol (according to the model).

According to European R&TTE Declaration of Conformity this device can be used in the following Countries: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Norway, Poland Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland, The Netherlands and The United Kingdom.

	N.B. The device must be disposed of according to local regulations governing the collection of electrical and electronic waste.
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