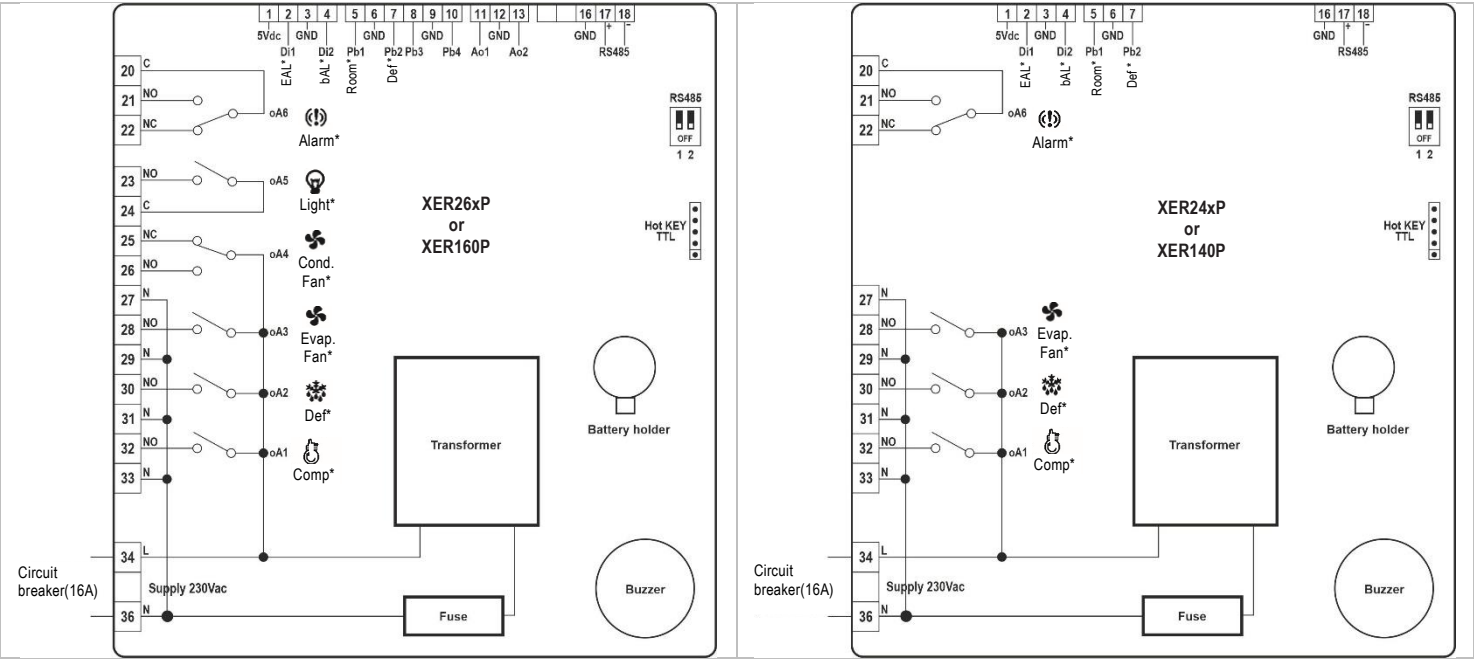


XER-P

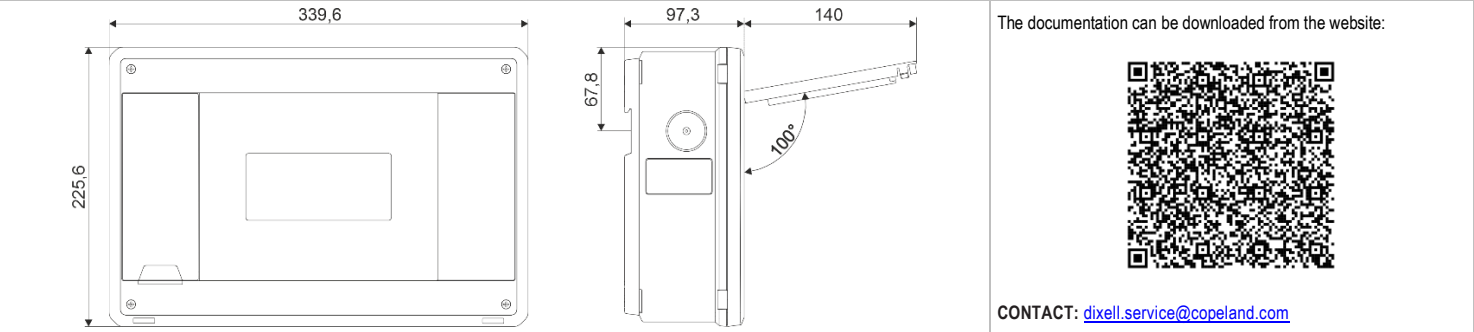
1. ELECTRICAL CONNECTIONS



*The I/O's legend and drawings refer to **factory default configuration**; however, all relays, digital inputs and probes are configurable as preferred by the user.

PIN	Label	Description	PIN	Label	Description
1	5Vdc	+5Vdc output, only for X-MOD motion sensor power supply	20	COM-oA6	Digital output 6: common
2	D.i.1	Power supply for 4-20mA sensor; EAL: External warning alarm	21	NO-oA6	Digital output 6: normally open
3	GND	Ground for analogue and digital inputs	22	NC-oA6	Digital output 6: normally closed
4	D.i.2	Digital input 2; bAL: External lock alarm	23	NO-oA5	Digital output 5: normally open
5	A.i.1	Analogue input 1 (temperature only)	24	COM	Digital output 5: common
6	GND	Ground for analogue and digital inputs	25	NC-oA4	Digital output 4: normally closed
7	A.i.2	Analogue input 2 (temperature only)	26	NO-oA4	Digital output 4: normally open
8	A.i.3	Analogue input 3 (temperature only)	27	N	High voltage power supply: Neutral
9	GND	Ground for analogue and digital inputs	28	NO-oA3	Digital output 3: normally open
10	A.i.4	Analogue input 4 (temperature only)	29	N	High voltage power supply: Neutral
11	A.out1	Analogue output 1, PWM	30	NO-oA2	Digital output 2: normally open
12	GND	Ground for analogue and digital inputs	31	N	High voltage power supply: Neutral
13	A.out2	Analogue output 2, 0-10Vdc or 4-20mA	32	NO-oA1	Digital output 1: normally open
14		Not Used	33	N	High voltage power supply: Neutral
15		Not Used	34	L	High voltage power supply: Line
16	GND	Ground for RS485 serial port	35		Not Used
17	RS485 (+)	Positive terminal for RS485 (+) serial port	36	N	High voltage power supply: Neutral
18	RS485 (-)	Negative terminal for RS485 (-) serial port			

2. DIMENSIONS



3. SAFETY INFO

- This manual is part of the product and should be kept near the instrument for easy and quick reference.
- The instrument shall not be used for purposes different from those described hereunder. It cannot be used as a safety device.
- Copeland Controls S.r.l. reserves the right to change the composition of its products, even without notice, ensuring the same and unchanged functionality.
- In case of failure or faulty operation contact the local distributor or Copeland Controls S.r.l.'s service team with a detailed description of the fault.
- Strictly follow the safety instructions before opening the box.
- Check the application limits and the correct power supply voltage before proceeding.
- Do not expose to water or moisture: use the controller only within the operating limits avoiding sudden temperature changes with high atmospheric humidity to avoid condensation
- Warning: disconnect the power supply and all other electrical connections before any kind of maintenance.
- Observe the maximum current value which can be applied to each relay (see Technical Data).
- Ensure that the wires for probes, loads and the power supply are separated and far enough from each other, without crossing or intertwining.

4. USER INTERFACE

SCREEN	APPEARANCE	SCREEN	APPEARANCE
Home		Set Point Temperature	
Programming Mode		ALL Parameter Menu	
GrP Parameter Menu		X9	
Function Menu		Info	
Upload		Download	

SCREEN NAME	DESCRIPTION
Home	This screen shows temperature value, measurement unit and active alarms only. This is the first screen after power on or after exit from other status.
Set Point Temperature	This screen enables the modification of the Temperature Set Point value.
Programming Mode	This screen enables the browsing mode for parameters: ALL: all parameters; GrP: logically grouped (as Wizmate).
ALL Parameter Menu	These screens enable the modification of all parameter values.
GrP Parameter Menu	These screens enable the modification of parameter values selecting one of the available logical groups (as Wizmate).
X9	This screen is for creating the parameter label by swiping-up every single part of the label itself (first, second and third char).
Info	This screen shows I/O values and status (probes, digital inputs, compressor, ventilators, etc.).
Function Menu	This screen enables the management of special function (direct function ON and OFF).
Upload	To copy parameters from the controller memory to external HOTKEY.
Download	To copy parameters from the external HOTKEY to controller memory.

5. USER INTERACTION

HOME NAVIGATION	PROG MENU	MODIFY SET POINT TEMP. FROM HOME SCREEN	MODIFY SET POINT TEMP. FROM "SET" MENU	ALL PARAMETER MENU
UP or DOWN	SET	SET	UP or DOWN	SET
UP or DOWN	UP or DOWN		SET	UP or DOWN
UP or DOWN	UP or DOWN			SET
UP or DOWN	UP or DOWN			UP or DOWN

NOTE: Light/Back button can be used to exit from the current screen/stage/menu and come back to the HOME screen.

ICON	STANDARD	ICON	STANDARD
	LIGHT or BACK		SETPOINT
	DEFROST		UP
	DOWN		OFF

6 MOUNTING ON A DIN RAIL



XER can be mounted on DIN rail and fixed using 1 screw (type: D4.5mm x L55mm)

7 MOUNTING ON A WALL



XER can be mounted on a wall and fixed using up to 4 screws (type: D4.5mm x L55mm)

8 MODEL DEFINITION

XER1x0P: models without lateral door for electromechanical devices.
XER2xxP: models with lateral door for electromechanical devices. They can use Circuit Breaker.

	XER140P	XER160P	XER240P	XER260P
oA1	Yes	Yes	Yes	Yes
oA2	Yes	Yes	Yes	Yes
oA3	Yes	Yes	Yes	Yes
oA4	No	Yes	No	Yes
oA5	No	Yes	No	Yes
oA6	Yes	Yes	Yes	Yes
Circuit Breaker	No	No	No	No
	XER241P	XER261P		
oA1	Yes	Yes		
oA2	Yes	Yes		
oA3	Yes	Yes		
oA4	No	Yes		
oA5	No	Yes		
oA6	Yes	Yes		
Circuit Breaker	Yes	Yes		

9 TECHNICAL SPECIFICATIONS

FEATURES	DESCRIPTION
Housing	Self-extinguishing PC+ABS
Dimensions	Front 340x226 mm; case depth 98 mm
Mounting device	DIN rail or wall mount
Degree of Protection	EN 60529IP54 (front panel only)
Power Supply	230VAC (ENEC) or 100 to 240VAC ±10%, 50/60Hz
Overvoltage Category	II
Rated Power	230VAC: 13VA (ENEC) 100-240VAC: 13VA
Rated Impulse Voltage	2500V
Display	Red display, LED type, 3 digits with decimal point and multi-function icons
Buzzer	Internal, always present
Software Class	A
Terminal blocks / Terminal Connections	Low voltage signals: Screw terminal block, wire section between 0,5 and 2,5 mm2 Max tightening force: 0.4 N/m High Voltage signals: Screw terminal block, wire section between 1,5 and 4 mm2 Max tightening force: 0.5 N/m
Data Storing	Real Time Clock: data maintenance up to 6 months with removable non-rechargeable lithium battery. Other parameters: internal flash.

FEATURES	DESCRIPTION		
Type of Action	1.B		
Pollution Degree	2, non-condensing humidity		
Ambient Operating Temperature and Humidity	Models without circuit breaker:	0T60°C / 32T140°F; 20-85 rH% (non-condensing humidity)	
	Models with circuit breaker:	0T40°C/32T104°F; 20-85 rH% (non-condensing humidity)	
Shipping and storage temperature	-25T60°C; 20-85 rH% (non-condensing humidity)		
Resistance to Heat	UL 94 V-0		
Measurement range	NTC: -40T110°C, resolution 0.1°C or 1°C (selectable) PT1000: -100T150°C, resolution 0.1°C or 1°C (selectable)		
Accuracy	NTC, PT1000: ±1% compared to the full scale If NTC probe is used: Class 0.5; less than 1% in the range [-25°C to +10°C].		
Inputs	Up to 4 NTC or PT1000 (configurable)		
	Up to 2 voltage free contacts; digital inputs connected to SELV Limited energy		
Relay Outputs without circuit breaker (XER1x0) IEC	oA1	20(8)A, 250Vac	
	oA2	20(8)A, 250Vac	
	oA3	10(4)A,250Vac	
	oA4*	10(4)A,250Vac	
	oA5*	8(3), 250Vac	
	oA6	8(3), 250Vac	
Relay Outputs with circuit breaker (XER2x1) IEC * NOT for XER140P and XER24xP		Ambient temperature: 30°C	Ambient temperature 40°C
	oA1	16(8)A,250Vac	14(8)A,250Vac
	oA2	16(8)A,250Vac	14(8)A,250Vac
	oA3	10(4)A,250Vac	10(4)A,250Vac
	oA4*	10(4)A,250Vac	10(4)A,250Vac
	oA5*	8(3)A,250Vac	8(3)A,250Vac
	oA6	8(3),250Vac	8(3),250Vac
Optional Relays (*)		Nominal	Type
	oA3	SPST 16A, 250VAC	Inrush type, same currents as the above configurations (with or without circuit breaker)
	oA4	SPST 16A, 250VAC	Inrush type, same currents as the above configurations (with or without circuit breaker)
Maximum ampacity on terminal 34	With Circuit Breaker: 16A MAX at 30°C ambient temperature or 14A MAX at 40°C ambient temperature (oA1+oA2+oA3+oA4+oA5+oA6 or oA1+oA2+oA3+oA4) Without Circuit Breaker: 20A MAX (oA1+oA2+oA3+oA4)		
Analogue Outputs	1Ao	Frequency output: Supply max voltage=12Vdc; Max supply current=2mA; duty cycle 50%; 0 to 166 Hz Accuracy: ±1Hz compared to the full scale PWM: Supply max voltage=12Vdc; Max supply current=2mA; 0 to 4kHz	
	2Ao	4-20mA 0-10Vdc; Max supply current = 5mA Accuracy: ±1% compared to the full scale	
I/O port	HOT-KEY: MAX voltage allowed is 5 VDC. DO NOT CONNECT ANY EXTERNAL POWER SUPPLY.		
Purpose of control	Operating control		
Construction of control	Incorporated control, intended to be used in Class I or Class II equipment		
Approvals	R290/R600a: relays tested according to IEC EN60079:0 and IEC EN60079:15 IEC 60730-1; IEC 60730-2-9		
Circuit Breaker (**)	Number of poles: 1+N; Rated Current: 16 A; C characteristic; Id =300mA, Icn= 4.5kA, Standard: IEC/EN 60898-1, IEC/EN 60947-2		

(*) See official How-To-Order for available inrush models.
(**) (***): Circuit Breaker is an optional component, selectable through official How-To-Order. Any third-party Circuit Breaker with overcurrent protection used (for replacement or for installing operations outside Copeland Controls S.r.l.) **MUST HAVE** the same or better characteristics.