

Important: Retain these instructions

These instructions shall be used by trained service personnel only. If the equipment is used in a manner not specified by these instructions, the protection provided by the equipment may be impaired.

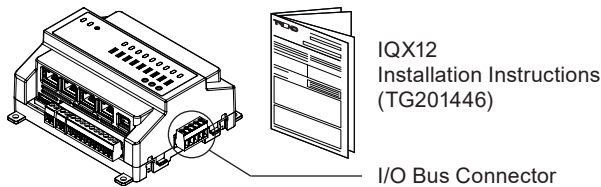


<https://partners.trendcontrols.com>

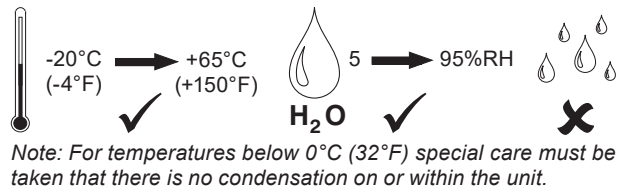
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1 BOX CONTENTS



2 STORING



3 INSTALLATION

Labels used on IQX12

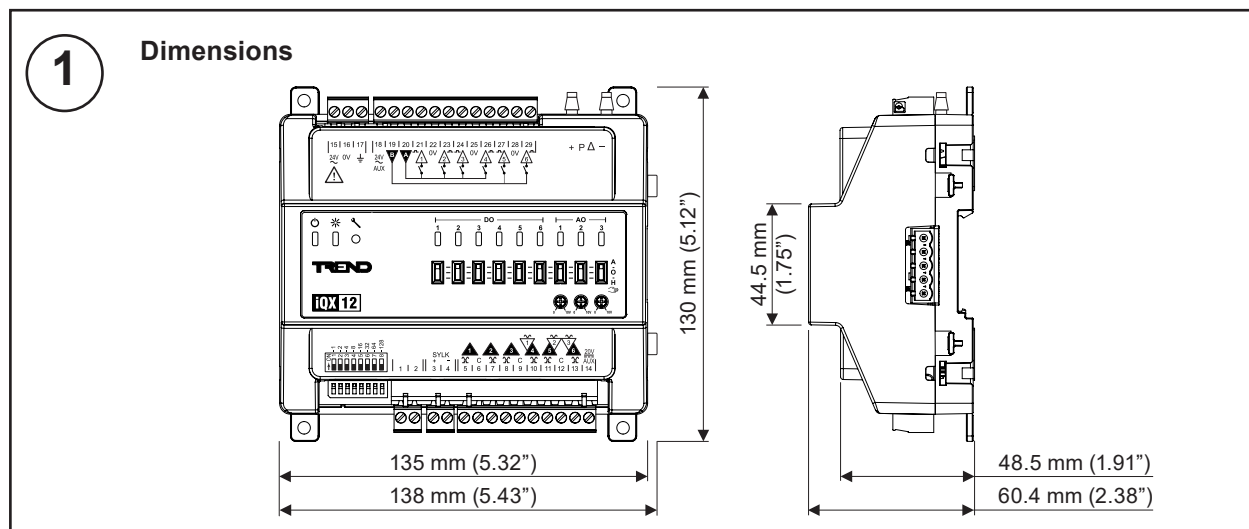
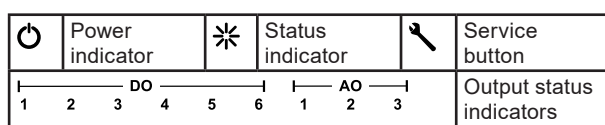
	Caution, consult documentation	SYLK +	Sylk bus connector
	24 Vac input power connector	+ P Δ -	Differential pressure sensor
	24 Vac AUX output connector	20V AUX	20 Vdc AUX output connector
	Supply inputs for digital outputs	0V	Digital output connector (DO)
	Universal input connector (UI)	0 10V	Analogue output override level
	Universal input/output connector (UI/AO)	A O H	Hand, off, auto switch
	Address switch (future use only)		

It is recommended that the installation should comply with the local electrical safety installation practices (e.g. HSE Memorandum of Guidance on Electricity at Work Regulations 1989, USA National Electric Code).

Any connected devices must be insulated from mains by reinforced insulation.

WARNING Removal of cover exposes dangerous voltages.

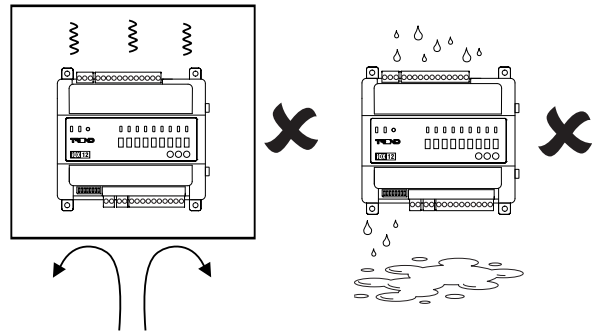
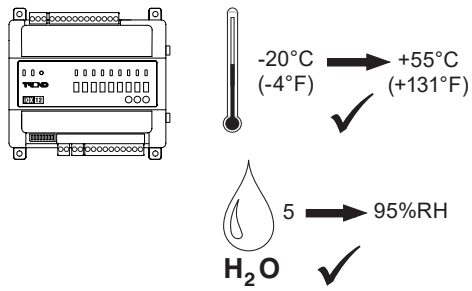
WARNING To reduce the risk of electrical shock or fire do not interconnect the output of different Class 2 circuits.



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3 INSTALLATION (continued)

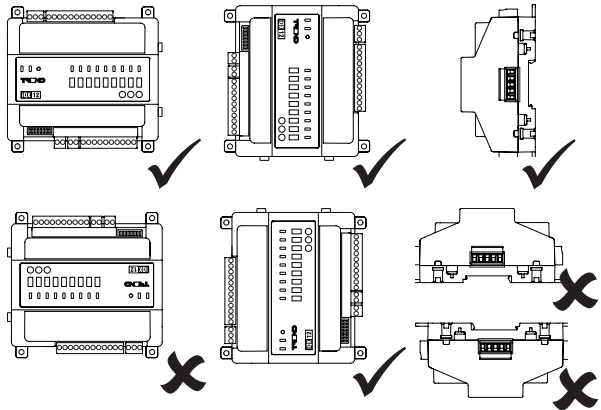
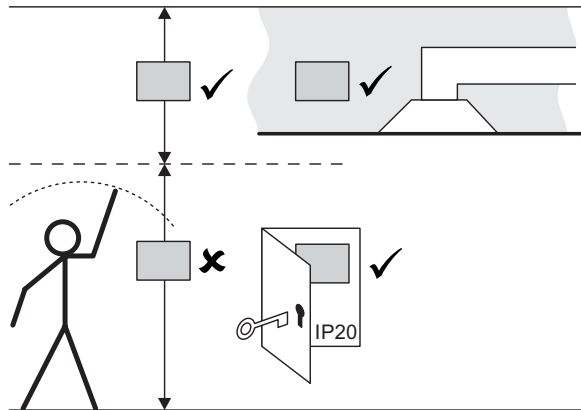
2 Mounting Requirements



Note: For temperatures below 0°C (32°F) special care must be taken that there is no condensation on or within the unit.

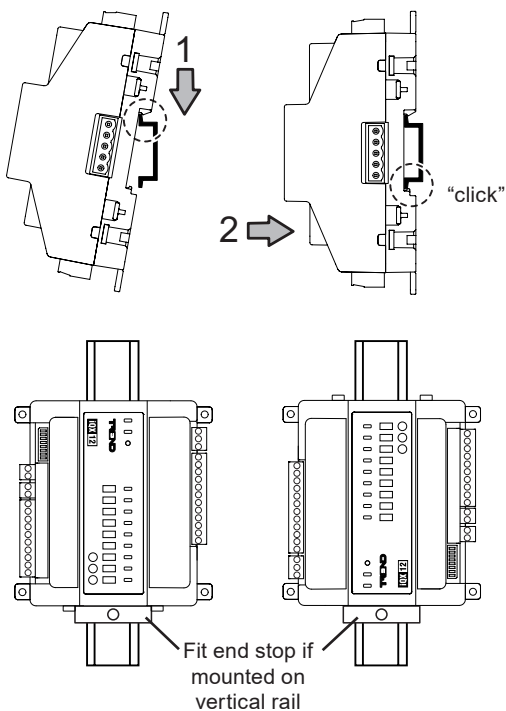
Note: If using the Differential Pressure Sensor (IQX12P only) a reduced ambient temperature range applies (see step 9).

Caution: Do not mount in areas where acid fumes or other deteriorating vapours can attack the metal parts of the controller, or in areas where escaping gas or other explosive vapours are present.

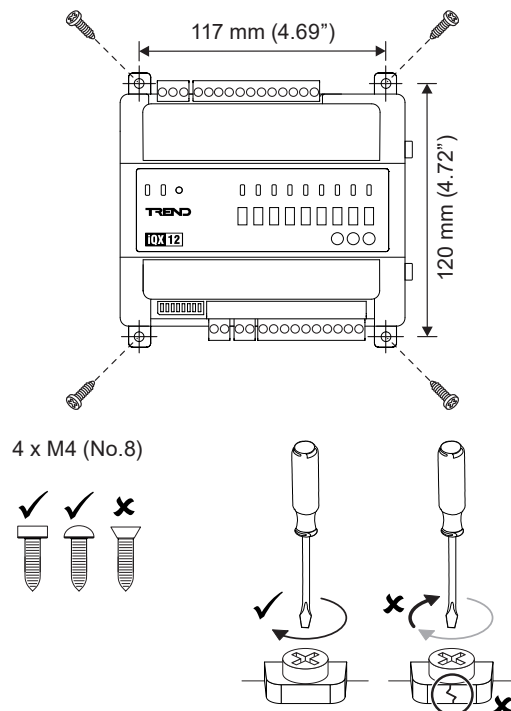


3 Mount Unit


Either: Clip on to TS35 DIN Rail

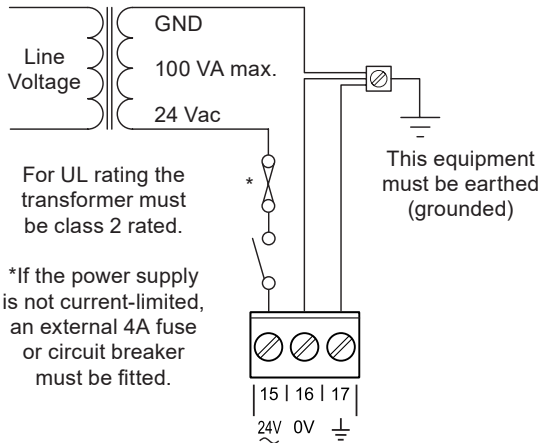
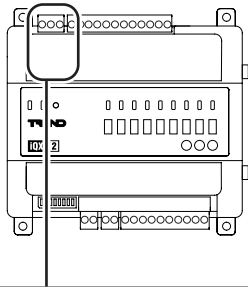


Or: Secure using screws and fixings



3 INSTALLATION (continued)

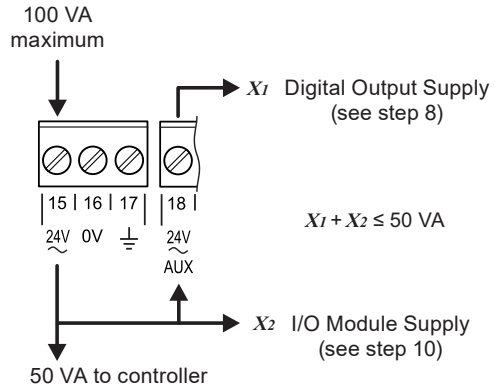
4 Connect Power 



Important: Where multiple devices are powered from a single transformer, the same side of the transformer secondary must be connected to the same power input terminal in each device.



Supply voltage: 24 Vac (20 to 30 Vac) 50/60 Hz
 Supply power: 50VA (controller only)
 100VA (controller and loads).

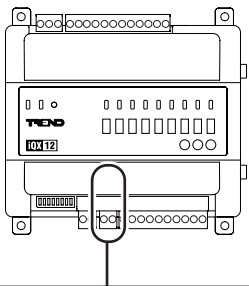


The supply must include a suitably rated switch in close proximity and be clearly marked as the disconnecting device for the unit. Do not position the equipment so that the disconnecting device is difficult to operate.

Terminal size: 2.0 to 1.0 mm² (14 to 18 AWG).
 Terminal screw torque: 0.4 to 0.5 Nm (3.5 to 4.4 lbf-in).
 Recommended cable: 2.0 mm² (14 AWG).

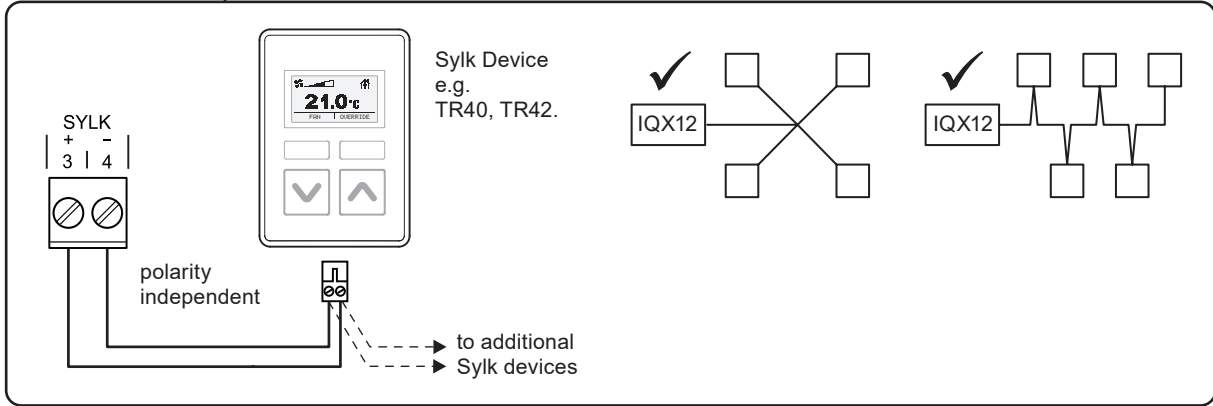
Power supply cable must have maximum operating temperature of 80°C or greater. For UL rating the input power connections must be made using 18 AWG or larger wire rated at least 90°C (194°F).

5 Connect Sylk™ Devices (if required)



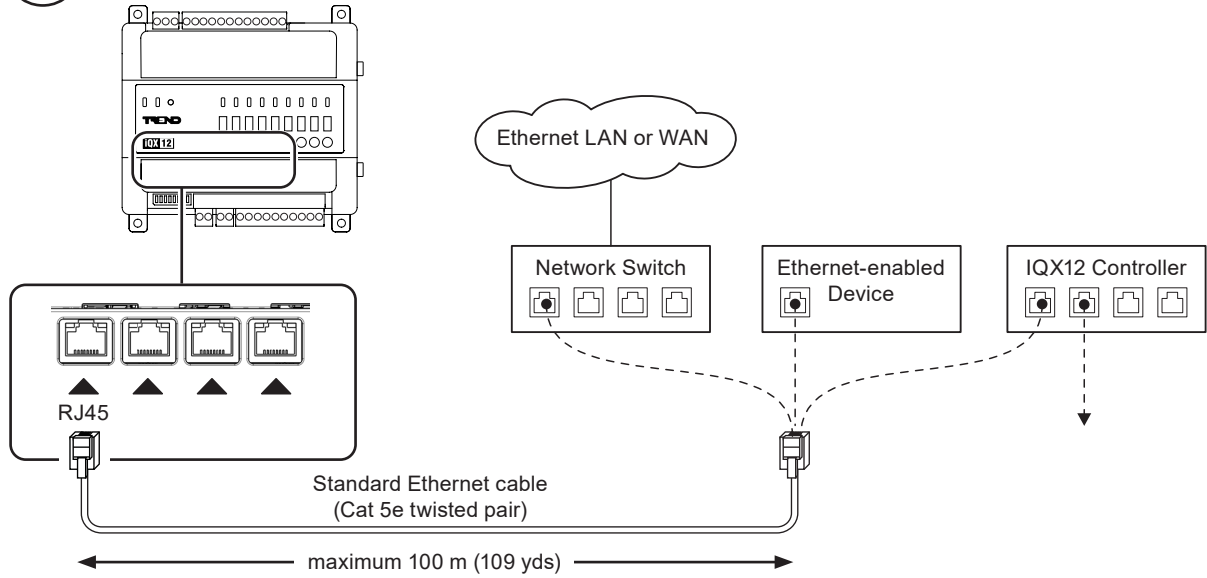
Terminal size: 2.0 to 1.0 mm² (14 to 18 AWG).
 Terminal screw torque: 0.4 to 0.5 Nm (3.5 to 4.4 lbf-in).
 Cable type: Unscreened twisted pair.
 Maximum cable length: 60 m (200 ft) in total, used to connect all Sylk bus devices.

Number of Devices: Up to 7 (subject to power loading - refer to device documentation).



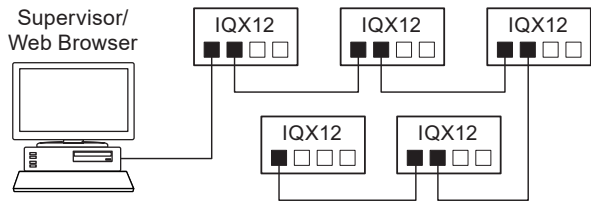
3 INSTALLATION (continued)

6 Connect Ethernet

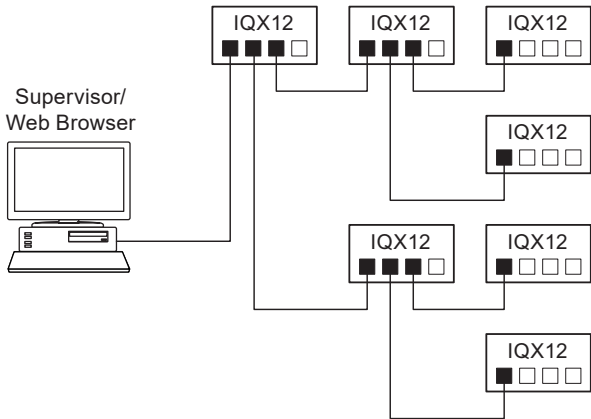


IQX12 Controller Network Examples

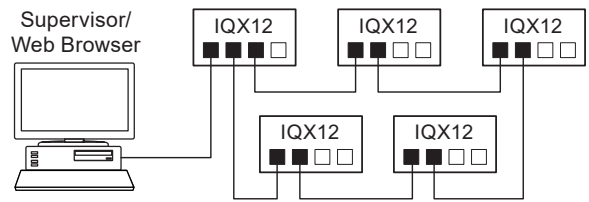
Daisy Chain Topology



Tree / Star Topology



RSTP Ring Topology (maximum 40 controllers)

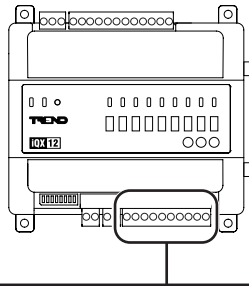


Important: DO NOT 'close' the ring until RSTP has been configured on ALL devices in the ring.



3 INSTALLATION (continued)

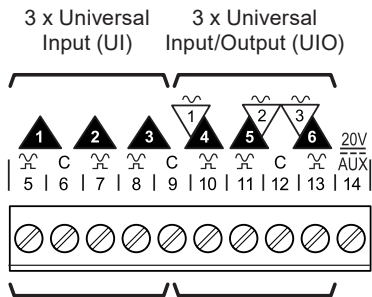
7 Connect Universal Inputs / Outputs (if required)



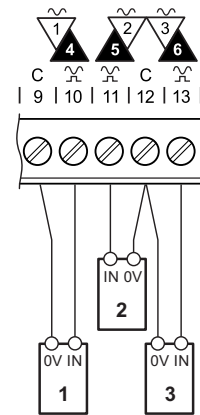
Terminal size: 2.0 to 1.0 mm² (14 to 18 AWG).
Terminal screw torque: 0.4 to 0.5 Nm (3.5 to 4.4 lbf-in).

Caution: Do not connect 'C' (0V) terminals to earth (ground).

I/O signal types are defined in controller configuration



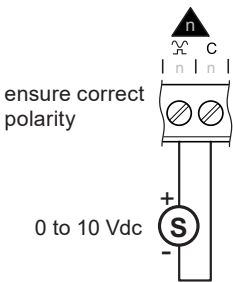
Output Connection Example



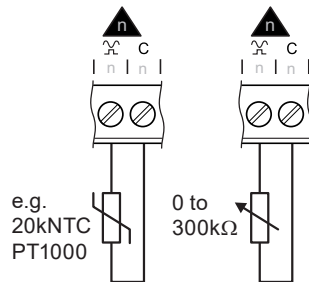
Output Type	Load
0 to 10 Vdc, 10 mA max.	≥1kΩ
4 to 20 mA	≤550Ω

Input Connection Examples

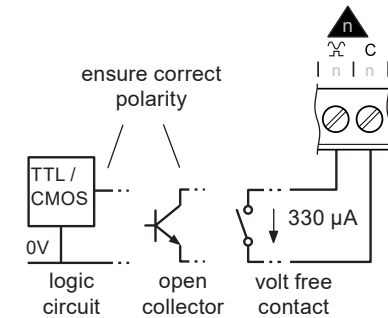
Voltage input



Thermistor / Resistive input

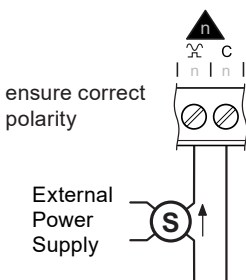


Volt-free / Digital input

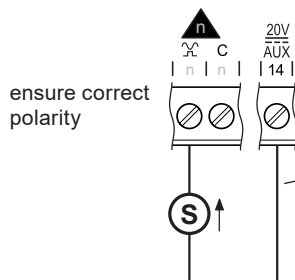


Current input

Externally powered



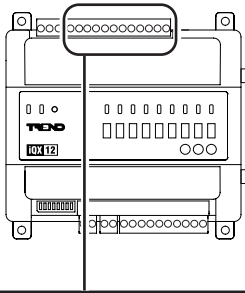
Loop powered (using 20 Vdc AUX output supply, 100mA maximum)



Common C terminal is linked internally to AUX supply common - no additional connection is required

3 INSTALLATION (continued)

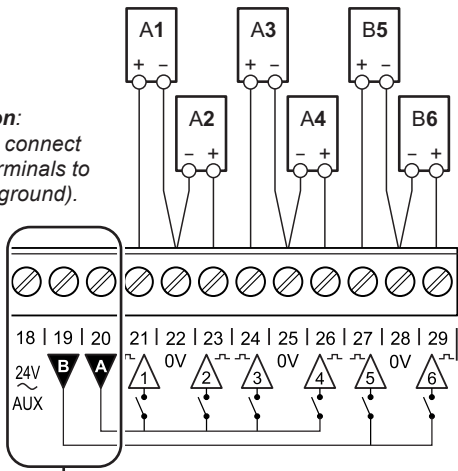
8 Connect Digital Outputs (if required)



Terminal size: 2.0 to 1.0 mm² (14 to 18 AWG).
 Terminal screw torque: 0.4 to 0.5 Nm (3.5 to 4.4 lbf-in).
 Output Type Solid-State Relay
 Current per Channel 1.5A* continuous;
 3.5A inrush for 100 ms.
 * subject to 100VA limit via terminal B.
 Voltage Range: As supply source (see below).

Connect Output Devices

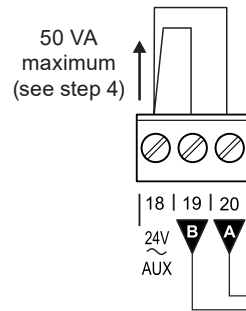
Caution:
 Do not connect '0V' terminals to earth (ground).



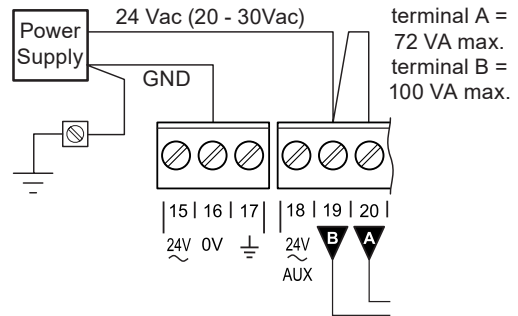
Output Signal Options:
 Binary (on/off);
 PWM (pulse width modulation)

Connect Output Power Supply

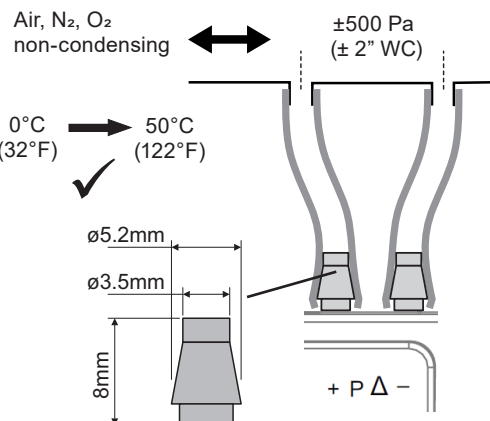
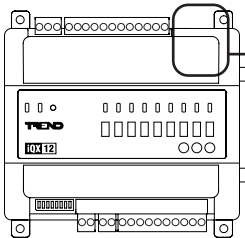
Either: from AUX output



Or: from an additional external source(s)



9 Connect Differential Pressure Sensor (IQX12P only, if required)



3 **INSTALLATION** (continued)

10

Install and Connect I/O Expansion Modules (if required)



11

Configure the IQX12 Controller, I/O Modules & Sylk Bus Devices



4 FIELD MAINTENANCE

The IQX12 requires no routine maintenance.



WARNING: Contains no serviceable parts. Do not attempt to open the unit. Failure to comply may cause damage to the unit.

5 DISPOSAL



WEEE Directive:

At the end of their useful life the packaging and product should be disposed of by a suitable recycling centre.

Do not dispose of with normal household waste.
Do not burn.

6 CHINA HAZARDOUS SUBSTANCE TABLE

部件名称 Component Name	有害物质 Hazardous Substances					
	铅 (Pb) Lead (Pb)	汞 (Hg) Mercury (Hg)	镉 (Cd) Cadmium (Cd)	六价铬 (Cr6+) Chromium VI Compounds (Cr6+)	多溴联苯 (PBB) Polybrominated Biphenyls (PBB)	多溴二苯醚 (PBDE) Polybrominated Diphenyl Ethers (PBDE)
接线端子 Terminal Block	X	○	○	○	○	○
导轨 Bus Bar	X	○	○	○	○	○
螺丝 Screws	X	○	○	○	○	○
印刷线路板 PCB	X	○	○	○	○	○
本表格依据 SJ/T 11364 的规定编制。 This table is prepared in accordance with the provisions of SJ/T 11364.						
○ 表示该有害物质在该部件所有均质材料中的含量均在 GB/T 26572 规定的限量要求以下。 Indicates that said hazardous substance contained in all of the homogeneous materials for this part is below the limit requirement of GB/T 26572.						
X 表示该有害物质至少在该部件的某一均质材料中的含量超出 GB/T 26572 规定的限量要求。 Indicates that said hazardous substance contained in all of the homogeneous materials for this part is above the limit requirement of GB/T 26572.						
未列入表内的其他部件, 皆不含任何超出限量要求的限制使用物质。 All other components, not listed in the table, do not contain restricted substances above the threshold level						

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