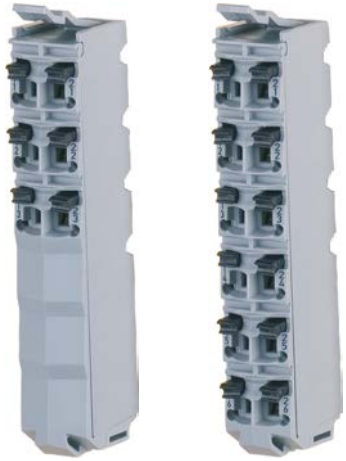
X20TB06/X20TB12

1 General information

The X20 24 VDC modules are wired using the X20TB06 and X20TB12 terminal blocks.

- Tool-free wiring with push-in technology
- Simple wire release using lever
- Ability to label each terminal
- Plain text labeling also possible
- Test access for standard probes
- Can be customer-coded

2 Order data



X20TB06 X20TB12

Model number	Short description
	Terminal blocks
X20TB06	X20 terminal block, 6-pin, 24 VDC keyed
X20TB12	X20 terminal block, 12-pin, 24 VDC keyed

Table 1: X20TB06, X20TB12 - Order data

3 Technical data

Model number	X20TB06	X20TB12
General information		
Certifications		
CE	Yes	
UL	cULus E115267 Industrial control equipment	
ATEX	Zone 2, II 3G Ex nA nC IIA T5 Gc IP20, Ta (see user's manual) FTZÚ 09 ATEX 0083X	
DNV GL	Temperature: **B** (0 - 55°C) Humidity: **B** (up to 100%) Vibration: **B** (4 g) EMC: **B** (Bridge and open deck)	
LR	ENV1	
GOST-R	Yes	
Terminal block		
Number of pins	6	12
Type of terminal block	Push-in terminal	
Push-in force per contact	Typ. 10 N	
Cable type	Only copper wires (no aluminum wires!)	
Wire stripping length	7 to 9 mm	
Connection cross section		
Solid wires	0.08 to 2.50 mm² / 28 to 14 AWG	
Fine strand wires	0.25 to 2.50 mm² / 24 to 14 AWG	
With wire end sleeves	0.25 to 1.50 mm² / 24 to 16 AWG	
With double wire end sleeves	Up to 2x 0.75 mm²	
Distance between contacts		
Left - Right	4.2 mm	
Above - Below	10.96 mm	
Electrical characteristics		
Nominal voltage	240 VAC	
Max. voltage	300 VAC	
Nominal current [1)]	10 A / contact	
Contact resistance	≤5 mΩ	
Environmental conditions [2)]		
Temperature		
Operation	Corresponds to the X20 module used	
Relative humidity		
Operation	Corresponds to the X20 module used	

Table 2: X20TB06, X20TB12 - Technical data

1) Take the respective limit data for the I/O modules into consideration!
2) Identical for operation, storage and transport.

Warning!

It is possible to come into contact with parts that carry voltage when the clamping block is disconnected. For this reason, working on a disconnected clamping block is not permitted at voltages of 50 V or higher.

4 Wiring

In order to achieve a secure connection in the terminal blocks, wires must be stripped accordingly.

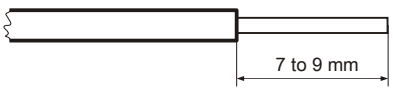


Figure 1: Wire stripping for a secure connection

Information:

The wire stripping length must not be more or less than 7 to 9 mm.

5 Contact holding force

To ensure that cables maintain a secure contact with the terminal block, they must not be under too much stress. If the holding force is exceeded, the cable will come loose from the terminal block and cause a malfunction.

	Fine strand wires			Solid wires				With wire end sleeves	
Cables in mm²	0.25	1.5	2.5	0.08	0.25	1.5	2.5	0.25	1.5
Standard spec. (min. value in Newton)	12.5	40	50	4	12.5	40	50	12.5	40

Information:

Fine strand wires must be twisted to provide sufficient holding force.

Use of wire end sleeves

In order to achieve an optimal cable retention force, the following points must be observed:

- Square crimping with the roughest possible surface should be carried out.
- The end of the wire end sleeve should not be cut in order to avoid a reduction of the cross section.
- No wires should protrude at the end of the sleeve.
- The wire end sleeve must be inserted completely to the end.
- The length of the wire end sleeve corresponds to the wire stripping length.

6 Access for test probes

Each contact is equipped with an additional opening for using a test probe.