

X20(c)PS8002

1 General information

The supply module is used to supply X20 stand-alone devices. These include e.g. the X20HB8884 POWERLINK compact link selector and the X20HB8880 stand alone hub.

- Supply for X20 stand-alone devices
- No electrical isolation between the I/O supply and the device power supply

1.1 Coated modules

Coated modules are X20 modules with a protective coating for the electronics component. This coating protects X20c modules from condensation and corrosive gases.

The modules' electronics are fully compatible with the corresponding X20 modules.

For simplification purposes, only images and module IDs of uncoated modules are used in this data sheet.

The coating has been certified according to the following standards:

- Condensation: BMW GS 95011-4, 2x 1 cycle
- Corrosive gas: EN 60068-2-60, method 4, exposure 21 days



1.1.1 Starting temperature

The starting temperature describes the minimum permissible ambient temperature in a voltage-free state at the time the coated module is switched on. This is permitted to be as low as -40°C. During operation, the conditions as specified in the technical data continue to apply.

Information:

It is important to absolutely ensure that there is no forced cooling by air currents in the closed control cabinet, e.g. due to the use of a fan or ventilation slots.

1.2 Other applicable documents

For additional and supplementary information, see the following documents.

Other applicable documents

Document name	Title
MAX20	X20 system user's manual
MAEMV	Installation / EMC guide

Additional documentation

Document name	Title
MAREDSYS	Redundancy for control systems

2 Order data


Order number	Short description	Figure
	System modules for the X20 hub system	
X20PS8002	X20 power supply module for standalone hub and compact link selector	
X20cPS8002	X20 power supply module, coated, for standalone hub and compact link selector	
	Required accessories	
	Terminal blocks	
X20TB12	X20 terminal block, 12-pin, 24 VDC keyed	

Table 1: X20PS8002, X20cPS8002 - Order data

3 Technical description


3.1 Technical data

Order number	X20PS8002	X20cPS8002
Short description		
Power supply module	24 VDC power supply module for X20 standalone devices	
General information		
Status indicators	Operating state, module status	
Diagnostics		
Module run/error	Yes, using LED status indicator	
Overload	Yes, using LED status indicator	
Power consumption ¹⁾	1.34 W	
Certifications		
CE	Yes	
ATEX	Zone 2, II 3G Ex nA nC IIA T5 Gc IP20, Ta (see X20 user's manual) FTZÜ 09 ATEX 0083X	
UL	cULus E115267 Industrial control equipment	
HazLoc	cCSAus 244665 Process control equipment for hazardous locations Class I, Division 2, Groups ABCD, T5	
DNV	Temperature: B (0 - 55°C) Humidity: B (up to 100%) Vibration: B (4 g) EMC: B (bridge and open deck)	
LR	ENV1	
KR	Yes	
ABS	Yes	
EAC	Yes	
KC	Yes	-
Input power supply		
Input voltage	24 VDC -15% / +20%	
Input current	Max. 0.7 A	
Fuse	Integrated, cannot be replaced	
Reverse polarity protection	Yes	
Output power supply		
Overload characteristics	Short-circuit proof, temporary overload	
Nominal output power		
Horizontal mounting orientation	7 W at 45°C and 5 W at 55°C	
Vertical mounting orientation	7 W at 40°C and 5 W at 50°C	
Electrical properties		
Electrical isolation	I/O power supply not isolated from device power supply	
Operating conditions		
Mounting orientation		
Horizontal	Yes	
Vertical	Yes	
Installation elevation above sea level		
0 to 2000 m	No limitation	
>2000 m	Reduction of ambient temperature by 0.5°C per 100 m	
Degree of protection per EN 60529	IP20	
Ambient conditions		
Temperature		
Operation		
Horizontal mounting orientation	-25 to 60°C	
Vertical mounting orientation	-25 to 50°C	
Derating	See section "Derating".	
Starting temperature	-	Yes, -40°C
Storage	-40 to 85°C	
Transport	-40 to 85°C	
Relative humidity		
Operation	5 to 95%, non-condensing	Up to 100%, condensing
Storage	5 to 95%, non-condensing	
Transport	5 to 95%, non-condensing	
Mechanical properties		
Note	Order 1x terminal block X20TB12 separately.	
Pitch	12.5 ^{+0.2} mm	

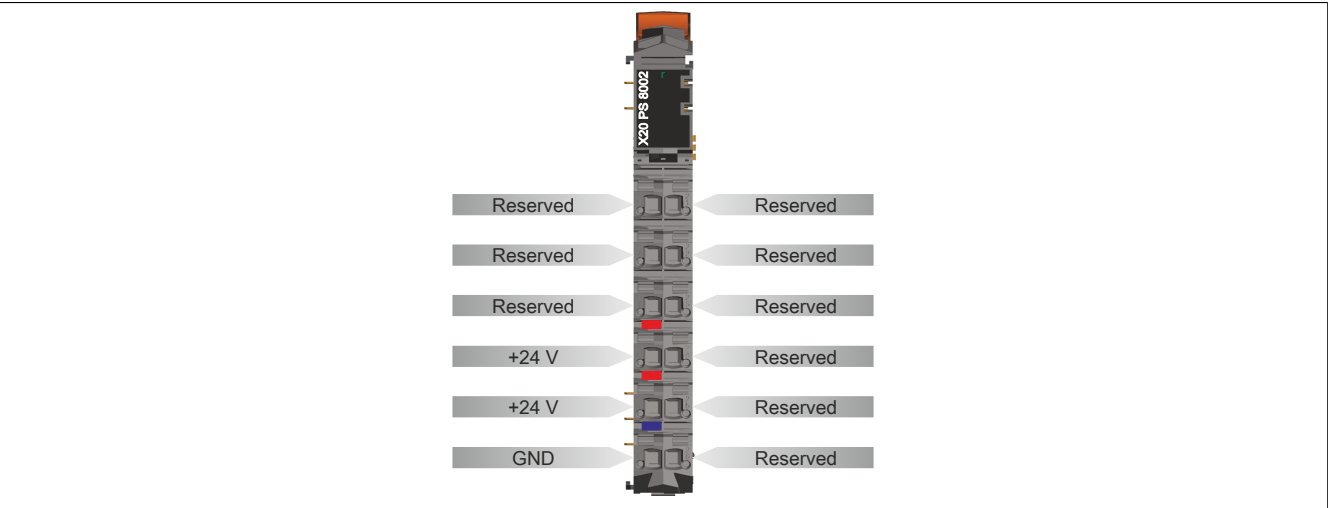
Table 2: X20PS8002, X20cPS8002 - Technical data

1) The specified values are maximum values. For examples of the exact calculation, see section "Mechanical and electrical configuration" in the X20 system user's manual.

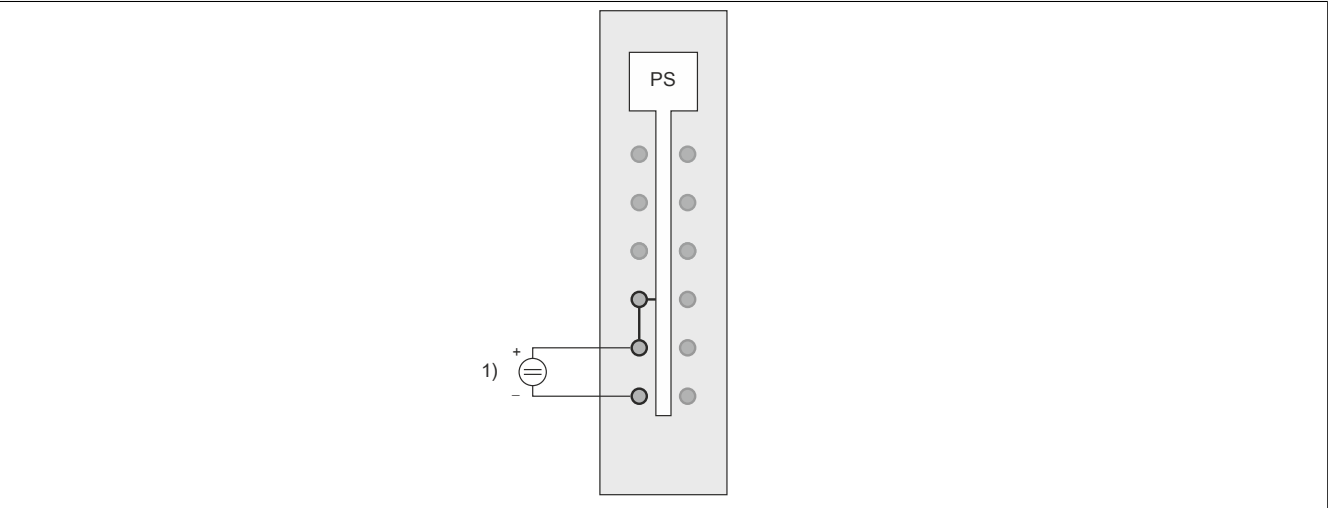
3.2 LED status indicators

Figure	LED	Color	Status	Description
	r	Green	On	Input voltage > 19.2 V

3.3 Pinout



3.4 Connection example



1) 24 VDC supply

3.5 Derating

The rated output current for the supply is 7 W. Derating must be taken into consideration based on mounting orientation.

