

X67PS1300

1 General information

This system supply module converts the 24 VDC I/O supply voltage into the electrically isolated X2X Link power supply. The module provides 15 W of output power for additional X67 modules on the bus.

- Electrical isolation of supply and X2X Link power supply
- Protection with redundancy during parallel operation of multiple system supply modules
- Short circuit protection
- Overload protection

2 Order data


Model number	Short description	Figure
	System supply modules	
X67PS1300	X67 system supply module 24 VDC, X2X Link power supply 15 W, reverse polarity protection, short circuit protection, overload protection, parallel connection possible, redundancy operation possible	

Table 1: X67PS1300 - Order data

Required accessories
For a general overview, see section "Accessories - General overview" of the X67 system user's manual.

3 Technical data

Model number	X67PS1300
Short description	
System power supply modules	Electrically isolated X2X Link power supply
General information	
Status indicators	Input voltage OK, output voltage OK
Connection type	
X2X Link power supply output	M12, B-keyed
X2X Link power supply input	M8, 4-pin
Power consumption	
Internal	3 W
Certifications	
CE	Yes
KC	Yes
EAC	Yes
UL	cULus E115267 Industrial control equipment
HazLoc	cCSAus 244665 Process control equipment for hazardous locations Class I, Division 2, Groups ABCD, T5
ATEX	Zone 2, II 3G Ex nA IIA T5 Gc IP67, Ta = 0 - Max. 60°C TÜV 05 ATEX 7201X
X2X Link power supply input	
Nominal voltage	24 VDC
Voltage range	18 to 30 VDC


Table 2: X67PS1300 - Technical data

Model number	X67PS1300
Nominal current	0.75 A
Fuse	Integrated
X2X Link power supply output	
Nominal voltage	20 VDC
Nominal current	0.75 A
Nominal output power	15 W
Efficiency	>80%
Parallel connection	Yes ¹⁾
Redundant operation	Yes, when input voltages are the same
Supply failure bridging	>5 ms at 24 VDC _{in} and I _{Out} = 0.75 A
Overload characteristics	Short circuit protection, overload protection
Isolation voltage between input and output	500 V _{Eff}
I/O power supply	
Nominal voltage	24 VDC
Voltage range	18 to 30 VDC
Integrated protection	Reverse polarity protection
Electrical properties	
Electrical isolation	X2X Link supply isolated from X2X Link power supply
Operating conditions	
Mounting orientation	
Any	Yes
Installation elevation above sea level	
0 to 2000 m	No limitations
>2000 m	Reduction of ambient temperature by 0.5°C per 100 m
Degree of protection per EN 60529	IP67
Ambient conditions	
Temperature	
Operation	-25 to 60°C
Derating	-
Storage	-40 to 85°C
Transport	-40 to 85°C
Mechanical properties	
Dimensions	
Width	53 mm
Height	85 mm
Depth	42 mm
Weight	225 g
Torque for connections	
M8	Max. 0.4 Nm
M12	Max. 0.6 Nm

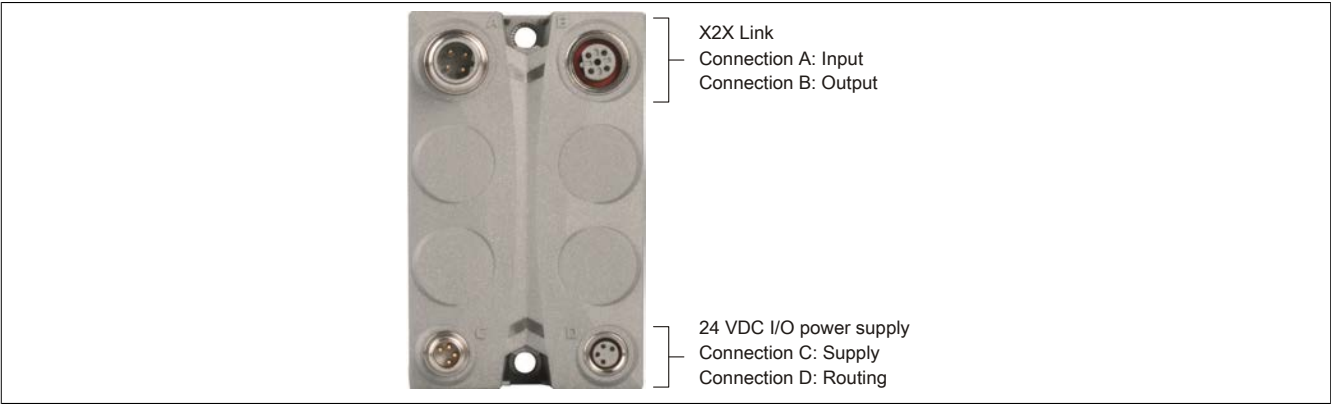
Table 2: X67PS1300 - Technical data

- 1) In parallel operation, only 90% of the rated power can be assumed. It is important to make sure that all power supplies operated in parallel are switched on and off at the same time.

4 LED status indicators

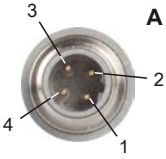

Figure	LED	Color	Status	Description
 <p>Status indicator 1: green</p> <p>Status indicator 2: orange</p>	Status indicator 1: Status indicator for X2X Link			
		Color	Status	Description
		Green	On	X2X Link power supply is within the valid limits
	Status indicator 2: Status indicator for the I/O power supply			
		Color	Status	Description
		Orange	On	I/O power supply voltage within the valid range

5 Connection elements



6 X2X Link

This module is connected to X2X Link using pre-assembled cables. The connection is made using M12 circular connectors.

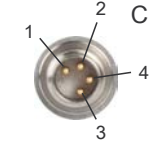
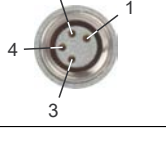
Connection	Pinout	
	Pin	Description
	1	X2X+
	2	X2X
	3	X2X↓
	4	X2X\
	Shield connection made via threaded insert in the module.	
	A → B-keyed (male), input	
	B → B-keyed (female), output	

7 24 VDC I/O power supply

The I/O power supply is connected via M8 connectors C and D. The I/O power supply is connected via connector C (male). Connector D (female) is used to route the I/O power supply to other modules.

Information:

The maximum permissible current for the I/O power supply is 8 A (4 A per connection pin)!

Connection	Pinout	
	Pin	Description
	1	24 VDC
	2	24 VDC
	3	GND
	4	GND
	C → Connector (male) in module, feed for I/O power supply	
	D → Connection (female) in module, routing of I/O power supply	

8 Maximum number of modules connected

With a large number of modules connected, the following must be taken into account:

- The total power consumption of all modules is not permitted to exceed 15 W.
- **In addition**, the internal resistance of the connection cable between the individual modules must also be taken into account.

Example

20 X67DM1321 modules should be connected to the system supply module.

This is possible according to the data sheet: $20 \cdot 0.75 \text{ W}$ power consumption = 15 W total power consumption.

The sum of the cable resistance values when using long connection cables between the modules, however, results in an additional voltage drop. The supply voltage drops below 18 V, which results in a situation where the functionality of the modules can no longer be guaranteed.

Solution: Add more system supply modules

9 Operating in Automation Studio

Information:

This module does not have to be integrated in the project in Automation Studio.