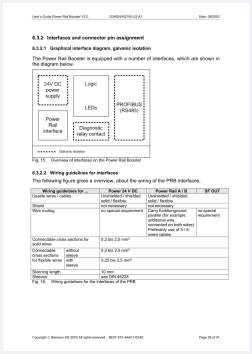
FIELD INSTALLATION QUICK GUIDE

# Installation Instructions

6ES7972-4AA01-0XA0

PROFIBUS power rail booster



| | |
|---|---|
| PRODUCT | 6ES7972-4AA01-0XA0 |
| FAMILY | SIMATIC NET Power Rail Booster V2.0 |
| FUNCTION | PROFIBUS power rail booster |
| STATUS | Verify exact installed equipment |

Prepared by Amikon Limited from Siemens documentation. This guide supplements the complete manufacturer manual and site procedure.

## 01 CONFIRM THE ORDERED CONFIGURATION

| | |
|---|---|
| Nominal DC supply | 24 V DC, SELV |
| Maximum supply current | 1.2 A |
| Maximum inrush current | 20 A |
| Incoming protection | 6 A Category C circuit breaker |
| Maximum power dissipation | 20 W |
| Supported transfer rates | 9.6, 19.2, 45.45, 93.75, 187.5 and 500 kbit/s |

## 02 PREPARATION AND CONNECTION

- Disconnect the 24 V feeder before installing or removing the V2.0 booster.
- Fit horizontally on a vertical wall using the documented rail mounting.
- Wire the RS485, contact rail, SELV supply and fault relay to the terminal map.
- Engineer PROFIBUS timing for rail length and booster propagation delay.

03

# OFFICIAL INSTALLATION REFERENCE



### 6.3.2 Interfaces and connector pin assignment

#### 6.3.2.1 Graphical interface diagram, galvanic isolation

The Power Rail Booster is equipped with a number of interfaces, which are shown in the diagram below.

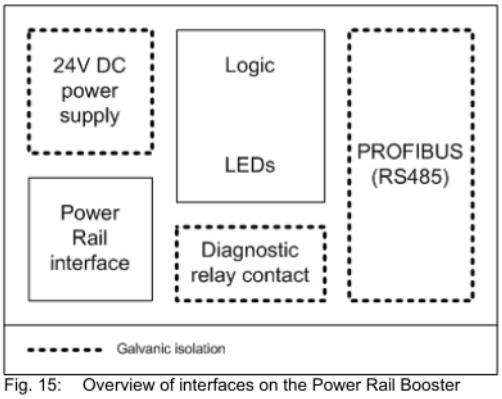



Fig. 15: Overview of interfaces on the Power Rail Booster

#### 6.3.2.2 Wiring guidelines for interfaces

The following figure gives a overview, about the wiring of the PRB interfaces.

| Wiring guidelines for ... | | Power 24 V DC | Power Rail A / B | SF OUT |
|---|---|---|---|---|
| Usable wires / cables | | Unshielded / shielded solid / flexible | Unshielded / shielded solid / flexible | |
| Shield | | not necessary | not necessary | |
| Wire routing | | no special requirement | Carry funktionground parallel (for example: additional wire, connected on both sides) Preferably use of 3-/ 5-wired cables | no special requirement |
| Connectable cross sections for solid wires | | 0,2 bis 2,5 mm² | | |
| Connectable cross sections for flexible wires | without sleeve | 0,2 bis 2,5 mm² | | |
| | with sleeve | 0,25 bis 2,5 mm² | | |
| Skinning length | | 10 mm | | |
| Sleeves | | see DIN 46228 | | |

Fig. 16: Wiring guidelines for the interfaces of the PRB

Copyright © Siemens AG 2003 All rights reserved. 6ES7 972-4AA01-0XA0


Official manufacturer page reproduced at its original aspect ratio.

Published by Amikon Limited

## 04 COMMISSIONING CHECKS

| | |
|---|---|
| 01 | Verify V2.0 throughout the contact-rail arrangement. |
| 02 | Confirm the 24 V SELV feeder and 6 A Category C protection. |
| 03 | Inspect RS485 and power-rail terminal allocations. |
| 04 | Check automatic recognition of the engineered baud rate. |
| 05 | Test communication along the complete permitted travel route. |
| 06 | Verify group-fault LEDs and the signaling contact. |

## 05 CONTROLLED DOCUMENT

| | |
|---|---|
| Official source | Siemens Power Rail Booster V2.0 G34924-R2100-U2-A1, 09/2003. |
| Product record | 6ES7972-4AA01-0XA0 |
| Manufacturer | Siemens |
| Warranty | 12 months from AMIKON |
| Support | INFO@AMIKON.CN |

**AMIKON PRODUCT SUPPORT**

+86-18020776786 INFO@AMIKON.CN **AMIKONG.COM**