



# PROFINET IO to Modbus Gateway ICDM-RX/PN1-DB9/RJ45-DIN

- DIN-rail mounting and DB9 serial connector
- Web-based configuration
- RS-232/422/485 software selectable interfaces
- PROFINET IO to and from Modbus TCP, Modbus ASCII, Modbus RTU and Modbus to Modbus communication
- Advanced Modbus gateway and routing capabilities
- Data Mapping sub-system and a built-in Modbus concentrator
- NEMA TS2 Certified

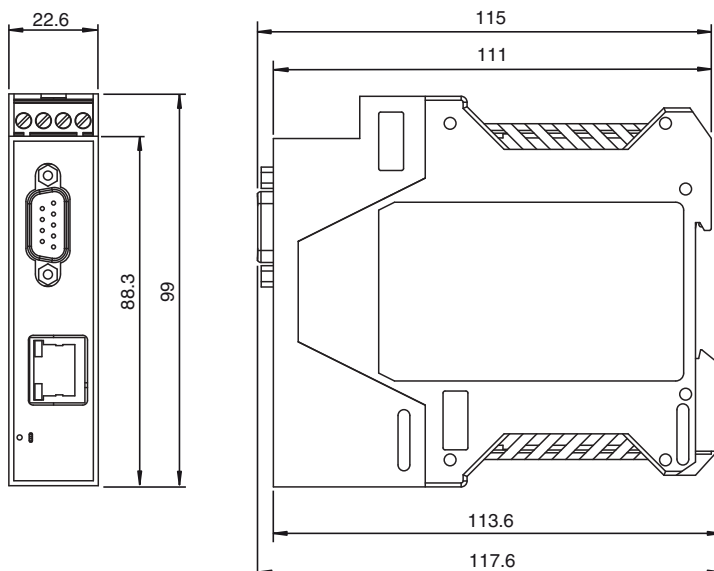
## PROFINET IO to Modbus Gateway 1-port DIN Rail DB9



### Function

The ICDM-RX/EN1 gateway enables the connection of serial devices (RS-232 / RS-422 / RS-485) such as barcode scanners, RFID readers and weigh scales to both PROFINET IO and Modbus networks. It combines an PROFINET IO interface with a Modbus gateway functionality and a built-in programmable data mapping sub-system, that ties everything together and doubles as a Modbus concentrator. The embedded web pages provide extensive diagnostics, intuitive and flexible configuration options, secure interfaces and numerous maintenance options. The result is a highly flexible gateway that allows full integration of PROFINET IO controllers into simple or complex Modbus networks. PROFINET IO controllers such as PLCs, HMIs, SCADAs and OPC servers can communicate to almost any Modbus master or slave, either locally or remotely.

### Dimensions



### Technical Data

#### General specifications

|                |         |
|----------------|---------|
| UL File Number | E360395 |
|----------------|---------|

#### Functional safety related parameters

|      |        |
|------|--------|
| MTBF | 61.4 a |
|------|--------|

Release date: 2023-04-17 Date of issue: 2023-04-17 Filename: 70114037\_eng.pdf

Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

Pepperl+Fuchs Group  
www.pepperl-fuchs.com

USA: +1 330 486 0001  
fa-info@us.pepperl-fuchs.com

Germany: +49 621 776 1111  
fa-info@de.pepperl-fuchs.com

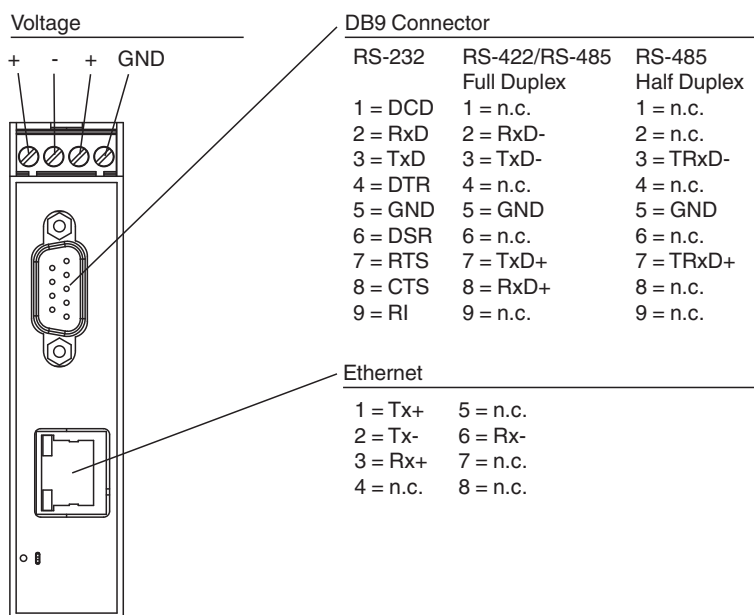
Singapore: +65 6779 9091  
fa-info@sg.pepperl-fuchs.com

**PEPPERL+FUCHS**

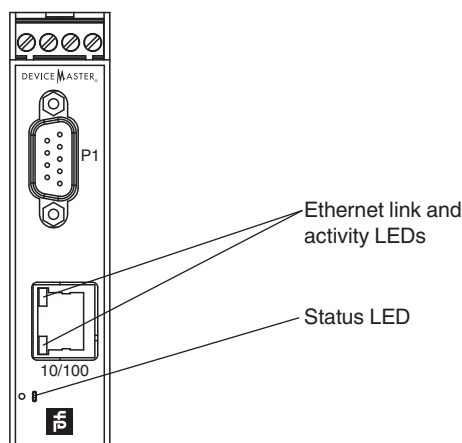
## Technical Data

|                                   |                |                                                                                                                                                                                             |
|-----------------------------------|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Indicators/operating means</b> |                |                                                                                                                                                                                             |
| LED indication                    |                | see manual                                                                                                                                                                                  |
| <b>Electrical specifications</b>  |                |                                                                                                                                                                                             |
| Rated operating voltage           | U <sub>e</sub> | 5 ... 30 V DC                                                                                                                                                                               |
| General information               |                | Redundant power                                                                                                                                                                             |
| Nominal voltage                   |                | 24 V DC                                                                                                                                                                                     |
| <b>Interface</b>                  |                |                                                                                                                                                                                             |
| Interface type                    |                | Software selectable interfaces: RS-232 , RS-422 , RS-485 (2 and 4-wire)                                                                                                                     |
| Physical                          |                | 1 x DB9                                                                                                                                                                                     |
| Protocol                          |                | MODBUS RTU                                                                                                                                                                                  |
| Supported baud rates              |                | 300 bps to 230Kbps                                                                                                                                                                          |
| <b>Interface 1</b>                |                |                                                                                                                                                                                             |
| Interface type                    |                | Industrial Ethernet                                                                                                                                                                         |
| Physical                          |                | 1 x RJ45                                                                                                                                                                                    |
| Protocol                          |                | PROFINET IO                                                                                                                                                                                 |
| Additional protocols              |                | ARP, BOOTP, DHCP/RARP, HTTP, HTTPS, SSH, SSL/TLS, ICMP, RFC 1006 (ISO over TCP), SNMP (MIB-II), TCP/IP & UDP socket services, Telnet, and TFTP, and supports IP multicast data transmission |
| Transfer rate                     |                | 10/100 Mbps                                                                                                                                                                                 |
| <b>Directive conformity</b>       |                |                                                                                                                                                                                             |
| Electromagnetic compatibility     |                |                                                                                                                                                                                             |
| Directive 2014/30/EU              |                | EN 61000-6-2:2005 , EN 610006-4:2007 , EN 610006-4/A1:2011                                                                                                                                  |
| RoHS                              |                | EN IEC 63000:2018                                                                                                                                                                           |
| <b>Standard conformity</b>        |                |                                                                                                                                                                                             |
| Degree of protection              |                | NEMA TS2                                                                                                                                                                                    |
| Electrical safety                 |                | CSA C22.2 No. 61010-1-12 / CSA C22.2 No. 61010-1-201<br>UL 61010-1 / UL 61010-1-201                                                                                                         |
| Emitted interference              |                | EN 61000-6-4, EN 55032, FCC Part 15 Subpart B, ICES-003, AS/NZS CISPR 32                                                                                                                    |
| Noise immunity                    |                | EN 61000-6-2                                                                                                                                                                                |
| <b>Ambient conditions</b>         |                |                                                                                                                                                                                             |
| Ambient temperature               |                | -40 ... 75 °C (-40 ... 167 °F)                                                                                                                                                              |
| Storage temperature               |                | -40 ... 85 °C (-40 ... 185 °F)                                                                                                                                                              |
| Relative humidity                 |                | max. 95 %                                                                                                                                                                                   |
| Altitude                          |                | 0 ... 3048 m                                                                                                                                                                                |
| <b>Mechanical specifications</b>  |                |                                                                                                                                                                                             |
| Housing length                    |                | 114.8 mm                                                                                                                                                                                    |
| Housing width                     |                | 22.9 mm                                                                                                                                                                                     |
| Housing height                    |                | 99.1 mm                                                                                                                                                                                     |
| Degree of protection              |                | IP20                                                                                                                                                                                        |
| Connection                        |                | Power Supply: screw terminals<br>Fieldbus: 1 x RJ45<br>Inputs/outputs: 1 x DB9                                                                                                              |
| <b>Material</b>                   |                |                                                                                                                                                                                             |
| Housing                           |                | Polyamide, UL94V-0                                                                                                                                                                          |
| Mass                              |                | 113.4g                                                                                                                                                                                      |
| Construction type                 |                | Cabinet module                                                                                                                                                                              |
| Mounting                          |                | DIN mounting rail                                                                                                                                                                           |

## Connection



## Assembly



## Accessories

|  |                                     |                                                                                                                              |
|--|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------|
|  | <b>V45-G-C5-GN1M-PUR-E1S</b>        | Ethernet bus cable male cordset single-ended RJ45, 4-pin, PUR cable green, Cat5e, shielded, UL approved, drag chain suitable |
|  | <b>V45-G-C5-GN3M-PUR-E1S</b>        | Ethernet bus cable male cordset single-ended RJ45, 4-pin, PUR cable green, Cat5e, shielded, UL approved, drag chain suitable |
|  | <b>V45-G-C5-GN10M-PUR-E1S</b>       | Ethernet bus cable male cordset single-ended RJ45, 4-pin, PUR cable green, Cat5e, shielded, UL approved, drag chain suitable |
|  | <b>V45-G-C5-GN1M-PUR-E1S-V45-G</b>  | Ethernet bus cable RJ45 to RJ45 PROFINET-coded, 4-pin, PUR cable green, Cat5e, shielded, UL approved, drag chain suitable    |
|  | <b>V45-G-C5-GN3M-PUR-E1S-V45-G</b>  | Ethernet bus cable RJ45 to RJ45 PROFINET-coded, 4-pin, PUR cable green, Cat5e, shielded, UL approved, drag chain suitable    |
|  | <b>V45-G-C5-GN10M-PUR-E1S-V45-G</b> | Ethernet bus cable RJ45 to RJ45 PROFINET-coded, 4-pin, PUR cable green, Cat5e, shielded, UL approved, drag chain suitable    |

Release date: 2023-04-17 Date of issue: 2023-04-17 Filename: 70114037\_eng.pdf

Accessories

|                                                                                   |                                     |                                                                                                                           |
|-----------------------------------------------------------------------------------|-------------------------------------|---------------------------------------------------------------------------------------------------------------------------|
|  | <b>V45-G-C5-GN20M-PUR-E1S-V45-G</b> | Ethernet bus cable RJ45 to RJ45 PROFINET-coded, 4-pin, PUR cable green, Cat5e, shielded, UL approved, drag chain suitable |
|-----------------------------------------------------------------------------------|-------------------------------------|---------------------------------------------------------------------------------------------------------------------------|

Release date: 2023-04-17 Date of issue: 2023-04-17 Filename: 70114037\_eng.pdf