Startup Information

OZD Profi 12M ...

Please read and notice the detailed
"Manual PROFIBUS Repeater OZD Profi 12M ...".
Use the fax form on page 5 of this leaflet to order a free copy of this manual (Order No. 039 629-001).

General Safety Instructions

- This device is electrically operated. Adhere strictly to the safety requirements relating to voltages applied to the device as described in the operating instructions.
- Make sure that the electrical installation meets local or nationally applicable safety regulations.

⚠️ Warning!
Failure to observe the information given in the warnings could result in serious injury and/or major damage. Only personnel that have received appropriate training should operate this device or work in its immediate vicinity. The personnel must be fully familiar with all of the warnings and maintenance measures in these operating instructions. Correct transport, storage, and assembly as well as careful operation and maintenance are essential in ensuring safe and reliable operation of this device. Never start operation with damaged components!

⚠️ Warning!
Any work that may have to be performed on the electrical installation should be performed by fully qualified technicians only.

⚠️ Warning!
LASER RADIATION
DO NOT VIEW DIRECTLY WITH OPTICAL INSTRUMENTS
CLASS 1M LASERPRODUCT in accordance with IEC 60825-1 (2007)

Certified usage

Please observe the following:

⚠️ Warning!
The device may only be employed for the purposes described in the catalog and technical description, and only in conjunction with external devices and components recommended or approved by Hirschmann. The product can only be operated correctly and safely if it is transported, stored, installed and assembled properly and correctly. Furthermore, it must be operated and serviced carefully.

Safety Guidelines Power Supply

- Switch the basic devices on only when the housing is closed.

⚠️ Warning!
The devices may only be connected to the supply voltage shown on the type plate. The devices are designed for operation with a safety extra-low voltage. Thus, they may only be connected to the supply voltage connections and to the signal contact with PELV circuits or alternatively SELV circuits with the voltage restrictions in accordance with IEC 950 / EN 60950 / VDE 0805.

Relevant for North America:
- The subject unit is to be supplied by a Class 2 power source complying with the requirements of the National Electrical Code, table 11(b). If power is redundant supplied (two individual power sources) the power sources together should comply with the requirements of the National Electrical Code, table 11(b).
- Use 60/75 °C or 75 °C copper(Cu) wire/conductor only.

Hirschmann. Simply a good Connection.
Relevant information for use in Ex zone 2 according to ATEX 94/9/EC

This product may be operated in EX zone 2 only if the product label is marked accordingly.
The following information applies when operating this equipment in EX zone 2 (ATEX 94/9/EC):

II 3G
Ex nA IIC T5 Gc
KEMA 00ATEX1141 X

Temperature Code T5
Standard types: Ta: 0 ... +60 °C
EEC types: Ta: −20 ... +60 °C

List of Standards
EN 60079-0 : 2012 + A11:2013
EN 60079-15 : 2010

Special conditions for safe use

The modules shall be installed in a suitable enclosure providing a degree of protection of at least IP54 in accordance with EN 60529, taking into account the environmental conditions under which the equipment will be used.

Installation, addition, removal or replacement of modules, connectors or fuses shall only take place when the system supply and the field supply are switched off, or when the area is known to be non-hazardous.

Power supply: 24 V DC (18 ... 32 V DC), max. 200 mA
Signalling contacts (Relay): max. 60 V DC / 42 V AC switching voltage, max. 1 A switching current

Output for termination resistor (RS485 bus lines – Sub-D port): 5 V DC (+5 %, −10 %), 90 mA.
Note on CE identification

The devices comply with the regulations of the following European directive:
89/336/EEC

The precondition for compliance with EMC limit values is strict adherence to the construction guidelines specified in the manual.

The EU declaration of conformity is kept available for the responsible authorities in accordance with the above-mentioned EU directives at:

Hirschmann Automation and Control GmbH
Stuttgarter Strasse 45 – 51
Germany
72654 Neckartenzlingen
Telephone +49 (0)1805 14-1538
E-Mail HAC.Support@Belden.com

NOTES FOR NORTH AMERICA:

A. THIS EQUIPMENT IS SUITABLE FOR USE IN CLASS I, DIVISION 2, GROUPS A, B, C AND D OR NON-HAZARDOUS LOCATIONS ONLY.

B. WARNING - EXPLOSION HAZARD - SUBSTITUTION OF ANY COMPONENTS MAY IMPAIR SUITABILITY FOR CLASS I, DIVISION 2.

C. WARNING - EXPLOSION - HAZARD - DO NOT DISCONNECT EQUIPMENT UNLESS POWER HAS BEEN SWITCHED OFF OR THE AREA IS KNOWN TO BE NON-HAZARDOUS.

D. POWER, INPUT AND OUTPUT (I/O) WIRING MUST BE IN ACCORDANCE WITH CLASS I, DIVISION 2 WIRING METHODS [ARTICLE 501-4(B) OF THE NATIONAL ELECTRICAL CODE, NFPA 70] AND IN ACCORDANCE WITH THE AUTHORITY HAVING JURISDICTION.

FCC RULES

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and
(2) this device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

C-Tick

Australia/New Zealand

This product meets the requirements of the AS/NZS 3548 standard.

N13320
Compatibility

The **functional compatibility** to OZD Profi modules of the preceding generation OZD Profi P3a, P4a, G3a, ... G4a, ... G3a-1300 and ... G4a-1300 is switched on with the DIL switch S7=1.

This operating mode is required when operating this module together with new devices.

Only turn switch S7 to Position 1 if the OZD Profi 12M ... is being used as a spare or expansion device in existing networks in conjunction with OZD Profi of the preceding generation, and a direct optical connection is to be made.

The following illustrations show the switch assignment of the OZD Profi 12M ... at S7=1 for

**Assignments**

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>L1+ / +24 V</td>
<td>+24 V input</td>
</tr>
<tr>
<td>F1</td>
<td>Signaling contact</td>
</tr>
<tr>
<td>M / ⫸</td>
<td>Ground</td>
</tr>
<tr>
<td>F2</td>
<td>Signaling contact</td>
</tr>
<tr>
<td>L2+ / +24 V</td>
<td>+24 V input redundant</td>
</tr>
</tbody>
</table>

**Pin assignment of the 5-pole screw clamp block**

1. **Ground / 5**
2. **n.c. / 4**
3. **Rx/D/TxD – P / 3**
4. **Ground / 2**
5. **Shield / 1**
6. **6 / + 5 V output**
7. **n.c.**
8. **/ RxD/TxD – N**
9. **/ n.c.**

**Technical Data**

- **Operating voltage**: 18 V DC to 32 V DC, typ. 24 V DC, (redundant inputs uncoupled), safety extra-low voltage, indirect-coupled
- **Current consumption**: max. 200 mA
- **Signaling contact**
  - **Maximum switching voltage**: 60 V DC; 42 V AC (safety extra-low voltage)
  - **Maximum switching current**: 1.0 A
- **Ambient temperature**: 0 °C to +60 °C (IEC 60068-2-1, -2-2)
  - -20 °C to +60 °C at OZD ... EEC 1) (IEC 60068-2-1, -2-2)
- **Relative humidity**: <95 %, non-condensing (IEC 60068-2-30)
  - 100 %, condensing at OZD ... EEC 1) (IEC 60068-2-30)
- **Vibration (during operation)**: 10 Hz to 58 Hz, 0.075 mm displacement; 58 Hz to 150 Hz, 10 m/s² (1 g) acceleration (IEC 60068-2-6)
- **Protection class**: IP40

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1) The OZD Profi 12M G12(-1300) can also be supplied in a special design for more severe environmental conditions. This variant is designated the OZD Profi 12M G12(-1300) EEC. The DIL switches on the OZD Profi 12M G12(-1300) EEC may also only be operated at ambient temperatures between 0 °C and +60 °C.
Dear customer,

You can order your free manual for the PROFIBUS-Repeater OZD Profi 12M ... by letter or fax using this coupon.

Yours

Hirschmann Automation and Control GmbH

☐ Please send me a free copy of the "Manual PROFIBUS-Repeater OZD Profi 12M ...”.

We apply the following Multimode/Singlemode modules:

☐ OZD Profi 12M P11  ☐ OZD Profi 12M G11  ☐ OZD Profi 12M G11-1300
☐ OZD Profi 12M P12  ☐ OZD Profi 12M G12  ☐ OZD Profi 12M G12-1300
☐ OZD Profi 12M G12 EEC  ☐ OZD Profi 12M G12-1300 EEC

We apply the following network topology:

☐ Line topology with optical cable monitoring  ☐ Star
☐ Line topology without optical cable monitoring  ☐ Redundant optical ring

We use the following transmission rate:

☐ 12 Mbit/s  ☐ 1.5Mbit/s  ☐ 500 kbit/s
☐ 187.5 kbit/s  ☐ others: ............

Our PROFIBUS Network consists of _____ participants at this time; _____ Fibre Optic Lines are integrated; it's in use for

We submit the following suggestions and desires to new modules for Field Bus Systems witch will be developed: