

Instruction Manual

1. Marking

Gateway LB81**A.1.EL
ATEX certificate: DEMKO 16 ATEX 1780 X ATEX marking: Ⓜ II 3 G Ex ec IIC T4 Gc
IECEX certificate: IECEX UL 16.0141 X IECEX marking: Ex ec IIC T4 Gc
North America Certificates: E106378 (UL) Class I, Division 2, Groups A-D, T4 Class I, Zone 2, AEx ec IIC T4 Gc (US), Ex ec IIC T4 Gc (Canada)
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2. Target Group, Personnel

Responsibility for planning, assembly, commissioning, operation, maintenance, and dismantling lies with the plant operator.

The personnel must be appropriately trained and qualified in order to carry out mounting, installation, commissioning, operation, maintenance, and dismantling of the device. The trained and qualified personnel must have read and understood the instruction manual.

3. Validity

Specific processes and instructions in this instruction manual require special provisions to guarantee the safety of the operating personnel.

Observe directives, standards, and national laws applicable to the intended use and the operating location.

Observe Directive 1999/92/EC in relation to hazardous areas.

The corresponding datasheets, manuals, declarations of conformity, EU-type examination certificates, certificates, and control drawings if applicable (see datasheet) are an integral part of this document. You can find this information under www.pepperl-fuchs.com.

For specific device information such as the year of construction, scan the QR code on the device. As an alternative, enter the serial number in the serial number search at www.pepperl-fuchs.com.

Due to constant revisions, documentation is subject to permanent change. Please refer only to the most up-to-date version, which can be found under www.pepperl-fuchs.com.

4. Intended Use

The device is only approved for appropriate and intended use. Ignoring these instructions will void any warranty and absolve the manufacturer from any liability.

The EtherNet/IP gateway forms the interface between the I/O modules on the backplane and the process control system.

Via this interface signals from NAMUR sensors, mechanical contacts, high-power solenoid drivers, power relays, sounders, and alarm LEDs are transported to the higher-level bus system.

The device must only be operated in the specified ambient temperature range and at the specified relative humidity without condensation.

Only use the device stationary.

The I/O modules, com units, power supplies, and bus termination modules of the remote I/O system must only be used together with the associated backplanes.

The backplane connections are non-intrinsically safe.

5. Improper Use

Protection of the personnel and the plant is not ensured if the device is not used according to its intended use.

The device is not suitable for isolating signals in power installations unless this is noted separately in the corresponding datasheet.

6. Mounting and Installation

Prior to mounting, installation, and commissioning of the device you should make yourself familiar with the device and carefully read the instruction manual.

Observe the instruction manuals for the associated backplanes.

Do not mount the device at locations where an aggressive atmosphere may be present.

The device must be installed and operated only in a controlled environment that ensures a pollution degree 2 (or better) according to IEC/EN 60664-1.

If used in areas with higher pollution degree, the device needs to be protected accordingly.

The device must be installed and operated only in an environment of overvoltage category II (or better) according to IEC/EN 60664-1.

Do not mount a damaged or polluted device.

Only use accessories specified by the manufacturer.

Do not push the modules into the slots with too much force. The rear connections of the devices may be damaged if using excessive force.

Only plug and pull the energized module in the absence of a potentially explosive atmosphere.

Supply the device with a power supply that meets the requirements for safety extra-low voltage (SELV) or protective extra-low voltage (PELV).

Provide a transient protection. Ensure that the peak value of the transient protection does not exceed 140 % of the rated voltage.

If the device has already been operated in general electrical installations, the device may subsequently no longer be installed in electrical installations used in combination with hazardous areas.

The power dissipation is based on specific conditions. Observe these conditions, to ensure the intrinsic safety.

You can find the data for electrical values and parameters in the corresponding datasheets.

Observe the installation instructions according to IEC/EN 60079-14.

Keep the separation distances between all non-intrinsically safe circuits and intrinsically safe circuits according to IEC/EN 60079-14.

Connection or disconnection of energized non-intrinsically safe circuits is only permitted in the absence of a potentially explosive atmosphere.

Before connecting or disconnecting circuits in the presence of a potentially explosive atmosphere, ensure that all non-intrinsically safe circuits are voltage-free and currentless.

6.1. Requirements for Surrounding Enclosures

Place warning marking "Warning – Non-intrinsically safe circuits protected by internal cover with a degree of protection IP30!" visibly on the surrounding enclosure.

Ensure that the surrounding enclosure is not damaged, distorted, or corroded.

Ensure that all seals are clean, undamaged, and correctly fitted.

Tighten all screws of the surrounding enclosure/surrounding enclosure cover with the appropriate torque.

For cable glands only use incoming cable diameters of the appropriate size.

Tighten all cable glands with the appropriate torque.

Close all unused cable glands with the appropriate sealing plugs.

6.2. Requirements for Non-Hazardous Area

The device must be installed and operated only in surrounding enclosures that

- comply with the requirements for surrounding enclosures according to IEC/EN 60079-0,
- are rated with the degree of protection IP54 according to IEC/EN 60529.

Alternatively, it is permitted to install and operate the device in a controlled environment that ensures a pollution degree 2 according to IEC/EN 60664-1.

6.3. Requirements for Equipment Protection Level Gc

The device must be installed and operated only in surrounding enclosures that

- comply with the requirements for surrounding enclosures according to IEC/EN 60079-0,
- are rated with the degree of protection IP54 according to IEC/EN 60529.

7. Operation, Maintenance, Repair

Prior to using the product make yourself familiar with it. Read the instruction manual carefully.

Substitution of components may impair suitability for Zone 2.

Do not use a damaged or polluted device.

Only use accessories specified by the manufacturer.

Do not repair, modify, or manipulate the device.

If there is a defect, always replace the device with an original device.

If intrinsically safe and non-intrinsically safe circuits are present, the cover with a degree of protection IP30 may only be removed if the non-intrinsically safe circuits are de-energized (voltage-free and currentless) or the absence of a potentially explosive atmosphere.

The surrounding enclosure may only be opened for maintenance while energized in Zone 2 if non-intrinsically safe circuit connections are protected by a cover with a degree of protection IP30.

Do not push the modules into the slots with too much force. The rear connections of the devices may be damaged if using excessive force.

Only plug and pull the energized module in the absence of a potentially explosive atmosphere.

Observe IEC/EN 60079-17 for maintenance and inspection.

Connection or disconnection of energized non-intrinsically safe circuits is only permitted in the absence of a potentially explosive atmosphere.

Before connecting or disconnecting circuits in the presence of a potentially explosive atmosphere, ensure that all non-intrinsically safe circuits are voltage-free and currentless.

8. Delivery, Transport, Disposal

Check the packaging and contents for damage.

Check if you have received every item and if the items received are the ones you ordered.

Keep the original packaging. Always store and transport the device in the original packaging.

Store the device in a clean and dry environment. The permitted ambient conditions must be considered, see datasheet.

The device, built-in components, packaging, and any batteries contained within must be disposed in compliance with the applicable laws and guidelines of the respective country.