

Instruction Manual

1. Marking

Capacitive limit switch LCL2
ATEX certificate: KEMA 01 ATEX 1149 X
ATEX marking: Ⓢ II 1/2D Ex ia/tb [ia Da] IIIC T ₂₀₀ T108°C T91°C Da/Db

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2. Device Versions

Device type	Basic specifications	Optional specifications
LCL2	-XXX-XXXX-XX	–

The X-marked letters of the type code are placeholders for versions of the device.

The following specifications reproduce an extract from the product structure and are used to assign.

Basic specifications

Option	Housing
H	Aluminium housing F34, IP66, NEMA 4X, thread NPT1/2
I	Aluminium housing F34, IP66, NEMA 4X, thread G1/2
J	Aluminium housing F34, IP66, NEMA 4X, cable gland M20

Option	Electrical connection
E5	3-wire, PNP, 10,8 V DC to 45 V DC
WA	Relay, potential-free change-over contact, 20 AC to 253 V AC, 20 V DC to 55 V DC

Option	Additional equipment
N	without additional equipment
D	Cover with sight glass

Option	Approval
EX	ATEX II 1/2D Ex ia/tb [ia Da] IIIC T ₂₀₀ T108°C T91°C Da/Db

Optional specifications

No options specific to hazardous locations are available.

3. 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.

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

4. Reference to Further Documentation

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

The corresponding datasheets, manuals, declarations of conformity, EU-type examination certificates, certificates, control drawings, and temperature tables if applicable 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.

5. 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 device is a capacitive limit switch for limit detection of light bulk solids.

Use the device only within the specified ambient and operating conditions. Only use the device in media to which the process-contacting materials of the device are sufficiently resistant.

The EU-type examination certificate in accordance with ATEX Directive applies only to the use of apparatus under atmospheric conditions.

The device can be used in hazardous areas containing combustible dust. Only use the device in fixed installations.

6. Improper Use

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

7. Mounting and Installation

Use appropriate protection measures in order to protect persons that have contact with hazardous or toxic substances.

Do not mount a damaged or polluted device.

Mount the device in a way that the device is protected against mechanical hazard.

Only use accessories specified by the manufacturer.

Avoid inadmissibly high electrostatic charge plastic surfaces.

Avoid inadmissibly high electrostatic charge of insulated capacities or insulated metal parts.

The intrinsically safe circuit is grounded.

Equipotential bonding must be achieved along the intrinsically safe circuits.

Observe the grounding requirements for type of protection Ex i according to IEC/EN 60079-14.

Ensure that the device provides and maintains a degree of protection of at least IP66 according to IEC/EN 60079-0.

Requirements for Cable Glands

Ensure that the degree of protection is not violated by the cable glands.

Only use cable glands that are suitably certified for the application.

Only use stopping plugs that are suitably certified for the application.

Observe the tightening torque of the cable glands.

Tightening torque

- Recommended tightening torque: 3.5 Nm

- Maximum tightening torque: 10 Nm

Use a strain relief device or alternatively install cables and cable glands in accordance with IEC/EN 60079-11.

Requirements for Cables and Connection Lines

Protect the cables from tensile load and torsional stress.

Specific Conditions of Use

Avoid impact effect or friction during mounting.

Avoid electrostatic charges which could result in electrostatic discharges while installing, operating, or maintaining the device.

Include the device into the equipotential bonding.

8. Operation, Maintenance, Repair

Do not use a damaged or polluted device.

The device is maintenance-free.

Do not repair, modify, or manipulate the device.

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

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

Avoid inadmissibly high electrostatic charge plastic surfaces.

Avoid inadmissibly high electrostatic charge of insulated capacities or insulated metal parts.

Specific Conditions of Use

Avoid impact effect or friction during operating.

Avoid electrostatic charges which could result in electrostatic discharges while installing, operating, or maintaining the device.

Include the device into the equipotential bonding.

Return

Take the following precautions before you return the device to Pepperl+Fuchs.

Remove all adhering residues from the device. These residues can be hazardous to health.

Fill in the form **Declaration of Contamination**. You can find this form on the product detail page at www.pepperl-fuchs.com.

Enclose the filled in **Declaration of Contamination** form with the device. Pepperl+Fuchs can examine and repair a returned device, only if a completed form is included in the return.

If needed, include special handling instructions with the device.

Specify the following information:

- Chemical and physical characteristics of the product
- Description of the application
- Description of the error that occurred (specify error code if possible)

- Operating time of the device

9. 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.

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.