

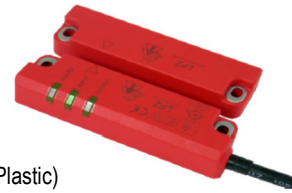


Non-Contact RFID Coded Safety Switches

LMZ LPZ Operating Instructions



LMZ (Stainless Steel)



LPZ (Plastic)

READ AND UNDERSTAND THESE INSTRUCTIONS BEFORE INSTALLING, OPERATING, OR MAINTAINING THIS EQUIPMENT.

The product is designed to be a component of a customized safety oriented control system. It is the responsibility of each manufacturer to ensure the correct overall functionality of its systems and machines. IDEM, its subsidiaries and affiliates, are not in a position to guarantee all of the characteristics of a given system or product not designed by IDEM.

APPLICATION:

RFID Coded Non-Contact Safety Switches are designed to interlock hinged, sliding or removable guard doors. They are specifically advantageous when:

- a) poor guard alignment exists
- b) high level anti-tamper is required
- c) high hygiene requirements exist e.g. food industry hose down
- d) long mechanical life is required (no moving or touching parts)

LPZ / LMZ switches must be used in combination with a dual channel safety control device e.g. Safety Relay or Safety Controller.

LPZ / LMZ switches can be used to provide protection to PLe/Cat.4 to ISO13849-1.

They will maintain PLe with switches connected in series due to internal test functions of the switches.

It is recommended to limit the number of switches connected in series to 30 maximum.

OPERATION:

All switches are designed to conform to EN60947-5-3 and be used as directed by ISO14119 and EN ISO12100. They have coded RFID sensing which provides a wide (>10mm) sensing distance and provides a high tolerance to misalignment after sensing. They can operate in extreme environments of temperature and moisture.

The switches are provided factory coded either uniquely (U types) or by a master code (M types).

For U types the individual code numbers are shown on the reverse of switch / actuator. For Master coded types any actuator will operate any switch.

If a Master type (M) actuator is to be changed then a re-teach process is needed. Power down – place new actuator to switch – Power up.

IMPORTANT:

Record any RFID codes as required by factory rules or with reference to any risk assessment for the particular application.

The Risk Assessment for the particular application should include the risk of spare actuators. Spare actuators should not be readily available and must be securely controlled.

The safety functions and mechanics must be tested regularly. For applications where infrequent guard access is foreseeable, the system must have a manual function test to detect a possible accumulation of faults. At least once per month for PLe Cat3/4 or once per year for PLd Cat3 (ISO13849-1). Where possible it is recommended that the control system of the machine demands and monitors these tests, and stops or prevents the machine from starting if the test is not done. (See ISO14119).

INSTALLATION:

Installation of all Safety Switches must be in accordance with a risk assessment for the individual application.

The use of a Safety Relay or Safety Controller is required for monitoring LPZ LMZ switches.

These devices monitor 2 redundant circuits as per ISO13849-1 for up to PLe / Category 4 protection.

M4 mounting bolts must be used to fix the switches. Tightening torque for mounting bolts to ensure reliable fixing is 1.0 Nm. Always mount on Non Ferrous materials.

It is recommended to fit the mounting hole washers supplied to prevent damage to the housings. If excessive vibration is present, consider additional fitting of anti-vibration washers or nuts.

The recommended setting gap is 5mm. The Safety Switch must not be used as a mechanical stop or be adjusted by striking with a hammer.

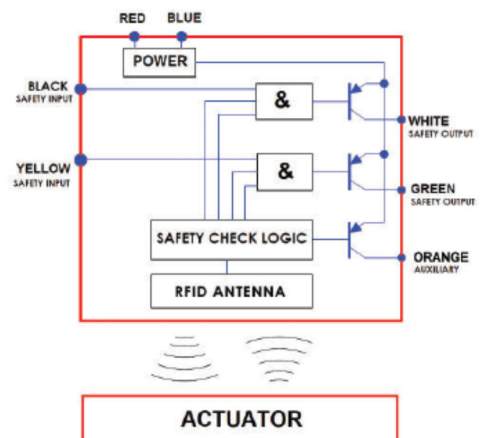
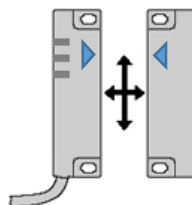
The actuator must not be allowed to strike the switch. Do not mount adjacent switches or actuators closer than 100mm.

Typical misalignment tolerance after setting is 5mm.

After installation always check each switch function by opening and closing each guard individually in turn and ensuring that the appropriate LEDs on the Safety Relay or Controller are illuminated when the switch is closed and are extinguished when the switch is open.

Check that the machine stops and cannot be re-started when each switch is open.

ACTUATOR OPERATING DIRECTION:



MAINTENANCE:

Monthly: Check alignment of actuator and look for signs of mechanical damage to the switch casing.

Check wiring for signs of damage. Check each switch function by opening and closing each guard individually in turn and ensuring that the appropriate LED's on the Safety Relay or Controller are illuminated when the switch is closed and are extinguished when the switch is open. Check that the machine stops and cannot be re-started when each switch is open. Never repair any switch, actuator or integral cables. Replace any switch displaying signs of mechanical damage to the casing or cables.

These requirements form part of the product warranty.



WARNING:

DO NOT DEFEAT, TAMPER, OR BYPASS THE SAFETY FUNCTION. FAILURE TO DO SO CAN RESULT IN DEATH OR SERIOUS INJURY

AVERTISSEMENT:

NE PAS DESACTIVER, MODIFIER, RETIRER, OU CONTOURNER CETI INTERVERROUILLAGE IL PEUT EN RESULTER DES BLESSURES GRAVES DU PERSONNEL UTILISATEUR.

