

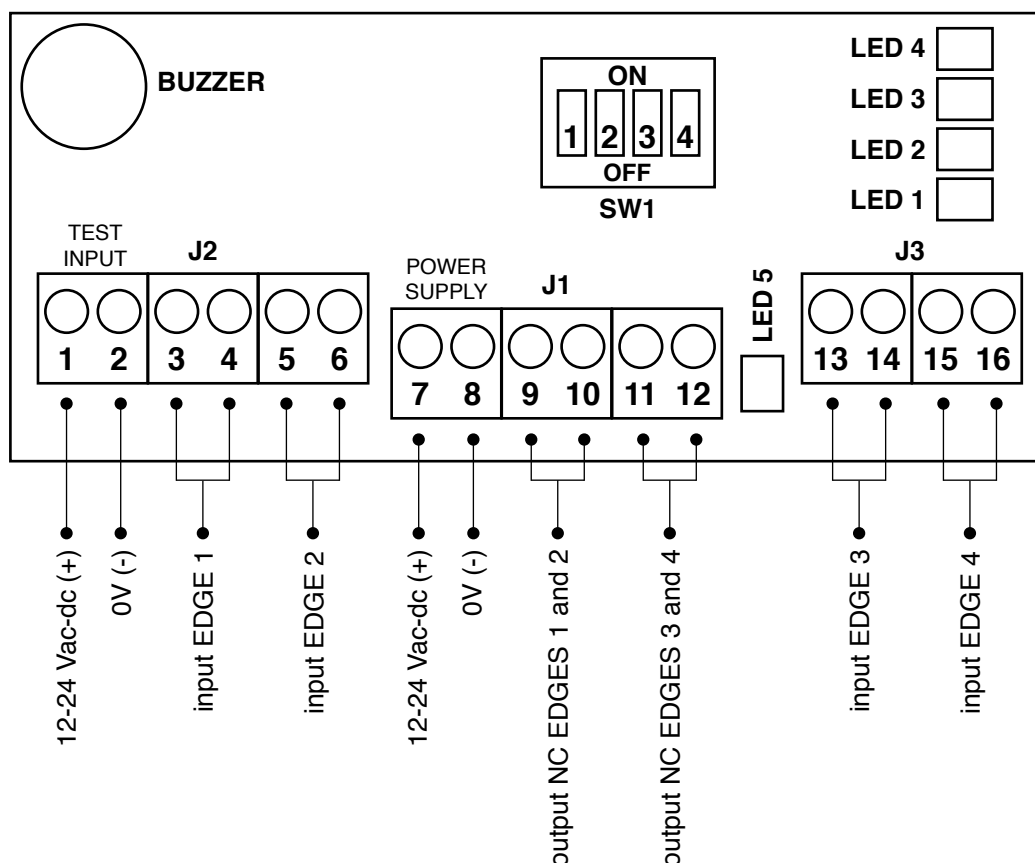
SAFETY DEVICE FOR ELECTROMECHANICAL AND RESISTIVE SAFETY EDGE

IRFC4/D PATENTED

Electronic control card for closing and opening systems equipped with electromechanical or resistive safety edges. That device is installed between the sensor of the safety edge and the control unit and it keeps on controlling the state of circuitry causing the gate motion to stop in case of anomaly.

It detects the short circuit condition, the cut of the electric wires as well as the normal functioning of the electromechanical micro switch or of the resistive safety edge. It manages up to 4 safety edges that can be installed through the SW1 micro switches.

The pairs of edges number 1-2 and 3-4 have effect on two NC relays which open in case of anomaly. In that case of anomaly or pressure exerted by an obstacle against the safety edge, the buzzer present in the control card sounds for one minute. A set of two-coloured LED indicates the general functioning state and the state of each single safety edge,



ELECTRIC FEATURE:

Power supply:	12-24Vac-dc
Output contact:	N. 2 NC contacts max 100 mA, 60V
Functioning temperature range:	-15°C ÷ 60°C
Max absorption:	30 mA
Dimensions:	125x55x28 mm
Weight:	0.100 Kg

SW1 MICRO SWITCHES:

- DIP1 ON - Safety edge 1 enabled
- DIP2 ON - Safety edge 2 enabled
- DIP3 ON - Safety edge 3 enabled
- DIP4 ON - Safety edge 4 enabled

BUZZER:

It sounds whenever an anomaly occurs. It remains activated until the alert state is resumed and in any case it lasts no longer than one minute after the event occurs.

BALANCE RESISTORS:

IRFC4/D device is able to automatically detect some resistors from 1000 up to 15000 Ohm. No setting is requested.

FUNCTIONING OF LEDS:

LED1: - (green-red) SAFETY EDGE 1 state signal

Off: the edge is not installed and its state is not monitored

Green: the edge is correctly installed and no anomaly is occurring

Red: an error occurs in the safety edge

LED2: - (green-red) SAFETY EDGE 2 state signal

Off: the edge is not installed and its state is not monitored

Green: the edge is correctly installed and no anomaly is occurring

Red: an error occurs in the safety edge

LED3: - (green-red) SAFETY EDGE 3 state signal

Off: the edge is not installed and its state is not monitored

Green: the edge is correctly installed and no anomaly is occurring

Red: an error occurs in the safety edge

LED4: - (green-red) SAFETY EDGE 4 state signal

Off: the edge is not installed and its state is not monitored

Green: the edge is correctly installed and no anomaly is occurring

Red: an error occurs in the safety edge

LED5: - (green-red-yellow) GENERAL STATE signal

Green: the edges are correctly installed and no anomaly is occurring

Red: an error occurs in the safety edge

Yellow: test state activated

FIRST INSTALLATION:

1. Set all the SW1 micro switches to OFF position;
2. Supply the device with 12-24 Vac-dc voltage via 7 (+) and 8 (-) terminals;
3. Ensure the LD5 led turns on GREEN light;
 - if LED is still off, ensure 12-24V voltage is enabled;
 - if LED shows RED light, ensure you have set all the micro switches to OFF position.

SAFETY EDGE 1 INSTALLATION:

1. Suspend the power supply to the device;
2. Connect the safety edge 1 with the 3-4 terminals;
3. Set the dip switch number 1 to ON position and check the state of LED1;
4. Restore the power supply voltage;
5. Ensure LED1 shows green or red coloured light;
 - if LED is off, ensure 12-24V voltage is enabled and you have set the micro switch 1 to ON position;
 - if LED shows RED light, an error occurred during the connection of the wires or the micro switch is damaged;
 - if LED shows GREEN light, you did the connection correctly.

NOTE: the buzzer might sound during the connection operations. Do not mind that beep.

SAFETY EDGE 2 INSTALLATION:

Repeat the same operations applied to SAFETY EDGE 1. Safety edge number 2 must be inserted in 5 and 6 terminals. Look at LED2 and at the micro switch number 2.

SAFETY EDGE 3 INSTALLATION:

Repeat the same operations applied to SAFETY EDGE 1. Safety Edge number 3 must be inserted in 13 and 14 terminals. Look at LED3 and at the micro switch number 3.

SAFETY EDGE 4 INSTALLATION:

Repeat the same operations applied to SAFETY EDGE 1. This safety edge must be inserted in 15 and 16 terminals. Look at LED4 and at the micro switch number 4.

TEST INPUT:

When applying 12-24Vac-dc voltage to the 1 (+) and 2 (-) terminals, the device sets in test mode. The test mode allows the correct functioning of the relays to be monitored and guarded by de-energising them for all the time the voltage is present no matter how the state of the edges is.



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