

DETESS METAL DETECTOR

Instruction Manual

Supply Voltage:	220 V AC
Max. Power:	15 W
Panel Protection	Panel Protection Class IP 65
Sensor:	Protection class IP 65 made off sheet metal
Sensor cable:	LIYCY
Mains cable:	2 x 1 mm
Control relay:	10 Amp. inverter
Warning relay:	6 Amp inverter
Failure relay:	6 Amp. inverter

LCD Digital Display:

- Possibility of setting the sensitivity and other adjustments by entering digital values.
- Noise adjustment
- Manual and automatic reset
- Delay adjustment
- Illuminated warning signal
- Possibility of counting and resetting the metal signal on the LCD display.

Metal detector adjustment parameters:

SENSITIVITY SETTING

(1) is the lowest sensitivity setting, i.e., the metal detection level is the lowest and the metal mass largest;

(250) is the highest sensitivity setting, i.e., the metal detection level is the highest and the metal mass smallest;

NOISE FILTER

As the invisible electrical noise emitted by the other machinery (electric motors, inverters etc.) in the vicinity affects the metal detector, this is a parameter that enables adjusting by entering variable values in order to reduce the effects of the electrical noise on the metal detector. Provides the most efficient operation between minimum 0 and 10; and maximum 0 and 25.

RIVET TIMING

The rivet sensor is used for the conveyor belts repaired with rivets or with tears in various places. The sensor is installed 10 cm behind the metal detector. Should be mounted to coincide with the side of the belt and to detect only 1 rivet.

When the sensor detects any rivet, it will have detected the other rivets behind and bypass the metal detector until the rivet passes over the metal detector. The bypass time should be entered when the metal detector is commissioned and when a rivet passes over the sensor. The average time duration should be 1.00 to 1.75 seconds.

RESET CONTROL

Reset button:	Enables manual reset operation,
Automatic reset:	Enables automatic reset operation at the end of the time period entered.

DELAY TIME

This is the setting parameter used for automatic reset. Enables automatic reset operation at the end of the time period entered (between 0 and 60 seconds with 250 msec increments)

STOP TIME

Means that the relay activates after the metal detector senses any metal, that is, stopping the belt conveyor or system with a delay (between 0 and 60 seconds with 250 msec increments).

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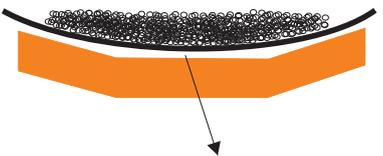
Power on the device after completing the installation.
Factory default values of the parameters are given below. Please check one by one. Press and hold the menu button until the settings light starts flashing and enter the parameters. You can access a different parameter each time the menu button is pressed and the values can be entered using the +> and <- buttons. After entering the desired value, move to the next parameter with the menu button and enter a value in the same way. To exit from the last parameter and store the values entered, press and hold the menu button until the settings light is switched off.

- Sensitivity: 175
- Noise: 10
- Rivet time: 1.50
- Reset: Reset button
- Delay time: 0
- Stop time: 0

After completing the operations described above, pass a sample piece of metal over the belt, on which the metal detector's sensor is mounted, at the movement direction of and in contact with the belt at the same speed as the belt and check if the metal lamp on the panel of the device lights up.

If the metal lamp lights up, the device has detected the metal and the metal relay in the device has change position. Check that the metal lamp turns off by pressing the reset button; the metal relay will return to the original position at the same time.

If the metal light does not turn on when the piece of metal is passes over the belt, use a larger piece of metal. If the lamp turns on, increase the sensitivity setting and retry with the original piece of sample metal.



The distance between the belt and metal detector should be 2.5 – 5 cm (the belt must absolutely not touch the metal detector).

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