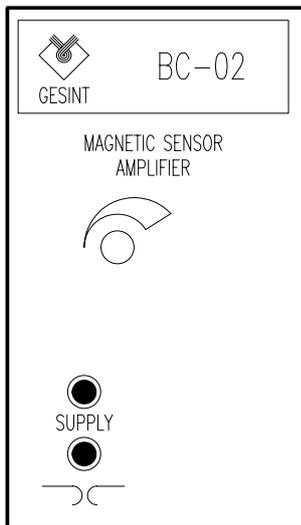


## BC02. Magnetic passage detector

Use Speed detection of the rope in the dyeing process and detection of the sew point in the unload process

### Technical data



Power supply:	24V, +15%, -10%, 50...60Hz
Power consumption:	max 3VA
Gain:	min $10^3$ max $3 \cdot 10^5$
Working temperature:	$-10^{\circ}\text{C} \div 50^{\circ}\text{C}$
Outputs:	2 contacts SPDT
Rate of the contacts:	3A 250Vca (resistive load)
Long term life:	$10^7$ (switch)
Impulse time	2 sec about
Proof:	IP20
Weigh:	0,15Kg
Dimensions:	38 x 76mm deep 100mm
Indications:	power supply presence greenLED Relay energized redLED

### General

BC02 is an instrument that, combined with a inductance coil, detect the the magnet passage by an impulse of about 2 seconds. The magnet passage induce a tension inpulse into the coil, if the pulse amplitude is greather than a fixed limit the instrument, changes the contacts of the relay for 2 seconds about.

The main factors that conditions the size of the impulse are the following:

- the moment of magnetic dipole of the used magnet;
- the number of wraps of the the coil used as sensor;
- relevant position between coil and the point of magnet passage;
- the minimum distance between coil and magnet in the point of revelance;
- magnet speed.

The unit has a control trimmer that permits to amplify the signal in order to obtain the better use depending on the appliances.

## Electrical connections

The drawing of the electrical connections is shown in the fig.1.  
The connections are made on socket undecal DIN standard.

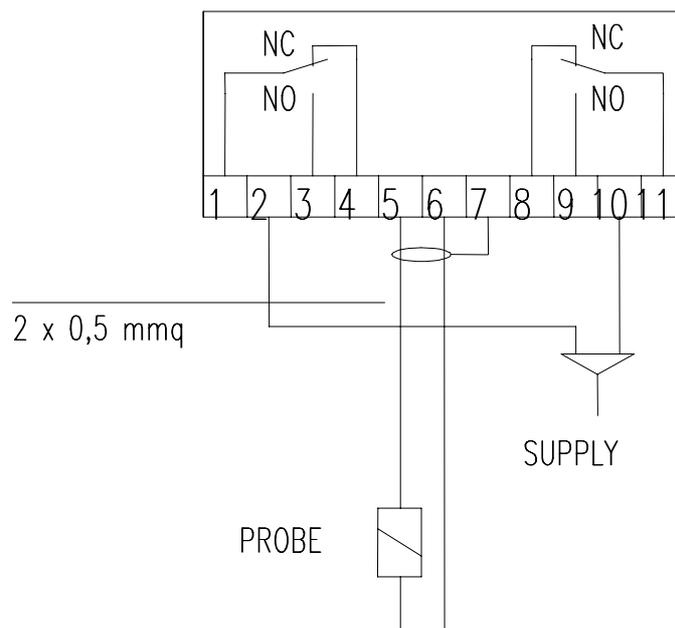
The connection cable must be placed separately from the power cables.  
Concerning the connection between sensor and amplifier, use a shielded 2 wires cable minimum  $0,5\text{mm}^2$ .  
The shield must be connected only to the switchboard side (pin 7)

The sensor must be protected from the influence of the electromagnetic field by a screen made with a metal shield.

## Setting

With the unit in a normal function, starting from the minimum amplification, adjust the trimmer in order to find all the magnet passage.

Fig.1 electrical connection



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