

Fig. 1

1. Application

The doublesheet detector consists of an amplifier and a pair of sensors (1 transmitter- and 1 receiver sensor), arranged according Fig. 1. The sensor must not touch the sheet. Both, moving as well as not moving sheets can be monitored. The sensors are fixed opposite each other in axial alignment. They are for example fixed between a sheet destacker and the infeed of a sheet working machine, watching each passing sheet for double sheets, before entering the sheet working machine. The sensors may be fixed in any kind of material, also steel. The sensors may be connected to 3 different amplifiers. Amplifier type IT01EZ is for external machine or wall mounting with sheet thickness adjust by knob, scale and fixing lever. Amplifiers IT 01SZ and IT 02SZ are designed for screw fixing or to snap on 35 mm rails in cabinets / enclosures. They have screwdriver operated sheet thickness adjusts. All amplifiers have 3 LEDs that indicate power, double sheets, relay and also screwdriver operated relay switch pulse extensions adjusts to stretch the switchpuls on high speed sheet transportation applications. Amplifiers IT 01EZ and IT 01SZ have a change- over (SPDT) output contact that switches when double sheets are detected. Amplifier IT 02SZ has 2 low side transistor outputs, one as N.O. and the other as N.C. function. The sensors are both identical and can be used either als transmitter or as receiver sensor. They are both fitted with 1 wire shielded 3 m cables that can be shortened to fit.

2. Setup

Fix the sensor SIZ 16 with clamps or in a holder with blocking screws and the sensors SIZ 30 with the enclosed 2 nuts in a simple hole, so that the monitored sheets can pass in the middle between both sensors, touchless. To fix amplifier IT 01EZ remove the 4 M 4 screws of the front cover, take off the front cover, pull carefully out the flat cable connector from PCB and fix the enclosure base in the 4 wholes in the enclosures corners. After fixing the enclosure and wiring, plug in the flat cable connector and close the front cover again. Fix amplifier IT 01SZ / IT 02SZ either with screws in the both diagonal holes or snap it on 35 mm rails. Check the voltage on the amplifiers type label with the voltage you want to connect the amplifier to, and connect the amplifier according to the connection diagram on fig. 5 for amplifier IT 01EZ or on fig.6 for amplifier IT 01SZ / IT 02SZ. Connection diagrams are also on the amplifiers. Put a sample sheet at least as large as 3 times of the sensors diameter in the middle between both sensors. Switch on power supply and turn on amplifier type IT 01EZ dial "Sheet tichness" right, till the red LED "Double sheet" goes off and the green LED "Contact" comes on. On amplifier IT 01SZ / IT 02SZ make the same adjust with a small screwdriver on the frontside "Thickness- adjust" potentiometer.

3. Specifications

Sensors	SIZ 16 (Pair)	SIZ 30 (Pair)
max.Thickn. (mm)	0,3 A= 10 mm	0,6 A= 20 mm
Diameter (mm)	16	M 30
Length (mm)	17	25
Cable length (m)	3	
Protection class	IP 65	
Amplifiers	IT 01EZ	IT 01SZ IT 02SZ
Thickness adjust	Dial/Scale	Screwdriver
Protection class	IP 63	IP 00
Output	Contact	Contact Transistor
Load	250V 1 A	250V 1 A 24 VDC 3A
Dimensions	160X80X55	55X75X110
Power supply	230/ 110 /24 AC 24DC	24 VDC
Power draw	ca. 3VA	
Temperature	0- 50 grd. C	



Fig. 2 Amplifier IT 01EZ



Fig 3 IT 01SZ



Fig. 4 Sensors SIZ 30 (Pair) each with 3 m cable

Fig. 5 Connection, sheet thickness adjust and switch puls extension adjust (DELAY) amplifier IT 01EZ

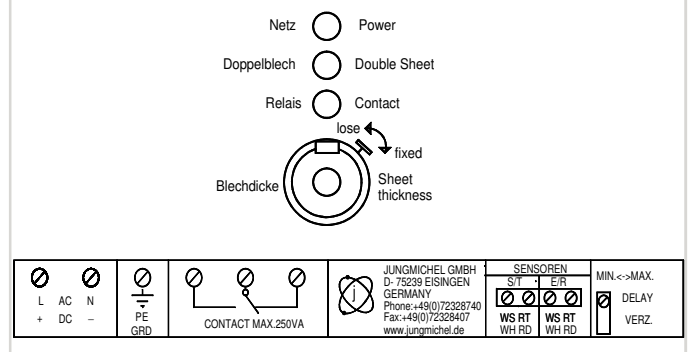


Fig. 6 Connection, sheet thickness adjust and switch puls extension adjust (DELAY) amplifiers IT 01SZ / IT 02SZ

