

New, programmable Double Sheet Sensors with 2 switch outputs



Fig.1 Sheet destacker with singlesided double sheet sensor

Double sheet sensors monitor the sheet separation on automatic sheet- destackers, - robots, feeders etc.

These new, programmable doublesheet sensors are usefull for extremely low price and simply double sheet monitoring as all functions are integrated in the sensor. No other external/ additional amplifiers or switching boxes are necessary. The sensors are for 24 VDC supply designed and have 2 output transistor switches that allows controlling of the full sheet loading process *) according Tab. 1.The sensors are connected via a M 12 x 1 connector with 5 pins: 2 pins for the 24 VDC supply , two pins for the outputs and the 5. pin for programming the sensor. Applying a high signal level on this programming pin stores the actual sheet thickness of the sheet on the sensor into a nonvolatile memory (EEPROM, teach- in system). As the single sheet thickness value is stored in the sensor permanently it is still available after power down or switch- off of the machine / controller . Programming of the sheet thickness can be done for example once after the sensor installation / wiring or again and again, everytime when sheet thickness changes. There are singlesided, sheet touching sensors for magnetic and non-magnetic (stainless-) steel sheets as well as bothsided, touchless sensors for magnetic-, non-magnetic-, aluminium and other non-ferrouse metal sheets available.

Tab.1

| Sensorconditons: | No Sheet | 1 Sheet | Double Seet |
|------------------|---------------|---------|-------------|
| Output OUT 1 | H | H | L |
| Output OUT 2 | H | L | H |
| LED | green (flash) | green | red |

*)Example for a singleside sensor fixed closed to a vacuum gripper of a sheet destacker:
 Vacuum gripper / sensor on top of stack: Stack present / last sheet in stack / no sheet in stack anymore ?
 Vacuum gripper / sensor lift off from stack: No sheet -/ single sheet- / double sheet picked up ?
 During sheet feed: Sheet still present / sheet lost ?
 Sheet target: Sheet successful placed / released ?

Fig. 2 Sensor connection example with PLC.

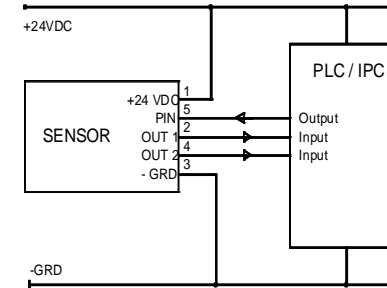


Fig. 3 Bothsided touchless sensors

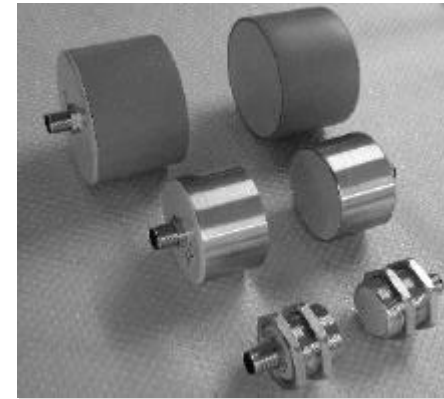


Fig. 4 Singleside sheet touching sensors



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