



Digital Multifunction Line-sensor

Series MZS-2000

Teach-In
3 Switching outputs
Integrated illumination
Analog output

Principal features:

Line sensor **256 pixel**
 Analog output **4-20 mA**
 Digital output for:
 IO, to HIGH, to LOW (PNP)
 Min- / Max-values teachable
 Background or integrated
 illumination
 5 different programs
 View angle **13°**
 Adjustment monitor
 Trigger output for external
 illumination
 Measuring rate **~150 Hz**
 Supply **24 VDC**
 Degree of protection **IP 65**

Applications:

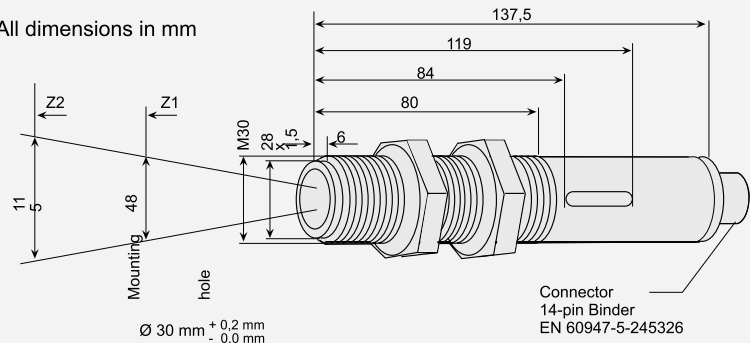
Geometrie control
 Edge control
 Plate measurement
 Ø- control
 Position control
 Drill break off control
 Detection of cracks and gaps
 Hight measurement

Advantages:

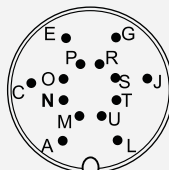
No PC necessary
 Easy teach-in of highest and
 lowest signal
 Digital edge evaluation
 Fast measuring frequency
 of 150 Hz
 Internal IR illumination
 to switch on
 Various external illumination
 available

Dimensions and operating range

All dimensions in mm



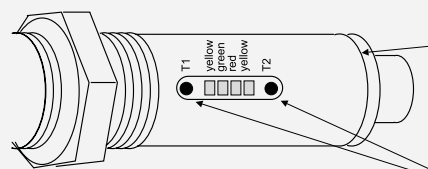
Wiring connections



14- pin. Plug-
connector
front side

Pin	Signal name	Cable	Function
A	NC	white	N.C.
C	VCC _{in}	brown	Positive power supply of sensor (7-30 VDC, / 0,3 W)
E	NC	green	N.C.
G	NC	yellow	N.C.
J	4-20 mA LOW	grey	GND of analog output (4-20 mA current output)
L	Trigger illumination	pink	Opto-coupled switching output for triggering an external illumination
M	GND _{in}	blue	GND of the sensor
N	4-20 mA HIGH	red	Positive connector of analog output (4-20 mA current output)
O	Object OK	black	Opto-coupled switching output "object OK" (object-size stays within the teached tolerance)
P	NC	violett	N.C.
R	Object to small	grey/pink	Opto-coupled switching output "object to small" (object-size is smaller than teached tolerance)
S	GND _{extern}	red/blue	GND of the opto-coupled switching outputs
T	Object to big	white/green	Opto-coupled switching output "object to big" (object-size is bigger than teached tolerance)
U	V _{extern}	brown/green	Positive supply of the optocoupled switching outputs (5-45 VDC / 1,5 W)

Operating and display elements



Connector
12-pin Binder
DIN 45326

Buttons

Technical data

Spezifical data	MZS-2000	
Spezifical data	Sensortype	Line sensor with 256 pixel
	Measuring principle	back- and frontlight measuring
	Measuring range	~1.9 to 4,5 in (48-115 mm) (depending on maesuring distance)
	Measuring distance	~7.88 to 19.7 in (200-500 mm)
	View angle	± 6.5°
	Resolution (geometrical)	± 0.19 mm to ± 0.45 mm / pixel
	Illumination	2 internal IR-LEDs (875 nm, switchable) or external illumination via trigger output (see accessories)
Electrical data	Supply voltage	24 V ± 30%
	Power consumption	~ 300 mW
	Measuring frequency	150 Hz
	Outputs	3 optocoupled switching outputs 5-45 V / 1,5 W ("to small", "OK", "to big") 1 optocoupled trigger output for extern. illumination 1 Analog output 4-20 mA (max 400)
Data on ambiente conditions	Max. operating temperature	32 to 104 °F (0 to +40 °C)
	Max. storage temperature	-4 to +158 °F (- 20 to +70 °C)
	Degree of protection	IP 65
Mechanical data	Weight	approx. 150 g (~ 0.33 lbs)
	Housing	Nickel plated brass with M30x1.5 mm thread
	Connection	14-pin plug-connector (EN 60947-5-2)

Ordering information

Line sensor	Part. No.	Accessories	Part. No.
MZS-2000	10691741	Mounting bracket right	11301744
		Mounting bracket left	11301745
Accessories	Part. No.		
Cable ~6.5 ft (2 m)	11301742		
Cable ~16.4 ft (5 m)	11301743	Reflector 50x220	11301746

For external illumination see separate data-sheet

Applications

<p>Sagging control</p>	<p>Diameter control</p>	<p>Edge control</p>
<p>Detection of defective parts</p>	<p>Presented by:</p>	