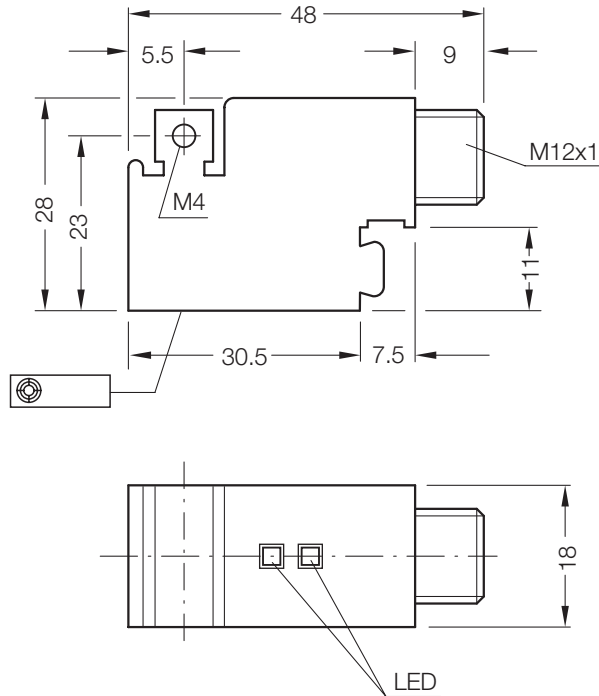


# Magnetic cylinder sensors

## MZ U2 series

### DC 3-wire, weld immune version

Dimensions in mm



#### Features

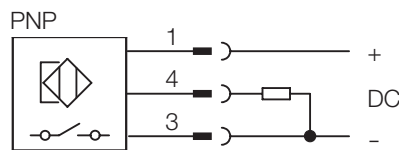


- ▶ Non-contact detection of piston position in pneumatic cylinders in weld field environments
- ▶ Weld immune in all welding applications (AC, DC and medium frequency)
- ▶ Response sensitivity of interference field detector  $\leq 2$  mT
- ▶ The sensors locks the output during the welding process. When the welding process stops, the sensor updates the output accordingly
- ▶ Flexible mounting technique for different cylinder styles
- ▶ Solid metal housing in die-cast zinc, optional with teflon coating
- ▶ Actuating speed  $< 1$  m/s
- ▶ 2 LEDs  
 Status indicator: yellow  
 Function indicator: green

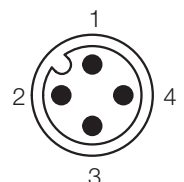
#### Accessories

Round connector  
 Round connector welding splatter resistant

#### Connection diagram







Contact	Assignment
1	+ V DC
4	NO
3	- V DC
2	free



## Electrical and mechanical data

<b>Operating voltage</b> $U_b$	10 ... 30 V DC	<b>Wire-break protection</b>	yes
<b>Ripple</b> $U_{pp}$	$\leq 10\%$ of $U_b$	<b>Short-circuit protection (pulsed)</b>	yes
<b>Voltage drop</b> $U_d$ (at $I_a$ max.)	$\leq 2.0$ V	<b>Reverse polarity protection</b>	yes
<b>Power consumption</b>	$\leq 18$ mA (unattenuated) $\leq 32$ mA (attenuated)	<b>Power-up pulse suppression</b>	yes
<b>Continuous current</b> $I_a$	$\leq 300$ mA	<b>Enclosure rating</b> to EN 60529	IP 67
<b>Time delay before availability</b> $t_v$	$\leq 20$ ms	<b>Shock and vibration stress</b>	30 g, 11 ms 10 to 55 Hz, 1 mm
<b>Hysteresis</b> H	$\leq 1.5$ mm	<b>Ambient temperature</b> $T_a$	- 25 ... + 75 °C
<b>Repeatability</b> R ( $U_b$ and $T_a$ constant)	$\leq 0.1$ mm	<b>Housing material</b>	Die-cast zinc, optional with teflon coating
<b>EMC</b>	to EN 60 947-5-2		

## Selection table

Response sensitivity in mT	Sensing face	Switching output	Output function	Switching frequency f in Hz	Connection	Type	Order number
3		PNP		40	Connector M12x1 mm	MZU2-03VPS-DCM	1017450
3		PNP		40	Connector M12x1 mm	MZU2-03VPS-TCM*	1017451

\* with teflon coating

## Accessories

Mounting clamp for pneumatic cylinder sensor MZU2

Mounting clamp: BEF-KS-U2-S1

Material: die-cast zinc

Order-No.: 4030922

Mounting clamp: BEF-KS-U2-S1T

Material: die-cast zinc with teflon coating

Order-No.: 4031632

Tie-rod cylinder  $\varnothing 4 \dots 20$  mm

