

Welker offers two magnetic cylinder switches: L3 (PNP) and L5 (NPN). They can be mounted in t-slot cylinders or on tie rod cylinders. Both switches are short circuit & overload protected and IP 65 / IP 67 rated for harsh environments.

## ***L3 Cylinder Switch***

*The Welker L3 solid state cylinder mounted sensor is immune to the majority\* of direct and alternating field welding applications.*

### ***L3 Cylinder Switch (Dual Sensor)***

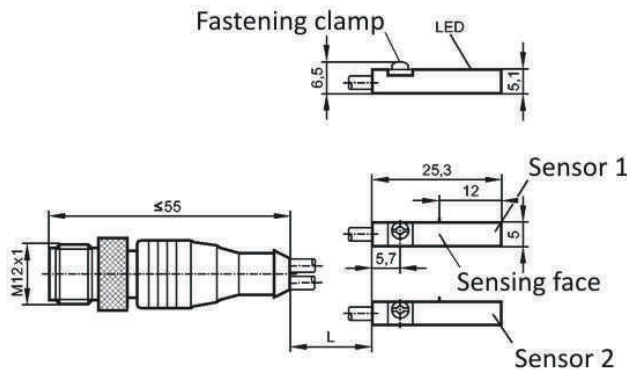
### ***L3S (Single Sensor)***

Features:

- Comparable to World Switch in function and performance
- IP 65 / IP 67 rated for harsh environments
- Short circuit & overload protected
- Mounts easily to T-slot and tie rod cylinders
- Magnetic sensitivity 1.5 mT
- 4-wire, N.O. PNP output, M12 DC connector
- Weld spray resistant cable covers



*L3 (dual sensor) shown*



\*Note that some mid and low frequency DC resistance applications (i.e. aluminum resistance welding applications) may cause a fault. In these applications, it is recommended that the sensor be ignored/bypassed during the welding cycle.

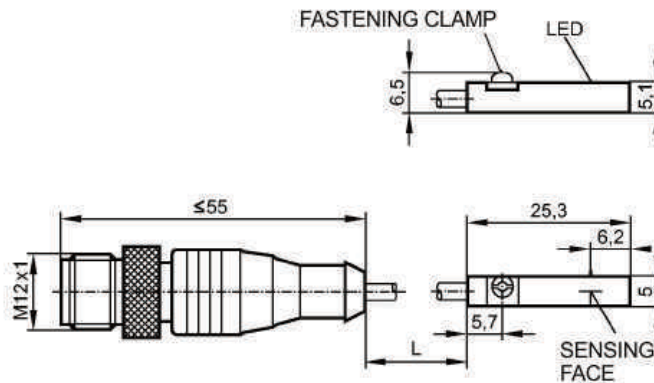
## L5 Cylinder Switch

*L5 Cylinder Switch (Two, Single Sensor)*  
*L5S (Single Sensor)*

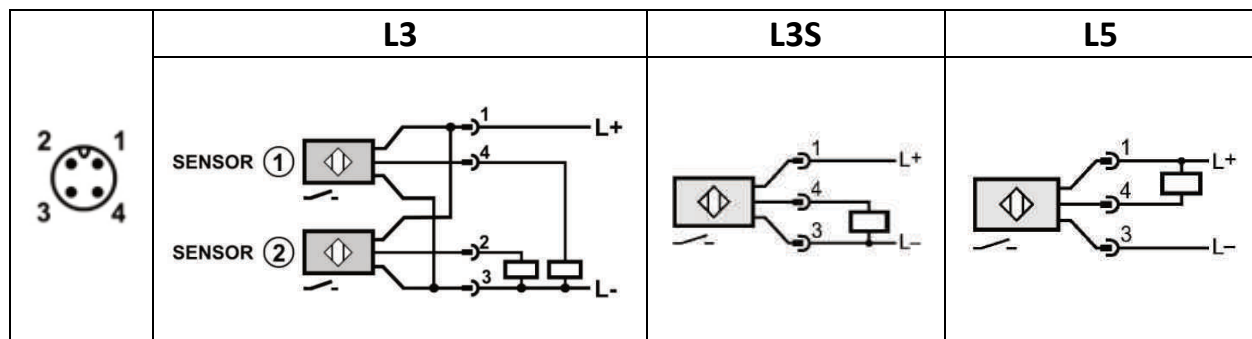
- 3-wire M12 DC connector  
(2 switches required per cylinder)
- N.O. NPN output
- Not weld field immune



*L5S (single) shown*



### Wiring



<b>Switch Specifications</b>		<b>L3</b>	<b>L5</b>
Electrical data	Electrical design	DC PNP	DC NPN
	Operating voltage	10...30V DC; cULus - Class 2 source required	
	Current consumption	< 10 mA	
	Protection class	III	
Outputs	Output function	Normally open	
	Voltage drop	< 2.5 V	
	Current rating	100 mA	
	Short-circuit protection	Yes	
	Overload protection	Yes	
	Switching frequency	9 Hz	10000 Hz
Monitoring range	Magnetic sensitivity	L3: 1.5 mT L3S: 2.8 mT	2.8 mT
	Travel speed	L3: > 0.25 m/s L3S: < 0.25 m/s	> 10
Accuracy/deviations	Hysteresis	< 1.5mm	
	Repeatability	< 0.2mm	
Reaction times	Power-on delay time	< 30 ms	
Environment	Ambient temperature	-13°F to 185°F (-25°C to 85°C)	
	Protection	IP 65 / IP 67	
Mechanical data	Mounting	Flush mountable	
	Housing material	PA (polyamide)	
	Fastening clamp	Stainless steel	
	Weight	L3: 0.023kg L3S: 0.024kg	0.021kg
Display	LED output status indication	Yellow	
Electrical connection	Connection	PUR cable / 0.3 m; with M12 connector, with turnable coupling ring	

<b>CYLINDER SWITCH ORDER INFO*</b>		
Switch	REORDER part number	Description
<b>L3</b>	<b>SWITCH L3</b>	2 sensor switch, 1 required
<b>L3S</b>	<b>SWITCH L3S</b>	1 sensor switch, 1 required
<b>L5</b>	<b>SWITCH L5</b>	1 sensor switch, 2 switches required
<b>L5S</b>	<b>SWITCH L5S</b>	1 sensor switch, 1 required

\*Contact Welker if replacement switch brackets are needed.  
Please have unit part number and/or job number available.