

## M49 - Series

Encapsulated Metal Body  
Position & Limit Switches



# Position Switches

## M49 Series - Metal Body

**NEW**



### Product characteristics

- Flat and compact design
- Pre-installed connecting cable (1m length) for quick and easy installation
- Top-mounting versions available
- Cable or M12-connector outlet on the side or at the bottom
- High protection class IP67
- Suitable for safety applications according to DIN EN 60947-5-1 (positive

### Good to know ...

Due to the space-saving enclosures and the high protection class IP67 the position switches of the M49 series are perfect for an installation where a flat design and a high protection class of IP67 is required. The switches are often used for the monitoring of covers and inspection doors, for position monitoring applications and similar applications. The high protection class allows outdoor applications.

### Options

- Different cable lengths are available on request

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### Technical design

- Slow- and snap action
- **Versions:** 1 NC/1 NO, 2 NC, 2 NO, 2 NC/2 NO

### Technical data

Electrical data		
Design insulation voltage	U <sub>i</sub> max.	400 V AC
Conventional thermoelectric current	I <sub>the</sub>	10 A
Rated operating voltage	U <sub>e</sub> max.	240 V
Utilisation category		AC-15; 24 V / 10 A; 240 V / 3 A
Protection class		II, protective insulation
Mechanical data		
Ambient temperature		-25 °C to +70 °C (connecting cable firmly wired)
Mechanical lifetime		10 x 10 <sup>6</sup> switching cycles
Switching frequency		≤ 60/min.
Type of connection		Cable 4 x 0.75 mm <sup>2</sup>
Protection class		IP67 conforming to IEC/EN 60529
Standards		
VDE 0660 T100, DIN EN 60947-1, IEC 60947-1		
VDE 0660 T200, DIN EN 60947-5-1, IEC 60947-5-1		

### Application examples

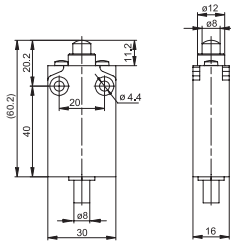
- Position monitoring of moving parts
- Object detection in conveying technology
- End position control of components
- Position monitoring on rolling doors
- Monitoring of sliding doors



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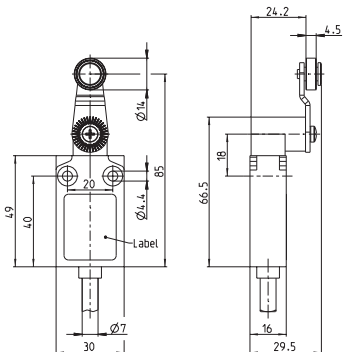
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### M49-... IW



	1 NC / 1 NO Snap-action	1 NC / 1 NO Slow-action	2 NC Slow-action	2 NO Slow-action	2 NC / 2 NO Slow-action
Switching diagram					
Cable outlet right	<b>602300001</b> M49-SU1Z IW	<b>602300003</b> M49-U1Z IW	<b>602300005</b> M49-A2Z IW	<b>602300007</b> M49-E2 IW	<b>602300009</b> M49-U2Z IW
Cable outlet below	<b>602300002</b> M49-SU1Z IW Z	<b>602300004</b> M49-U1Z IW Z	<b>602300006</b> M49-A2Z IW Z	<b>602300008</b> M49-E2 IW Z	<b>602300010</b> M49-U2Z IW Z
M12 connector right	<b>602300011</b> M49-SU1Z IW M12	<b>602300013</b> M49-U1Z IW M12	<b>602300015</b> M49-A2Z IW M12	<b>602300017</b> M49-E2 IW M12	
M12 connector below	<b>602300012</b> M49-SU1Z IW Z M12	<b>602300014</b> M49-U1Z IW Z M12	<b>602300016</b> M49-A2Z IW Z M12	<b>602300018</b> M49-E2 IW Z M12	

### M49-... AH



	1 NC / 1 NO Snap-action	1 NC / 1 NO Slow-action	2 NC Slow-action	2 NO Slow-action	2 NC / 2 NO Slow-action
Switching diagram					
Cable outlet right	<b>602300073</b> M49-SU1Z AH	<b>602300075</b> M49-U1Z AH	<b>602300077</b> M49-A2Z AH	<b>602300079</b> M49-E2 AH	<b>602300081</b> M49-U2Z AH
Cable outlet below	<b>602300074</b> M49-SU1Z AH Z	<b>602300076</b> M49-U1Z AH Z	<b>602300078</b> M49-A2Z AH Z	<b>602300080</b> M49-E2 AH Z	<b>602300082</b> M49-U2Z AH Z
M12 connector right	<b>602300083</b> M49-SU1Z AH M12	<b>602300085</b> M49-U1Z AH M12	<b>602300087</b> M49-AZ AH M12	<b>602300089</b> M49-E2 AH M12	
M12 connector below	<b>602300084</b> M49-SU1Z AH Z M12	<b>602300086</b> M49-U1Z AH Z M12	<b>602300088</b> M49-AZ AH Z M12	<b>602300090</b> M49-E2 AH Z M12	

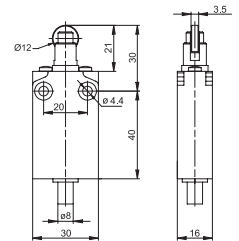
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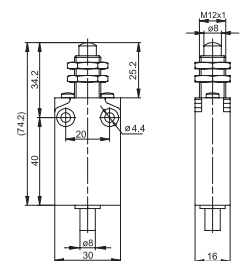
### M49... RIW

	1 NC / 1 NO Snap-action	1 NC / 1 NO Slow-action	2 NC Slow-action	2 NO Slow-action	2 NC / 2 NO Slow-action
Switching diagram					
Cable outlet right	<b>6023000019</b> M49-SU1Z RIW	<b>6023000021</b> M49-U1Z RIW	<b>6023000023</b> M49-A2Z RIW	<b>6023000025</b> M49-E2 RIW	<b>6023000027</b> M49-U2Z RIW
Cable outlet below	<b>6023000020</b> M49-SU1Z RIW Z	<b>6023000022</b> M49-U1Z RIW Z	<b>6023000024</b> M49-A2Z RIW Z	<b>6023000026</b> M49-E2 RIW Z	<b>6023000028</b> M49-U2Z RIW Z
M12 connector right	<b>6023000029</b> M49-SU1Z RIW M12	<b>6023000031</b> M49-U1Z RIW M12	<b>6023000033</b> M49-A2Z RIW M12	<b>6023000035</b> M49-E2 RIW M12	
M12 connector below	<b>6023000030</b> M49-SU1Z RIW Z M12	<b>6023000032</b> M49-U1Z RIW Z M12	<b>6023000034</b> M49-A2Z RIW Z M12	<b>6023000036</b> M49-E2 RIW Z M12	



### M49... IWF

	1 NC / 1 NO Snap-action	1 NC / 1 NO Slow-action	2 NC Slow-action	2 NO Slow-action	2 NC / 2 NO Slow-action
Switching diagram					
Cable outlet right	<b>6023000037</b> M49-SU1Z IWF	<b>6023000039</b> M49-U1Z IWF	<b>6023000041</b> M49-A2Z IWF	<b>6023000043</b> M49-E2 IWF	<b>6023000045</b> M49-U2Z IWF
Cable outlet below	<b>6023000038</b> M49-SU1Z IWF Z	<b>6023000040</b> M49-U1Z IWF Z	<b>6023000042</b> M49-A2Z IWF Z	<b>6023000044</b> M49-E2 IWF Z	<b>6023000046</b> M49-U2Z IWF Z
M12 connector right	<b>6023000047</b> M49-SU1Z IWF M12	<b>6023000049</b> M49-U1Z IWF M12	<b>6023000051</b> M49-A2Z IWF M12	<b>6023000053</b> M49-E2 IWF M12	
M12 connector below	<b>6023000048</b> M49-SU1Z IWF Z M12	<b>6023000050</b> M49-U1Z IWF Z M12	<b>6023000052</b> M49-A2Z IWF Z M12	<b>6023000054</b> M49-E2 IWF Z M12	





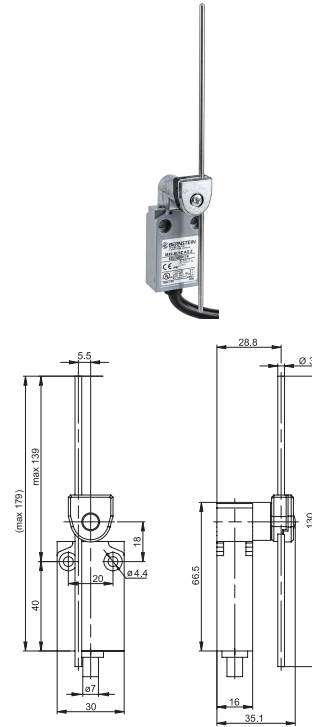
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### M49... AD

	1 NC / 1 NO Snap-action	1 NC / 1 NO Slow-action	2 NC Slow-action	2 NO Slow-action	2 NC / 2 NO Slow-action
Switching diagram					
Cable outlet right	<b>6023000113</b> M49-SU1 AD	<b>6023000115</b> M49-U1 AD	<b>6023000117</b> M49-A2 AD	<b>6023000119</b> M49-E2 AD	<b>6023000121</b> M49-U2 AD
Cable outlet below	<b>6023000114</b> M49-SU1 AD Z	<b>6023000116</b> M49-U1 AD Z	<b>6023000118</b> M49-A2 AD Z	<b>6023000120</b> M49-E2 AD Z	<b>6023000122</b> M49-U2 AD Z
M12 connector right	<b>6023000123</b> M49-SU1 AD M12	<b>6023000125</b> M49-U1 AD M12	<b>6023000127</b> M49-A2 AD M12	<b>6023000129</b> M49-E2 AD M12	
M12 connector below	<b>6023000124</b> M49-SU1 AD Z M12	<b>6023000126</b> M49-U1 AD Z M12	<b>6023000128</b> M49-A2 AD Z M12	<b>6023000130</b> M49-E2 AD Z M12	



### M49... FF

	1 NC / 1 NO Snap-action
Switching diagram	
Cable outlet right	<b>6023000109</b> M49-SU1 FF
Cable outlet below	<b>6023000110</b> M49-SU1 FF Z
M12 connector right	<b>6023000111</b> M49-SU1 FF M12
M12 connector below	<b>6023000112</b> M49-SU1 FF Z M12

