

## IN73- Series

Larger Modular Plastic Body  
Position & Limit Switches



# Position & Limit Switches

## IN73 Series - Plastic Body



### Good to know ...

Our new standard switch, the IN73, is the latest in our ENK-series. It offers a modular, robust enclosure and a wide range of actuators made of metal. In mechanical and plant engineering, it is used as a position and safety switch in rough environments as it features additional fixing holes to achieve a better installation.

The “big brother” of the IN65, it has a similar modular design, however there is an important difference: Whereas the C14 switch insert (introduced on page 37) has 2 contacts, the IN73 can be equipped with the C17 switch insert with 4 contacts.

The modular design and the easy way to change the actuator allows for a great variety of applications, for example for monitoring doors, hoods, and flaps, or for detecting the position of moving machine parts. The IN73 is as cost effective as a plastic enclosed switch, robust to install like a metal switch, and clever due to its modular design and easy to change actuators.



**2 OR 4 CONTACTS**

# Position & Limit Switches

## IN73 Series - Plastic Body

### Technical design

- Slow- and snap-action
- **Versions:**
  - With C14 switch insert: 2 NC, 2 NO, 1 NC/1 NO
  - With C17 switch insert: 4 NO, 4 NC, 2 NO/2 NC
  - 1 NC/3 NO and 3 NC/1 NO

### Technical data

Electrical data		
Design insulation voltage	$U_i$ max.	400 V AC
Conventional thermoelectric current	(up to) $I_{the}$	5 A
Rated operating voltage	$U_e$ max.	240 V AC
Utilisation category (up to)		AC-15, $U_e/I_e$ 240 V/3 A DC-13 $U_e/I_e$ 24 V/1.5 A
Short-circuit protection (up to)		Safety fuse 4 A gG
Protection class		II, protective insulation
Mechanical data		
Enclosure/Cover material		Thermoplastics, glass-fibre reinforced (UL 94-V0)
Ambient temperature		-30 °C to +75 °C
Mechanical lifetime (up to)		10 × 10 <sup>6</sup> switching cycles
B10d NC Contact cycles (up to)		20 million
B10d NO Contact cycles (up to)		1 million
Switching frequency		≤ 60/min.
Type of connection		4 screwed connections (M3)
Conductor cross-sections		Single-wire 0.5 – 1.5 mm <sup>2</sup> or strand with wire-end ferrule 0.5 – 1.5 mm <sup>2</sup>
Cable entry		1 × M20 × 1.5
Protection class		IP66/IP67 according to EN 60529; DIN VDE 0470 T1
Standards		

VDE 0660 T211, DIN EN 60947-5-4, IEC 60947-5-4  
DIN EN ISO 13849-1, DIN EN ISO 13849-2

① Depending on switching system

### Product characteristics

- High reliability at low currents (1 mA/24 VDC)
- Up to 4 contacts
- Actuator and installation collar with mounting holes made of metal
- Easy turning (8 x 45°) and changing of the actuators without a tool
- Standard switch and standard actuator according to DIN EN 50041



### Options

- Available with an M12 connector
- On request, available with customised cables and connectors

### Mounting

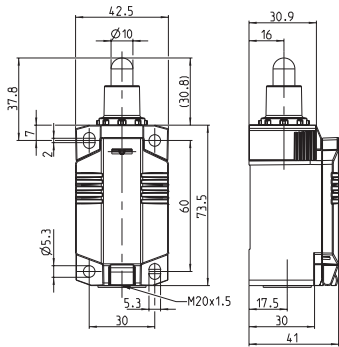
- 2 oval holes for adjustment for M5 screws
- 2 round holes for M5 screws for fixing when used for safety applications

# Position & Limit Switches

## IN73 Series - Plastic Body

### IN73-... SM

Replacement actuator: 3918022415



	1 NC / 1 NO	2 NC	2 NO	2 NC / 2 NO
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Slow-action system	<b>608100002</b> IN73-11 SM 	<b>608100004</b> IN73-20 SM 	<b>608100006</b> IN73-02 SM 	<b>608100008</b> IN73-22 SM 
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Snap-action system	<b>608100001</b> IN73-S11 SM 	<b>608100003</b> IN73-S20 SM 	<b>608100005</b> IN73-S02 SM 
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	4 NC	4 NO	3 NC / 1 NO	1 NC / 3 NO	1 NC / 1 NO overlapping
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Slow-action system	<b>608100009</b> IN73-40 SM 	<b>608100010</b> IN73-04 SM 	<b>608100011</b> IN73-31 SM 	<b>608100012</b> IN73-13 SM 	<b>608100007</b> IN73-V11 SM 
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# Position & Limit Switches

## IN73 Series - Plastic Body



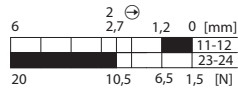
Replacement actuator: 3918172417

IN73-... RM

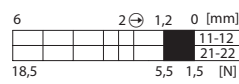
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Slow-action system

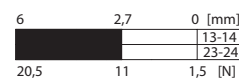
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IN73-11 RM



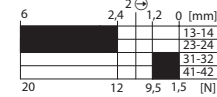
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IN73-20 RM



**608100018**  
IN73-02 RM



**608100020**  
IN73-22 RM

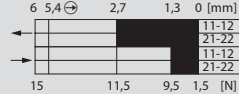


Snap-action system

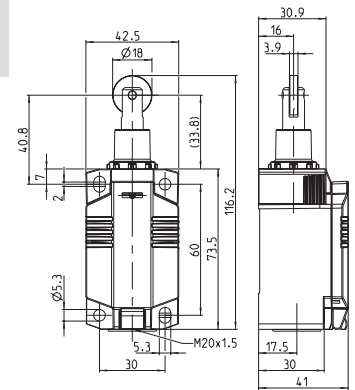
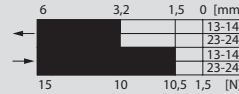
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IN73-S11 RM



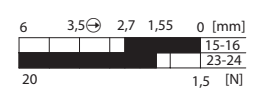
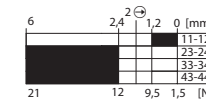
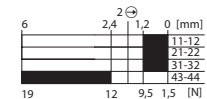
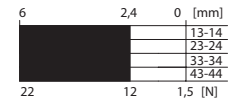
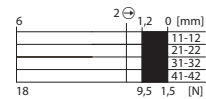
**608100015**  
IN73-S20 RM



**608100017**  
IN73-S02 RM



4 NC	4 NO	3 NC / 1 NO	1 NC / 3 NO	1 NC / 1 NO overlapping
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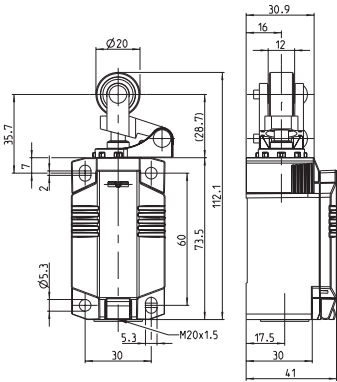


# Position & Limit Switches

## IN73 Series - Plastic Body

### IN73-... HK

Replacement actuator: 3918202432



	1 NC / 1 NO	2 NC	2 NO	2 NC / 2 NO
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Slow-action system	<b>608100026</b> IN73-11 HK 	<b>608100028</b> IN73-20 HK 	<b>608100030</b> IN73-02 HK 	<b>608100032</b> IN73-22 HK 
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Snap-action system	<b>608100025</b> IN73-S11 HK 	<b>608100027</b> IN73-S20 HK 	<b>608100029</b> IN73-S02 HK 
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	4 NC	4 NO	3 NC / 1 NO	1 NC / 3 NO	1 NC / 1 NO overlapping
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Slow-action system	<b>608100033</b> IN73-40 HK 	<b>608100034</b> IN73-04 HK 	<b>608100035</b> IN73-31 HK 	<b>608100036</b> IN73-13 HK 	<b>608100031</b> IN73-V11 HK 
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# Position & Limit Switches

## IN73 Series - Plastic Body



Replacement actuator: 3918202428

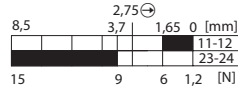
IN73-... DGHK



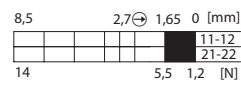
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Slow-action system

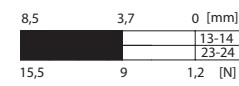
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IN73-11 DGHK



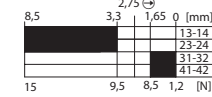
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IN73-20 DGHK



**6081000042**  
IN73-02 DGHK

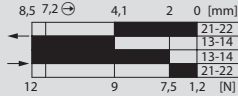


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IN73-22 DGHK

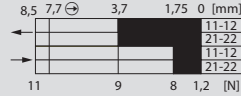


Snap-action system

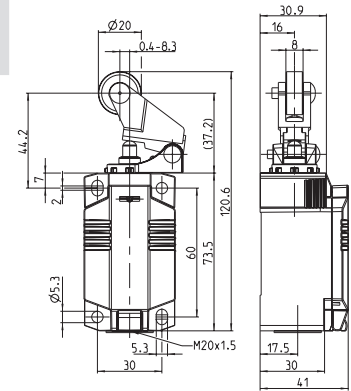
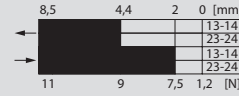
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IN73-S11 DGHK



**6081000039**  
IN73-S20 DGHK



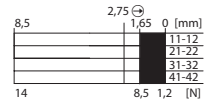
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IN73-S02 DGHK



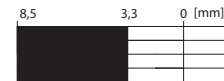
	4 NC	4 NO	3 NC / 1 NO	1 NC / 3 NO	1 NC / 1 NO overlapping
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Slow-action system

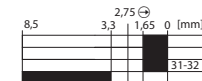
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IN73-40 DGHK



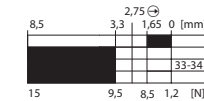
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IN73-04 DGHK



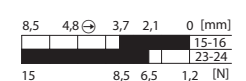
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IN73-31 DGHK



**6081000048**  
IN73-13 DGHK



**6081000043**  
IN73-V11 DGHK

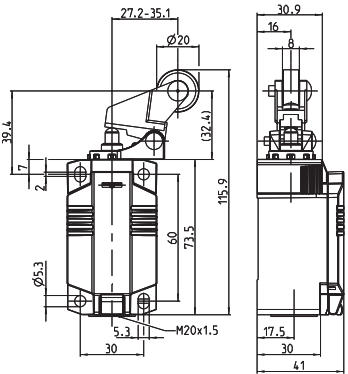


# Position & Limit Switches

## IN73 Series - Plastic Body

### IN73-... DGKK

Replacement actuator: 3918202430

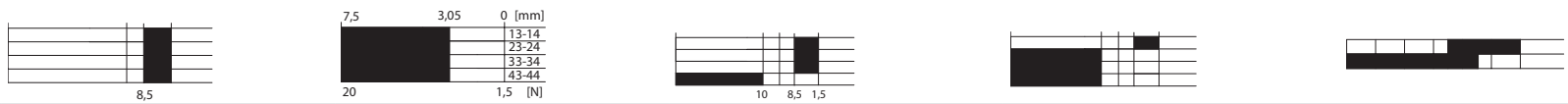


	1 NC / 1 NO	2 NC	2 NO	2 NC / 2 NO
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Slow-action system	<b>6081000050</b> IN73-11 DGKK  7,5 3,4 2,6 1,55 0 [mm] 11-12 23-24	<b>6081000052</b> IN73-20 DGKK  7,5 2,6 1,55 0 [mm] 17 5,5 1,5 [N]	<b>6081000054</b> IN73-02 DGKK  7,5 3,4 0 [mm] 20 10 1,5 [N]	<b>6081000056</b> IN73-22 DGKK  7,5 3,05 1,55 0 [mm] 13-14 23-24 31-32 41-42 18 10 8,5 1,5 [N]
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Snap-action system	<b>6081000049</b> IN73-S11 DGKK  7,5 6,5 3,8 1,95 0 [mm] 21-22 13-14 13-14 21-22 14 9,5 8,5 1,5 [N]	<b>6081000051</b> IN73-S20 DGKK  7,5 6,85 3,4 1,65 0 [mm] 11-12 21-22 11-12 21-22 14 9,5 8 1,5 [N]	<b>6081000053</b> IN73-S02 DGKK  7,5 4,1 1,95 0 [mm] 13-14 23-24 13-14 23-24 14 10 8,5 1,5 [N]
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4 NC	4 NO	3 NC / 1 NO	1 NC / 3 NO	1 NC / 1 NO overlapping
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# Position & Limit Switches

## IN73 Series - Plastic Body



Replacement actuator: 3918352393

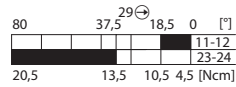
IN73-... AHK



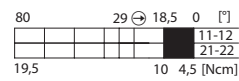
	1 NC / 1 NO	2 NC	2 NO	2 NC / 2 NO
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Slow-action system

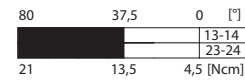
**608100062**  
IN73-11 AHK



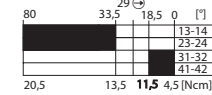
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IN73-20 AHK



**608100066**  
IN73-02 AHK

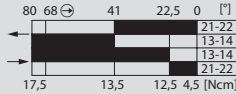


**608100068**  
IN73-22 AHK

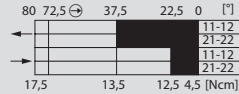


Snap-action system

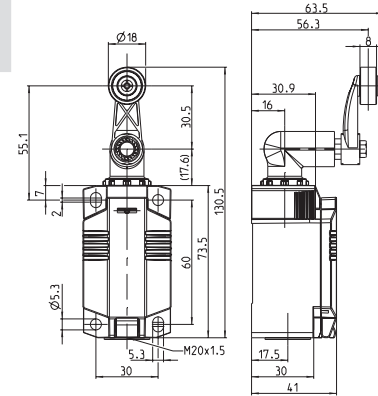
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IN73-S11 AHK



**608100063**  
IN73-S20 AHK



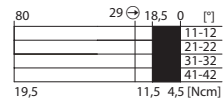
**608100065**  
IN73-S02 AHK



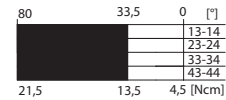
	4 NC	4 NO	3 NC / 1 NO	1 NC / 3 NO	1 NC / 1 NO overlapping
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Slow-action system

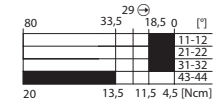
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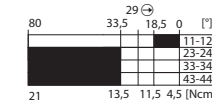
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IN73-04 AHK



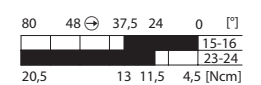
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IN73-31 AHK



**608100072**  
IN73-13 AHK



**608100067**  
IN73-V11 AHK



# Position & Limit Switches

## IN73 Series - Plastic Body



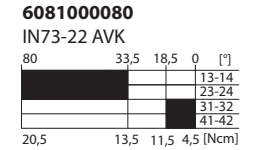
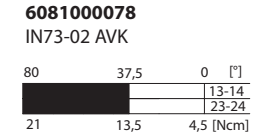
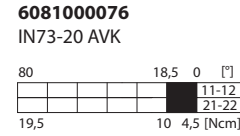
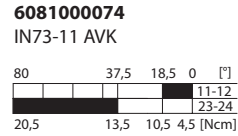
### IN73-... AVK

Replacement actuator: 3918362424

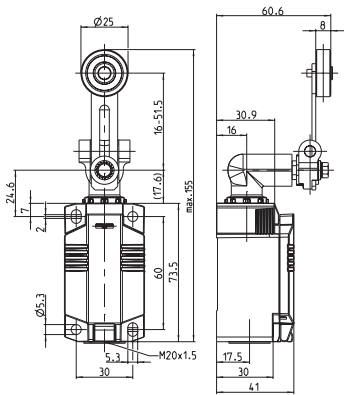
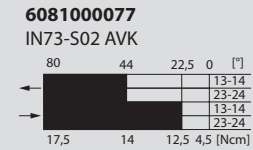
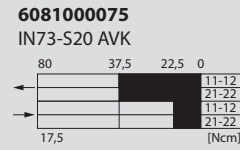
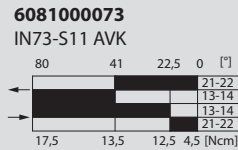


	1 NC / 1 NO	2 NC	2 NO	2 NC / 2 NO
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#### Slow-action system

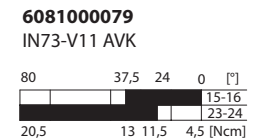
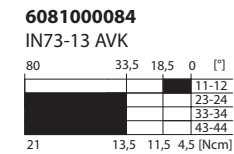
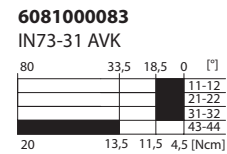
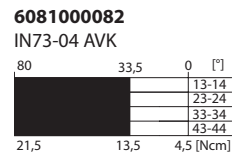
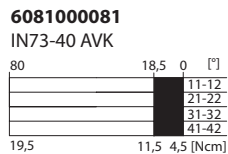


#### Snap-action system



	4 NC	4 NO	3 NC / 1 NO	1 NC / 3 NO	1 NC / 1 NO overlapping
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#### Slow-action system



# Position & Limit Switches

## IN73 Series - Plastic Body



Replacement actuator: 3918372421

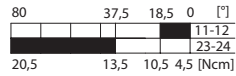
IN73-... AHDM



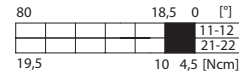
	1 NC / 1 NO	2 NC	2 NO	2 NC / 2 NO
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Slow-action system

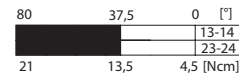
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IN73-11 AHDM



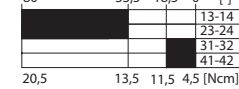
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IN73-20 AHDM



**6081000090**  
IN73-02 AHDM

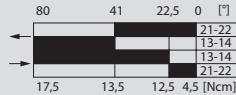


**6081000092**  
IN73-22 AHDM

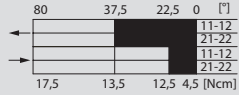


Snap-action system

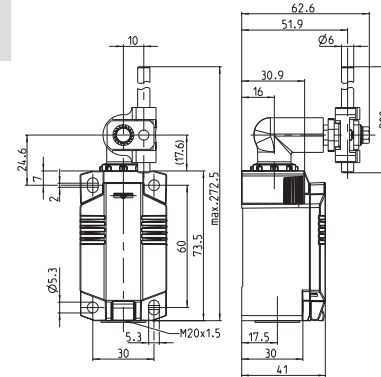
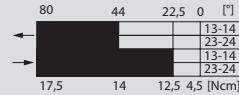
**6081000085**  
IN73-S11 AHDM



**6081000087**  
IN73-S20 AHDM



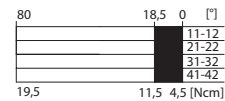
**6081000089**  
IN73-S02 AHDM



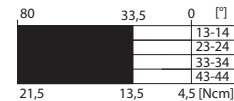
	4 NC	4 NO	3 NC / 1 NO	1 NC / 3 NO	1 NC / 1 NO overlapping
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Slow-action system

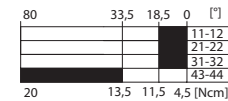
**6081000093**  
IN73-40 AHDM



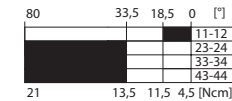
**6081000094**  
IN73-04 AHDM



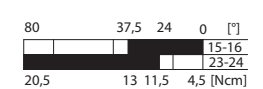
**6081000095**  
IN73-31 AHDM



**6081000096**  
IN73-13 AHDM



**6081000091**  
IN73-V11 AHDM



# Position & Limit Switches

## IN73 Series - Plastic Body

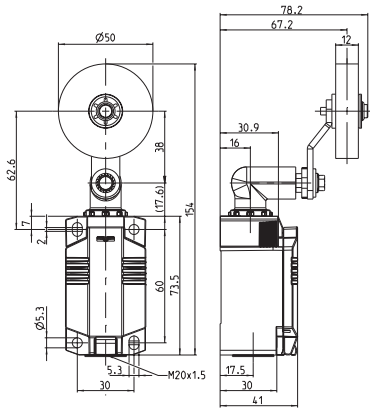


### IN73-... AHGU RO50

Replacement actuator: 3918352422



	1 NC / 1 NO	2 NC	1 NC / 1 NO overlapping																																																																				
<b>Slow-action system</b>	<p><b>6081000109</b> IN73-11 AHGU Ro50</p> <table border="1"> <tr> <td>80</td> <td>37,5</td> <td>29</td> <td>18,5</td> <td>0</td> <td>[°]</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td>11-12</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td>23-24</td> </tr> <tr> <td>26,5</td> <td>19</td> <td>16</td> <td>7,5</td> <td colspan="2">[Ncm]</td> </tr> </table>	80	37,5	29	18,5	0	[°]						11-12						23-24	26,5	19	16	7,5	[Ncm]		<p><b>6081000110</b> IN73-20 AHGU Ro50</p> <table border="1"> <tr> <td>80</td> <td>29</td> <td>18,5</td> <td>0</td> <td>[°]</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td>11-12</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td>21-22</td> </tr> <tr> <td>26</td> <td>15,5</td> <td>7,5</td> <td colspan="2">[Ncm]</td> </tr> </table>	80	29	18,5	0	[°]					11-12					21-22	26	15,5	7,5	[Ncm]		<p><b>6081000111</b> IN73-V11 AHGU Ro50</p> <table border="1"> <tr> <td>80</td> <td>48</td> <td>37,5</td> <td>24</td> <td>0</td> <td>[°]</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td>15-16</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td>23-24</td> </tr> <tr> <td>26,5</td> <td>19</td> <td>17</td> <td>7,5</td> <td colspan="2">[Ncm]</td> </tr> </table>	80	48	37,5	24	0	[°]						15-16						23-24	26,5	19	17	7,5	[Ncm]	
80	37,5	29	18,5	0	[°]																																																																		
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80	29	18,5	0	[°]																																																																			
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26	15,5	7,5	[Ncm]																																																																				
80	48	37,5	24	0	[°]																																																																		
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26,5	19	17	7,5	[Ncm]																																																																			
<b>Snap-action system</b>	<p><b>6081000108</b> IN73-S11 AHGU Ro50</p> <table border="1"> <tr> <td>80</td> <td>68</td> <td>41</td> <td>22,5</td> <td>0</td> <td>[°]</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td>21-22</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td>13-14</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td>13-14</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td>21-22</td> </tr> <tr> <td>24</td> <td>19</td> <td>18</td> <td>7,5</td> <td colspan="2">[Ncm]</td> </tr> </table>			80	68	41	22,5	0	[°]						21-22						13-14						13-14						21-22	24	19	18	7,5	[Ncm]																																	
80	68	41	22,5	0	[°]																																																																		
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24	19	18	7,5	[Ncm]																																																																			



# Position & Limit Switches

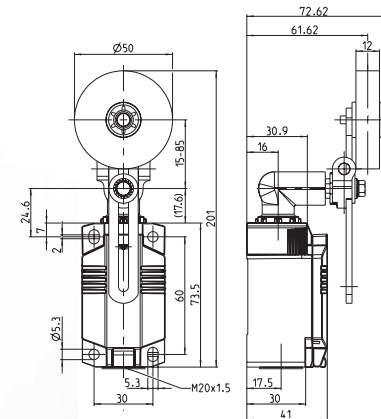
## IN73 Series - Plastic Body



Replacement actuator: 3918362423

IN73-... AVGU RO50

	1 NC / 1 NO	2 NC	1 NC / 1 NO overlapping
<b>Slow-action system</b>	<p><b>6081000105</b> IN73-11 AVGU Ro50</p>	<p><b>6081000106</b> IN73-20 AVGU Ro50</p>	<p><b>6081000107</b> IN73-V11 AVGU Ro50</p>
<b>Snap-action system</b>	<p><b>6081000104</b> IN73-S11 AVGU Ro50</p>		



# Position & Limit Switches

## IN73 Seperate Switch Body and Actuators



**SM**  
3918022415  
(Metal plunger)



**RK**  
3918172416  
(Plastic roller)



**RM**  
3918172417  
(Metal roller)



**RP\***  
3911042418  
(Pull switch attachment)



**AHK**  
3918352393  
(Plastic roller)



**AHM**  
3918352419  
(Metal roller)



**AHDK**  
3918372420  
(Plastic)



**AHDM**  
3918372421  
(Metal)



**AHGU RO**  
3918352422  
(Rubber roller)



**AVGU RO**  
3918362423  
(Rubber roller)



**AVK**  
3918362424  
(Plastic roller)



**AVM**  
3918362425  
(Metal roller)



**AVZK**  
3918362426  
(Plastic roller)



**AVZM**  
3918362427  
(Metal roller)



**DGHK**  
3918202428  
(Plastic roller)



**DGHM**  
3918202429  
(Metal roller)



**DGKK**  
3918202430  
(Plastic roller)



**DGKM**  
3918202431  
(Metal roller)



**HK**  
3918202432  
(Plastic roller)



**HM**  
3918202433  
(Metal roller)

### IN73 partially assembled with a switching unit

		1 NC / 1 NO	2 NC	2 NO	2 NC / 2 NO
Slow-action system	M20	<b>6081000113</b> IN73-11 M20	<b>6081000115</b> IN73-20 M20	<b>6081000117</b> IN73-02 M20	<b>6081000119</b> IN73-22 M20
	M12	<b>6081000126</b> IN73-11 03	<b>6081000128</b> IN73-20 03	<b>6081000130</b> IN73-02 03	<b>6081000132</b> IN73-22 05
Snap-action system	M20	<b>6081000112</b> IN73-S11 M20	<b>6081000114</b> IN73-S20 M20	<b>6081000116</b> IN73-S02 M20	
	M12	<b>6081000125</b> IN73-S11 03	<b>6081000127</b> IN73-S20 03	<b>6081000129</b> IN73-S02 03	



		4 NC	4 NO	3 NC / 1 NO	1 NC / 3 NO	1 NC / 1 NO overlapping
Slow-action system	M20	<b>6081000120</b> IN73-40 M20	<b>6081000121</b> IN73-04 M20	<b>6081000122</b> IN73-31 M20	<b>6081000123</b> IN73-13 M20	<b>6081000118</b> IN73-V11 M20
	M12	<b>6081000133</b> IN73-40 05	<b>6081000134</b> IN73-04 05	<b>6081000135</b> IN73-31 05	<b>6081000136</b> IN73-13 05	<b>6081000131</b> IN73-V11 03

\* Can only be used with slow-action systems.