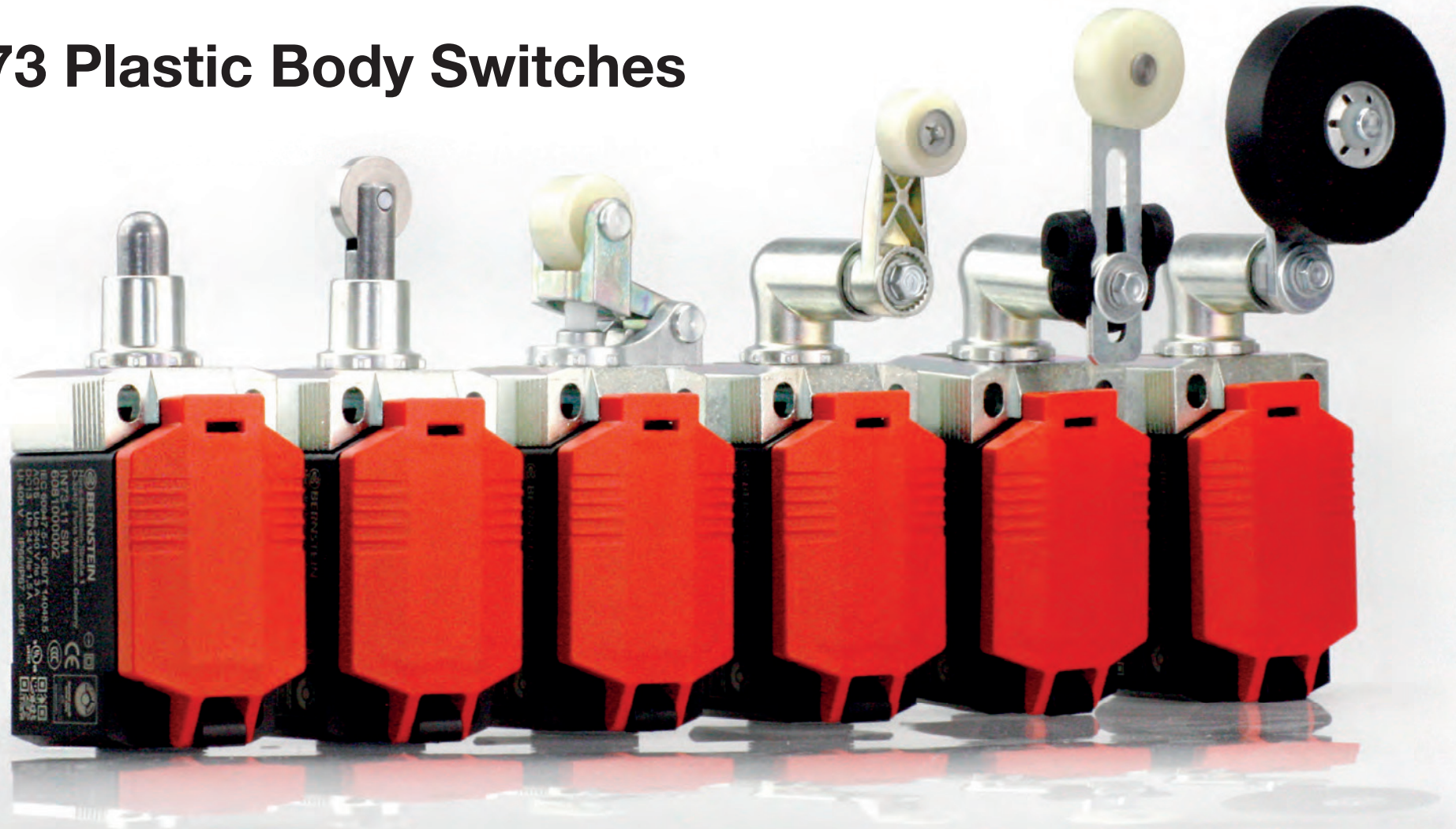


IN73 Plastic Body Switches



Position switches
IN73 and MN78

Altech Corp.[®]
Your Source for Automation & Control Components

Plastic enclosures

Position switches Plastic IN73

NEW



2 OR 4 CONTACTS

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 26) 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.

Altech Corp.[®]

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)		10×10^6 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 ² or strand with wire-end ferrule 0.5 – 1.5 mm ²
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		
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
- Protection class IP66 and IP67 according to EN 60529



Options

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

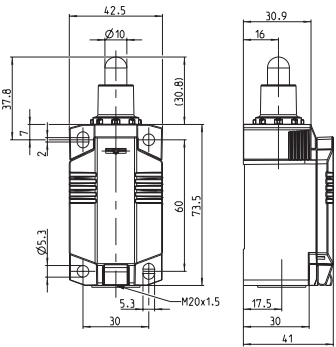
Mounting

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

POSITION SWITCHES PLASTIC IN73

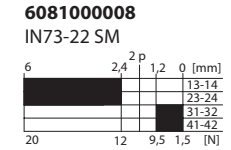
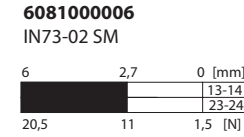
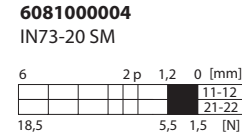
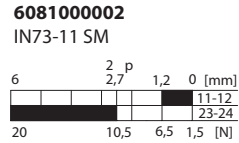
IN73-... SM

Replacement actuator: 3918022415

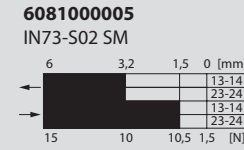
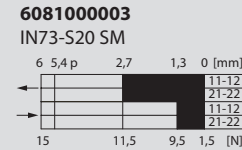
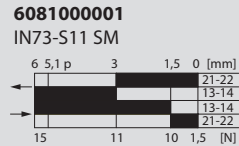


	1 NC / 1 NO	2 NC	2 NO	2 NC / 2 NO
--	-------------	------	------	-------------

Slow-action system

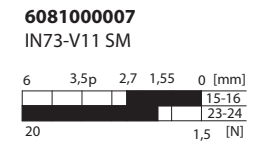
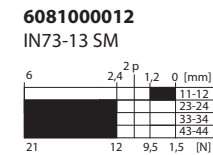
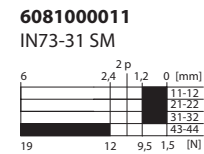
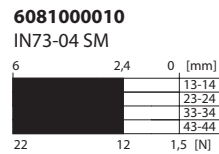
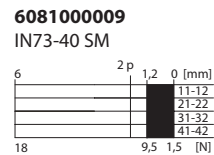


Snap-action system



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

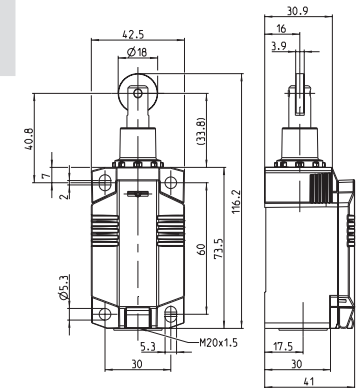
Slow-action system





Replacement actuator: 3918172417

IN73-... RM



	1 NC / 1 NO	2 NC	2 NO	2 NC / 2 NO
--	-------------	------	------	-------------

Slow-action system	6081000014 IN73-11 RM 	6081000016 IN73-20 RM 	6081000018 IN73-02 RM 	6081000020 IN73-22 RM
--------------------	-------------------------------------	-------------------------------------	-------------------------------------	-------------------------------------

Snap-action system	6081000013 IN73-S11 RM 	6081000015 IN73-S20 RM 	6081000017 IN73-S02 RM
--------------------	--------------------------------------	--------------------------------------	--------------------------------------

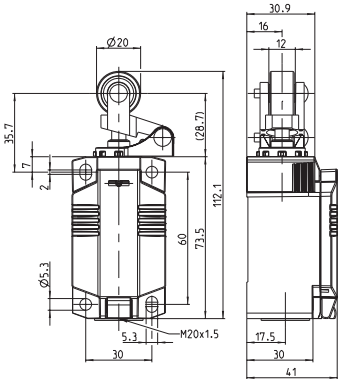
	4 NC	4 NO	3 NC / 1 NO	1 NC / 3 NO	1 NC / 1 NO overlapping
--	------	------	-------------	-------------	-------------------------

Slow-action system	6081000021 IN73-40 RM 	6081000022 IN73-04 RM 	6081000023 IN73-31 RM 	6081000024 IN73-13 RM 	6081000019 IN73-V11 RM
--------------------	-------------------------------------	-------------------------------------	-------------------------------------	-------------------------------------	--------------------------------------

POSITION SWITCHES PLASTIC IN73

IN73-... HK

Replacement actuator: 3918202432



	1 NC / 1 NO	2 NC	2 NO	2 NC / 2 NO
--	-------------	------	------	-------------

Slow-action system	608100026 IN73-11 HK	608100028 IN73-20 HK	608100030 IN73-02 HK	608100032 IN73-22 HK
	6,7 2,8 1,2 0 [mm] 11-12 23-24 20 11,5 7,4 2 [N]	6,7 2,1p 1,2 0 [mm] 11-12 21-22 18 6,5 2 [N]	6,7 2,8 0 [mm] 13-14 23-24 21 12,5 2 [N]	6,7 2,5 1,2 0 [mm] 13-14 23-24 31-32 41-42 20 12,5 10,5 2 [N]

Snap-action system	608100025 IN73-S11 HK	608100027 IN73-S20 HK	608100029 IN73-S02 HK
	6,7 5,6 p 3,2 1,5 0 [mm] 21-22 13-14 13-14 21-22 15 12 10 2 [N]	6,7 5,65 p 2,8 1,3 0 [mm] 11-12 21-22 11-12 21-22 15 11,5 10 2 [N]	6,7 3,4 1,5 0 [mm] 11-12 13-14 23-24 11-12 13-14 23-24 15 12 10 2 [N]

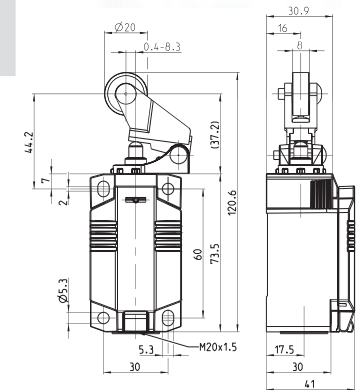
	4 NC	4 NO	3 NC / 1 NO	1 NC / 3 NO	1 NC / 1 NO overlapping
--	------	------	-------------	-------------	-------------------------

Slow-action system	608100033 IN73-40 HK	608100034 IN73-04 HK	608100035 IN73-31 HK	608100036 IN73-13 HK	608100031 IN73-V11 HK
	6,7 2,1 p 1,2 0 [mm] 11-12 21-22 31-32 41-42 18,5 10,5 1,5 [N]	6,7 2,5 0 [mm] 13-14 23-24 33-34 43-44 21,5 12,5 2 [N]	6,7 2,5 1,2 0 [mm] 11-12 21-22 31-32 43-44 19 12,5 10,5 2 [N]	6,7 2,5 1,2 0 [mm] 11-12 21-22 33-34 43-44 21 12,5 10,5 2 [N]	6,7 3,75 p 2,8 1,65 0 [mm] 15-16 23-24 20 11 9 2 [N]



Replacement actuator: 3918202428

IN73-... DGHK



	1 NC / 1 NO	2 NC	2 NO	2 NC / 2 NO
--	-------------	------	------	-------------

Slow-action system	6081000038 IN73-11 DGHK 	6081000040 IN73-20 DGHK 	6081000042 IN73-02 DGHK 	6081000044 IN73-22 DGHK
--------------------	---------------------------------------	---------------------------------------	---------------------------------------	---------------------------------------

Snap-action system	6081000037 IN73-S11 DGHK 	6081000039 IN73-S20 DGHK 	6081000041 IN73-S02 DGHK 	
--------------------	--	--	--	--

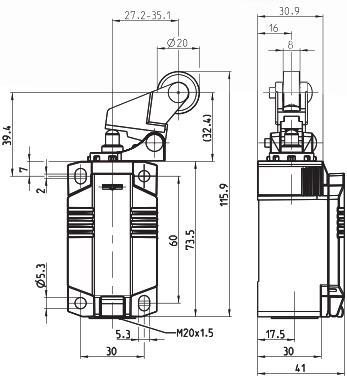
	4 NC	4 NO	3 NC / 1 NO	1 NC / 3 NO	1 NC / 1 NO overlapping
--	------	------	-------------	-------------	-------------------------

Slow-action system	6081000045 IN73-40 DGHK 	6081000046 IN73-04 DGHK 	6081000047 IN73-31 DGHK 	6081000048 IN73-13 DGHK 	6081000043 IN73-V11 DGHK
--------------------	---------------------------------------	---------------------------------------	---------------------------------------	---------------------------------------	--

POSITION SWITCHES PLASTIC IN73

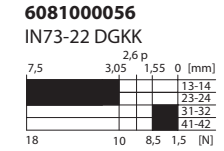
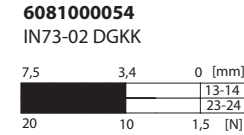
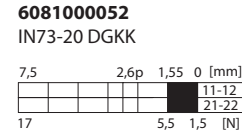
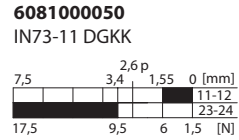
IN73-... DGKK

Replacement actuator: 3918202430

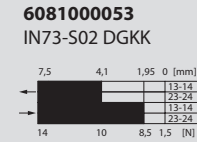
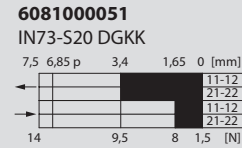
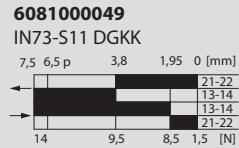


	1 NC / 1 NO	2 NC	2 NO	2 NC / 2 NO
--	-------------	------	------	-------------

Slow-action system

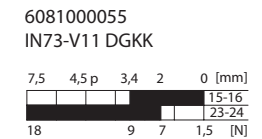
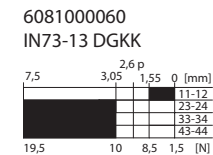
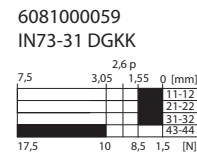
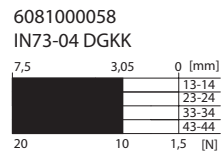
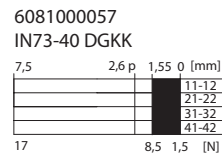


Snap-action system



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

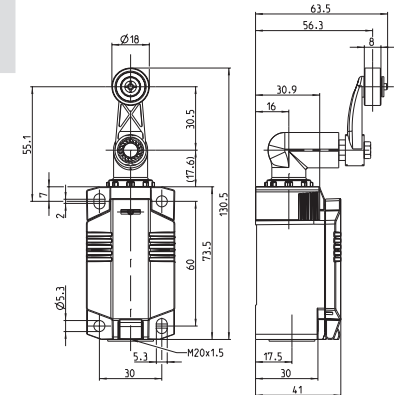
Slow-action system





Replacement actuator: 3918352393

IN73-... AHK



	1 NC / 1 NO	2 NC	2 NO	2 NC / 2 NO
--	-------------	------	------	-------------

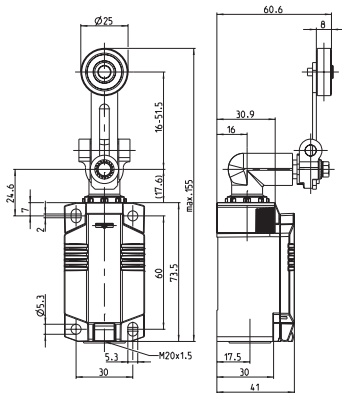
Slow-action system	608100062 IN73-11 AHK 	608100064 IN73-20 AHK 	608100066 IN73-02 AHK 	608100068 IN73-22 AHK
--------------------	-------------------------------------	-------------------------------------	-------------------------------------	-------------------------------------

Snap-action system	608100061 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
--	------	------	-------------	-------------	-------------------------

Slow-action system	608100069 IN73-40 AHK 	608100070 IN73-04 AHK 	608100071 IN73-31 AHK 	608100072 IN73-13 AHK 	608100067 IN73-V11 AHK
--------------------	-------------------------------------	-------------------------------------	-------------------------------------	-------------------------------------	--------------------------------------

POSITION SWITCHES PLASTIC IN73



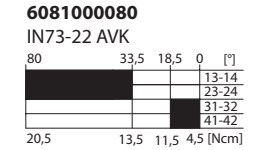
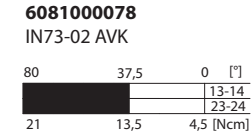
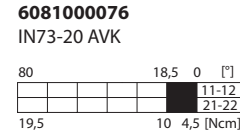
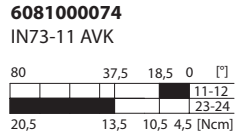
IN73-... AVK

Replacement actuator: 3918362424

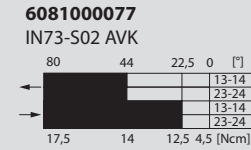
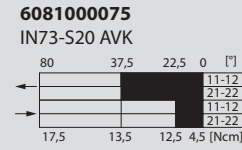
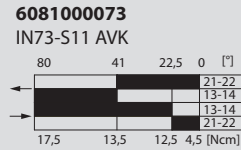


	1 NC / 1 NO	2 NC	2 NO	2 NC / 2 NO
--	-------------	------	------	-------------

Slow-action system

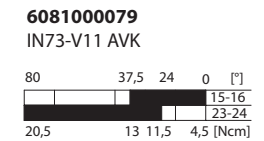
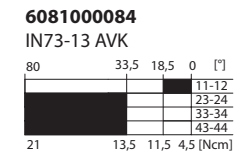
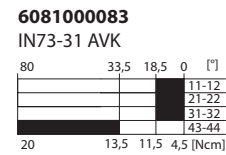
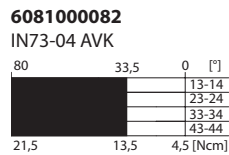
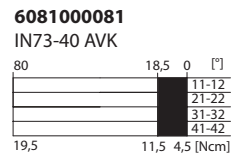


Snap-action system



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

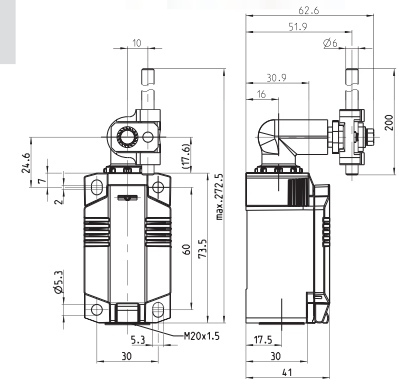
Slow-action system





Replacement actuator: 3918372421

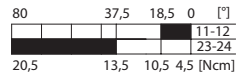
IN73-... AHDM



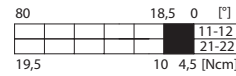
	1 NC / 1 NO	2 NC	2 NO	2 NC / 2 NO
--	-------------	------	------	-------------

Slow-action system

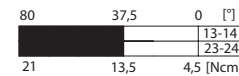
608100086
IN73-11 AHDM



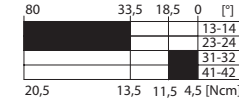
608100088
IN73-20 AHDM



608100090
IN73-02 AHDM

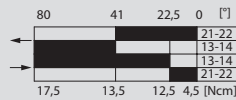


608100092
IN73-22 AHDM

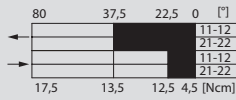


Snap-action system

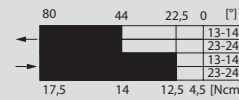
608100085
IN73-S11 AHDM



608100087
IN73-S20 AHDM



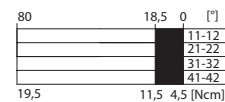
608100089
IN73-S02 AHDM



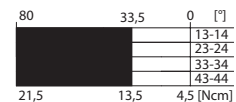
	4 NC	4 NO	3 NC / 1 NO	1 NC / 3 NO	1 NC / 1 NO overlapping
--	------	------	-------------	-------------	-------------------------

Slow-action system

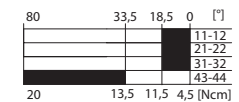
608100093
IN73-40 AHDM



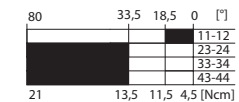
608100094
IN73-04 AHDM



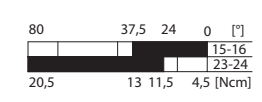
608100095
IN73-31 AHDM



608100096
IN73-13 AHDM



608100091
IN73-V11 AHDM



POSITION SWITCHES PLASTIC IN73

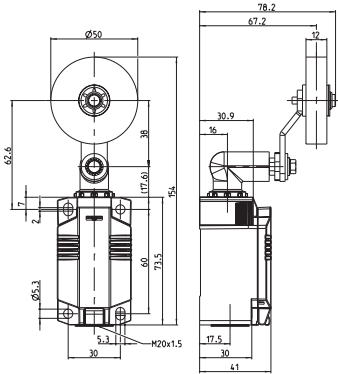


IN73-... AHGU Ro50

Replacement actuator: 3918352422



	1 NC / 1 NO	2 NC	1 NC / 1 NO overlapping
Slow-action system	6081000109 IN73-11 AHGU Ro50 	6081000110 IN73-20 AHGU Ro50 	6081000111 IN73-V11 AHGU Ro50
Snap-action system	6081000108 IN73-S11 AHGU Ro50 		



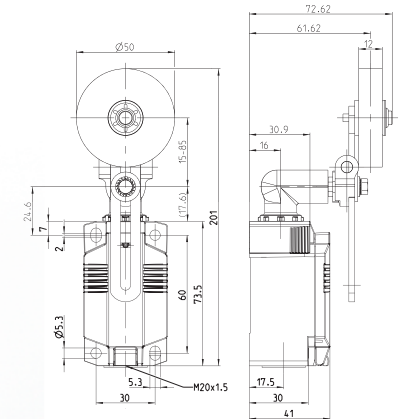
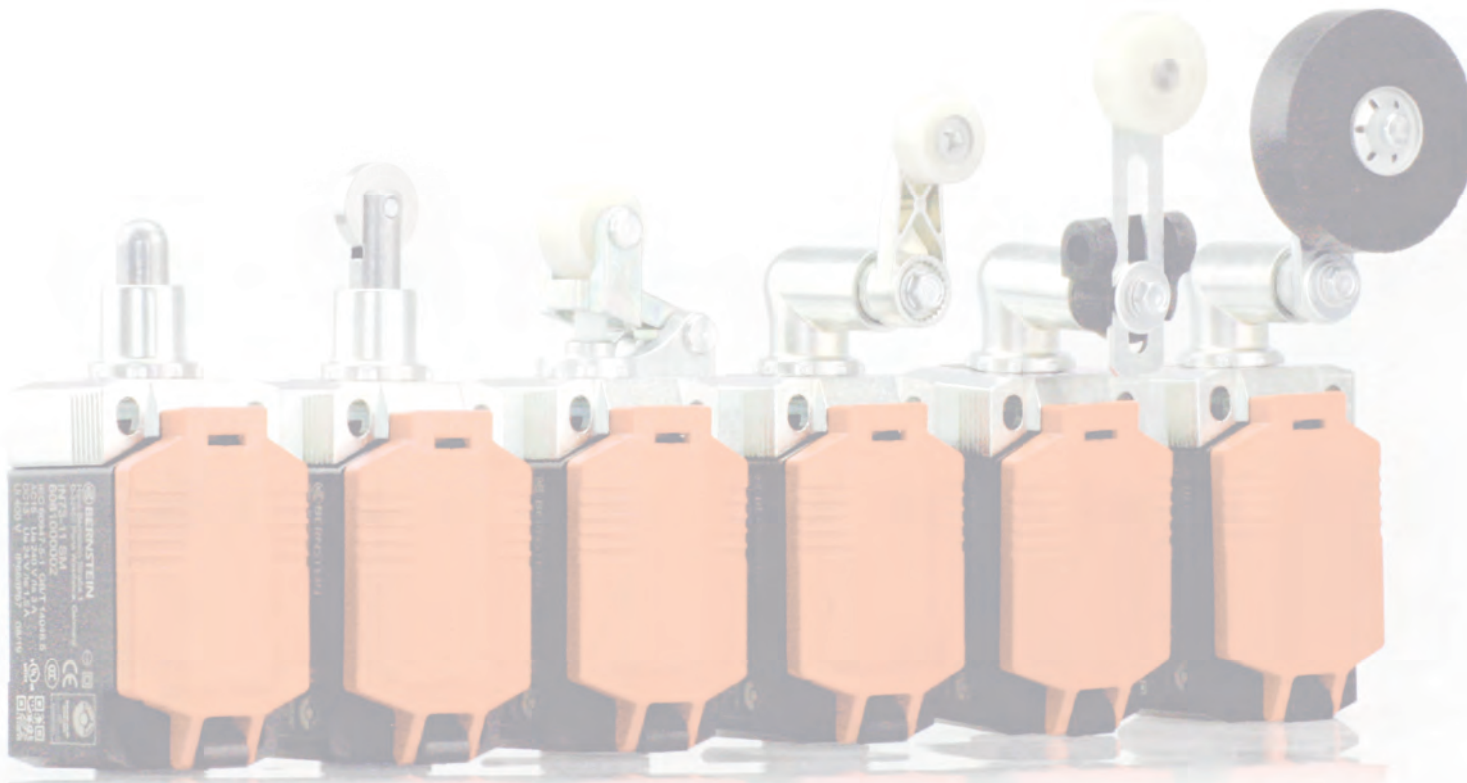


Replacement actuator: 3918362423

IN73-... AVGU RO50

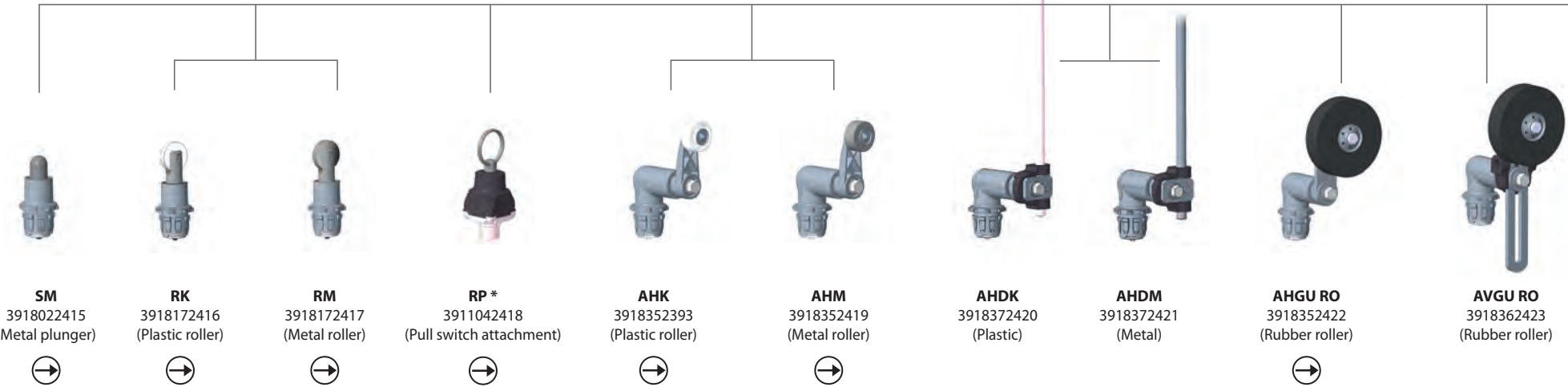


	1 NC / 1 NO	2 NC	1 NC / 1 NO overlapping
Slow-action system	6081000105 IN73-11 AVGU Ro50 	6081000106 IN73-20 AVGU Ro50 	6081000107 IN73-V11 AVGU Ro50
Snap-action system	6081000104 IN73-S11 AVGU Ro50 		



ACTUATORS IN73, MN78

Here is a small selection of our actuators. Others are available on request.



IN73 partially assembled with a switching unit

	1 NC / 1 NO	2 NC	2 NO	2 NC / 2 NO
Slow-action system	6081000113 IN73-11 M20	6081000115 IN73-20 M20	6081000117 IN73-02 M20	6081000119 IN73-22 M20
Snap-action system	6081000112 IN73-S11 M20	6081000114 IN73-S20 M20	6081000116 IN73-S02 M20	



	4 NC	4 NO	3 NC / 1 NO	1 NC / 3 NO	1 NC / 1 NO overlapping
Slow-action system	6081000120 IN73-40 M20	6081000121 IN73-04 M20	6081000122 IN73-31 M20	6081000123 IN73-13 M20	6081000118 IN73-V11 M20

* Can only be used with slow-action systems.



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)



MN78 partially assembled with a switching unit

	1 NC / 1 NO	2 NC	2 NO	2 NC / 2 NO
Slow-action system	6087000103 MN78-11 M20	6087000105 MN78-20 M20	6087000107 MN78-02 M20	6087000109 MN78-22 M20
Snap-action system	6087000102 MN78-S11 M20	6087000104 MN78-S20 M20	6087000106 MN78-S02 M20	



	4 NC	4 NO	3 NC / 1 NO	1 NC / 3 NO	1 NC / 1 NO overlapping
Slow-action system	6087000110 MN78-40 M20	6087000111 MN78-04 M20	6087000112 MN78-31 M20	6087000113 MN78-13 M2	6087000108 MN78-V11 M20

POSITION SWITCHES

What's so special about the C14?

We installed a modern assembly line in our factory in Hille-Hartum to produce the new C14 switch inserts (1 NC/1 NO, 2 NC, 2 NO). The modular design of the line allows maximum flexibility for the production of all the different switch inserts. During the fully-automatic manufacturing process, all switch inserts are tested to ensure the highest quality. More than 800 switch inserts can be produced per hour.

The most important feature of the C14 switch insert is the encapsulated contacts. Production takes place in a cleanroom environment to ensure that the contact surfaces are extremely clean, even during the assembly. And due to the encapsulated enclosure of the C14 switch insert, we can ensure that, even after the manufacturing process, no dirt or dust can contaminate the contacts. The switch can therefore handle very low currents of 1 mA at 24 VDC.



C14 SWITCH INSERT

