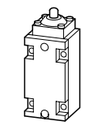
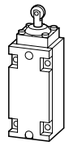
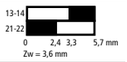
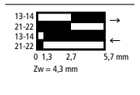
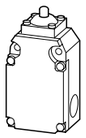
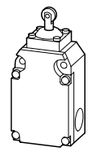
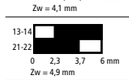
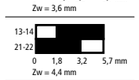
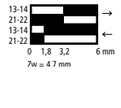
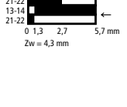
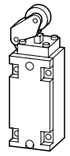
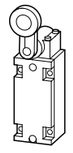
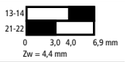
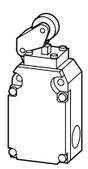
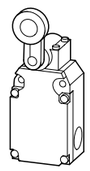
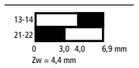
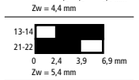
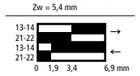
AT4 Position Switches
Complete Units

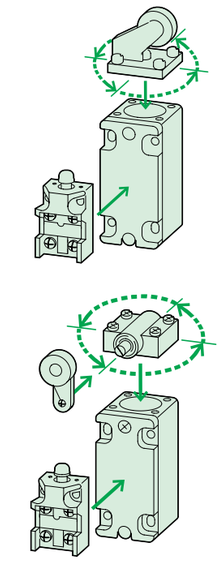
Contacts M = Make B = Break ⊖ = Safety function by positive opening of contacts to IEC/EN 60 947-5-1	Contact sequence Contact ■ Closed □ Open Zw = Positive opening clearance	**Plunger** **EN 50 041** Form B **Type** Article no.	**Price** See Price List		**Roller plunger** **EN 50 041** Form C **Type** Article no.	**Price** See Price List
Complete units, IP65						
Narrow version						
1 M 1 B ⊖		 **AT4/11-1/I/S** 005244			 **AT4/11-1/I/RS** 000498	
1 M 1 B ⊖		 **AT4/11-2/I/S** 097791			 **AT4/11-2/I/RS** 090672	
1 M 1 B ⊖		Snap-action contact  **AT4/11-S/I/S** 090673			 **AT4/11-S/I/RS** 085927	
Wide version						
1 M 1 B ⊖		 **AT4/11-1/IA/S** 038466			 **AT4/11-1/IA/RS** 031347	
1 M 1 B ⊖		 **AT4/11-2/IA/S** 024229			 **AT4/11-2/IA/RS** 021856	
1 M 1 B ⊖		Snap-action contact  **AT4/11-S/IA/S** 028976			 **AT4/11-S/IA/RS** 024230	

AT4 Position Switches
Complete Units

	Roller head **Type** Article no.	**Price** See Price List		**Rotary lever** **EN 50 041** Form A **Type** Article no.	**Price** See Price List	**Notes** Std. pack
						
	 **AT4/11-1/I/AR** 085925			 **AT4/11-1/I/R316** 095417		1 off
	 **AT4/11-2/I/AR** 076434			 **AT4/11-2/I/R316** 085926		
	 **AT4/11-S/I/AR** 062197			 **AT4/11-S/I/R316** 081181		
						
	 **AT4/11-1/IA/AR** 017109			 **AT4/11-1/IA/R316** 026601		1 off
	 **AT4/11-2/IA/AR** 005245			 **AT4/11-2/IA/R316** 014737		
	 **AT4/11-S/IA/AR** 000500			 **AT4/11-S/IA/R316** 019484		

The operating heads can be rotated in 90° stages to match the specified direction of operation.

For degree of protection IP65, use M20 cable glands with up to 9.0 mm length of connecting thread (V-M20).



Accessories	**Page**
V-M20 cable gland	03/019

AT4 Position Switches
Complete Units

Contacts M = Make B = Break ⊖ = Safety function by positive opening of contacts to IEC/EN 60 947-5-1	Contact sequence Contact ■ Closed □ Open Zw = Positive opening clearance	Adjustable roller lever Type Article no.	Price See Price List		Actuating rod[1] EN 50 041 Form D Type Article no.	Price See Price List
Complete units, IP65						
totally insulated						
Narrow version						
1 M 1 B ⊖		**AT4/11-1/I/V** 009990			**AT4/11-1/I/H** 090671	
1 M 1 B ⊖		**AT4/11-2/I/V** 000499			**AT4/11-2/I/H** 083553	
1 M 1 B ⊖	Snap-action contact	**AT4/11-S/I/V** 095419			**AT4/11-S/I/H** 076435	
Wide version						
1 M 1 B ⊖		**AT4/11-1/IA/V** 040839			**AT4/11-1/IA/H** 021855	
1 M 1 B ⊖		**AT4/11-2/IA/V** 031348			**AT4/11-2/IA/H** 012364	
1 M 1 B ⊖	Snap-action contact	**AT4/11-S/IA/V** 033722			**AT4/11-S/IA/H** 014738	

Notes

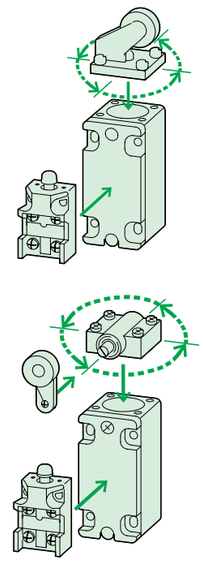
1) Not to be used as a safety position switch
2) Not to be used as a safety position switch; admissible only with snap-action contact.

AT4 Position Switches
Complete Units

Spring-rod actuator[2] Type Article no.	Price See Price List		Type Article no.	Price See Price List	Std. pack	Notes
–			–		1 off	
–			–			
AT4/11-S/I/F 066943			**AT4/11-S/I/F2** 071689			
–			–		1 off	
–			–			
AT4/11-S/IA/F 005246			**AT4/11-S/IA/F2** 009992			

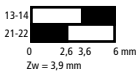
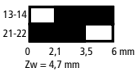
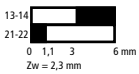
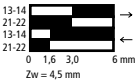
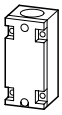
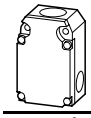
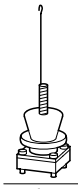
The operating heads can be rotated in 90° stages to match the direction of operation to the plane of actuation of the position switches.

For degree of protection IP65, use M20 cable glands with up to 9.0 mm length of connecting thread (V-M20).



Accessories	Page
V-M20 cable gland	03/018

AT4 Position Switches
Components

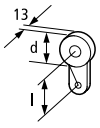
	Contacts M = Make B = Break ⊖ = Safety function by positive opening of contacts to IEC/EN 60 947-5-1	Contact sequence Contact ■ Closed □ Open Zw = Positive opening clearance	**Type** Article no.	**Price** See Price List	Std. pack
Switch mechanisms					
For fitting into the following insulated housings					
	1 M 1 B ⊖ 		**ATB11-1** 069314		10 off
	1 M 1 B ⊖ 		**ATB11-2** 071687		
	1 M 1 B ⊖ 		**ATB11-3** 077210		
	1 M 1 B ⊖ 	Snap-action contact 	**ATB11-S** 074060		
Insulated enclosures, IP65					
For housing the above switch mechanisms					
Narrow version to EN 50 041 			**I-AT4** 055226		1 off
Wide version 			**IA-AT4** 074212		1 off
Operating heads					
For combination with the above insulated housings					
Plunger head to EN 50 041 			**S-AT4** 095692		2 off
Roller plunger head to EN 50 041 			**RS-AT4** 024502		
Actuating roller head 			**AR-AT4** 088344		
Spring-rod actuator head, rod length 160 mm[1] 			**F-AT4** 090792		
Spring-rod actuator head, rod length 130 mm[1] 			**F2-AT4** 036214		

Notes

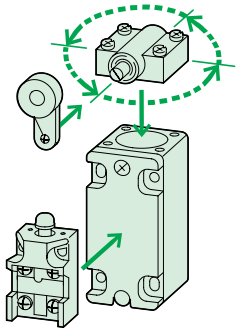
1) Not to be used as a safety position switch; admissible only with snap-action contact.

AT4 Position Switches
Components

	Max. operating speed - lateral	Angle of actuation	Lever length *l*	Dia-meter *d*	**Type** Article no.	**Price** See Price List	Std. pack	Notes
		Degrees	mm	mm				
Operating heads								
For combination with the insulated housings opposite								
Rotary drive head • For combination with the actuators below	3 1.5	15 50			**R-AT4** 095687		2 off	
Actuators								
Adjustable roller lever	2.3 1.1	15 50	150	–	**HV** 019631		5 off	
Actuating rod[1] • With adjustable aluminium rod	1.4	–	190	–	**HH-A** 063268		10 off	
Actuating rod[1] • With plastic rod	1.4	–	190	–	**HH-K** 063267		10 off	
Actuating roller lever[2] • With plastic roller			30	18	**HR311** 059970		1 off	
			30	22	**HR313** 064716			
			30	30	**HR316** 069462			
			30	40	**HR317** 071835			
			30	50	**HR318** 074208			
			37.5	18	**HR411** 088446			
			37.5	22	**HR413** 093192			
			37.5	30	**HR416** 097938			
			37.5	40	**HR417** 012511			
			37.5	50	**HR418** 014884			
			50	18	**HR511** 033868			
			50	22	**HR513** 038614			
			50	30	**HR516** 043360			
			50	40	**HR517** 045733			
			50	50	**HR518** 048106			

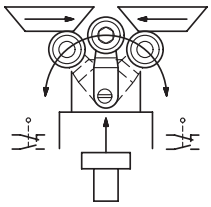


The operating heads can be rotated in 90° stages to match the specified direction of operation.

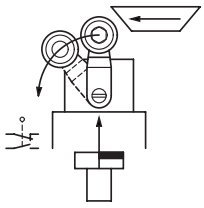


With the rotary drive, the method of contact making can be selected to suit the direction of operation simply by turning the plunger components.

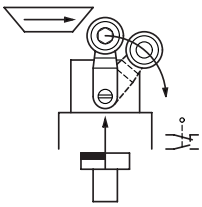
Contact made in both directions



Only when actuated from the right



Only when actuated from the left



For degree of protection IP65, use M20 cable glands with up to 9.0 mm length of connecting thread (V-M20).

Accessories	**Page**
V-M20 cable gland	03/018

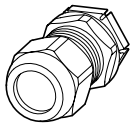
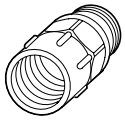
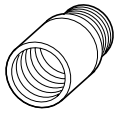
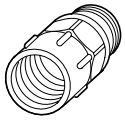
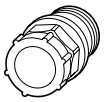
Notes

[1] Not to be used as a safety position switch; admissible only with snap-action contact.

[2] For non-standard rollers, please enquire.

AT... Position Switches

Accessories

	Type Article no.	Price See Price List	Std. pack	
Metric cable gland, M20, to EN 50 262 • With lock nut and built-in strain relief • IP68 up to 5 bar, halogen-free • External diameter of cable 6 – 13 mm 	**V-M20** 206910		20 off	
Adapter to convert PG 13,5 to M20, IP65 For PG13,5 cable glands Moulded 	**VPG13,5/M20** 225268		10 off	
Screw connection to fit M20 into ½'' For American pipe thread Metal 	**V1/2''/M20-NA** 225269		1 off	The screw connection must be earthed, not total insulation
Screw connection to fit M20 into ½'' For American pipe thread Moulded 	**V1/2''/M20** 225270		10 off	
M20 diaphragm bolt, IP65 With built-in push-through diaphragm External diameter of cable up to 13 mm IP65 with cable inserted 	**EMS20** 225271		25 off	
M20 screw closure, IP65 (self-sealing grommet) For tightening / loosening by using a standard wrench for sealing grommet plugs 	**SV-M20** 225267		25 off	

Position Switches, Safety Position Switches
Technical Data

Position switches				AT0...[3]	ATR...	AT4...
Contacts/switching capacity						
Rated impulse withstand voltage U_{imp}			V	6000	6000	6000
Rated insulation voltage U_i			V	500	500	500
Overvoltage category/pollution degree				III/3	III/3	III/3
Rated operational current I_e						
AC-15	24 V		A	10	10	10
	230 V		A	6	6	6
	400 V		A	4	4	4
	500 V		A	2	2	2
DC-13	24 V DC		A	10	10	10
	110 V DC		A	1	1	1
	220 V DC		A	0.5	0.5	0.4
Supply frequency			Hz	≦ 400	≦ 400	≦ 400
Short-circuit rating in the closed state (IEC/EN 60 947-5-1)						
Fuseless			Type	PKZM0-10, FAZ-B6	PKZM0-10, FAZ-B6	PKZM0-10, FAZ-B6
Maximum fuse			A gG/gL	10	10	10
Short-circuit rating to IEC/EN 60 947-5-1						
Maximum fuse			A gG/gL	6	6	6
Repetition accuracy of switching point			mm	± 0.02	± 0.02	± 0.02
Mechanical variables						
Lifespan						
Standard-action contact		Operations	× 10^6	20[2]	20[2]	20
Snap-action contact		Operations	× 10^6	20[2]	20[2]	20
Contact temperature of roller head			°C	≦ 100	≦ 100	≦ 100
Mechanical shock resistance (shock duration 20 ms)						
Standard-action contact			g	25	25	5
Snap-action contact			g	2	2	2
Actuating frequency			Ops./h	6000	6000	6000
Dimensions				→ Page 03/046	→ Page 03/047, 052	→ Page 03/048
Actuation						
Mechanical						
Actuating force at beginning/end of stroke						
	Basic units		N	1.0/8.0	1.0/8.0	–
	S		N	–	–	8.0/20.0
	RS		N	1.0/8.0	–	8.0/20.0
	AR (WR)		N	1.0/8.0	–	3.0/9.0
	ARG-ATR, ARK-ATR		N	1.0/8.0	1.0/8.0	–
	ZB/ZBZ (push in/pull out)		N	–	–	–
Mechanical holding force	ZBZ/G; ZBZ/W		N	–	–	–
	ZBZ/F; ZBZ/NW		N	–	–	–
	ZBZ/FG; ZBZ/NG		N	–	–	–
Actuating torque of rotary drives			Nm	0.2	–	0.3
Max. operating speed with DIN cam		Angle of actuation				
	Basic units	(α = 0°/30°)	m/s	1/0.5	1/1	–
	R	(α = 30°)	m/s	1.5	–	1.8
	V	(α = 30°, L = 125 mm)	m/s	1.5	–	1.4
	H	(L = 130 mm)	m/s	1.5	–	1.4
	AR	(α = 30°/45°)	m/s	1	–	1.5/1
	ARG-ATR	(α = 30°, β = 45°)	m/s	–	1.5/1	–
	ARK-ATR	(α = 30°)	m/s	–	1	–
	WR	(α = 30°)	m/s	1	–	–
	RS, ZRS	(α = 0°/30°)	m/s	1/1	–	0.5/0.5
	S, ZS	(α = 0°/30°)	m/s	1/0.5	–	0.5
Electromechanical						
For magnet	AC voltage (50/60 Hz)		V/VA	–	–	–
			V/VA	–	–	–
	DC voltage		V/W	–	–	–
Voltage tolerance				–	–	–
Magnet duty factor			DF	–	–	–

Position Switches, Safety Position Switches
Technical Data

AT4/.../ZB	AT0-...-ZB	AT0-...ZBZ
6000	6000[1]	4
500	500[1]	400
III/3	III/3	III/3
10	10	6
6	6	6
4	4	4
2	2	–
10	10	10
1	1	1
0.5	0.5	0.5
≦ 400	≦ 400	≦ 400
PKZM0-10, FAZ-B6	PKZM0-10, FAZ-B6	PKZM0-10, FAZ-B6
10	10	10
6	6	6
–	–	–
10	10	1
–	–	–
–	–	–
5	25	10
–	–	–
1800	1800	800
→ Page 03/053	→ Page 03/051	→ Page 03/050
–	–	–
–	–	–
–	–	–
–	–	–
–	–	–
15/20	10/5	25/15
–	–	2000
–	–	1000
–	–	1800
–	–	–
–	–	–
–	–	–
–	–	–
–	–	–
–	–	–
–	–	–
–	–	–
–	–	–
–	–	–
–	–	–
–	–	230/11
–	–	120/8
–	–	24/8
–	–	0.85 – 1.1 × U_s
–	–	100 %

General technical data

Standards	IEC/EN 60 947	
Climatic proofing	Damp heat, constant to IEC 60 068-2-3, cyclical to IEC 60 068-2-30	
Ambient temperature min./max. °C	–25/+70 (**AT0-...ZBZ:** –25/+40)	
Mounting position	As required	
Degree of protection	IP65	
Weight	→ Page 15/022	
Terminal capacity		
1 conductor, solid	min./max.	0.75/2.5 mm²
1 conductor, flexible	min./max.	0.5/1.5 mm²
2 conductors, solid	min./max.	0.75/1.5 mm²
2 conductors, flexible	min./max.	0.5/1.5 mm²

Notes

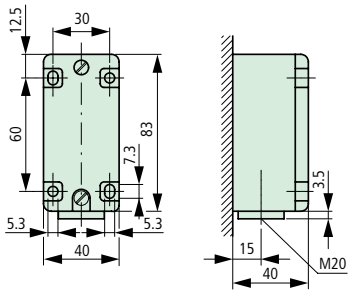
[1] AT0-02-1-ZB: U_{imp} = 4 kV, U_i = 400 V
[2] AT...-I(IA) at lateral operation: 6 × 10^6
.../WR: 15 × 10^6
.../F: 6 × 10^6
.../ZS: 1 × 10^6
.../TKG: 1 × 10^6
.../TS: 1 × 10^6
[3] AT0-11-S1...:
AC-15: 230 V/3 A
DC-12: 24 V/4 A

AT4 Position Switches

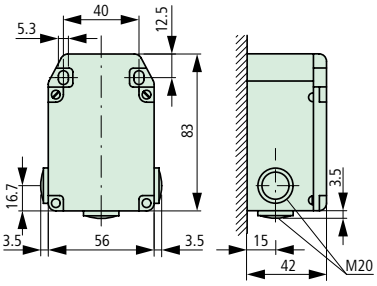
Dimensions

Position switches

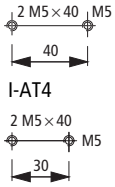
I-AT4



IA-AT4

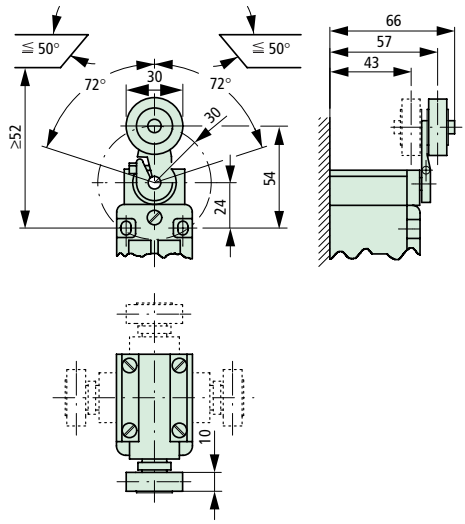


IA-AT4

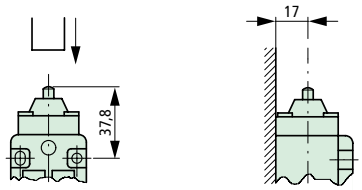


I-AT4

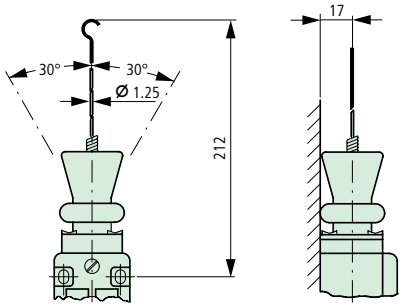
AT4/-...-.../I(IA)/R316



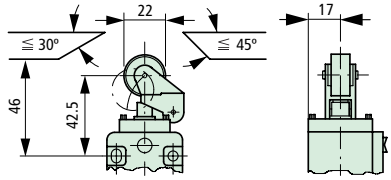
AT4/.../-.../I(IA)/S



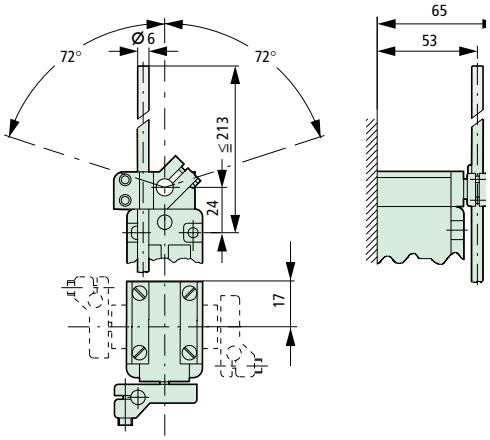
AT4/11-S/I(IA)/F



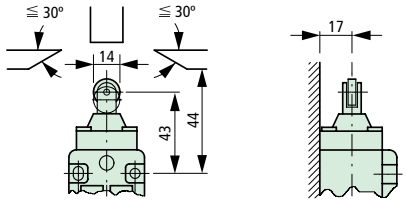
AT4/...-.../I(IA)/AR



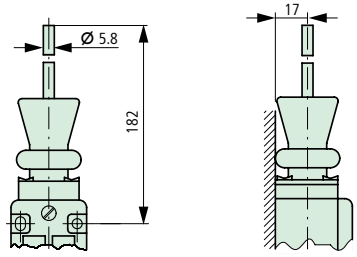
AT4/-...-.../I(IA)/H



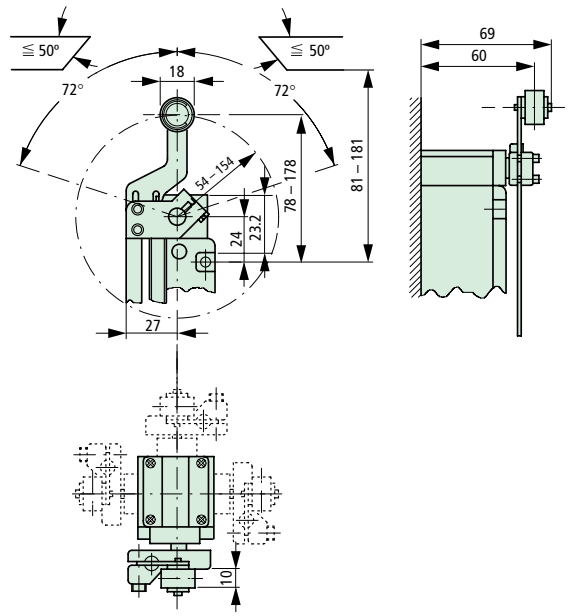
AT4/...-.../I(IA)/RS



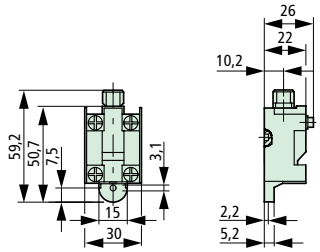
AT4/11-S/I(IA)/F2



AT4/-...-.../I(IA)/V

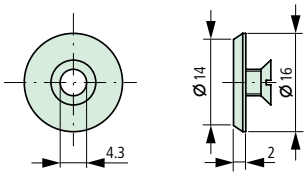


ATB11-...

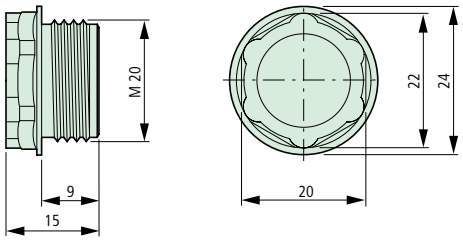


AT... Accessories
Dimensions

AT locating plate
FS-AT



Diaphragm bolt
EMS20



Adapter
VPG13,5/M20

