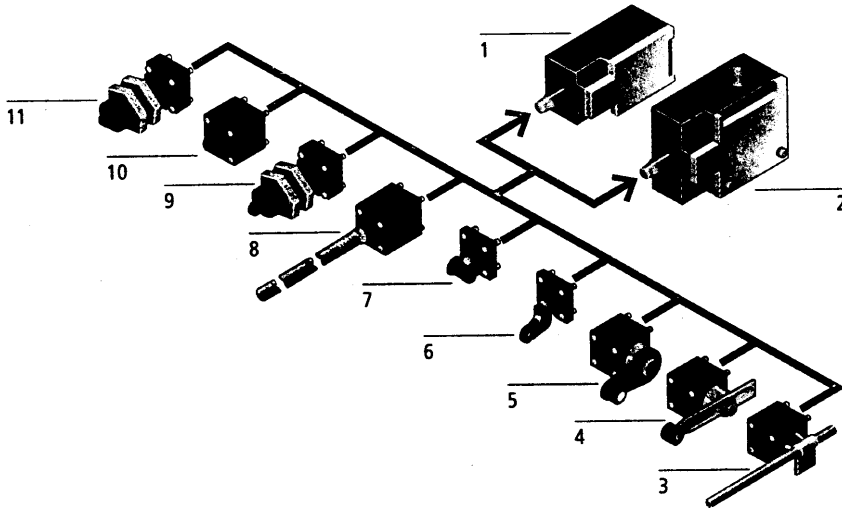


AT0, ATR, AT4 Position Switches System Overview

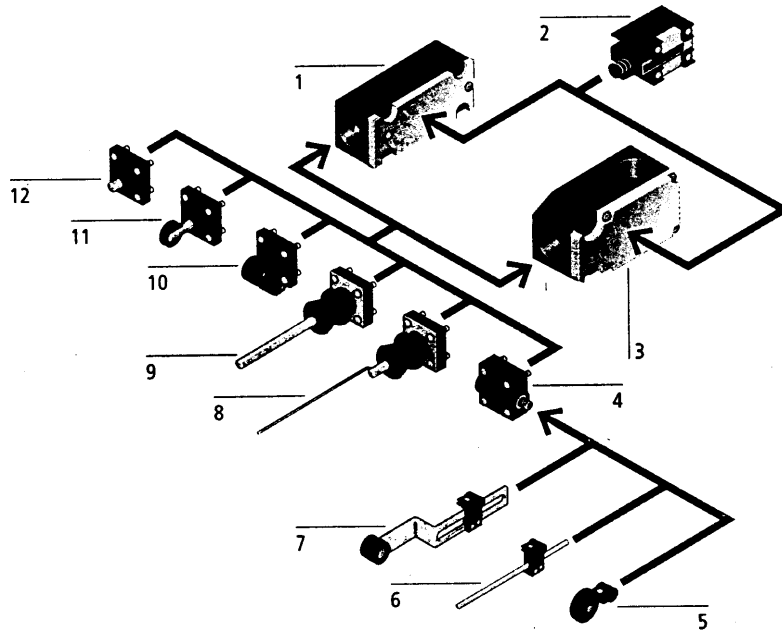
AT0 LIMIT SWITCH + OP. HEADS.

Pressure Switches, Float Switches

AT0



AT4



## ATO, ATR, AT4 Position Switches System Overview

### ATO/ATR

#### Basic units

<b>Basic unit</b>	1
Narrow version	
To EN 50 047	
With snap-on cover	
Number of contacts: 1M/1B, 2M, 2B	
As snap-action or standard-action switch	
→ Page 03/004	

<b>Basic unit</b>	2
Wide version	
With 2 × M20	
Number of contacts: 1M/1B, 2M, 2B	
As snap-action or standard-action switch	
→ Page 03/004	

#### Operating heads

Can be rotated in 90° stages

<b>Actuating rod</b>	3
On conveyor belts for light-weight goods	
<b>Adjustable roller lever</b>	4
For length adjustment as required	
<b>Rotary lever</b>	5
For transverse actuation, for pendulum movements	
<b>Angled roller lever</b>	6
For actuation along the device axis	
<b>Roller lever</b>	7
For one-sided operation with high actuation speed	
→ Page 03/009	

#### Operating heads

Can be rotated in 90° stages

<b>Spring-rod actuator</b>	8
For flexible actuation from any side	
<b>Plunger (centre fixing)</b>	9
For transverse and axial actuation when fitted in a through-hole	
<b>Roller plunger</b>	10
For transverse actuation with low actuating force	
<b>Roller plunger (centre fixing)</b>	11
For transverse actuation when fitted in a through-hole	
→ Page 03/009	

### AT4

#### Housings/switch mechanisms

<b>AT4 enclosure</b>	1
Narrow version	
To EN 50 041	
→ Page 03/016	

<b>Switch mechanisms</b>	2
Standard-action and snap-action contact	
Overlapping method of contact-making	
Number of contacts: 1M/1B	
→ Page 03/016	

<b>AT4 enclosure</b>	3
Wide version	
With 3 × M20	
→ Page 03/016	

#### Operating heads

Can be rotated in 90° stages


<b>Rotary drive head</b>	4
For use in combination with more than 30 different actuators	
<b>Actuating roller lever</b>	5
With various lever lengths, roller diameters and widths	
<b>Actuating rod</b>	6
With plastic rod or adjustable aluminium rod	
<b>Adjustable roller lever</b>	7
For length adjustment as required	
→ Page 03/017	

#### Operating heads

Can be rotated in 90° stages

<b>Spring-rod head</b>	8
For flexible actuation from any side, with steel spring-rod	
<b>Spring-rod head</b>	9
For flexible actuation from any side, with plastic rod	
<b>Actuating roller head</b>	10
For one-sided operation with high actuation speed	
<b>Roller plunger head</b>	11
For transverse actuation with low wear	
<b>Plunger head</b>	12
With steel cap for operation with hot operating elements	
→ Page 03/016	

### ATO, ATR, AT4 product attributes

- Modular system
- Degree of protection IP65
-  Safety Insulation
- Personnel protection
- Positive operation
- Suitable for use with electronic devices to IEC/EN 61 131-2
- Ⓢ Safety function by positive opening of contacts to IEC/EN 60 947-5-1
- Devices for world markets



# ATO 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 50 047**  
 Form B  
 Basic unit  
 Type  
 Article no.

Price  
 See Price List

Plunger  
 Centre fixing

Type  
 Article no.  
 Price  
 See Price List

## Complete units, IP65

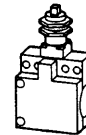
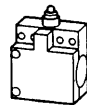


Narrow version



1 M 1 B ⊖			<b>ATO-11-1-I</b> 095406		<b>ATO-11-1-I/ZS</b> 036069
1 M 1 B ⊖			<b>ATO-11-2-I</b> 097779		<b>ATO-11-2-I/ZS</b> 076410
2 M - -			<b>ATO-20-1-I</b> 002860		<b>ATO-20-1-I/ZS</b> 062173
- 2 B ⊖			<b>ATO-02-1-I</b> 005233		<b>ATO-02-1-I/ZS</b> 002849
- 2 B ⊖			<b>ATO-02-1-I-SOND916</b> 098448		-
1 M 1 B ⊖		<b>Snap-action contact</b> 	<b>ATO-11-S-I</b> 000487		<b>ATO-11-S-I/ZS</b> 019459
1 M 1 B ⊖		<b>Snap-action contact</b> 	<b>ATO-11-S1-I</b> 226060		-

## Wide version





1 M 1 B ⊖			<b>ATO-11-1-IA</b> 007606		<b>ATO-11-1-IA/ZS</b> 055053
1 M 1 B ⊖			<b>ATO-11-2-IA</b> 009979		<b>ATO-11-2-IA/ZS</b> 095394
2 M - -			<b>ATO-20-1-IA</b> 014725		<b>ATO-20-1-IA/ZS</b> 081157
- 2 B ⊖			<b>ATO-02-1-IA</b> 017098		<b>ATO-02-1-IA/ZS</b> 021833
1 M 1 B ⊖		<b>Snap-action contact</b> 	<b>ATO-11-S-IA</b> 012352		<b>ATO-11-S-IA/ZS</b> 040816
1 M 1 B ⊖		<b>Snap-action contact</b> 	<b>ATO-11-S1-IA</b> 226061		-

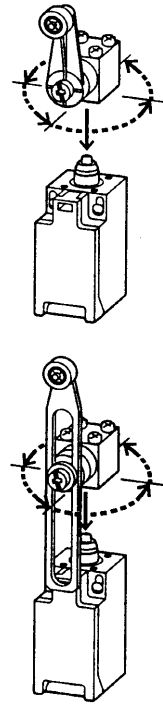
**ATO Position Switches  
Complete Units**

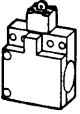
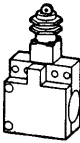
Position Switches, Proximity Switches  
Pressure Switches, Float Switches

Roller plunger EN 50 047 Form C		Roller plunger Centre fixing		Notes
Type Article no.	Price See Price List	Type Article no.	Price See Price List	Std. pack

				
ATO-11-1-I/RS 024204		ATO-11-1-I/ZRS 033696		10 off
ATO-11-2-I/RS 064545		ATO-11-2-I/ZRS 074037		2 off
ATO-20-1-I/RS 050308		ATO-20-1-I/ZRS 059800		
ATO-02-1-I/RS 090649		ATO-02-1-I/ZRS 000476		
-		-		
ATO-11-S-I/RS 007594		ATO-11-S-I/ZRS 017086		10 off
-		-		1 off

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).



				
ATO-11-1-IA/RS 045561		ATO-11-1-IA/ZRS 052680		1 off
ATO-11-2-IA/RS 085902		ATO-11-2-IA/ZRS 093021		
ATO-20-1-IA/RS 071665		ATO-20-1-IA/ZRS 078784		
ATO-02-1-IA/RS 012341		ATO-02-1-IA/ZRS 019460		
ATO-11-S-IA/RS 031324		ATO-11-S-IA/ZRS 038443		
-		-		

For external applications or temperatures down to -40 °C use RBS-ATO sealing membrane.

No SUVA approval for the following types:

- ATO-20-1-I
- ATO-20-1-I/ZS
- ATO-20-1-I/RS
- ATO-20-1-I/ZRS
- ATO-20-1-IA
- ATO-20-1-IA/ZS
- ATO-20-1-IA/RS
- ATO-20-1-IA/ZRS

Accessories	Page
V-M20 cable gland	03/018
Sealing membrane	03/018

**ATO Position Switches**  
Complete Units

Pressure Switches, Float Switches

		Spring-rod actuator <sup>1)</sup>		Roller lever	
Contacts		Contact sequence		EN 50 047	
M = Make		Contact		Form E	
B = Break		<input checked="" type="checkbox"/> Closed <input type="checkbox"/> Open Zw = Positive opening clearance		Type	
⊕ = Safety function by positive opening of contacts to IEC/EN 60 947-5-1		Type		Article no.	
		Article no.		Price	
		See Price List		See Price List	

**Complete units, IP65**

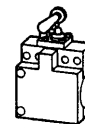
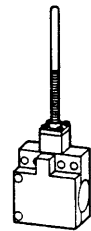


**Narrow version**



1 M 1 B ⊕					<b>ATO-11-1-I/AR</b> 017085
1 M 1 B ⊕					<b>ATO-11-2-I/AR</b> 057426
2 M - -					<b>ATO-20-1-I/AR</b> 043189
- 2 B ⊕					<b>ATO-02-1-I/AR</b> 083530
1 M 1 B ⊕		<b>Snap-action contact</b>	<b>ATO-11-S-I/F</b> 000475		<b>ATO-11-S-I/AR</b> 097767

**Wide version**




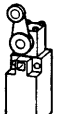
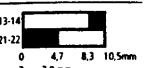
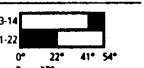
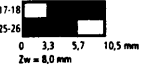
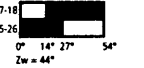
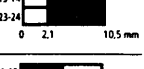
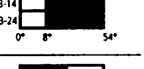
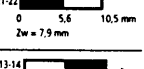
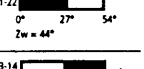
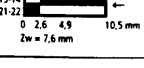
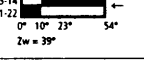

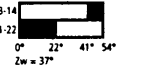
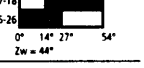
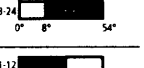
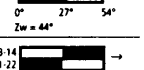
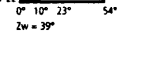
1 M 1 B ⊕					<b>ATO-11-1-IA/AR</b> 038442
1 M 1 B ⊕					<b>ATO-11-2-IA/AR</b> 078783
2 M - -					<b>ATO-20-1-IA/AR</b> 064546
- 2 B ⊕					<b>ATO-02-1-IA/AR</b> 005222
1 M 1 B ⊕		<b>Snap-action contact</b>	<b>ATO-11-S-IA/F</b> 024205		<b>ATO-11-S-IA/AR</b> 021832

**Notes**

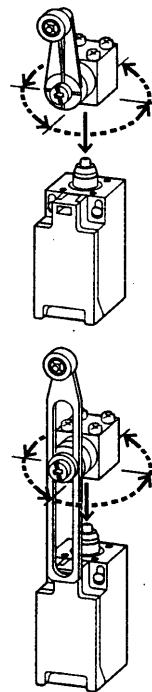
<sup>1)</sup> Do not use spring-rod actuator as a safety position switch; admissible only with snap-action contact.

**ATO Position Switches  
Complete Units**

Position Switches, Proximity Switches, Float Switches

Angled roller lever			Rotary lever		
Type	Price		Type	Price	Notes
Article no.	See Price List		Article no.	See Price List	Std. pack
					
 13-14 21-22 0 4.7 8.3 10.5mm Zw = 7.0 mm		<b>ATO-11-1-I/WR 031323</b>	 13-14 21-22 0° 22° 41° 54° Zw = 37°		<b>ATO-11-1-I/R 021831</b> 10 off
 17-18 25-26 0 3.3 5.7 10.5mm Zw = 8.0 mm		<b>ATO-11-2-I/WR 071664</b>	 17-18 25-26 0° 14° 27° 54° Zw = 44°		<b>ATO-11-2-I/R 062172</b> 2 off
 13-14 23-24 0 2.1 10.5mm		<b>ATO-20-1-I/WR 057427</b>	 13-14 23-24 0° 8° 54°		<b>ATO-20-1-I/R 047935</b>
 11-12 21-22 0 5.6 10.5mm Zw = 7.9 mm		<b>ATO-02-1-I/WR 097768</b>	 11-12 21-22 0° 27° 54° Zw = 44°		<b>ATO-02-1-I/R 088276</b>
 13-14 21-22 13-14 21-22 0 2.6 4.9 10.5mm Zw = 7.6 mm		<b>ATO-11-S-I/WR 014713</b>	 13-14 21-22 13-14 21-22 0° 10° 23° 54° Zw = 39°		<b>ATO-11-S-I/R 005221</b> 1 off
					
			 13-14 21-22 0° 22° 41° 54° Zw = 37°		<b>ATO-11-1-IA/R 043188</b> 2 off
			 17-18 25-26 0° 14° 27° 54° Zw = 44°		<b>ATO-11-2-IA/R 083529</b>
			 13-14 23-24 0° 8° 54°		<b>ATO-20-1-IA/R 069292</b>
			 11-12 21-22 0° 27° 54° Zw = 44°		<b>ATO-02-1-IA/R 009968</b>
			 13-14 21-22 13-14 21-22 0° 10° 23° 54° Zw = 39°		<b>ATO-11-S-IA/R 028951</b>

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)



No SUVA approval for the following types:

- AT0-11-S-I/F
- AT0-20-1-I/AR
- AT0-20-1-I/WR
- AT0-20-1-I/R
- AT0-11-S-IA/F
- AT0-20-1-IA/AR
- AT0-20-1-IA/R

Accessories	Page
V-M20 cable gland	03/018

# ATO Position Switches Complete Units




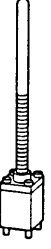





		Adjustable roller lever		Actuating rod <sup>1)</sup>		
Contacts	Contact sequence	Type	Price	Type	Price	Std. pack
M = Make B = Break ⊕ = Safety function by positive opening of contacts to IEC/EN 60 947-5-1	<div style="display: flex; align-items: center;"> <div style="width: 10px; height: 10px; background-color: black; margin-right: 5px;"></div> Closed  <div style="width: 10px; height: 10px; border: 1px solid black; margin-right: 5px; margin-left: 5px;"></div> Open                      Zw = Positive opening clearance                 </div>	Article no.	See Price List	Article no.	See Price List	
<b>Complete units, IP65</b>						
<b>Narrow version</b>						
1 M 1 B ⊕		 13-14 21-22 0° 22° 41° 54° Zw = 37°	ATO-11-1-I/V 028950		ATO-11-1-I/H 019458	10 off
1 M 1 B ⊕		 17-18 25-26 0° 14° 27° 54° Zw = 44°	ATO-11-2-I/V 069291		ATO-11-2-I/H 059799	2 off
2 M - -		 13-14 23-24 0° 0° 54°	ATO-20-1-I/V 055054		ATO-20-1-I/H 045562	
- 2 B ⊕		 11-12 21-22 0° 27° 54° Zw = 44°	ATO-02-1-I/V 095395		ATO-02-1-I/H 085903	
1 M 1 B ⊕		Snap-action contact  13-14 21-22 13-14 21-22 0° 10° 23° 54° Zw = 39°	ATO-11-S-I/V 012340		ATO-11-S-I/H 002848	10 off
<b>Wide version</b>						
1 M 1 B ⊕		 13-14 21-22 0° 22° 41° 54° Zw = 37°	ATO-11-1-IA/V 050307		ATO-11-1-IA/H 040815	2 off
1 M 1 B ⊕		 17-18 25-26 0° 14° 27° 54° Zw = 44°	ATO-11-2-IA/V 090648		ATO-11-2-IA/H 081156	
2 M - -		 13-14 23-24 0° 0° 54°	ATO-20-1-IA/V 076411		ATO-20-1-IA/H 066919	
- 2 B ⊕		 11-12 21-22 0° 27° 54° Zw = 44°	ATO-02-1-IA/V 017087		ATO-02-1-IA/H 007595	
1 M 1 B ⊕		Snap-action contact  13-14 21-22 13-14 21-22 0° 10° 23° 54° Zw = 39°	ATO-11-S-IA/V 036070		ATO-11-S-IA/H 026578	

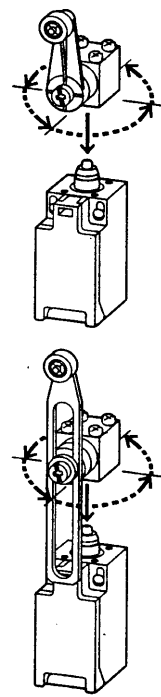
**Notes**

<sup>1)</sup> Not to be used as a safety position switch



**ATO Position Switches**  
Operating Heads

	Style	Direction of actuation	Type Article no.	Price See Price List	Std. pack	Notes
<b>Operating heads</b>						
	Form C to EN 50 047	transverse	<b>RS-ATO</b> 053145		5 off	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)
	(centre fixing)	transverse	<b>ZRS-ATO</b> 031083			
	(centre fixing)	axial, transverse	<b>ZS-ATO</b> 033456			
	-	transverse	<b>F-ATO</b> 050772			
	Form E to EN 50 047	transverse	<b>AR-ATO</b> 046026		10 off	
	-	transverse	<b>WR-ATO</b> 048399		5 off	
	Form A to EN 50 047	transverse	<b>R-ATO</b> 038907			
	-	transverse	<b>V-ATO</b> 041280			
	-	transverse	<b>H-ATO</b> 043653			



Not for use as safety position switches:

- F-ATO
- H-ATO

F-ATO can be used, but only in conjunction with snap-action contact

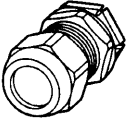



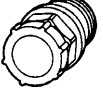
Accessories	Page
V-M20 cable gland	03/018

Position Switches; Proximity Switches; Pressure Switches; Float Switches



## AT... Position Switches

### Accessories

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