

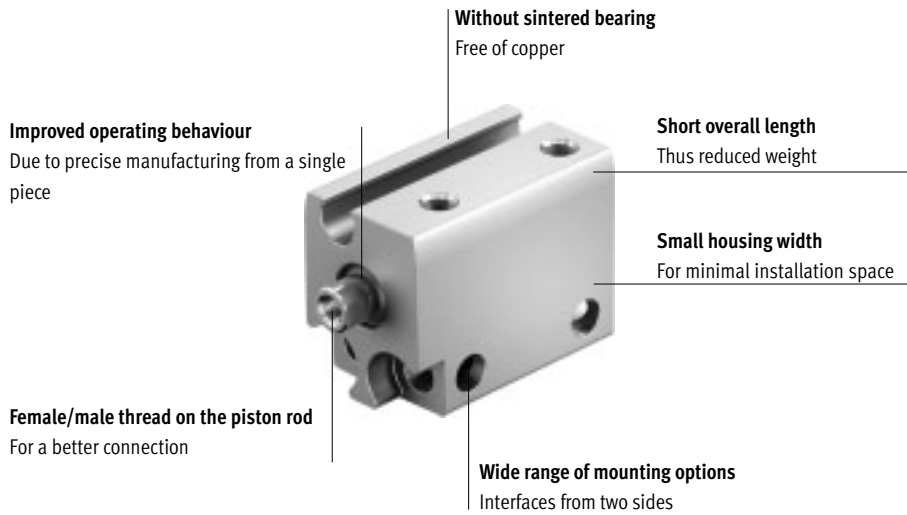
Compact cylinders ADN-S, AEN-S



Compact cylinders ADN-S, AEN-S

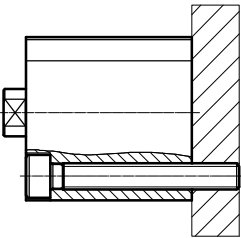
Key features

At a glance

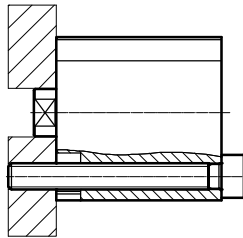


Mounting options

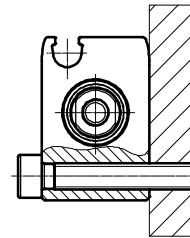
From the front



From the rear

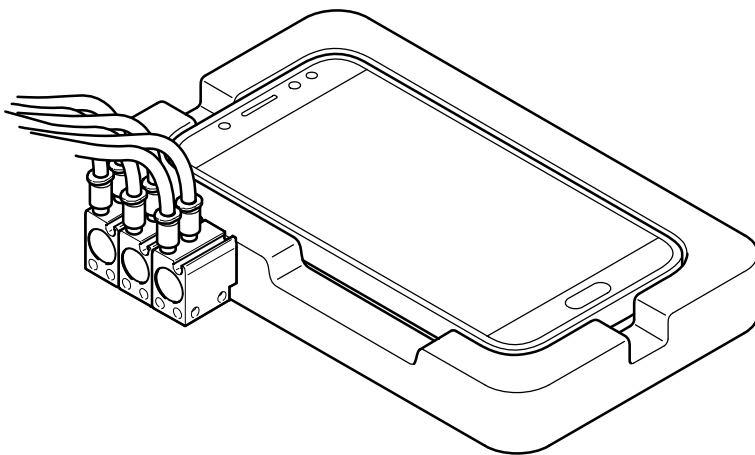


Side



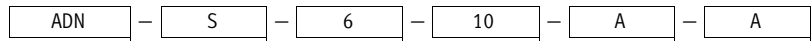
Application example

Long term tests of smartphone keys



Compact cylinders ADN-S, double-acting

Type codes

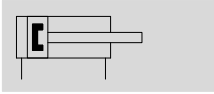


Type code	
Double-acting	
ADN	Compact cylinder
Type	
S	Short
Piston Ø [mm]	
6	6 mm
10	10 mm
Stroke [mm]	
5	5 mm
10	10 mm
Piston rod thread	
A	Male thread
I	Female thread
Position sensing	
-	None
A	Via proximity sensor


Compact cylinders ADN-S

Technical data

Function



 Diameter
6, 10 mm

 Stroke length
5, 10 mm



General technical data	
Design	Piston Piston rod
Mode of operation	Double-acting
Piston rod end	Male thread Female thread
Pneumatic connection	M3
Stroke [mm]	5, 10
Cushioning	None
Position sensing	Via proximity sensor
Type of mounting	Via through-hole
Mounting position	Optional

Operating and environmental conditions		
Piston Ø	6	10
Operating medium	Compressed air according to ISO 8573-1:2010 [7:4:4]	
Note on the operating medium	Lubricated operation possible (is then required for further operation)	
Operating pressure ¹⁾ [bar]	1.5 ... 8	1 ... 8
Ambient temperature ²⁾ [°C]	-10 ... +60	
Corrosion resistance class CRC ³⁾	1	

1) After a longer downtime, the minimum pressure in the retracting direction may be slightly higher.

2) Note operating range of proximity sensors

3) Corrosion resistance class CRC 1 to Festo standard FN 940070

Low corrosion stress. For dry indoor applications or transport and storage protection. Also applies to parts behind covers, in the non-visible interior area, and parts which are covered in the application (e.g. drive trunnions).

Weight [g]		
Piston Ø	6	10
Product weight		
With 5 mm stroke	9.2/10.9 ¹⁾	12.2/14.5 ¹⁾
With 10 mm stroke	11.9/13.6 ¹⁾	15.4/17.7 ¹⁾
Moving mass		
With 5 mm stroke	1.5/1.6 ¹⁾	4.1/4.5 ¹⁾
With 10 mm stroke	2.3/2.4 ¹⁾	5.3/5.7 ¹⁾

1) With position sensing

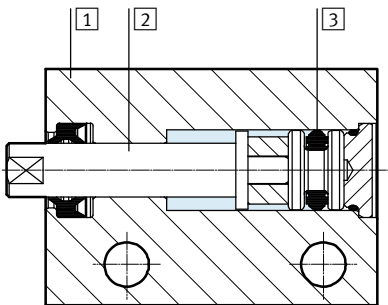
Compact cylinders ADN-S

Technical data

Forces [N] and impact energy [J]		
Piston \varnothing	6	10
Theoretical force at 6 bar, advancing	17	47
Theoretical force at 6 bar, retracting	9.4	30.2
Impact energy at the end positions	0.006	0.012

Materials

Sectional view



Compact cylinder		
1	Housing	Anodised wrought aluminium alloy
2	Piston rod	High-alloy stainless steel
3	Seals	NBR, TPE-U(PU)
-	Note on materials	RoHS-compliant

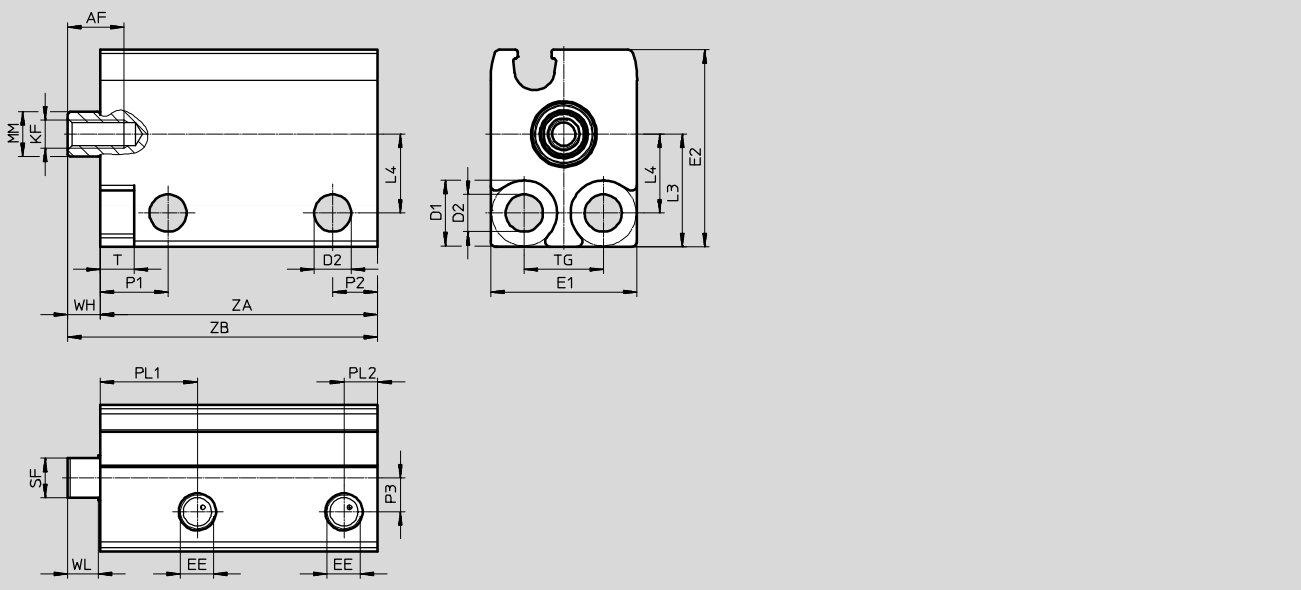
Compact cylinders ADN-S

Technical data

Dimensions

Download CAD data → www.festo.com

With female thread



∅	AF	D1	D2	EE	E1	E2	KF	L3	L4	MM
[mm]	min.	∅ H13	∅		max.	max.				
6	5	5.8	3.3	M3	13	17.5	M2.5	10	7	4
10	6				13.5	20.5	M3	11	8	6

∅	P1	P2	P3	PL2	ST	T	TG	WH	WL
[mm]							±0.1		
6	6	4	3	3	3.5	3	7	3	2.7
10			3.2		5				

∅	Stroke	Position sensing	PL1	ZA	ZB
[mm]	[mm]			+0.3	+0.35
6	5	-	8.6	20.5	23.5
		■	8.6	24.5	27.5
	10	-	8.6	25.5	28.5
		■	8.6	29.5	32.5
10	5	-	9.2	20.5	23.5
		■	9.9	24.5	27.5
	10	-	9.2	25.5	28.5
		■	9.9	29.5	32.5

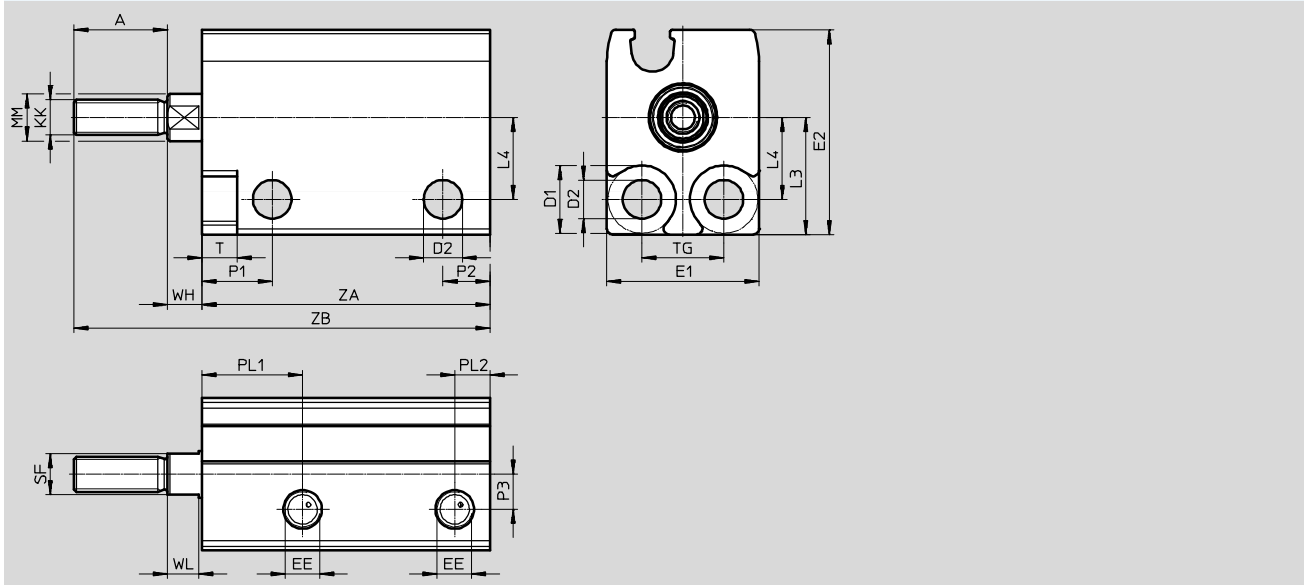
Compact cylinders ADN-S

Technical data

Dimensions

Download CAD data → www.festo.com

With male thread




∅	A	D1 ∅	D2 ∅	EE	E1	E2	KK	L3	L4	MM
[mm]		H13	∅		max.	max.				
6	8	5.8	3.3	M3	13	17.5	M3	10	7	4
10	10				13.5	20.5	M4	11	8	6

∅	P1	P2	P3	PL2	ST	T	TG	WH	WL
[mm]							±0.1		
6	6	4	3	3	3.5	3	7	3	2.7
10			3.2		5				

∅	Stroke [mm]	Position sensing	PL1	ZA +0.3	ZB +0.35
6	5	-	8.6	20.5	23.5
		■	8.6	24.5	27.5
	10	-	8.6	25.5	28.5
		■	8.6	29.5	32.5
10	5	-	9.2	20.5	23.5
		■	9.9	24.5	27.5
	10	-	9.2	25.5	28.5
		■	9.9	29.5	32.5

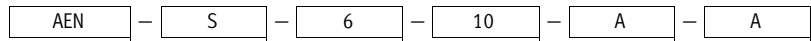
Compact cylinders ADN-S

Technical data

Ordering data						
Type code	Piston Ø [mm]	Stroke [mm]	I – Piston rod with female thread		A – Piston rod with male thread	
			Part No.	Type code	Part No.	Type code
	6	Without position sensing				
		5	4886885	ADN-S-6-5-I	8080598	ADN-S-6-5-A
		10	4886886	ADN-S-6-10-I	8080596	ADN-S-6-10-A
		With position sensing				
		5	5173732	ADN-S-6-5-I-A	8080597	ADN-S-6-5-A-A
		10	5173733	ADN-S-6-10-I-A	8080595	ADN-S-6-10-A-A
	10	Without position sensing				
		5	4887523	ADN-S-10-5-I	8080589	ADN-S-10-5-A
		10	4887524	ADN-S-10-10-I	8080588	ADN-S-10-10-A
		With position sensing				
5		5177082	ADN-S-10-5-I-A	8080587	ADN-S-10-5-A-A	
10		5177085	ADN-S-10-10-I-A	8080590	ADN-S-10-10-A-A	

Compact cylinders AEN-S, single-acting

Type codes



Type	
Single-acting	
AEN	Compact cylinder

Type	
S	Short

Piston Ø [mm]	
6	6 mm
10	10 mm

Stroke [mm]	
5	5 mm
10	10 mm

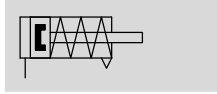
Piston rod thread	
A	Male thread
I	Female thread

Position sensing	
-	None
A	Via proximity sensor


Compact cylinders AEN-S

Technical data

Function



 Diameter
6, 10 mm

 Stroke length
5, 10 mm



General technical data	
Design	Piston Piston rod
Mode of operation	Single-acting Pushing
Piston rod end	Male thread Female thread
Pneumatic connection	M3
Stroke [mm]	5, 10
Cushioning	None
Position sensing	Via proximity sensor
Type of mounting	Via through-hole
Mounting position	Optional

Operating and environmental conditions		
Piston Ø	6	10
Operating medium	Compressed air according to ISO 8573-1:2010 [7:4:4]	
Note on the operating medium	Lubricated operation possible (is then required for further operation)	
Operating pressure [bar]	2.5 ... 8	1.5 ... 8
Ambient temperature ¹⁾ [°C]	-10 ... +60	
Corrosion resistance class CRC ²⁾	1	

1) Note operating range of proximity sensors

2) Corrosion resistance class CRC 1 to Festo standard FN 940070

Low corrosion stress. For dry indoor applications or transport and storage protection. Also applies to parts behind covers, in the non-visible interior area, and parts which are covered in the application (e.g. drive trunnions).

Weight [g]		
Piston Ø	6	10
Product weight		
With 5 mm stroke	9.2/10.9 ¹⁾	12.2/17 ¹⁾
With 10 mm stroke	11.9/15 ¹⁾	15.4/19 ¹⁾
Moving mass		
With 5 mm stroke	1.5/1.6 ¹⁾	4.1/4.5 ¹⁾
With 10 mm stroke	2.3/2.4 ¹⁾	5.3/5.7 ¹⁾

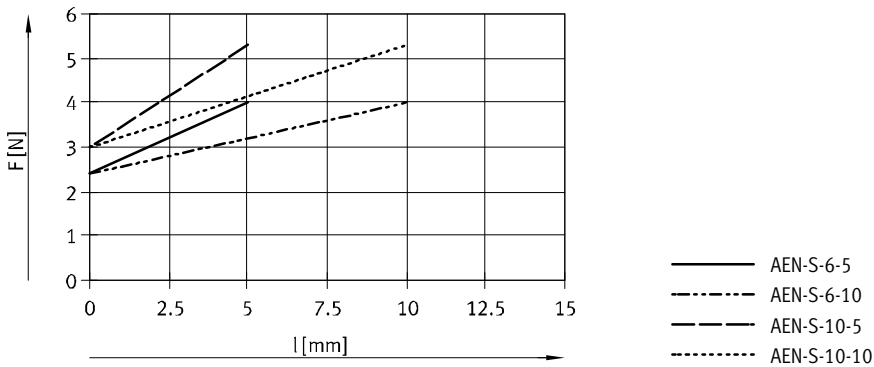
1) With position sensing


Compact cylinders AEN-S

Technical data

Forces [N] and impact energy [J]		
Piston \varnothing	6	10
Theoretical force at 6 bar, advancing	13	41.7
Impact energy at the end positions	0.006	0.012

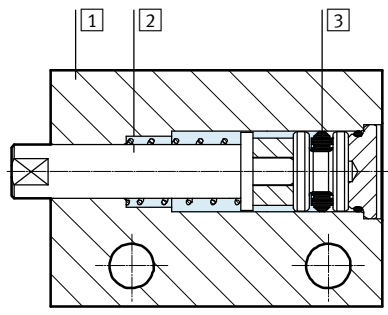
Theoretical spring force for retraction



 Note
 The degree of friction depends upon the mounting position and the type of load involved. Single-acting cylinders should as far as possible be operated without lateral forces.

Materials

Sectional view



Compact cylinder	
1	Housing Anodised wrought aluminium alloy
2	Piston rod High-alloy stainless steel
3	Seals NBR, TPE-U(PU)
-	Note on materials RoHS-compliant

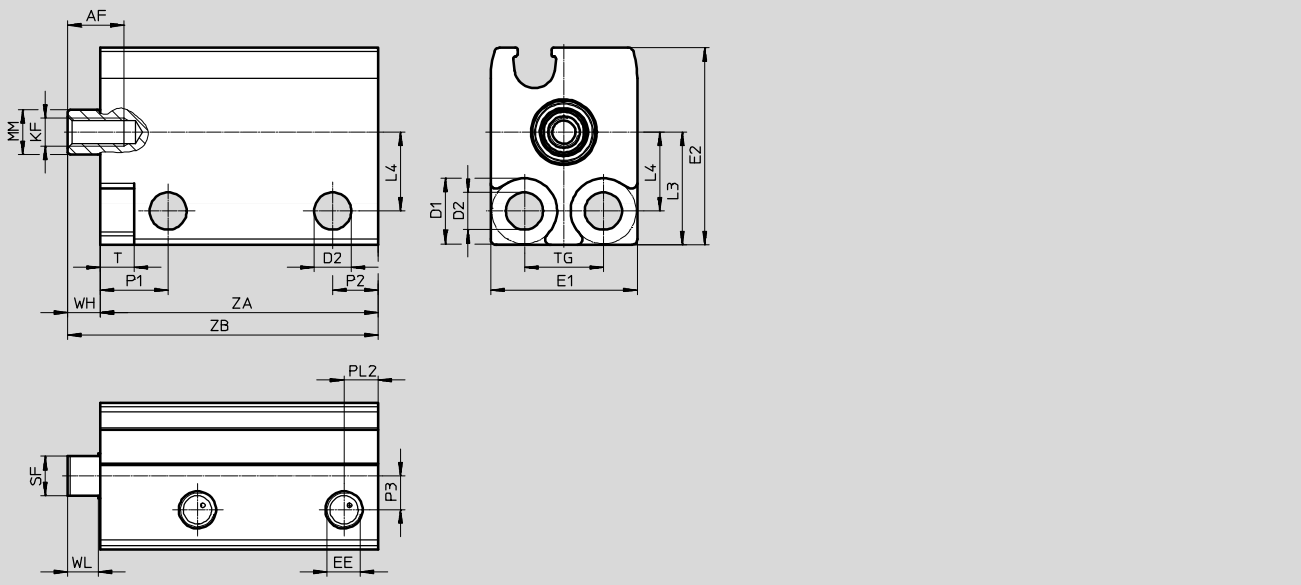
Compact cylinders AEN-S

Technical data

Dimensions

Download CAD data → www.festo.com

With female thread



∅	AF	D1	D2	EE	E1	E2	KF	L3	L4	MM
[mm]	min.	∅ H13	∅		max.	max.				
6	5	5.8	3.3	M3	13	17.5	M2.5	10	7	4
10	6				13.5	20.5	M3	11	8	6

∅	P1	P2	P3	PL2	ST	T	TG	WH	WL
[mm]							±0.1		
6	6	4	3	3	3.5	3	7	3	2.7
10			3.2		5				

∅	Stroke	Position sensing	ZA	ZB
[mm]	[mm]		+0.3	+0.35
6	5	-	20.5	23.5
		■	24.5	27.5
	10	-	25.5	28.5
		■	29.5	32.5
10	5	-	20.5	23.5
		■	24.5	27.5
	10	-	25.5	28.5
		■	29.5	32.5

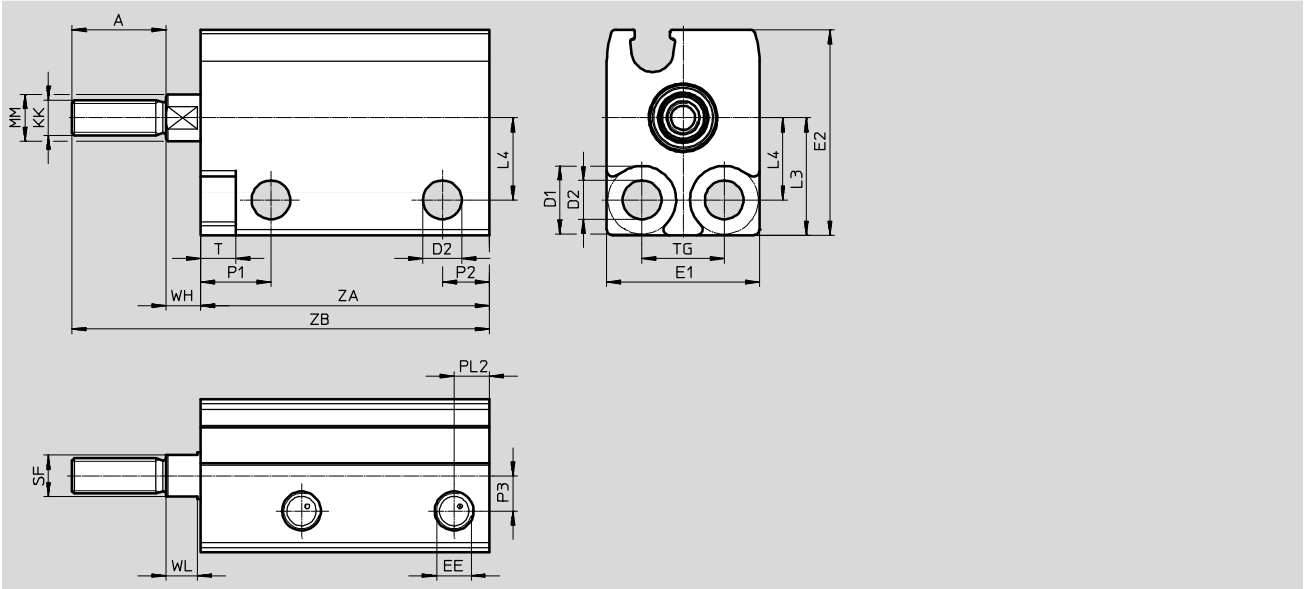
Compact cylinders AEN-S

Technical data

Dimensions

Download CAD data → www.festo.com

With male thread




∅	A	D1 ∅	D2 ∅	EE	E1	E2	KK	L3	L4	MM
[mm]		H13			max.	max.				
6	8	5.8	3.3	M3	13	17.5	M3	10	7	4
10	10				13.5	20.5	M4	11	8	6

∅	P1	P2	P3	PL2	ST	T	TG	WH	WL
[mm]							±0.1		
6	6	4	3	3	3.5	3	7	3	2.7
10			3.2		5				

∅	Stroke [mm]	Position sensing	ZA +0.3	ZB +0.35
6	5	-	20.5	23.5
		■	24.5	27.5
	10	-	25.5	28.5
		■	29.5	32.5
10	5	-	20.5	23.5
		■	24.5	27.5
	10	-	25.5	28.5
		■	29.5	32.5


Compact cylinders AEN-S


Technical data

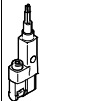
Ordering data						
Type code	Piston Ø [mm]	Stroke [mm]	I – Piston rod with female thread		A – Piston rod with male thread	
			Part no.	Type code	Part no.	Type code
	6	Without position sensing				
		5	4984929	AEN-S-6-5-I	8080593	AEN-S-6-5-A
		10	4984930	AEN-S-6-10-I	8080594	AEN-S-6-10-A
		With position sensing				
		5	5267300	AEN-S-6-5-I-A	8080591	AEN-S-6-5-A-A
		10	5267301	AEN-S-6-10-I-A	8080592	AEN-S-6-10-A-A
	10	Without position sensing				
		5	4891759	AEN-S-10-5-I	8080583	AEN-S-10-5-A
		10	4891760	AEN-S-10-10-I	8080586	AEN-S-10-10-A
		With position sensing				
5		5269268	AEN-S-10-5-I-A	8080584	AEN-S-10-5-A-A	
10		5269269	AEN-S-10-10-I-A	8080585	AEN-S-10-10-A-A	



Compact cylinders ADN-S, AEN-S

Accessories

Ordering data – Proximity sensor for C-slot, magneto-resistive						Technical data → Internet: smt	
	Type of mounting	Switching output	Electrical connection, connection outlet direction	Cable length [m]	Part No.	Type	
N/O contact							
	Insertable in the slot from above	PNP	Plug M8x1, 3-pin, lengthwise	0.3	551375	SMT-10M-PS-24V-E-0,3-L-M8D	
			Cable, 3-wire, lengthwise	2.5	551373	SMT-10M-PS-24V-E-2,5-L-OE	

Ordering data – Proximity sensor for C-slot, magnetic reed						Technical data → Internet: sme	
	Type of mounting	Switching output	Electrical connection, connection outlet direction	Cable length [m]	Part No.	Type	
N/O contact							
	Insertable in the slot from above	Contacting	Plug M8x1, 3-pin, lengthwise	0.3	551367	SME-10M-DS-24V-E-0,3-L-M8D	
			Cable, 3-wire, lengthwise	2.5	551365	SME-10M-DS-24V-E-2,5-L-OE	
			Cable, 2-wire, lengthwise	2.5	551369	SME-10M-ZS-24V-E-2,5-L-OE	

Ordering data – Proximity sensor for C-slot, magneto-resistive						Technical data → Internet: smt	
	Type of mounting	Electrical connection, connection outlet direction	Switching output	Cable length [m]	Part No.	Type	
N/O contact							
	Insertable in the slot lengthwise	Cable, 3-wire, crosswise	PNP	2.5	547862	SMT-10G-PS-24V-E-2,5Q-OE	
		Plug M8x1, 3-pin, crosswise		0.3	547863	SMT-10G-PS-24V-E-0,3Q-M8D	
		Cable, 3-wire, crosswise	NPN	2.5	8065030	SMT-10G-NS-24V-E-2,5Q-OE	
		Plug M8x1, 3-pin, crosswise		0.3	8065029	SMT-10G-NS-24V-E-0,3Q-M8D	

Ordering data – Connecting cables						Technical data → Internet: nebu	
	Electrical connection, left	Electrical connection, right	Cable length [m]	Part No.	Type		
	Straight socket, M8x1, 3-pin	Cable, open end, 3-wire	2.5	541333	NEBU-M8G3-K-2.5-LE3		
			5	541334	NEBU-M8G3-K-5-LE3		
	Angled socket, M8x1, 3-pin	Cable, open end, 3-wire	2.5	541338	NEBU-M8W3-K-2.5-LE3		
			5	541341	NEBU-M8W3-K-5-LE3		