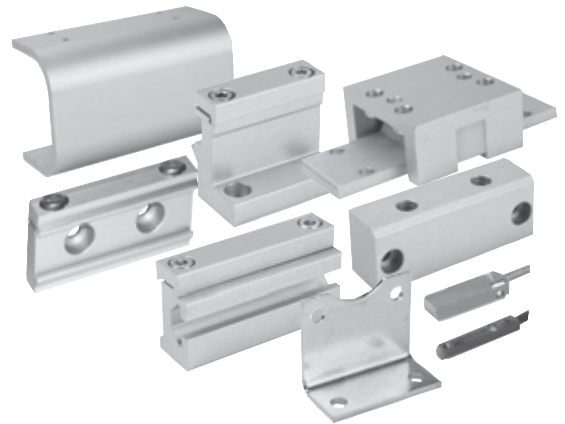


















Linear Drive-Accessories (Mountings and Magnetic Switches) Series OSP-P



Contents

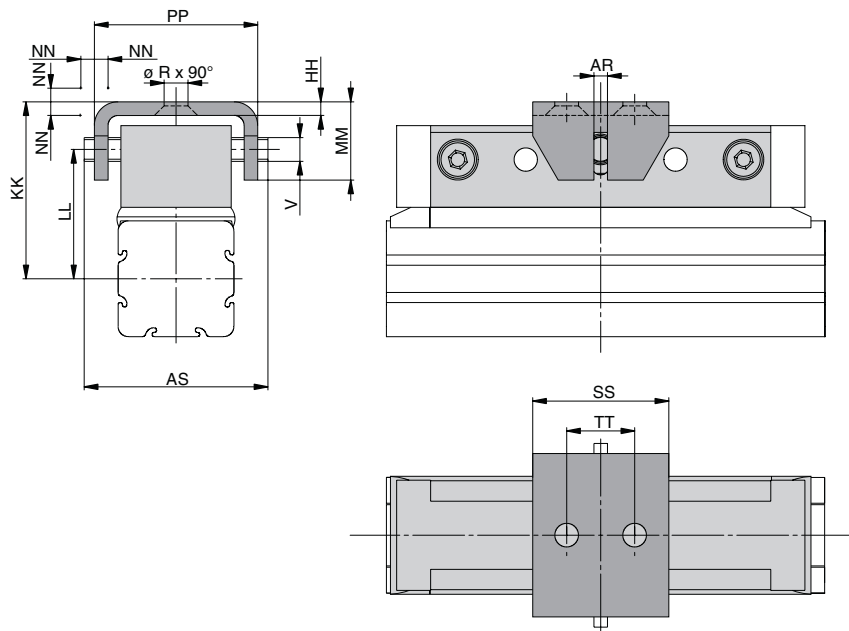
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Linear Drive Accessories for Series OSP-P		
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Magnetic Switch for T-Nut mounting		1.45.104E
Cable cover		1.45.102E

A3P11E00HAA00X

The right to introduce technical modifications is reserved

Series OSP-P10



Linear Drive Accessories

ø 10 mm

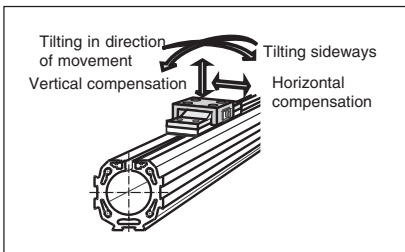
Clevis Mounting



For Linear-drive
• Series OSP-P

When external guides are used, parallelism deviations can lead to mechanical strain on the piston. This can be avoided by the use of a clevis mounting. In the drive direction, the mounting has very little play. Freedom of movement is provided as follows:

- Tilting in direction of movement
- Vertical compensation
- Tilting sideways
- Horizontal compensation



Dimension Table (mm)

Series	øR	V	AR	AS	HH	KK	LL	MM	NN*	PP	SS	TT	Order No.	
													Standard	Stainless
OSP-P10	3.4	3.5	2	27	2	26	19	11.5	1	24	20	10	20971	-

* Dimension NN gives the possible plus and minus play in horizontal and vertical movement, which also makes tilting sideways possible.



For rodless pneumatic cylinder OSP-P see 1.10.002E



Linear Drive Accessories

ø 16-80 mm
Clevis Mounting

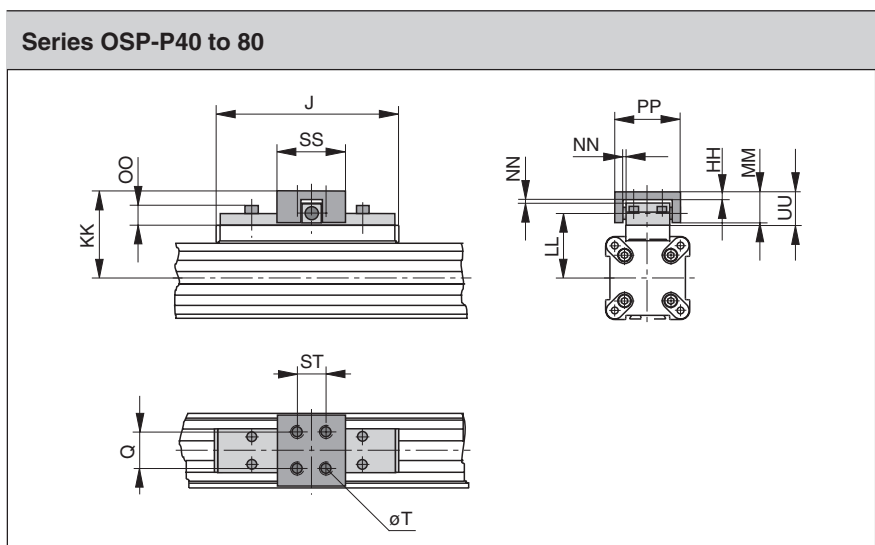
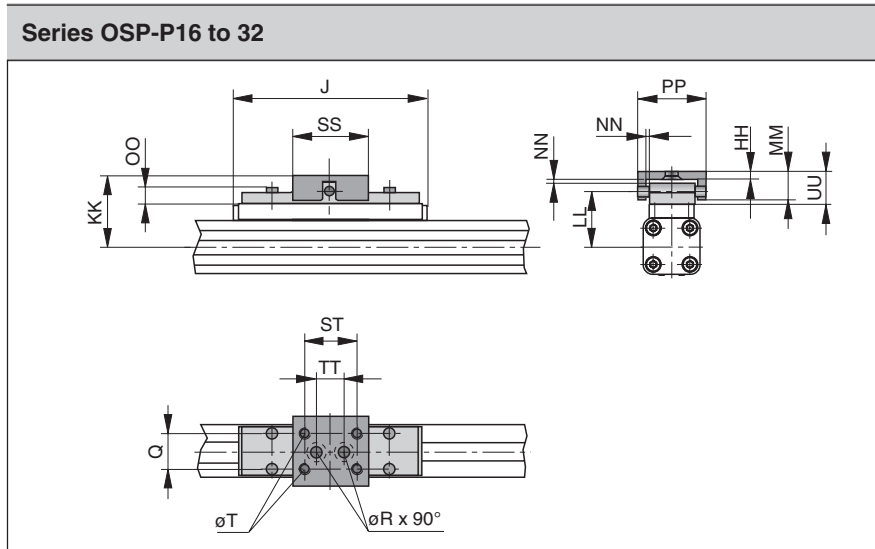
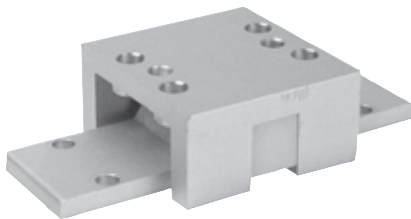


For Linear-drive
• Series OSP-P

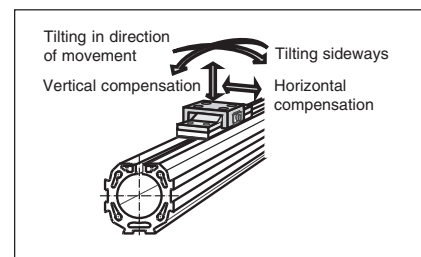
When external guides are used, parallelism deviations can lead to mechanical strain on the piston. This can be avoided by the use of a clevis mounting. In the drive direction, the mounting has very little play. Freedom of movement is provided as follows:

- Tilting in direction of movement
- Vertical compensation
- Tilting sideways
- Horizontal compensation

A stainless steel version is also available.



Please note:
When using additional inversion mountings, take into account the dimensions in data sheet 1.45.006E.



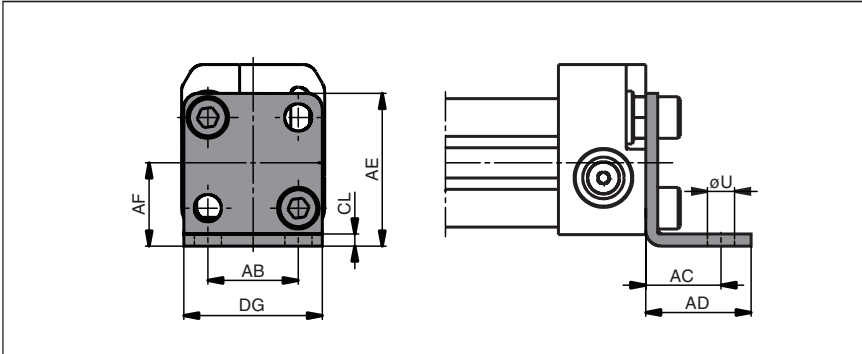
Dimension Table (mm)

Series	J	Q	T	øR	HH	KK	LL	MM	NN*	OO	PP	SS	ST	TT	UU	Order No.	
																Standard	Stainless
OSP-P16	69	10	M4	4.5	3	34	26.6	10	1	8.5	26	28	20	10	11	20462	20463
OSP-P25	117	16	M5	5.5	3.5	52	39	19	2	9	38	40	30	16	21	20005	20092
OSP-P32	152	25	M6	6.6	6	68	50	28	2	13	62	60	46	40	30	20096	20094
OSP-P40	152	25	M6	–	6	74	56	28	2	13	62	60	46	–	30	20024	20093
OSP-P50	200	25	M6	–	6	79	61	28	2	13	62	60	46	–	30	20097	20095
OSP-P63	256	37	M8	–	8	100	76	34	3	17	80	80	65	–	37	20466	20467
OSP-P80	348	38	M10	–	8	122	96	42	3	16	88	90	70	–	42	20477	20478

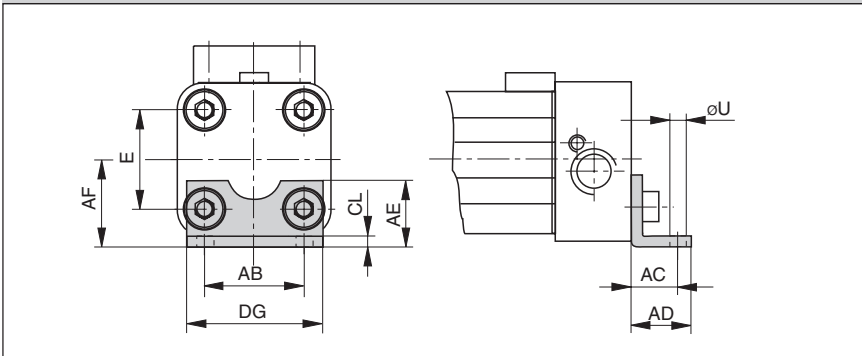
* Dimension NN gives the possible plus and minus play in horizontal and vertical movement, which also makes tilting sideways possible.

For rodless pneumatic cylinder OSP-P see 1.10.002E

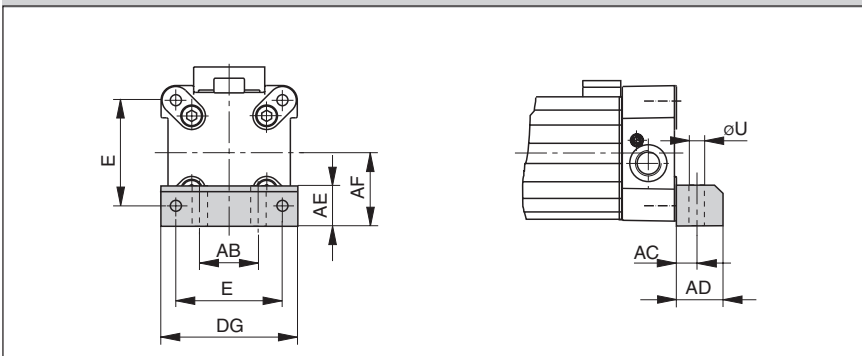
Series OSP-P10 : Type A1



Series OSP-P16 to 32: Type A1



Series OSP-P40 to 80: Type C1



Linear Drive Accessories

ø 10-80 mm

End Cap Mountings

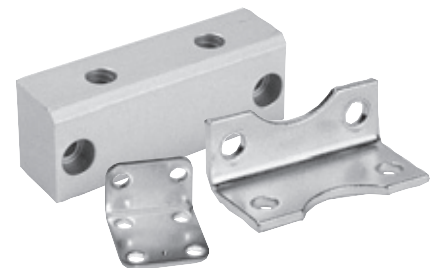


For Linear-drive
• Series OSP-P

On the end-face of each end cap there are four threaded holes for mounting the actuator. The hole layout is square, so that the mounting can be fitted to the bottom, top or either side, regardless of the position chosen for the air connection.

Material:
Series OSP-P10 – P32:
Galvanised steel.
Series OSP-P40 – P80:
Anodized aluminium.

The mountings are supplied in pairs.



Dimension Table (mm)

Series	E	ØU	AB	AC	AD	AE	AF	CL	DG	Order No. (*	
										TypeA1	TypeC1
OSP-P10	-	3.6	12	10	14	20.2	11	1.6	18.4	0240	-
OSP-P16	18	3.6	18	10	14	12.5	15	1.6	26	20408	-
OSP-P25	27	5.8	27	16	22	18	22	2.5	39	2010	-
OSP-P32	36	6.6	36	18	26	20	30	3	50	3010	-
OSP-P40	54	9	30	12.5	24	24	38	-	68	-	4010
OSP-P50	70	9	40	12.5	24	30	48	-	86	-	5010
OSP-P63	78	11	48	15	30	40	57	-	104	-	6010
OSP-P80	96	14	60	17.5	35	50	72	-	130	-	8010

(* = Pair)

For rodless pneumatic cylinder OSP-P see 1.10.002E

A1P579E00HAA00X

The right to introduce technical modifications is reserved

Linear Drive Accessories

∅ 10-80 mm

Mid-Section Support

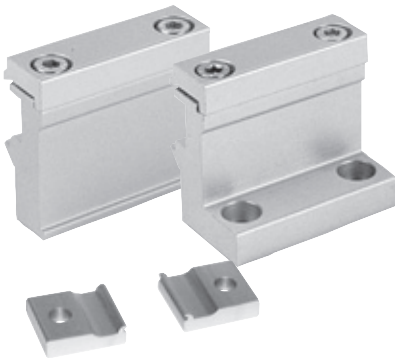


For Linear-drive
• Series OSP-P

Note on Types E1 and D1 (P16 – P80):
The mid-section support can also be mounted on the underside of the actuator, in which case its distance from the centre of the actuator is different.

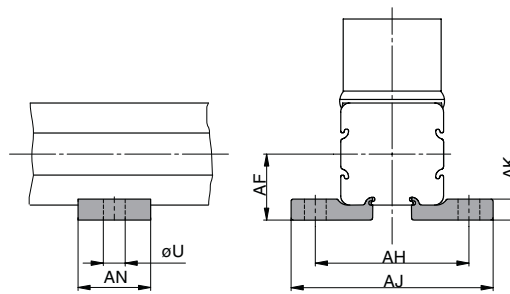
For design notes, see data sheet 1.10.002E-2

Stainless steel version on demand.



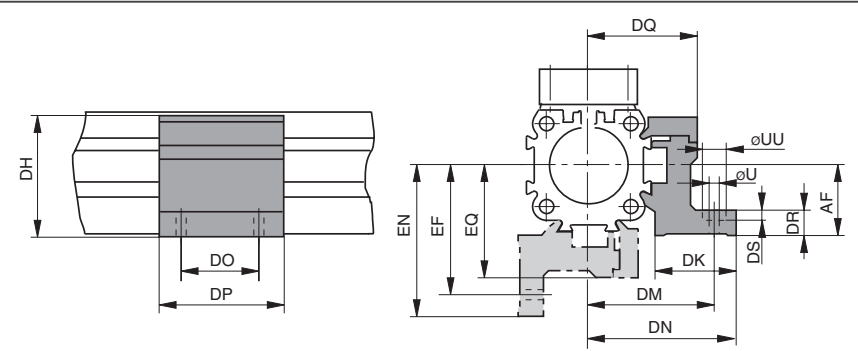
Series OSP-10, Type E1

(Mounting from above / below using a cap screw)



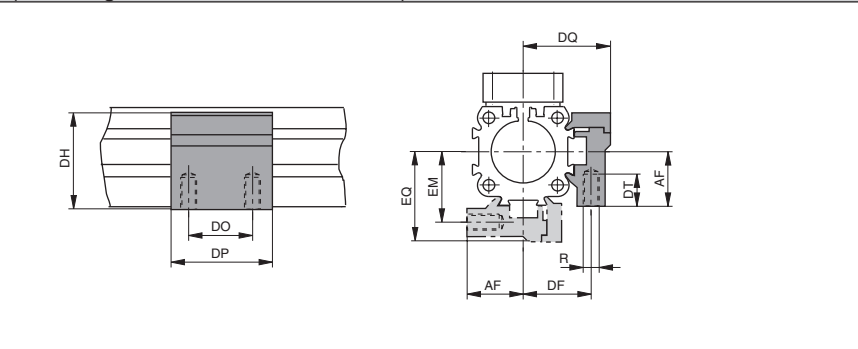
Series OSP-P16 to P80: Type E1

(Mounting from above / below using a cap screw)



Series OSP-16 to 80, Type D1

(Mountings from below with 2 screws)



Dimension Table (mm) Series OSP-P10

Series	U	AF	AH	AJ	AK	AN	Order No.	
							Type E1	Type D1
OSP-P10	3.6	11	25.4	33.4	3.5	12	0250	-

Dimension Table (mm) – Series OSP-P16 to P80





Series	R	U	UU	AF	DF	DH	DK	DM	DN	DO	DP	DQ	DR	DS	DT	EF	EM	EN	EQ	Order No.	
																				Type E1	Type D1
OSP-P16	M3	3.4	6	15	20	29.2	24	32	36.4	18	30	27	6	3.4	6.5	32	20	36.4	27	20435	20434
OSP-P25	M5	5.5	10	22	27	38	26	40	47.5	36	50	34.5	8	5.7	10	41.5	28.5	49	36	20009	20008
OSP-P32	M5	5.5	10	30	33	46	27	46	54.5	36	50	40.5	10	5.7	10	48.5	35.5	57	43	20158	20157
OSP-P40	M6	7	-	38	35	61	34	53	60	45	60	45	10	-	11	56	38	63	48	20028	20027
OSP-P50	M6	7	-	48	40	71	34	59	67	45	60	52	10	-	11	64	45	72	57	20163	20162
OSP-P63	M8	9	-	57	47.5	91	44	73	83	45	65	63	12	-	16	79	53.5	89	69	20452	20451
OSP-P80	M10	11	-	72	60	111.5	63	97	112	55	80	81	15	-	25	103	66	118	87	20482	20480



For rodless pneumatic cylinder OSP-P see 1.10.002E

A1P542E00HAA00X

The right to introduce technical modifications is reserved

Overview																		
Mounting Type	Type	Type – OSP Guides																
		SLIDELINE PROLINE MULTIBRAKE						POWERSLIDE										
		16 ¹⁾	25	32	40	50	63 ¹⁾	80 ¹⁾	16/25	25/25	25/35	25/44	32/35	32/44	40/44	40/60	50/60	50/76
End cap mounting 	Type A1	X							X									
	Type A2	O	O	O														
	Type A3									O	O		O					
End cap mounting, reinforced 	Type B1		X	X					X	X	X	X	X					
	Type B3								O									
	Type B4											O		O				
	Type B5																	
End cap mounting 	Type C1				X	X	X	X							X	X	X	X
	Type C2				O	O												
	Type C3						O	O							O		O	
	Type C4															O		O
Mid section support, small Mid section support, wide 	Type D1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	Type E1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	Type E2	O	O	O	O	O												
	Type E3						O	O	O	O	O		O		O		O	
	Type E4											O		O		O		O
	Type E5																	

- X = carriage mounted in top (12 o'clock position)
- O = carriage mounted in lateral (3 or 9 o'clock position)
- = available components
- 1) = not available for all sizes

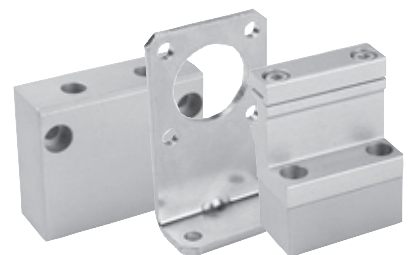
Linear Drive Accessories

Mountings for Linear Drives fitted with OSP-Guides



For Linear-drives
• Series OSP-P

Note:
For mountings and mid-section supports for linear drives with recirculating ball bearing guide STARLINE see data sheet 1.45.005E-6 to 1.45.005E-9, for recirculating ball bearing guide KF see data sheet 1.45.005E-4 to 1.45.005E-9



For rodless pneumatic cylinder OSP-P see 1.10.002E

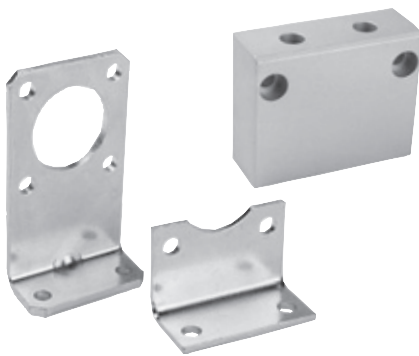
Data Sheet No. 1.45.005E-1

End cap mountings *

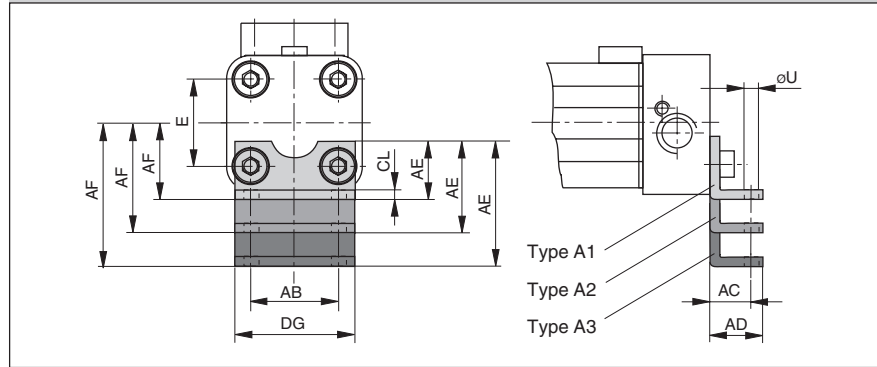
Four internal screw threads are located in the end faces of all OSP actuators for mounting the drive unit. End cap mountings may be secured across any two adjacent screws.

Material: Series OSP-16, 25, 32:
Galvanised steel
Series OSP-40,50, 63, 80:
Anodized aluminium

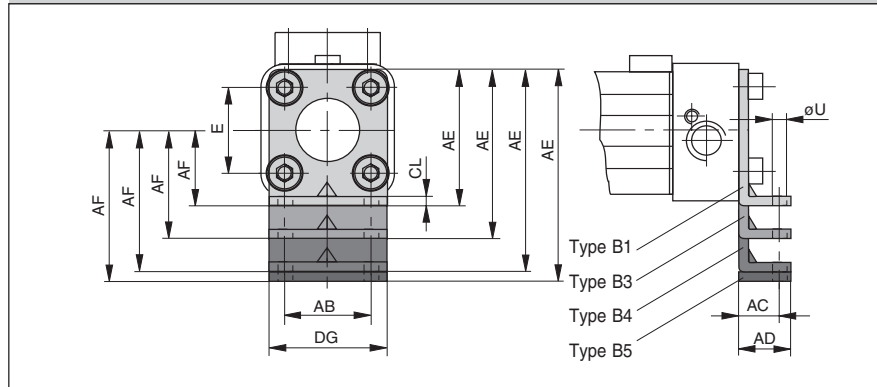
The mountings are supplied in pairs.



Series OSP-P16, 25, 32: Type A



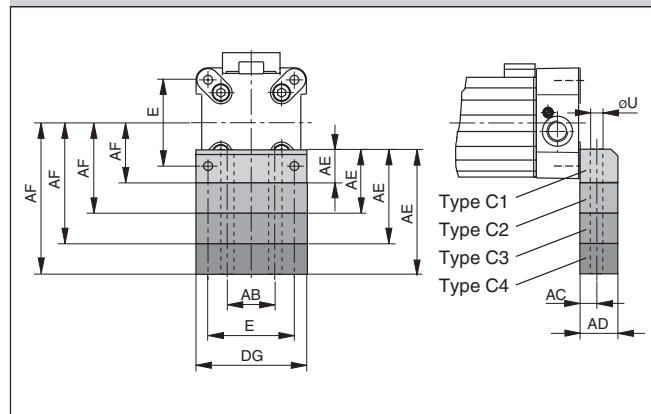
Series OSP-P16, 25, 32: Type B



Dimension Table (mm)
– Dimensions AE and AF (Dependant on the mounting type)

Mount. type	Dimensions AE for size								AF for size							
	16	25	32	40	50	63	80	16	25	32	40	50	63	80		
A1	12.5	18	20	-	-	-	-	15	22	30	-	-	-	-		
A2	27.5	33	34	-	-	-	-	30	37	44	-	-	-	-		
A3	-	45	42	-	-	-	-	-	49	52	-	-	-	-		
B1	-	42	55	-	-	-	-	-	22	30	-	-	-	-		
B3	55	-	-	-	-	-	-	42	-	-	-	-	-	-		
B4	-	80	85	-	-	-	-	-	60	60	-	-	-	-		
B5	-	-	90	-	-	-	-	-	-	65	-	-	-	-		
C1	-	-	-	24	30	40	50	-	-	-	38	48	57	72		
C2	-	-	-	37	39	-	-	-	-	-	51	57	-	-		
C3	-	-	-	46	54	76	88	-	-	-	60	72	93	110		
C4	-	-	-	56	77	-	-	-	-	-	70	95	-	-		

Series OSP-P40, 50, 63, 80: Type C



Dimension Table (mm)

Series	E	øU	AB	AC	AD	CL	DG
OSP-P16	18	3.6	18	10	14	1.6	26
OSP-P25	27	5.8	27	16	22	2.5	39
OSP-P32	36	6.6	36	18	26	3	50
OSP-P40	54	9	30	12.5	24	-	68
OSP-P50	70	9	40	12.5	24	-	86
OSP-P63	78	11	48	15	30	-	104
OSP-P80	96	14	60	17.5	35	-	130

* see mounting instructions on page 1.45.005E-1

Linear Drive Accessories

Ø 25-50 mm

End Cap Mounting

correspond to
FESTO dimensions
HP25 – 50

for Linear Drives with
Recirculating Ball Bearing Guide

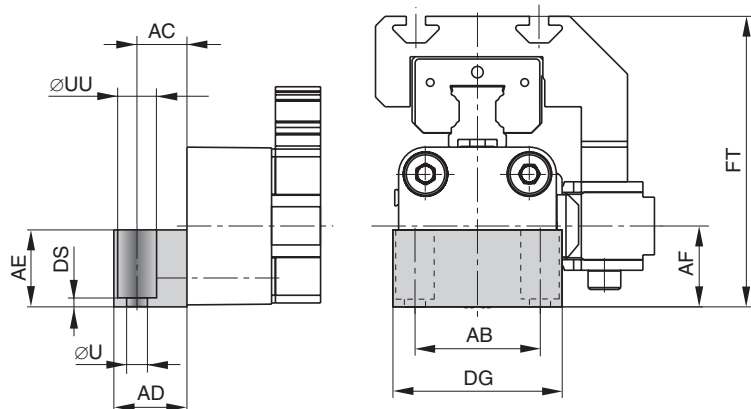
- Series OSP-P KF

On the end-face of each end cap there are four threaded holes for mounting the actuator.

Material:
Series OSP-P KF25 – 50:
Anodized aluminium.

The mountings are supplied in pairs.

Series OSP-P KF25 to KF50: Type HP (Correspond to FESTO dimensions)

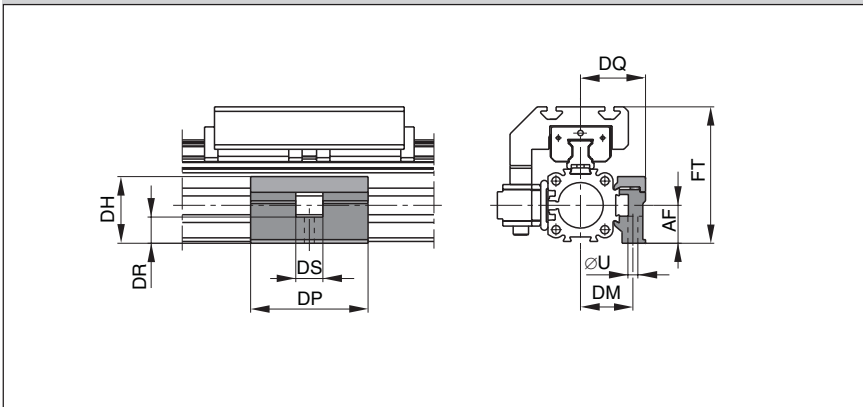


Note:
Correspond to FESTO DGPL-KF,
when the End Cap Mountings HP are mounted on the opposite side to the carriage
(see drawing)

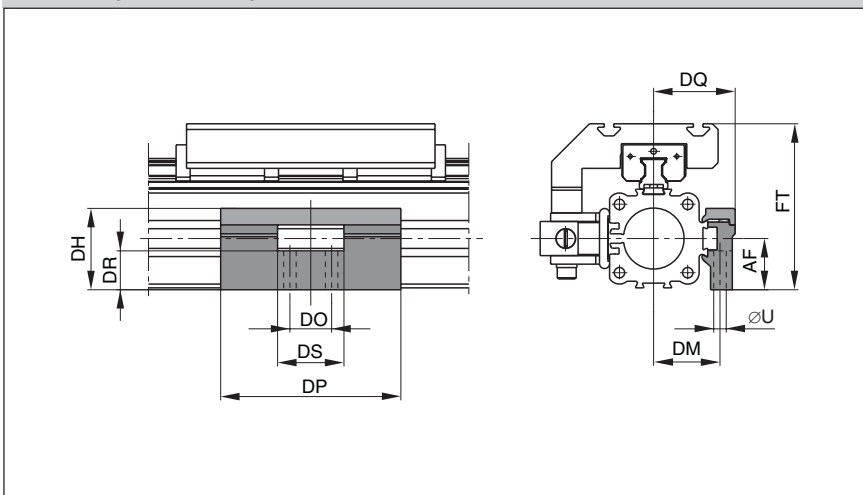
Dimension Table (mm)

Series	ØU	AB	AC	AD	AE	AF	DG	DS	FT	ØUU	Order No.
HP25	5.5	32.5	13	19	20	21	44	2	75.5	10	21107
HP32	6.6	38	17	24	24	27	52	3	87.5	11	21108
HP40	6.6	45	17.5	24	24	35	68	2	104.5	11	21109
HP50	9	65	25	35	35	48	86	6	138.5	15	21110

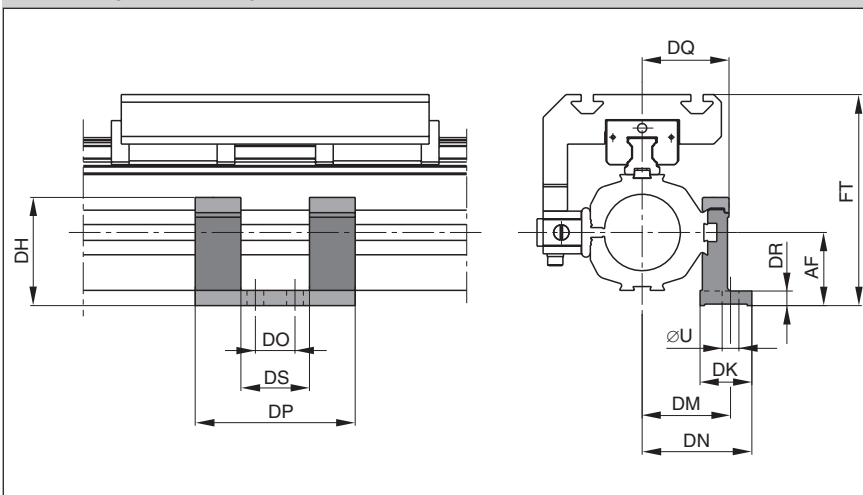
Series OSP-P KF25: Type MUP
(Mounting over through holes)



Series OSP-P KF32 to KF40: Type MUP
(Mounting over through holes)



Series OSP-P KF50: Type MUP
(Mounting over through holes)



Linear Drive Accessories

Ø 25-50 mm

Mid-Section Support

correspond to
FESTO dimensions
MUP25 – 50

for Linear Drives with
Recirculating Ball Bearing Guide

- Series OSP-P KF

For design notes, see data sheet
1.40.007E-3

Note:
Correspond to FESTO DGPL-KF,
when the Mid-Section Support MUP
are mounted on the 90° side to the
carriage (see drawings).

Dimension Table (mm)

Series	ØU	AF	DH	DK	DM	DN	DO	DP	DQ	DR	DS	FT	Order No.
MUP25	5.5	21	36.9	–	29	–	–	65	36	14.5	15	75.5	21119
MUP32	6.6	27	42.9	–	35	–	22	95	43	20.5	35	87.5	21120
MUP40	6.6	35	58	–	40	–	22	95	48	28.5	35	104.5	21121
MUP50	11	48	71	34	58	72	26	105	57	10	45	138.5	21122

Linear Drive Accessories

Ø 16 to 32 mm End Cap Mounting Type: B

for Linear Drives with
Recirculating Ball Bearing Guide

- Series OSP-P STL
- Series OSP-P KF

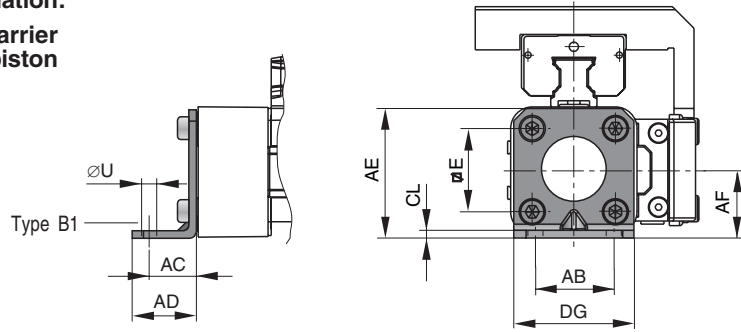
Material:
Galvanised steel
Anodized aluminium

The mountings are supplied in pairs.



Series OSP-P STL16, STL25, STL32 : Type B1
Series OSP-P KF16, KF25, KF32 : Type B1

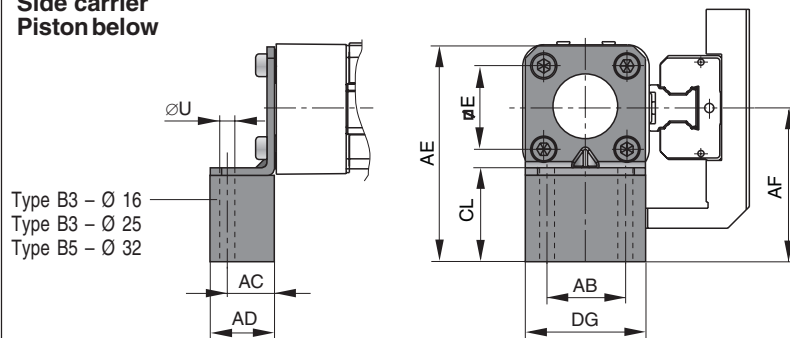
Installation:
Top carrier
Sidepiston



Drawing shows: Mounting with Guide Type STL

Series OSP-P STL16, STL25, STL32: Type B3 (Ø 32:B5)
Series OSP-P KF16, KF25, KF32: Type B3 (Ø 32:B5)

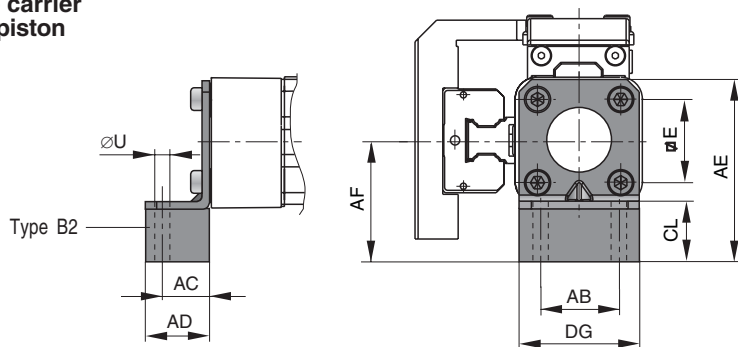
Installation:
Side carrier
Piston below



Drawing shows: Mounting with Guide Type STL

Series OSP-P STL16, STL25, STL32: Type B2
Series OSP-P KF16, KF25, KF32: Type B2

Installation:
Side carrier
Toppiston



Drawing shows: Mounting with Guide Type STL

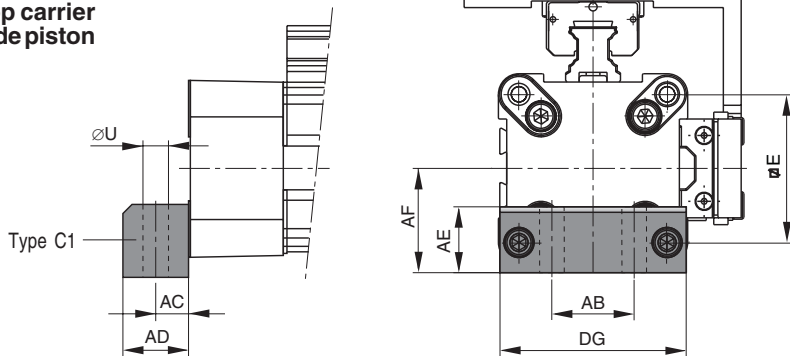
Dimension Table (mm) for End Cap Mounting Type: B1 to B5

Series	Mounting Type	E	ØU	AB	AC	AD	AE	AF	CL	DG	Order No. (pair)
OSP-P STL16	B1	18	3.6	18	10	14	28	15	2	26	21135
OSP-P KF16	B2	18	3.6	18	10	14	43	30	17	26	21136
	B3	18	3.6	18	10	14	55	42	29	26	21137
OSP-P STL25	B1	27	5.8	27	16	22	42	22	2.5	39	20311
OSP-P KF25	B2	27	5.8	27	16	22	57	37	17.5	39	21138
	B3	27	5.8	27	16	22	69	49	29.5	39	21139
OSP-P STL32	B1	36	6.6	36	18	26	55	30	3	50	20313
OSP-P KF32	B2	36	6.6	36	18	26	69	44	17	50	21140
	B5	36	6.6	36	18	26	90	65	9	50	21141

Series OSP-P STL40, STL50: Type C1
 Series OSP-P KF40, KF50: Type C1

Installation:

Top carrier
 Side piston



Drawing shows: Mounting with Guide Type STL

Ø 40 to 50 mm End Cap Mounting Type: C

for Linear Drives with
 Recirculating Ball Bearing Guide

- Series OSP-P STL
- Series OSP-P KF

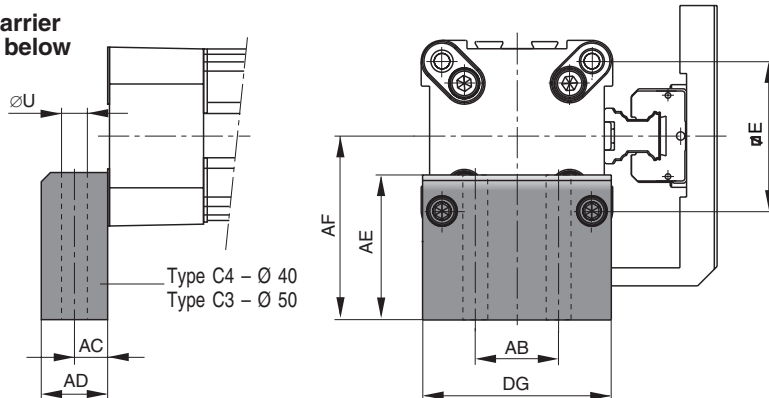
Material:
 Anodized aluminium

The mountings are supplied in pairs.

Series OSP-P STL40, STL50: Type C4 (Ø 50: C3)
 Series OSP-P KF40, KF50: Type C4 (Ø 50: C3)

Installation:

Side carrier
 Piston below

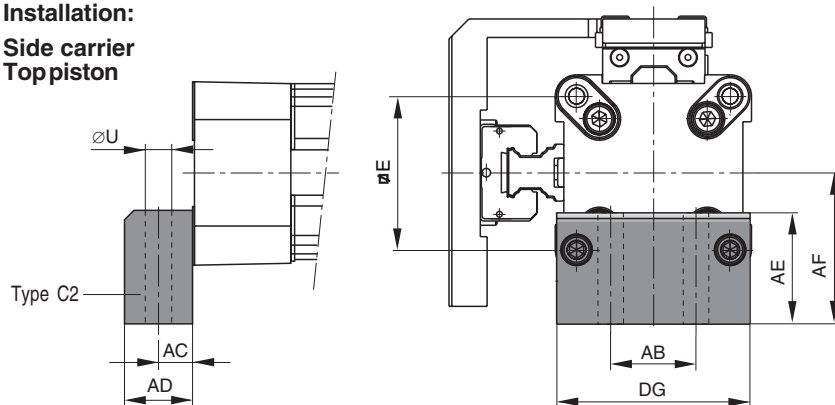


Drawing shows: Mounting with Guide Type STL

Series OSP-P STL40, STL50: Type C2
 Series OSP-P KF40, KF50: Type C2

Installation:

Side carrier
 Top piston



Drawing shows: Mounting with Guide Type STL

Dimension Table (mm) for End Cap Mounting Type: C1 to C4

Series	Mounting Type	E	ØU	AB	AC	AD	AE	AF	DG	Order No. (pair)
OSP-P STL40	C1	54	9	30	12.5	24	24	38	68	4010
OSP-P KF40	C2	54	9	30	12.5	24	37	51	68	20338
	C4	54	9	30	12.5	24	56	70	68	20340
OSP-P STL50	C1	70	9	40	12.5	24	30	48	86	5010
OSP-P KF50	C2	70	9	40	12.5	24	39	57	86	20349
	C3	70	9	40	12.5	24	54	72	86	20350



Linear Drive Accessories

Ø 16 to 50

Mid-Section Support

Type: D1ST

for Linear Drives with Recirculating Ball Bearing Guide

- Series OSP-P STL
- Series OSP-P KF

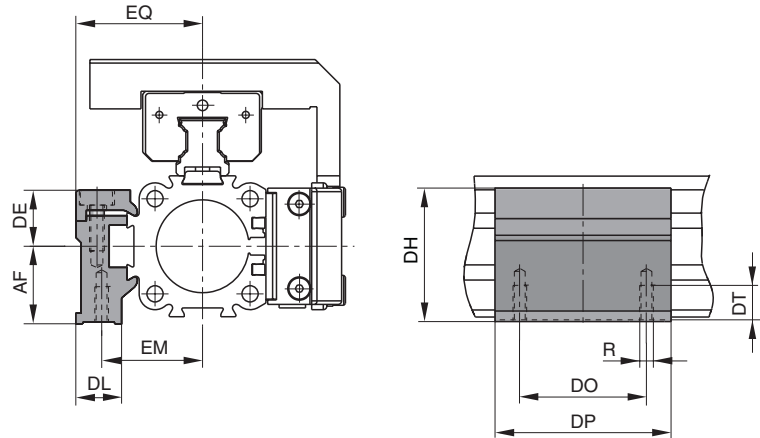
Note on Types D1ST
The mid-section support can also be mounted on the underside of the actuator, in which case its distance from the centre of the actuator is different.

For design notes, see page
1.40.006E-3 (Serie OSP-P STL)
1.40.007E-3 (Serie OSP-P KF)



Series OSP-P STL16 to STL50: Type D1ST
Series OSP-P KF16 to KF50: Type D1ST

Mountings from below with 2 screws



Drawing shows: Mounting with Guide Type STL

Dimension Table (mm) Mid-Section Support D1ST

Series OSP-P	Mounting Type	R	AF	DE	DH	DL	DO	DP	DT	EM	EQ	Order No.
STL/KF16	D1ST	M3	15	14.2	29.2	14.6	18	30	6.5	20	27	21125
STL/KF25	D1ST	M5	22	16	38	13	36	50	10	28.5	36	21126
STL/KF32	D1ST	M5	30	16	46	13	36	60	10	35.5	43	21127
STL/KF40	D1ST	M6	38	23	61	19	45	60	11	38	48	21128
STL/KF50	D1ST	M6	48	23	71	19	45	60	11	45	57	21129

Order example: Type D1ST16 Order No. 21125

Mid-Section Support

Type: E1ST bis E5ST

for Linear Drives with Recirculating Ball Bearing Guide

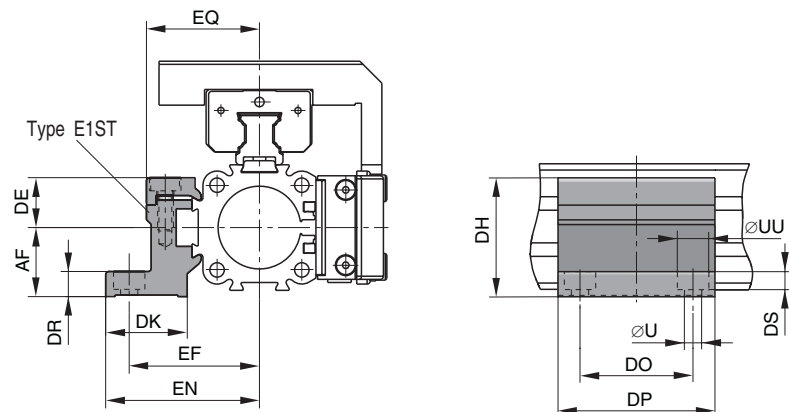
- Series OSP-P STL
- Series OSP-P KF



Series OSP-P STL16 to STL50: Type E1ST
Series OSP-P KF16 to KF50: Type E1ST

Installation:
Top carrier
Side position

Mounting from above / below
using a cap screw

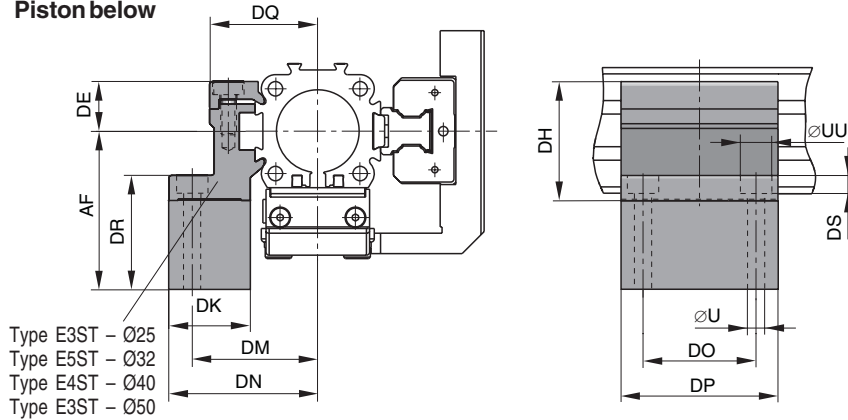


Drawing shows: Mounting with Guide Type STL

Series OSP-P STL25 to STL50: Type E3ST, E4ST, E5ST
Series OSP-P STL25 to STL50: Type E3ST, E4ST, E5ST

Installation:
Side carrier
Piston below

Mounting from above / below
 using a cap screw



Drawing shows: Mounting with Guide Type STL

Mid-Section Support Type: E1ST to E5ST

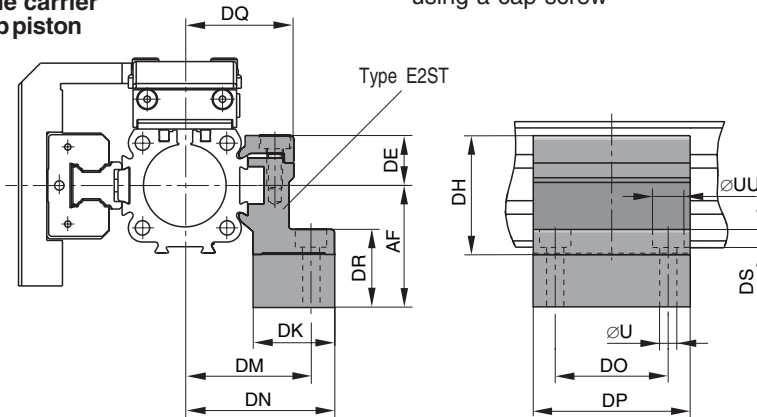
for Linear Drives with
 Recirculating Ball Bearing Guide

- Series OSP-P STL
- Series OSP-P KF

Series OSP-P STL16 to STL50: Type E2ST
Series OSP-P KF16 to KFL50: Type E2ST

Installation:
Side carrier
Top piston

Mounting from above / below
 using a cap screw



Drawing shows: Mounting with Guide Type STL



Dimension Table (mm) for Mid-Section Support E1ST to E5ST

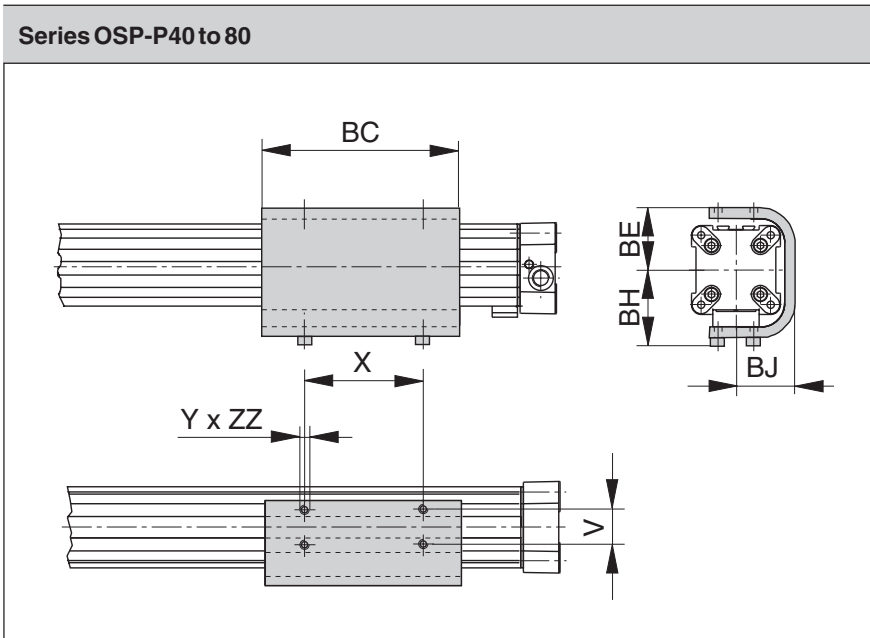
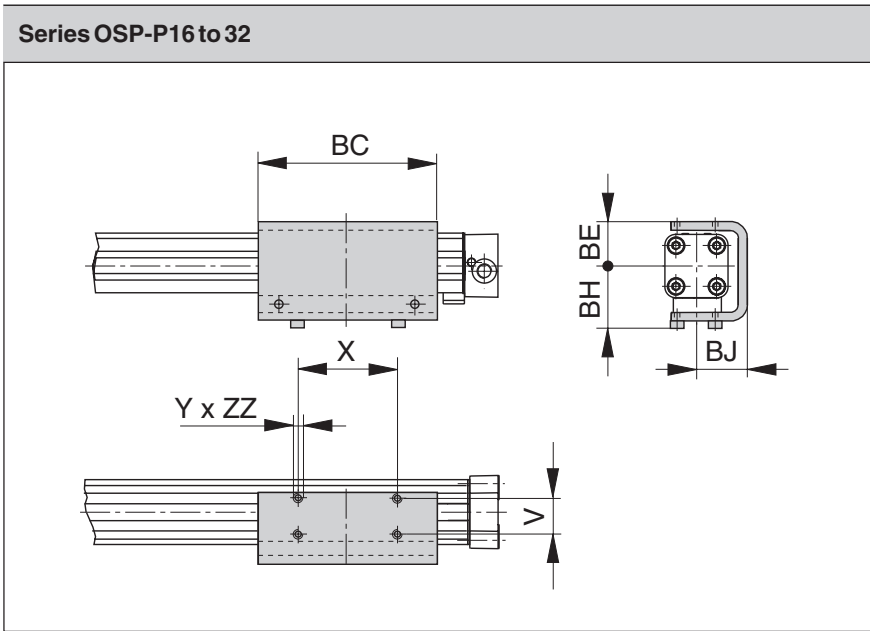
Series OSP-P	Mounting Type	ØU	ØUU	AF	DE	DH	DK	DM	DN	DO	DP	DR	DQ	DS	EF	EN	EQ	Order No.
STL/KF16	E1ST	3.4	6	15	14.2	29.2	24	32	36.4	18	30	6	27	3.4	32	36.4	27	21130
STL/KF16	E2ST	3.4	6	30	14.2	29.2	24	32	36.4	18	30	21	27	3.4	32	36.4	27	21142
STL/KF25	E1ST	5.5	10	22	16	38	26	40	47.5	36	50	8	34.5	5.7	41.5	49	36	21131
STL/KF25	E2ST	5.5	10	37	16	38	26	40	47.5	36	50	23	34.5	5.7	41.5	49	36	21143
STL/KF25	E3ST	5.5	10	49	16	38	26	40	47.5	36	50	35	34.5	5.7	41.5	49	36	21148
STL/KF32	E1ST	5.5	10	30	16	46	27	46	54.5	36	60	10	40.5	5.7	48.5	57	43	21132
STL/KF32	E2ST	5.5	10	44	16	46	27	46	54.5	36	60	24	40.5	5.7	48.5	57	43	21144
STL/KF32	E5ST	5.5	10	65	16	46	27	46	54.5	36	60	45	40.5	5.7	48.5	57	43	21151
STL/KF40	E1ST	7	-	38	23	61	34	53	60	45	60	10	45	-	56	63	48	21133
STL/KF40	E2ST	7	-	51	23	61	34	53	60	45	60	23	45	-	56	63	48	21145
STL/KF40	E4ST	7	-	70	23	61	34	53	60	45	60	42	45	-	56	63	48	21150
STL/KF50	E1ST	7	-	48	23	71	34	59	67	45	60	10	52	-	64	72	57	21134
STL/KF50	E2ST	7	-	57	23	71	34	59	67	45	60	19	52	-	64	72	57	21146
STL/KF50	E3ST	7	-	72	23	71	34	59	67	45	60	34	52	-	64	72	57	21149

Order example: Type E1ST16

Order No. 21130

A1P581E00HAA00X

The right to introduce technical modifications is reserved



Dimension Table (mm)									
Series	V	X	Y	BC	BE	BH	BJ	ZZ	Order No.
OSP-P16	16.5	36	M4	69	23	33	25	4	20446
OSP-P25	25	65	M5	117	31	44	33.5	6	20037
OSP-P32	27	90	M6	150	38	52	39.5	6	20161
OSP-P40	27	90	M6	150	46	60	45	8	20039
OSP-P50	27	110	M6	200	55	65	52	8	20166
OSP-P63	34	140	M8	255	68	83.5	64	10	20459
OSP-P80	36	190	M10	347	88	107.5	82	15	20490

For rodless pneumatic cylinder OSP-P see 1.10.002E

Linear Drive Accessories

ø 16-80 mm

Inversion Mounting



For Linear-drive
• Series OSP-P

In dirty environments, or where there are special space problems, inversion of the cylinder is recommended. The inversion bracket transfers the driving force to the opposite side of the cylinder. The size and position of the mounting holes are the same as on the standard cylinder.

Stainless steel version on demand.

Please note:
Other components of the OSP system such as **mid-section supports, magnetic switches and the external air passage for the P16**, can still be mounted on the free side of the cylinder.

When combining single end porting with inversion mountings, RS magnetic switches can only be mounted directly opposite to the external air-supply profile.

Important Note:
May be used in combination with Clevis Mounting, ref. dimensions in data sheet 1.45.002E



Linear Drive Accessories

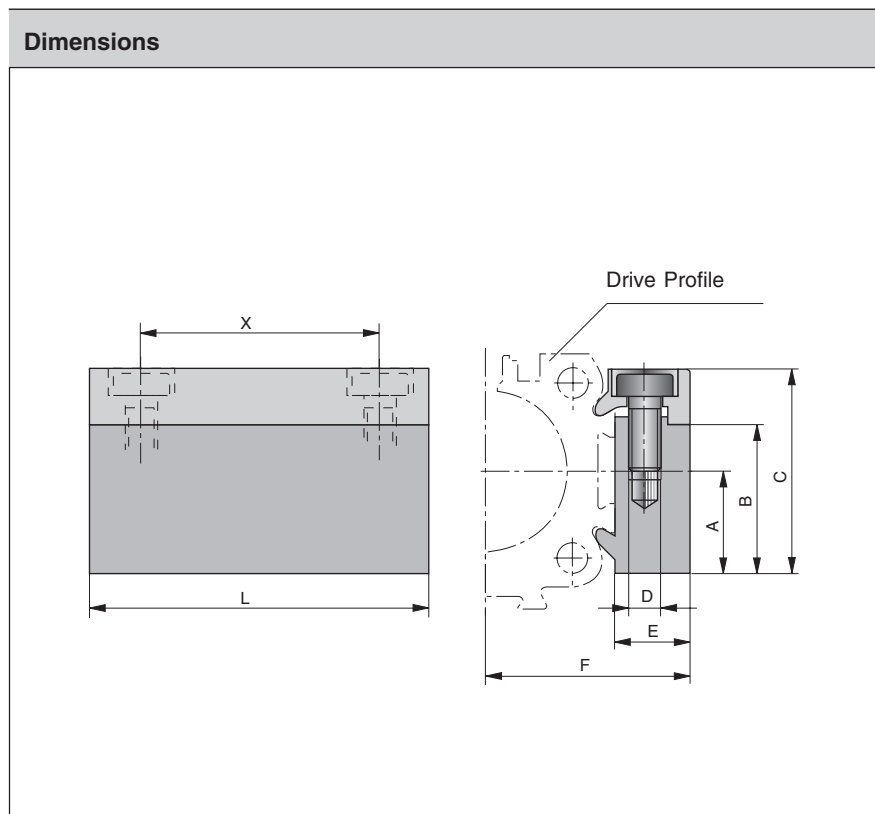
ø 16-50 mm Adaptor Profile



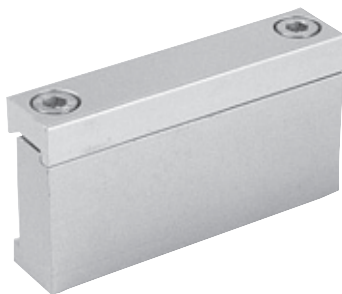
For Linear-drive
• Series OSP-P

Adaptor Profile OSP

- A universal attachment for mounting of valves etc.
- Solid material



Dimension Table (mm)										
Series	A	B	C	D	E	F	L	X	Order No.	
									Standard	Stainless
OSP-P16	14	20.5	28	M3	12	27	50	38	20432	20438
OSP-P25	16	23	32	M5	10.5	30.5	50	36	20006	20186
OSP-P32	16	23	32	M5	10.5	36.5	50	36	20006	20186
OSP-P40	20	33	43	M6	14	45	80	65	20025	20267
OSP-P50	20	33	43	M6	14	52	80	65	20025	20267

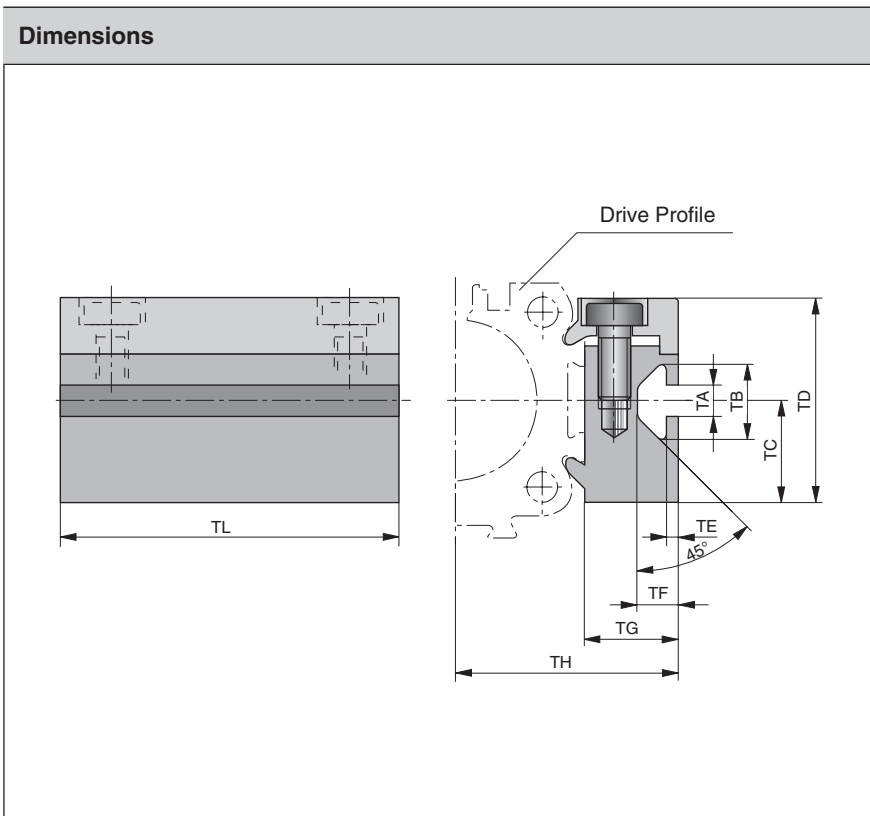


For rodless pneumatic cylinder OSP-P see 1.10.002E

Data Sheet No. 1.45.007E

A1P583E00AH00X

The right to introduce technical modifications is reserved



Linear Drive Accessories

ø 16-50 mm

T-Nut Profile



For Linear-drive
• Series OSP-P

T-Nut Profile OSP
• A universal attachment for mounting with standard T-Nuts

Dimension Table (mm)											
Series	TA	TB	TC	TD	TE	TF	TG	TH	TL	Order No.	
										Standard	Stainless
OSP-P16	5	11.5	14	28	1.8	6.4	12	27	50	20433	20439
OSP-P25	5	11.5	16	32	1.8	6.4	14.5	34.5	50	20007	20187
OSP-P32	5	11.5	16	32	1.8	6.4	14.5	40.5	50	20007	20187
OSP-P40	8.2	20	20	43	4.5	12.3	20	51	80	20026	20268
OSP-P50	8.2	20	20	43	4.5	12.3	20	58	80	20026	20268

Following T-Nuts from the company ITEM could be used:

Cyl.-Series	T-Nut St5	T-Nut St8
OSP-P16-32	●	
OSP-P40-50		●



For rodless pneumatic cylinder OSP-P see 1.10.002E

Linear Drive Accessories

ø 16-50 mm

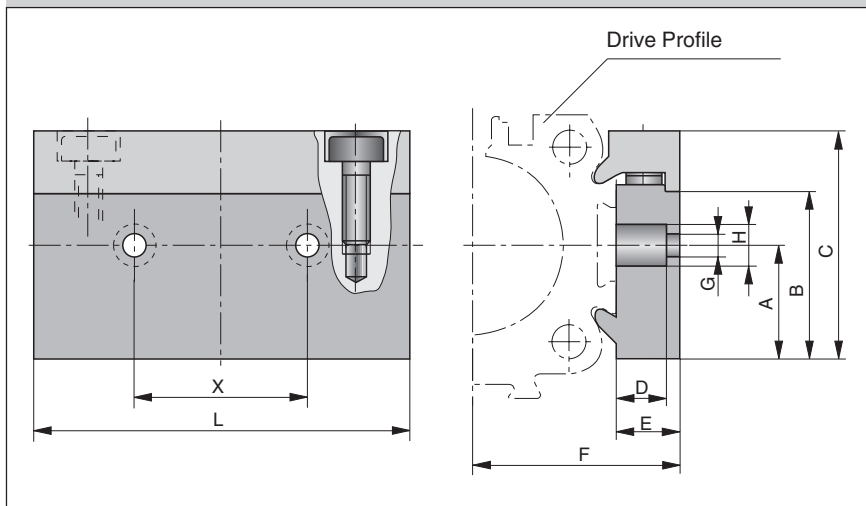
Connection Profile



For combining

- Series OSP-P with system profiles
- Series OSP-P with Series OSP-P

Dimensions

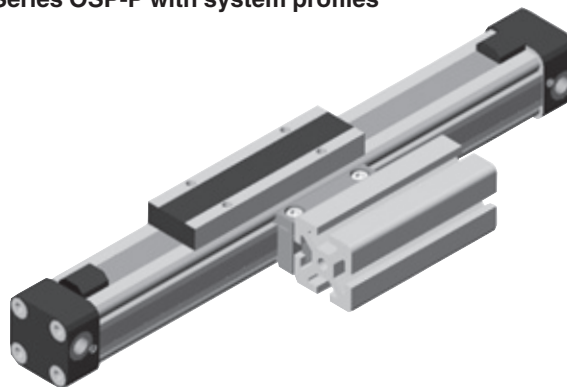


Dimension Table (mm)

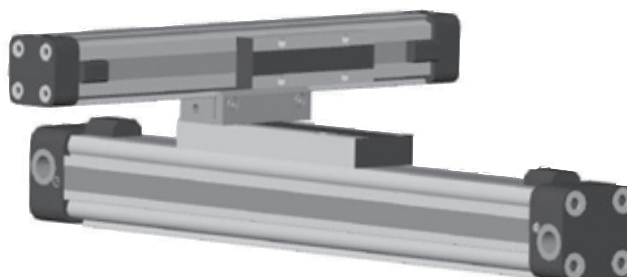
Cylinder Series	for mounting on the carrier of	A	B	C	D	E	F	G	H	L	X	Order No.
OSP-P16	OSP25	14	20.5	28	8.5	12	27	5.5	10	50	25	20849
OSP-P25	OSP32-50	16	23	32	8.5	10.5	30.5	6.6	11	60	27	20850
OSP-P32	OSP32-50	16	23	32	8.5	10.5	36.5	6.6	11	60	27	20850
OSP-P40	OSP32-50	20	33	43	8	14	45	6.6	11	60	27	20851
OSP-P50	OSP32-50	20	33	43	8	14	52	6.6	11	60	27	20851

Possible Combinations

Combination of Series OSP-P with system profiles



Combination of Series OSP-P with Series OSP-P

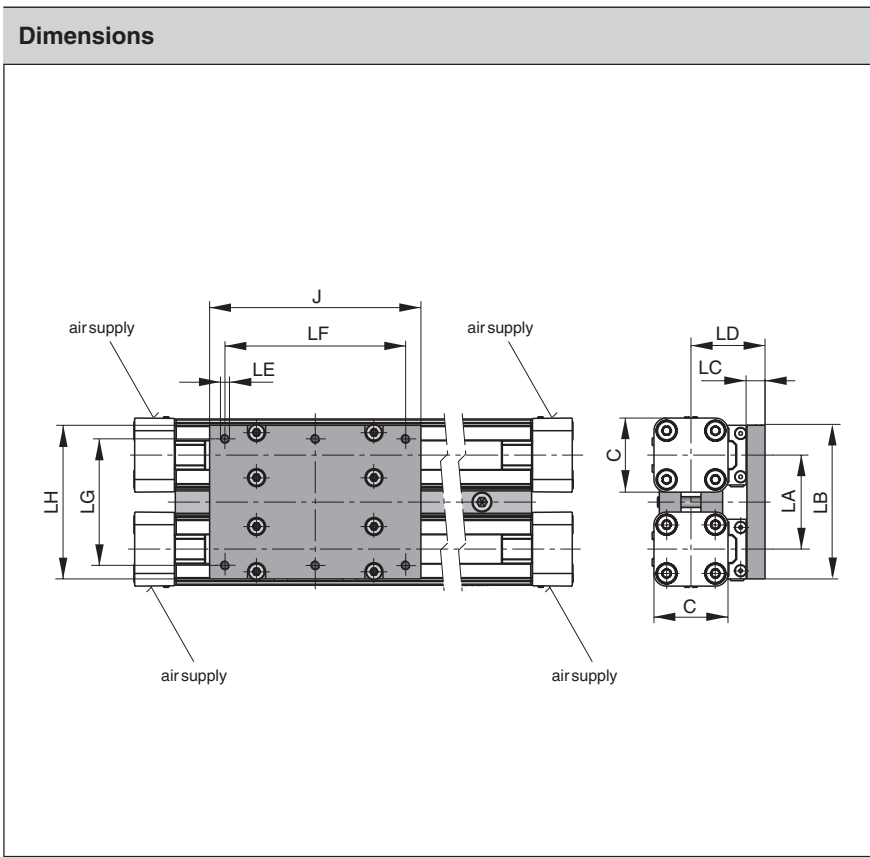


For rodless pneumatic cylinder OSP-P see 1.10.002E

Data Sheet No. 1.45.009E

A1P681E00AHH00X

The right to introduce technical modifications is reserved



Linear Drive Accessories

ø 25-50 mm
Duplex Connection



For connection of cylinders of the Series OSP-P

The duplex connection combines two OSP-P cylinders of the same size into a compact unit with high performance.

Dimension Table (mm)

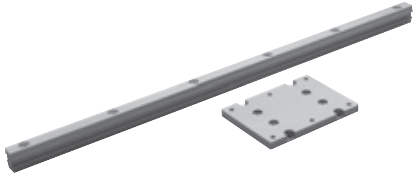
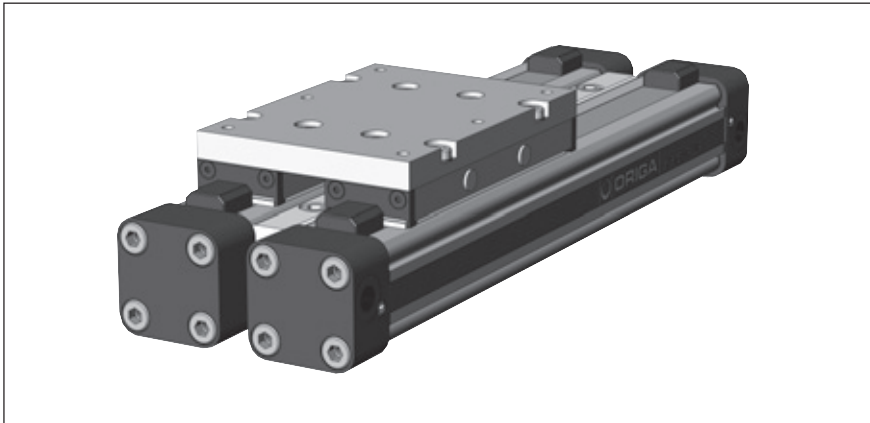
Cylinder Series	C	J	LA	LB	LC	LD	LE	LF	LG	LH	Order	No.
											Standard	Stainless
OSP-P25	41	117	52	86	10	41	M5	100	70	85	20153	20194
OSP-P32	52	152	64	101	12	50	M6	130	80	100	20290	20291
OSP-P40	69	152	74	111	12	56	M6	130	90	110	20156	20276
OSP-P50	87	200	88	125	12	61	M6	180	100	124	20292	20293

Features

- increased load and torque capacity
- higher driving forces

Included in delivery:

- 2 clamping profiles with screws
- 1 mounting plate with fixings



For rodless cylinders OSP-P see 1.10.002E



Linear Drive Accessories

ø 25-50 mm Multiplex Connection



For connection of cylinders of the Series OSP-P

The multiplex connection combines two or more OSP-P cylinders of the same size into on unit.

Features

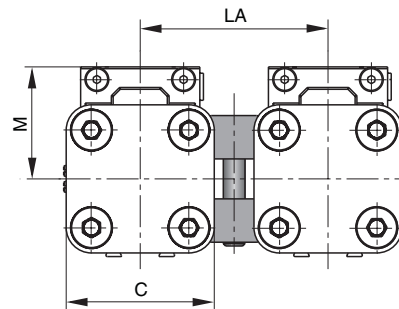
- The orientation of the carriers can be freely selected

Included in delivery:

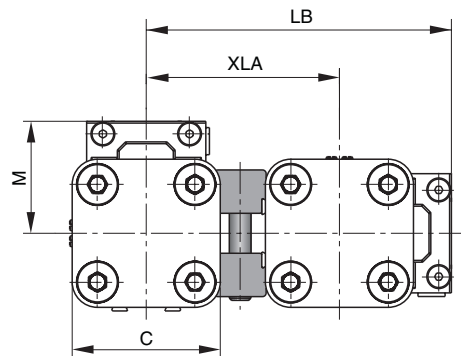
2 clamping profiles with clamping screws

Dimensions

Installation:
Top carrier/Top carrier

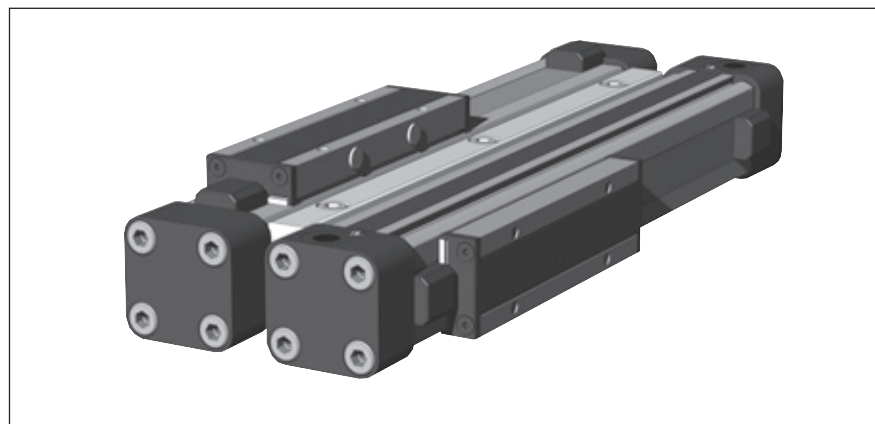


Installation:
Top carrier/Side carrier



Dimension Table (mm)

Cylinder Series	C	M	LA	LE	XLA	Order No.	
						Standard	Stainless
OSP-P25	41	31	52	84.5	53.5	20035	20193
OSP-P32	52	38	64	104.5	66.5	20167	20265
OSP-P40	69	44	74	121.5	77.5	20036	20275
OSP-P50	87	49	88	142.5	93.5	20168	20283



For rodless cylinders OSP-P see 1.10.002E

Characteristics				
Characteristics	Symbol	Unit	Description	
Electrical Characteristics			Type RS	Type ES
Switching output			Reed	PNP, NPN
Operating voltage	U_B	V	10-240 AC/DC (NO) 10-150 AC/DC (NC)	10-30 DC
Residual voltage		V	< 3	< 3
Connection			Two wire	Three wire
Output function			normally open normally closed	normally open
Permanent current	I_{Dmax}	mA	200	200
Max. switching capacity		VA (W)	10 VA	—
Power consumption without load		mA	—	< 20
Function indicator			LED, yellow	
Typical switching time		ms	On: < 2	On: < 2
Switch-off delay		ms	—	ca. 25
Pole reversal			LED does not work	—
Pole reversal protection			—	Built in
Short-circuit protection			—	Built in
Switchable capacity load		μ F	0.1 at 100 Ω , 24 VDC	
Switching point accuracy		mm	$\pm 0,2$	
Switching distance		mm	ca. 15	ca. 15
Hysteresis for OSP		mm	ca. 8	ca. 3
Lifetime			3 x 10 ⁶ , up to 6 x 10 ⁶ cycles	Theoretically unlimited
Mechanical Characteristics				
Housing			Makrolon, smoke color	
Cable cross section		mm ²	2 x 0.14	3 x 0.14
Cable type *)			PVC	PUR, black
Bending radius fixed		mm	≥ 20	
moving		mm	≥ 70	
Weight (Mass)		kg	0.012	
Degree of protection		IP	67 to DIN EN 60529	
Ambient temperature range *) ¹⁾	ϑ_{min} ϑ_{max}	$^{\circ}$ C $^{\circ}$ C	-25 other temperature ranges +80 on request	
Shock resistance		m/s ²	100 (contact switches)	500

*) other versions on request

¹⁾ for the magnetic switch temperature range, please take into account the surface temperature and the self-heating properties of the linear drive.

Linear Drive Accessories

ø 10-80 mm

Magnetic Switches



For electrical sensing of the carrier position, e.g. at the end positions, magnetic switches may be fitted. Position sensing is contactless and is based on magnets fitted as standard to the carrier. A yellow LED indicates operating status.

The universal magnetic switches are suitable for all HOERBIGER-ORIGA OSP-Actuators and aluminum profile rod type cylinders.

Piston, speed and switching distance affect signal duration and should be considered in conjunction with the minimum reaction time of ancillary control equipment.

Min. reaction time =	$\frac{\text{Switching distance}}{\text{Piston speed}}$
----------------------	---



HOERBIGER
ORIGA

For linear drives see 1.10.002E

Type RS

In the type RS contact is made by a mechanical **reed switch** encapsulated in glass. Direct connection with 2-pole cable, 5 m long, open ended (**Type RS-K**).

Type ES

In the type ES contact is made by an **electronic switch** – without bounce or wear and protected from pole reversal. The output is short circuit proof and insensitive to shocks and vibrations. Connection is by 3-pole connector for easy disconnection. Fitted with connection cable 100 mm long with connector. A 5 m cable with connector and open end can be ordered separately, or use the Order No. for the complete Type ES with 5 m cable.

Magnetic Switches RS and ES

Electrical Service Life Protective Measures

Magnetic switches are sensitive to excessive currents and inductions. With high switching frequencies and inductive loads such as relays, solenoid valves or lifting magnets, service life will be greatly reduced.

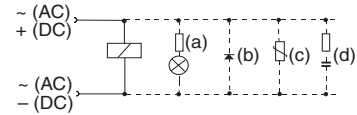
With **resistive and capacitive loads** with high switch-on current, such as light bulbs, a protective resistor should be fitted. This also applies to long cable lengths and voltages over 100 V.

In the switching of inductive loads such as relays, solenoid valves and

lifting magnets, voltage peaks (transients) are generated which must be suppressed by protective diodes, RC loops or varistors.

Connection Examples

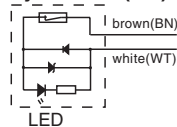
- Load with protective circuits
- (a) Protective resistor for light bulb
- (b) Freewheel diode on inductivity
- (c) Varistor on inductivity
- (d) RC element on inductivity



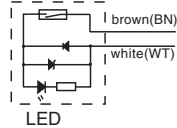
For the type ES, external protective circuits are not normally needed.

Electrical Connection, Type RS

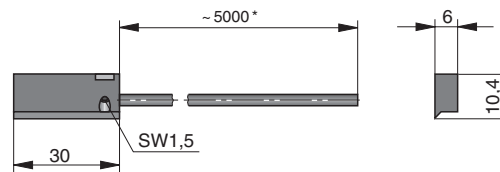
Normally closed (NC)



Normally open (NO)



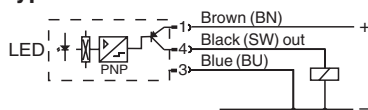
Dimensions (mm) – Type RS-K



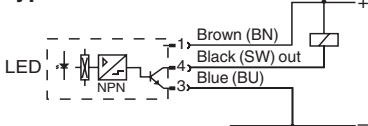
* Length with possible minus tolerance, see chart below

Electrical Connection, Type ES

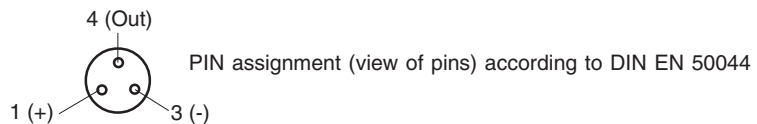
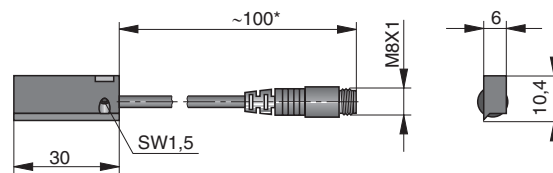
Standard Version: Type PNP



Optional Version Type NPN



Dimensions (mm) – Type ES-S

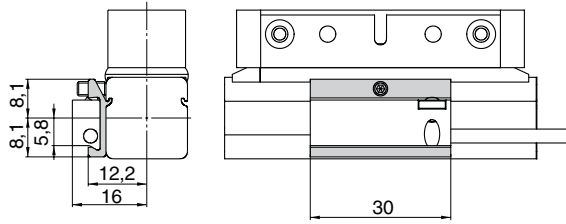


* Length with possible minus tolerance, see chart below

Length of connection cable with length tolerance

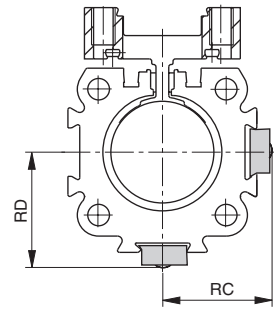
Magnetic Switch Order No.	Nominal cable length	Length tolerance
KL3045	5000 mm	- 50 mm
KL3048	5000 mm	- 50 mm
KL3054	100 mm	- 20 mm
KL3060	145 mm	± 5 mm

Dimensions Series OSP-P10



Note:
Sensors can not be mounted directly opposite of the carrier

Dimensions Series OSP-P16 to 80



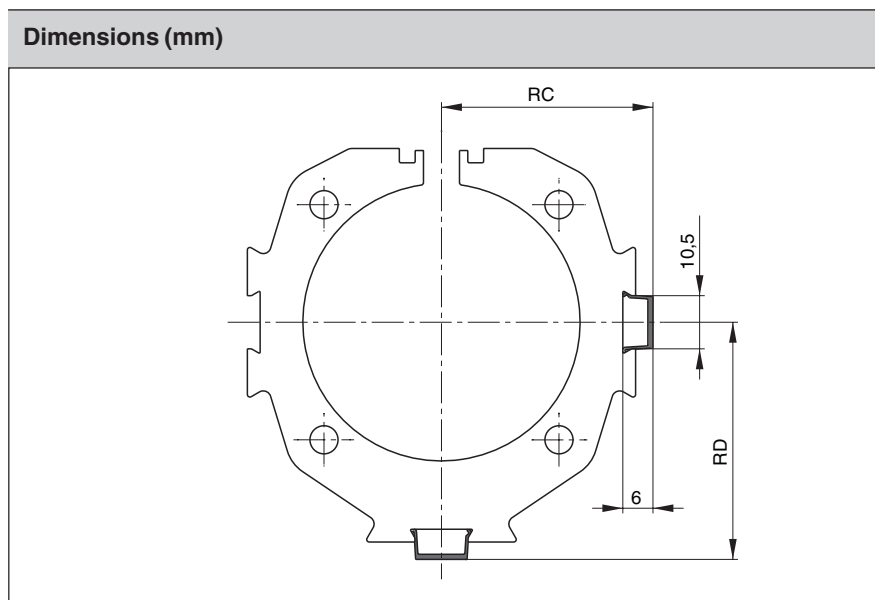
Dimension Table (mm) and Order Instructions

Series	Dimensions		Order No..						
	RC	RD	RS closer Normally open	RS opener Normally closed	ES PNP	NPN	ES compl. with 5 m cable		Adapter only for OSP-P10)
			Type:	Type:	Type:	Type:	Type:	Type:	
OSP-P10	–	–	RS-K KL3045	RS-K KL 3048	ES-S KL 3054	ES-S KL 3060	10750	10751	20968
OSP-P16	20	20.5							please order separately
OSP-P25	25	27							
OSP-P32	31	34							
OSP-P40	36	39							
OSP-P50	43	48							
OSP-P63	53	59							
OSP-P80	66	72							
Cable 5 m with connector and with open end for magnetic switches Type ES-S					4041				

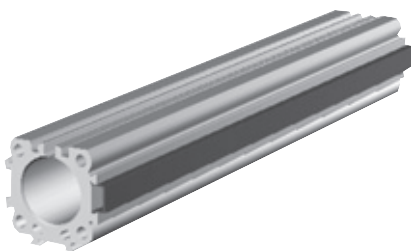
Linear Drive Accessories

Ø 16-80 mm
Cable Cover

For clean guidance of magnetic switch cables along the cylinder body.
Contains a maximum of 3 cables with diameter 3 mm.
Material: Plastic
Colour: Red
Temperature Range: -10 to +80°C



Dimension Table (mm) and Order Instructions			
Series	Dimensions (mm)		Order No.
	RC	RD	
OSP-P16	18.5	19	13039 Minimal length: 1m Max. profile length: 2m Multiple profiles can be used.
OSP-P25	23.5	25.5	
OSP-P32	29.5	32	
OSP-P40	34.5	37.5	
OSP-P50	41.5	46.5	
OSP-P63	51.5	57.5	
OSP-P80	64.5	70.5	



A1P687E00HAE00X

The right to introduce technical modifications is reserved

Characteristics				
Characteristics	Symbol	Unit	Description	
Electrical Characteristics			Type RST	Type EST
Switching output			Reed	PNP
Operating voltage	U_B	V	10-30 AC/DC	10-30 DC
Ripple	U_b		-	≤ 10%
Voltage drop		V	≤ 3	≤ 2
Electrical configuration			2 wire	3 wire
Output function			normally open normally closed	normally open
Permanent current	I_{Dmax}	mA	≤ 100	≤ 100
Breaking capacity		W	≤ 6 peak	-
Power consumption, at $U_B=24V$, switched on, without load		mA	-	≤ 10
Function indicator			LED, yellow (not for normally closed)	
Response time		ms	≤ 2	≤ 0.5
Sensitivity		mT	2 – 4	2 – 4
Timedelaybeforeavailability		ms	-	≤ 2
Reverse polarity prot.			yes	yes
Short-circuit protection			no	yes (pulsed)
Switchable capacity load		μF	0.1 at 100 Ω, 24 VDC	
Switching frequency		Hz	≤ 400	≤ 5 k
Repeatability		mm	≤ 0.2	≤ 0.2
Hysteresis		mm	≤ 1.5	≤ 1.5
EMC		EN	60947-5-2	
Lifetime			≥ 35 Mio. cycles wit PLC load	unlimited
Power-up pulse suppression			-	yes
Protection for inductive load			-	yes
Mechanical Characteristics				
Housing			Plastic / PA66 + PA6I red	
Cable cross section		mm ²	2 x 0.14	3 x 0.14
Cable type			PUR, black	PUR, black
Bending radius		mm	≥ 36	≥ 30
Weight		kg	ca. 0.030 RST-K ca. 0.010 RST-S	ca. 0.030 EST-K ca. 0.010 EST-S
Degree of protection		IP	67 to EN 60529	
Ambient temperature range ¹⁾		°C	-25 to +80	-25 to +75 at $U_B=10 - 30 V$ -25 to +80 at $U_B=10 - 28 V$
- with adapter		°C	-25 to +60	
Adapter tightening torque		Nm	0.15 (tightening torque of screwing adapter onto magnetic switch)	
Shock resistance				
Vibration to EN 60068-2-6		G	15, 11ms, 10 to 55 Hz, 1 mm	
Shock to EN 60068-2-27		G	50, 11 ms	
Bump to EN 60068-2-29		G	30, 11 ms, 1000 bumps each axis	

For linear drives see 1.10.002E

Data Sheet No. 1.45.104E-1

Linear Drive Accessories

∅ 10-80 mm

Magnetic Switches



Series RST
EST

Magnetic switches are used for electrical sensing of the position of the piston, e.g. at its end positions. They can also be used for sensing of intermediate positions.

Sensing is contactless, based on magnets which are built-in as standard. A yellow LED indicates operating status.

The universal magnetic switches are suitable for all HOERBIGER-ORIGA OSP-Actuators and aluminum profile rod type cylinders.

¹⁾ for the magnetic switch temperature range, please take into account the surface temperature and the self-heating properties of the linear drive.



HOERBIGER
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Type RST

In the type RST contact is made by a mechanical **reed switch** encapsulated in glass.

Type EST

In the type EST contact is made by an **electronic switch** – without bounce or wear and protected from pole reversal. The output is short circuit proof and insensitive to shocks and vibrations. Connection is by 3-pole connector for easy disconnection. Fitted with connection cable 100 mm long with connector.

A 5 m cable with connector and open end can be ordered separately, or use the Order No. for the complete Type ES with 5 m cable.

Magnetic Switches RST and EST

Electrical Service Life Protective Measures

Magnetic switches are sensitive to excessive currents and inductions. With high switching frequencies and inductive loads such as relays, solenoid valves or lifting magnets, service life will be greatly reduced.

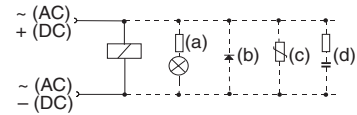
With **resistive and capacitive loads** with high switch-on current, such as light bulbs, a protective resistor should be fitted. This also applies to long cable lengths and voltages over 100 V.

In the switching of inductive loads such as relays, solenoid valves and

lifting magnets, voltage peaks (transients) are generated which must be suppressed by protective diodes, RC loops or varistors.

Connection Examples

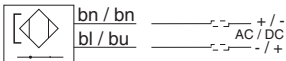
- Load with protective circuits
- (a) Protective resistor for light bulb
 - (b) Freewheel diode on inductivity
 - (c) Varistor on inductivity
 - (d) RC element on inductivity



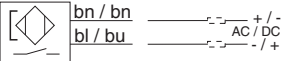
For the type EST, external protective circuits are not normally needed.

Electrical Connection Type RST-K

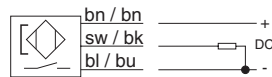
Normally closed



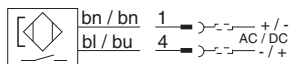
Normally open



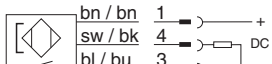
Electrical Connection Type EST-K



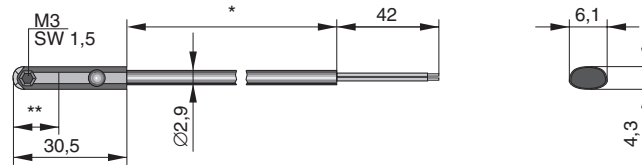
Electrical Connection Type RST-S



Electrical Connection Type EST-S

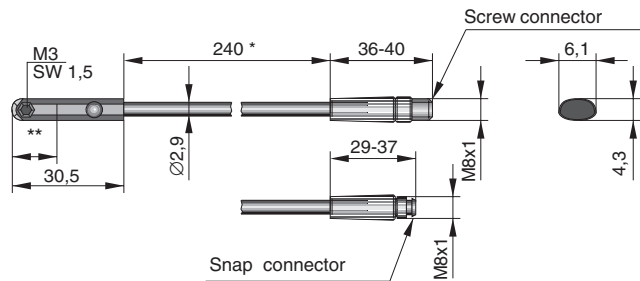


Dimensions (mm) – Type RST-K, EST-K

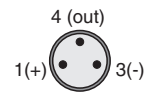


- * Cable lengths available: 5000 mm ± 75 mm
2000 mm ± 40 mm
- ** Switching point: Type RST-K Normally closed 14 mm
Type RST-K Normally open 12.3 mm
Type EST-K Normally open 8.1 mm

Dimensions (mm) – Type RST-S, EST-S

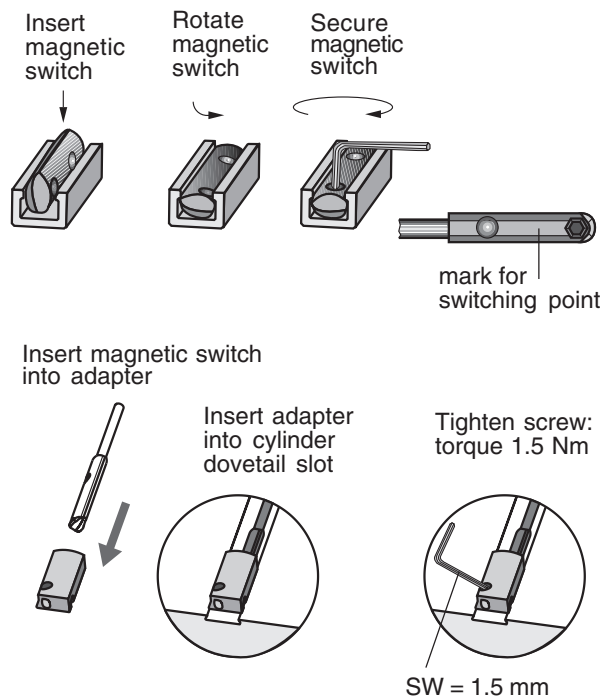


- * ± 6 mm
- ** Switching point: Type RST-K Normally closed 14 mm
Type RST-K Normally open 12.3 mm
Type EST-K Normally open 8.1 mm

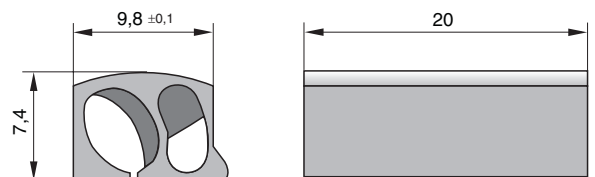


PIN assignment
(view of pins)
to DIN EN 50044

Installation



Dimensions of Adapter for Magnetic Switch



Order Instructions			
Version	Voltage	Order Instructions	
		Type	Order No.
Magnetic switch, reed contact, normally open, LED indicator, cable 2 m	10-30 V AC / DC	RST-K	KL 3301
Magnetic switch, reed contact, normally open, LED indicator, cable 5 m	10-30 V AC / DC	RST-K	KL 3300
Magnetic switch, reed contact, normally open, snap connector M8, LED indicator, cable 0.24 m	10-30 V AC / DC	RST-S	KL 3302
Magnetic switch, reed contact, normally open, screw connector M8, LED indicator, cable 0.24 m	10-30 V AC / DC	RST-S	KL 3303
Magnetic switch, reed contact, normally closed, cable 5 m	10-30 V AC / DC	RST-K	KL 3305
Magnetic switch, electronic, PNP LED indicator, cable 2 m	10-30 V DC	EST-K	KL 3308
Magnetic switch, electronic, PNP LED indicator, cable 5 m	10-30 V DC	EST-K	KL 3309
Magnetic switch, electronic, PNP snap connector M8, LED indicator	10-30 V DC	EST-S	KL 3312
Magnetic switch, electronic, PNP screw connector M8, LED indicator	10-30 V DC	EST-S	KL 3306

Included in delivery: 1 magnetic switch
1 adapter for dovetail groove mounting

Accessories		
Description	Order Instruction	
	Type	Order No.
Cable M8, 2.5 m without lock nut	KS 25	KY 3240
Cable M8, 5.0 m without lock nut	KS 50	KY 3241
Cable M8, 10.0 m without lock nut	KS 100	KY 3140
Cable M8, 2.5 m with lock nut	KSG 25	KC 3102
Cable M8, 5.0 m with lock nut	KSG 50	KC 3104
Adapter for dovetail groove (pack of 10)		KL 3333

Characteristics				
Characteristics	Symbol	Unit	Description	
Elektrical Characteristics			Type RS-K ATEX	Type ES-K ATEX
ATEX Certification			yes	yes
Category Type: RS-K			⊕ II 3GD EEX nC IIC T3 146°C	
Category Type: ES-K			⊕ II 2GD EEX ib IIC T5 100°C	
Switching output			Reed	NAMUR
Operating voltage	U_B	V	10-240 AC/DC	7-10 DC
Voltage drop		V	≤ 3	–
Electrical configuration			Two wire	Two wire
Output function			normally open	normally open
Permanent current	I_{Dmax}	mA	≤ 200	≤ 3
Power consumption		W/VA	≤ 10/10 peak	–
Peak current		mA	≤ 500	–
Power consumption without load		mA	–	≤ 1
Function indicator			LED, yellow	
Response time On/Out		ms	≤ 2	≤ 0.5
Sensitivity		mT	2-4	2-4
Reverse polarity prot.			yes	yes
Short-circuit protection			no	yes
Repeatability		mm	≤ 0.2	≤ 0.2
Hysteresis		mm	≤ 1.5	≤ 1.5
EMC		EN	60947-5-2	
Lifetime			≥ 10 Mio. Cycles with PLC load	
Mechanical Characteristics				
Housing			Makrolon, smoke color	
Cable cross section		mm ²	2 x 0.14	2 x 0.14
Cable type			PVC, blau	PVC, blue
Weight		kg	ca. 0.075	
Degree of protection		IP	67 to EN 60529	
Ambient temperature range ¹⁾		°C °C	-25 +80	-20 +75
Surface temperature		°C	The maximum surface temperature $T=146^{\circ}\text{C}$ is referred to the max. ambiente temperature of 80°C	
Shock resistance				
Vibration and Shock			50G at 50Hz and 1mm	

¹⁾ for the magnetic switch temperature range, please take into account the surface temperature and the self-heating properties of the linear drive.

OSP
— ORIGA
— SYSTEM
— PLUS

Components for EX-Areas

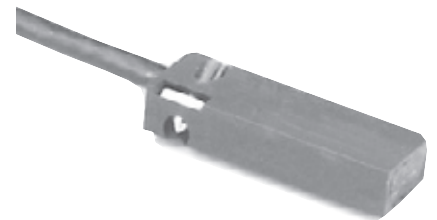


Magnetic Switches ø 10 – 80 mm

Series: RS-K..ATEX
ES-K..ATEX

For electrical sensing of the carrier position, e.g. at the end positions, magnetic switches may be fitted. Position sensing is contactless and is based on magnets fitted as standard to the carrier. A yellow LED indicates operating status.

The universal magnetic switches are suitable for all HOERBIGER-ORIGA OSP-Actuators and aluminum profile rod type cylinders.



HOERBIGER
ORIGA

For Linear Drives in ATEX-Version see 1.10.020E

Magnetic Switches Type RS-K ATEX-Version

In the type RS contact is made by a mechanical **reed switch** encapsulated in glass.

ATEX-Category Type: RS-K
 ⓧ II 3GD EEX nC IIC T3 146°C

Electrical Service Life Protective Measures

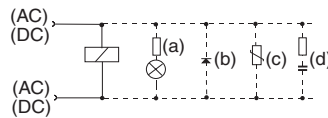
Magnetic switches are sensitive to excessive currents and inductions. With high switching frequencies and inductive loads such as relays, solenoid valves or lifting magnets, service life will be greatly reduced.

With **resistive and capacitive loads** with high switch-on current, such as light bulbs, a protective resistor should be fitted. This also applies to long cable lengths.

In the switching of inductive loads such as relays, solenoid valves and lifting magnets, voltage peaks (transients) are generated which must be suppressed by protective diodes, RC loops or varistors.

Connection Examples

- Load with protective circuits
 (a) Protective resistor for light bulb
 (b) Freewheel diode on inductivity
 (c) Varistor on inductivity
 (d) RC element on inductivity



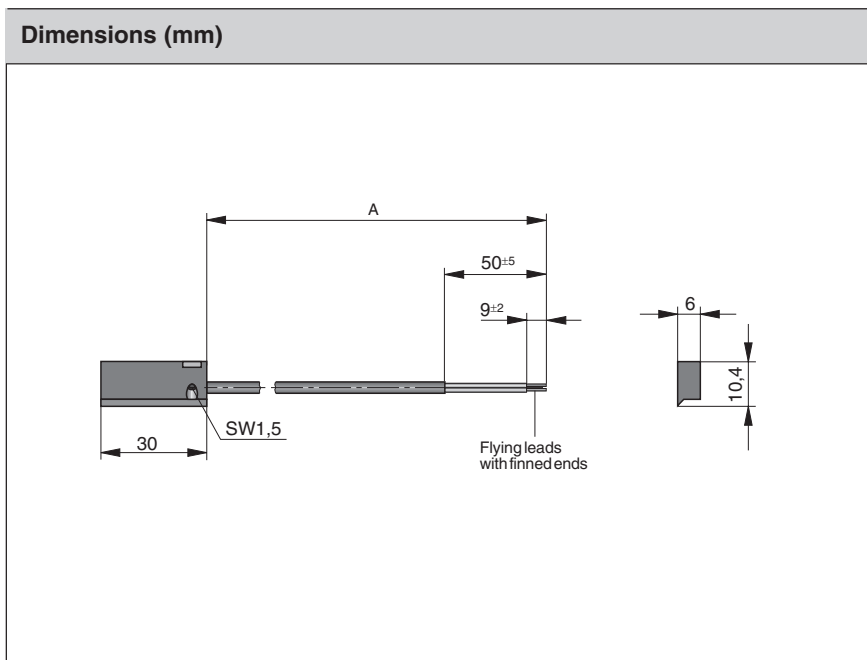
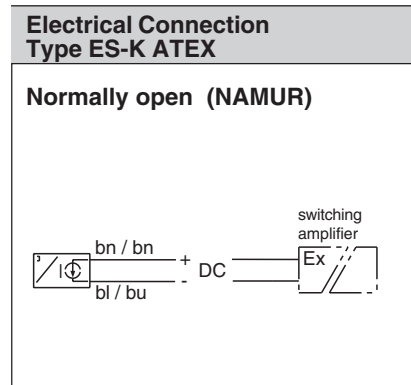
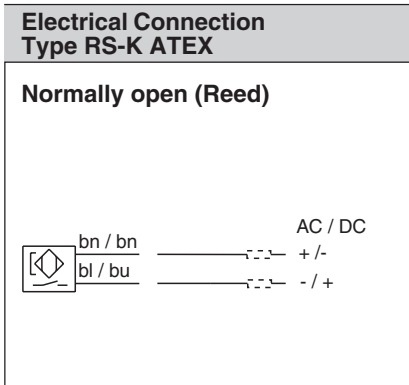
Magnetic Switches Type ES-K ATEX-Version

In the type ES contact is made by an **electronic switch** – without bounce or wear and protected from pole reversal. The output is short circuit proof and insensitive to shocks and vibrations.

ATEX-Category Type: ES-K
 ⓧ II 2GD EEX ib IIC T5 100°C

Note!

The connection of the magnetic switch Type ES-K ATEX must be realised by means of an EEX i switching amplifier (see Accessories).



Dimension Table (mm)

Magnetic switch Order No.	Nominal cable length A	Lengths tolerance
KL3240	5000	- 50
KL3241	10000	- 50
KL3250	5000	- 50
KL3251	10000	- 50

Order Instructions			
Version	Valotage	Type	Order Instruction Order No.
Magnetic switch, reed contact, normally open LED indicator, cable 5 m	10-240 V AC/DC	RS-K ATEX	KL3240
Magnetic switch, reed contact, normally open LED indicator, cable 10 m	10-240 V AC/DC	RS-K ATEX	KL3241
Magnetic switch, electronic, NAMUR, normally open LED indicator, cable 5 m	7-10 V DC	ES-K ATEX	KL3250
Magnetic switch, electronic, NAMUR, normally open LED indicator, cable 10 m	7-10 V DC	ES-K ATEX	KL3251

Accessories

Description	for magnetic switch	Order No.
2 channel switching amplifier 24 V DC	ES-K ATEX	2876
2 channel switching amplifier 220 V AC	ES-K ATEX	1546

Note: 2 magnetic switches can be connected to each switching amplifier.