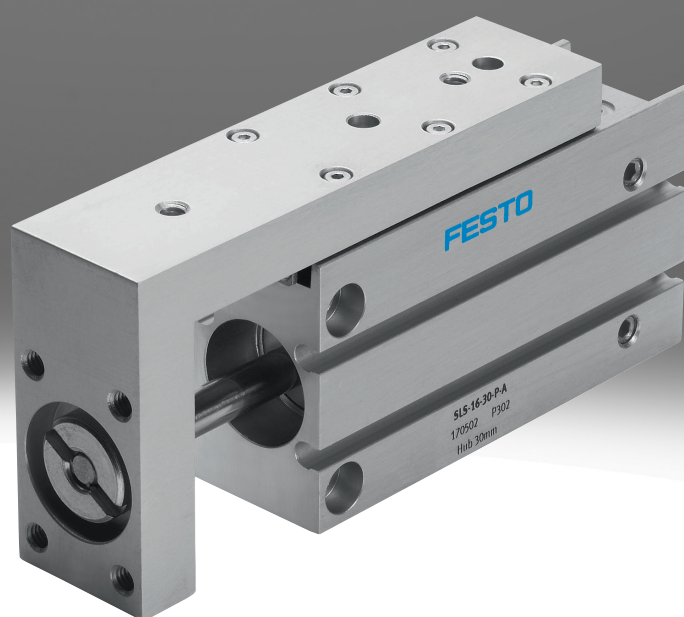


Mini slide SLS

FESTO



Characteristics

At a glance

[Link ↗ SLS](#)

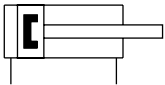
- Double-acting drive
- Slim design
- Precise and rigid guide
- Versatile air connections

Wide variety of mounting and assembly options:

- On housing
- On the slide
- On the yoke plate

Cushioning

[P] Elastic cushioning rings/plates on both sides



The drive is fitted with elastic polymer end-position cushioning.

Position sensing

For sensing the piston position

Type code

001	Series	
SLS	Mini slide, double-acting	
002	Size [mm]	
6	6	
10	10	
16	16	

003	Stroke [mm]	
5	5	
10	10	
15	15	
20	20	
25	25	
30	30	

004	Cushioning	
P	Elastic cushioning rings/plates on both sides	

005	Position sensing	
A	For proximity sensor	

Datasheet

General technical data

Piston diameter	6 mm	10 mm	16 mm
Design	Yoke Piston Piston rod Ball roller guide Slide		
Mode of operation	Double-acting		
Stroke	5 mm, 10 mm, 15 mm, 20 mm, 25 mm, 30 mm		
Type of mounting	With through-hole		
Cushioning	Elastic cushioning rings/plates at both ends		
Adjustable end-position range/length	–		
Mounting position	optional		

Operating and environmental conditions

Operating and environmental conditions			
Piston diameter	6 mm	10 mm	16 mm
Operating pressure	0.15 ... 1 MPa	0.1 ... 1 MPa	
Operating pressure	21.75 ... 145 psi	14.5 ... 145 psi	
Operating pressure	1.5 ... 10 bar	1 ... 10 bar	
Operating medium	Compressed air to ISO 8573-1:2010 [7:4:4]		
Ambient temperature ¹⁾	-20 ... 60°C		
Corrosion resistance class CRC ²⁾	0 - No corrosion stress		

1) Observe the application range of the proximity switches

2) More information www.festo.com/x/topic/kbk

Forces and impact energy

Piston diameter	6 mm	10 mm	16 mm
Theoretical force at 0.6 MPa (6 bar, 87 psi), advance stroke	17 N	47 N	121 N
Theoretical force at 0.6 MPa (6 bar, 87 psi), return stroke	13 N	39 N	104 N
Impact energy in end positions ¹⁾	0.008 Nm	0.05 Nm	0.15 Nm

1) The mass moved by the slides must be taken into consideration when calculating the end-position cushioning energy

Weight SLS-6/-10

Piston diameter	6 mm						10 mm					
Stroke	5 mm	10 mm	15 mm	20 mm	25 mm	30 mm	5 mm	10 mm	15 mm	20 mm	25 mm	30 mm
Product weight	97 g	104 g	113 g	120 g	131 g	141 g	130 g	139 g	149 g	164 g	182 g	191 g
Moving mass	28 g		32 g	33 g	37 g	38 g	41 g	44 g	49 g	51 g	60 g	62 g

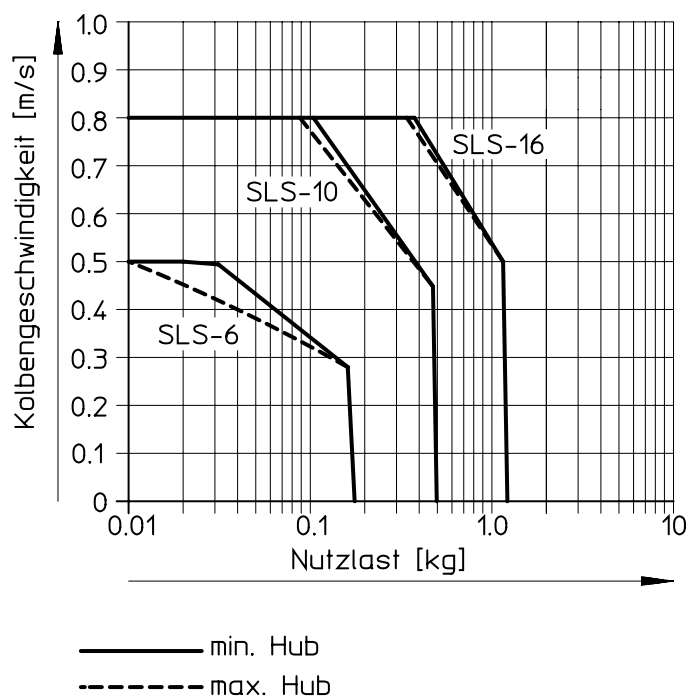
Weight SLS-16

Piston diameter	16 mm											
Stroke	5 mm	10 mm	15 mm	20 mm	25 mm	30 mm						
Product weight	225 g	226 g	256 g	257 g	291 g	301 g						
Moving mass	92 g		100 g	101 g	111 g	115 g						

Materials

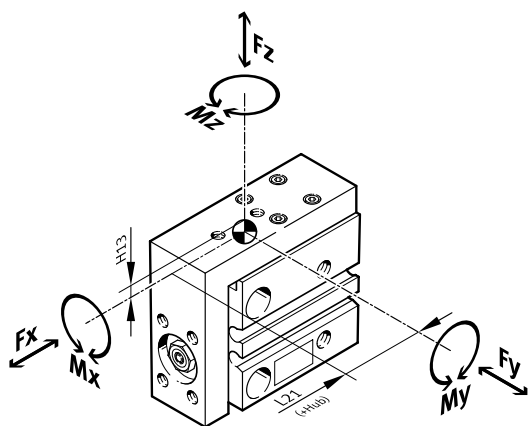
Material housing	High-alloy stainless steel
Material cover	Anodised wrought aluminium alloy
Note on materials	RoHS-compliant
LABS (PWIS) conformity	VDMA24364-B2-L

Datasheet

Piston speed v as a function of payload m 

The piston speed as a function of payload determined from this graph must not be exceeded, as the kinetic impact or residual energy in the end positions could damage the drive.

Characteristic load values SLS-6/-10

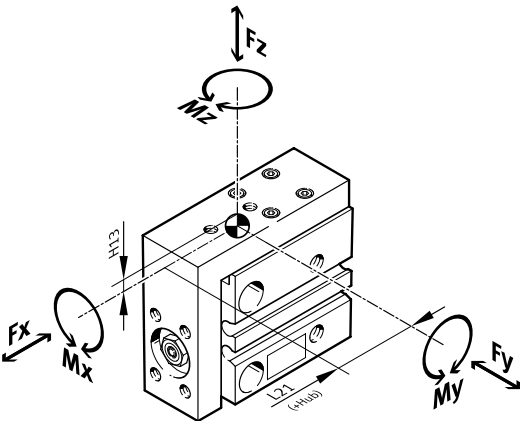


The indicated torques refer to the centre of the guide. These values must not be exceeded during dynamic operation. Special attention must be paid to the deceleration phase.

Piston diameter	6 mm						10 mm					
Stroke	5 mm	10 mm	15 mm	20 mm	25 mm	30 mm	5 mm	10 mm	15 mm	20 mm	25 mm	30 mm
Max. force F_y	220 N	170 N	180 N	160 N	150 N	140 N	220 N	170 N		150 N	140 N	130 N
Max. force F_z	220 N	170 N	180 N	160 N	150 N	140 N	220 N	170 N		150 N	140 N	130 N
Max. moment M_x	0.6 Nm		0.9 Nm				0.6 Nm		1.1 Nm			
Max. moment M_y	0.6 Nm		0.9 Nm				0.6 Nm		1.1 Nm			
Max. moment M_z	0.5 Nm		0.6 Nm				0.5 Nm		0.7 Nm			

Datasheet

Characteristic load values SLS-16



The indicated torques refer to the centre of the guide. These values must not be exceeded during dynamic operation. Special attention must be paid to the deceleration phase.

Piston diameter	16 mm					
Stroke	5 mm	10 mm	15 mm	20 mm	25 mm	30 mm
Max. force Fy	590 N	470 N	410 N	370 N	410 N	390 N
Max. force Fz	590 N	470 N	410 N	370 N	410 N	390 N
Max. moment Mx	2.1 Nm		1.7 Nm		2.5 Nm	
Max. moment My	2.1 Nm		1.7 Nm		2.5 Nm	
Max. moment Mz	1.6 Nm		1.3 Nm		1.4 Nm	

Calculating the load-comparison factor

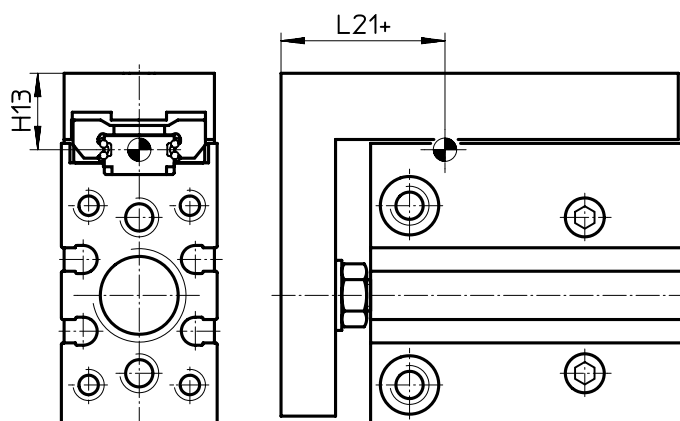
$$f_v = \frac{|F_{y1}|}{F_{y2}} + \frac{|F_{z1}|}{F_{z2}} + \frac{|M_{x1}|}{M_{x2}} + \frac{|M_{y1}|}{M_{y2}} + \frac{|M_{z1}|}{M_{z2}} \leq 1$$

If the drive is subjected to several of the indicated forces and torques at the same time, the following equation must be satisfied in addition to the indicated maximum loads.

- F1 / M1 = dynamic value
- F2 / M2 = maximum value

Datasheet

Position of the guide centre



Geometric characteristics

Dimension H13:

SLS-6: 8.5 mm

SLS-10: 10 mm

SLS-16: 11 mm

Dimension L21:

SLF-6-5: 20.5 mm

SLF-6-10: 20.5 mm

SLF-6-15: 23 mm

SLF-6-20: 23 mm

SLF-6-25: 23 mm

SLF-6-30: 23 mm

SLF-10-5: 27.5 mm

SLF-10-10: 27.5 mm

SLF-10-15: 36 mm

SLF-10-20: 36 mm

SLF-10-25: 36 mm

SLF-10-30: 36 mm

SLF-16-5: 30.5 mm

SLF-16-10: 30.5 mm

SLF-16-15: 30.5 mm

SLF-16-20: 30.5 mm

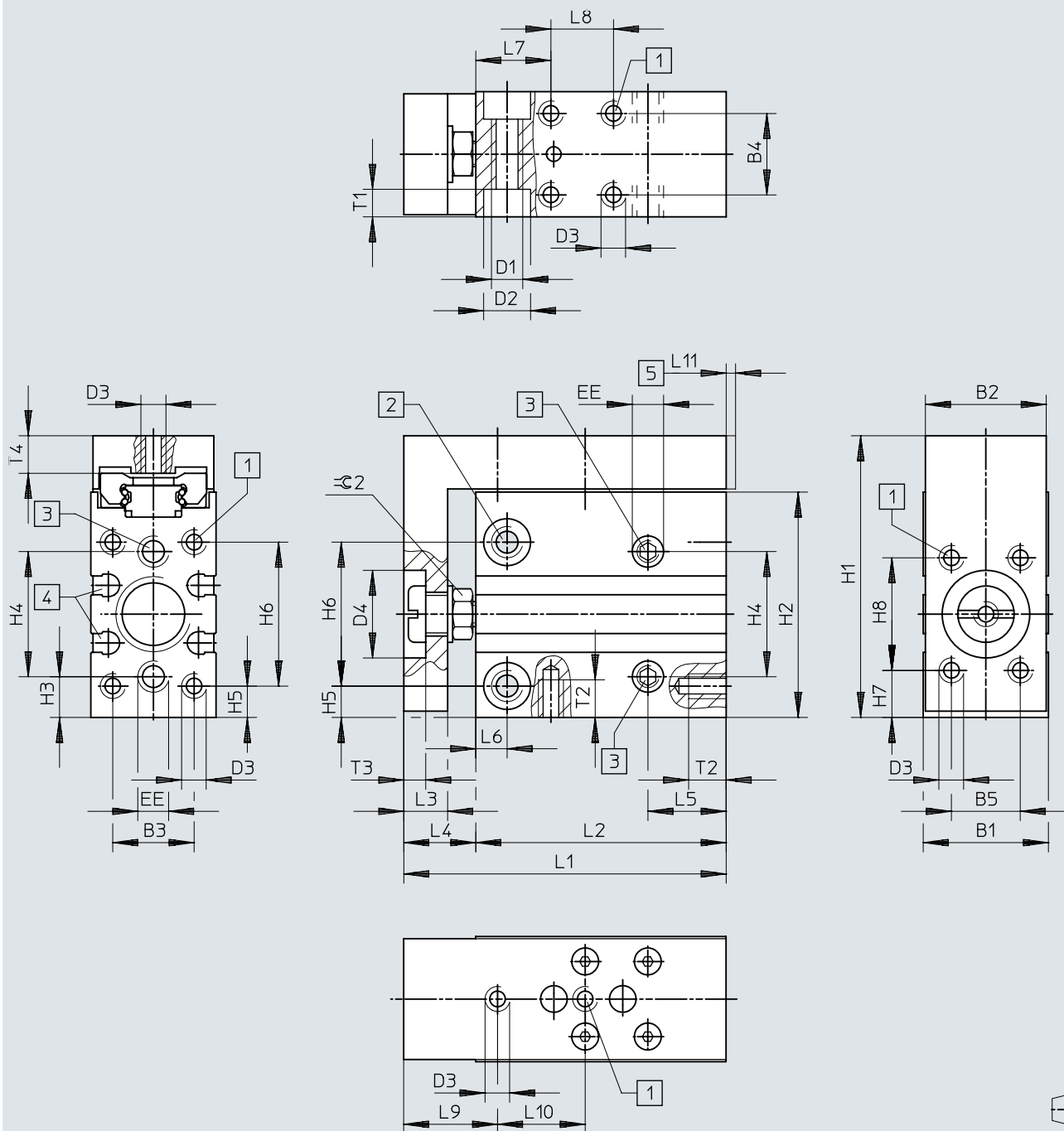
SLF-16-25: 34 mm

SLF-16-30: 34 mm

+ plus stroke length

Dimensions

Dimensions – SLS-6/-10/-16

Download CAD data www.festo.com

- [1] Mounting thread
- [2] Through-holes and threaded holes for mounting the drive
- [3] Compressed air ports
- [4] Sensor slots for proximity switch SME/SMT-10
- [5] Possible protrusion of the slide in relation to the edge of the housing

Dimensions

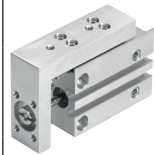
	L ¹⁾	B1 +0,4	B2	B3	B4	B5	D1	D2 Ø	D3	D4 Ø H11	EE	H1
SLS-6	5	16	15,3	10,5	10	9	M4	6	M3	12	M5	39
	10											
	15											
	20											
	25											
	30											
SLS-10	5	20	19,3	13	13	11	M5	7,5	M4	14	M5	45
	10											
	15											
	20											
	25											
	30											
SLS-16	5	24	23,3	17	17	16	M5	7,5	M4	19,5	M5	51
	10											
	15											
	20											
	25											
	30											

	L ¹⁾	H2	H3	H4	H5	H6	H7	H8	L1	L2	L3	L4	L5
SLS-6	5	31	6	17	5	19	7	15	46	37,5	6	8,5	10
	10								51	42,5			
	15								56	47,5			
	20								61	52,5			
	25								66	57,5			
	30								71	62,5			
SLS-10	5	36	6,5	20	5	23	7,5	18	51,5	40	7	11,5	12,5
	10								56,5	45			
	15								61,5	50			
	20								66,5	55			
	25								73,5	62			
	30								78,5	67			
SLS-16	5	41	6,5	25	5,5	27	6	26	66	52	10	14	12,5
	10								76	62			
	15								86	72			
	20								91	77			
	25												
	30												

	L ¹⁾	L6	L7	L8	L9	L10	L11	T1	T2	T3	T4	≈ 2
SLS-6	5	4	10	10	13	20	-	3,3	4,8	3	5	7
	10			15		25						
	15			20		30						
	20			25		40						
	25			30								
	30			35								
SLS-10	5	5	12	10	15	14	max. 0,75	4,4	6	3,5	6	8
	10			14		19						
	15			18		25						
	20			24		30						
	25			32		40						
	30			35		45						
SLS-16	5	5	12	20	18	24	max. 0,75	4,4	6	5	6	13
	10			20		35						
	15			30		45						
	20			40		50						
	25			45		55						
	30											

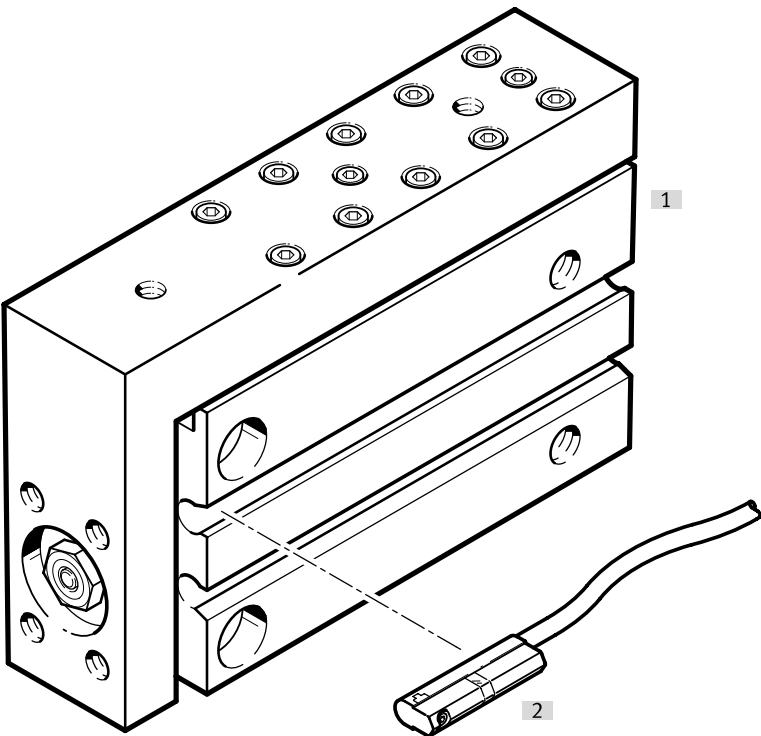
1) Stroke

Ordering data

Ordering data				
	Piston diameter	Stroke	Part no.	Type
	6 mm	5 mm	170485	SLS- 6-5-P-A
		10 mm	170486	SLS- 6-10-P-A
		15 mm	170487	SLS- 6-15-P-A
		20 mm	170488	SLS- 6-20-P-A
		25 mm	170489	SLS- 6-25-P-A
		30 mm	170490	SLS- 6-30-P-A
	10 mm	5 mm	170491	SLS-10-5-P-A
		10 mm	170492	SLS-10-10-P-A
		15 mm	170493	SLS-10-15-P-A
		20 mm	170494	SLS-10-20-P-A
		25 mm	170495	SLS-10-25-P-A
		30 mm	170496	SLS-10-30-P-A
	16 mm	5 mm	170497	SLS-16-5-P-A
		10 mm	170498	SLS-16-10-P-A
		15 mm	170499	SLS-16-15-P-A
		20 mm	170500	SLS-16-20-P-A
		25 mm	170501	SLS-16-25-P-A
		30 mm	170502	SLS-16-30-P-A

Peripherals

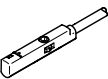
Peripherals overview

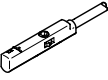


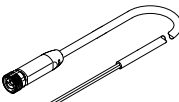
Accessories			→ Link
Type/order code	Description		
[1] Mini slide SLS	Pneumatic drive		sls
[2] One-way flow control valve GRLA	For regulating speed		12
[2] Push-in fitting QS	For connecting compressed air tubing with standard O.D.		qs
[3] Proximity switches SMT/SME-10	For sensing the piston position		12

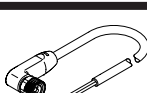
Accessories

One-way flow control valves GRLA					
	Pneumatic connection 1	Pneumatic connection, port 2	Product weight	Part no.	Type
	Push-in connector 3 mm	M5	13 g	193137	GRLA-M5-QS-3-D
	Push-in connector 4 mm			★ 193138	GRLA-M5-QS-4-D

Proximity switch SMT-10 for round slot, magneto-resistive						Link smt
	Type of mounting	Switching output	Electrical connection	Cable length	Part no.	Type
	Screw-clamped, Insertable in the slot from above	3-wire PNP N/O contact	Open end	2.5 m	★ 551373	SMT-10M-PS-24V-E-2,5-L-OE
			Plug M8, A-coded	0.3 m	★ 551375	SMT-10M-PS-24V-E-0,3-L-M8D

Proximity switch SME-10 for round slot, magnetic reed						Link sme
	Type of mounting	Switching output	Electrical connection	Cable length	Part no.	Type
	Screw-clamped, Insertable in the slot from above	3-wire N/O contact	Open end	2.5 m	551365	SME-10M-DS-24V-E-2,5-L-OE
			Plug M8, A-coded	0.3 m	551367	SME-10M-DS-24V-E-0,3-L-M8D

Connecting cables NEBA, straight						
	Electrical connection 1, connector system	Electrical connection 2, connector system	Electrical connection 2, number of connections/ cores	Cable length	Part no.	Type
	M8x1, A-coded, to EN 61076-2-104	Open end	3	2.5 m	★ 8078223	NEBA-M8G3-U-2.5-N-LE3
				5 m	★ 8078224	NEBA-M8G3-U-5-N-LE3

Connecting cables NEBA, angled						
	Electrical connection 1, connector system	Electrical connection 2, connector system	Electrical connection 2, number of connections/ cores	Cable length	Part no.	Type
	M8x1, A-coded, to EN 61076-2-104	Open end	3	2.5 m	★ 8078230	NEBA-M8W3-U-2.5-N-LE3
				5 m	★ 8078231	NEBA-M8W3-U-5-N-LE3