

Sensors, Series SM6

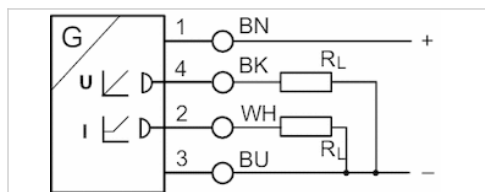


AVENTICS™ Sensors, Series SM6



Sensors, Series SM6

- 6 mm groove
- with cable
- without wire end ferrule, tin-plated, 4-pin
- with distance measuring sensor, measurement range 32 ... 256 mm
- Analog
- Direct mounting for series PRA, PRE, CCI, KPZ, SSI, GPC, CVI
- Indirect mounting for series TRB, ITS, 167, MNI, ICM, TRR



Certificates	cULus
Ambient temperature min./max.	-20 ... 70 °C
Protection class	IP67
Output signal	0 - 10 V DC, 4 - 20 mA
Quiescent current (without load)	25 mA
Maximum load (analog current output)	500 Ω
Residual ripple	≤ 10 %
sampling interval	1 ms
Resolution max. measuring range	0,05 mm
Repetitive precision max. measuring range	0.1 mm
Linearity deviation	0,3 mm
Sampling speed	3 m/s
Display	LED
LED status display	Yellow
Vibration resistance	10 - 55 Hz, 1 mm
Shock resistance	30 g / 11 ms
Cable length L	2 m

Technical data

Part No.	for	Type of contact	Cable length L
R412010141	PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Analog	2 m
R412010143	PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Analog	2 m
R412010262	PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Analog	2 m
R412010264	PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Analog	2 m
R412010411	PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Analog	2 m
R412010413	PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Analog	2 m
R412010415	PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Analog	2 m
R412010417	PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Analog	2 m

Part No.	max. measuring range	Overall length Sensor A
R412010141	32 mm	45 mm
R412010143	64 mm	77 mm
R412010262	96 mm	109 mm
R412010264	128 mm	141 mm
R412010411	160 mm	173 mm
R412010413	192 mm	205 mm

Part No.	max. measuring range	Overall length Sensor A
R412010415	224 mm	237 mm
R412010417	256 mm	269 mm

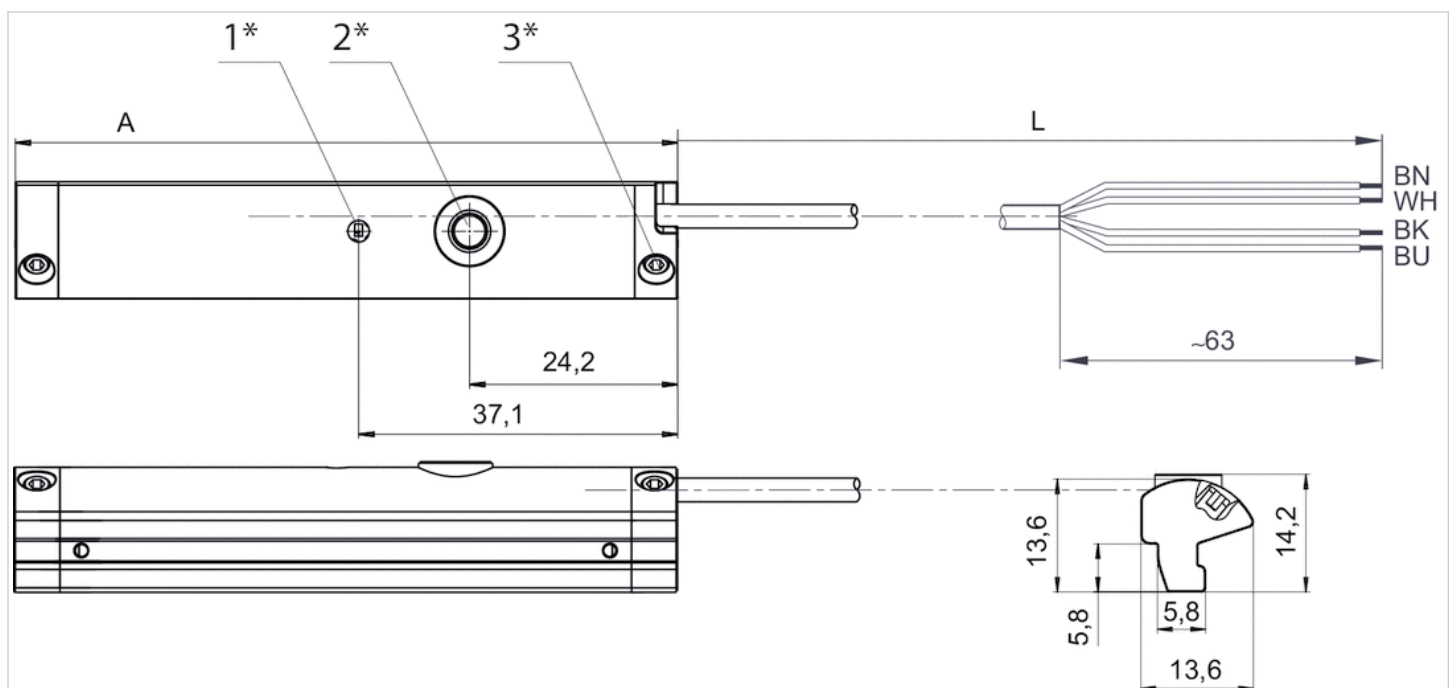
Part No.	Version
R412010141	short circuit resistant Protected against polarity reversal Overload protection
R412010143	short circuit resistant Protected against polarity reversal Overload protection
R412010262	short circuit resistant Protected against polarity reversal Overload protection
R412010264	short circuit resistant Protected against polarity reversal Overload protection
R412010411	short circuit resistant Protected against polarity reversal Overload protection
R412010413	short circuit resistant Protected against polarity reversal Overload protection
R412010415	short circuit resistant Protected against polarity reversal Overload protection
R412010417	short circuit resistant Protected against polarity reversal Overload protection

Technical information

Material	
Housing	Polyamide fiber-glass reinforced
Cable sheath	Polyurethane

Dimensions

Dimensions



1* = LED 2* = teach button 3* = threaded pin M3x11

L = cable length

(1) BN=brown

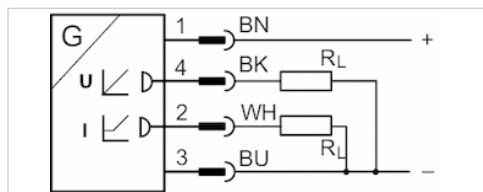
(2) WH=white

(3) BU=blue

(4) BK=black
A = sensor length

Sensors, Series SM6

- 6 mm groove
- with cable
- Plug, M8x1, 4-pin, with knurled screw
- with distance measuring sensor, measurement range 32 ... 256 mm
- Analog
- Direct mounting for series PRA, PRE, CCI, KPZ, SSI, GPC, CVI
- Indirect mounting for series TRB, ITS, 167, MNI, ICM, TRR



Certificates	cULus
Ambient temperature min./max.	-20 ... 70 °C
Protection class	IP67
Output signal	0 - 10 V DC, 4 - 20 mA
Quiescent current (without load)	25 mA
Min./max. DC operating voltage	15 ... 30 V DC
sampling interval	1 ms
Resolution max. measuring range	0,05 mm
Repetitive precision max. measuring range	0.1 mm
Linearity deviation	0,3 mm
Sampling speed	3 m/s
Display	LED
LED status display	Yellow
Vibration resistance	10 - 55 Hz, 1 mm
Shock resistance	30 g / 11 ms
Cable length L	0.3 m

Technical data

Part No.	for	Type of contact	Cable length L
R412010142	PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Analog	0.3 m
R412010144	PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Analog	0.3 m
R412010263	PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Analog	0.3 m
R412010265	PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Analog	0.3 m
R412010410	PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Analog	0.3 m
R412010412	PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Analog	0.3 m
R412010414	PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Analog	0.3 m
R412010416	PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Analog	0.3 m

Part No.	max. measuring range	Overall length Sensor A
R412010142	32 mm	45 mm
R412010144	64 mm	77 mm
R412010263	96 mm	109 mm
R412010265	128 mm	141 mm
R412010410	160 mm	173 mm
R412010412	192 mm	205 mm

Part No.	max. measuring range	Overall length Sensor A
R412010414	224 mm	237 mm
R412010416	256 mm	269 mm

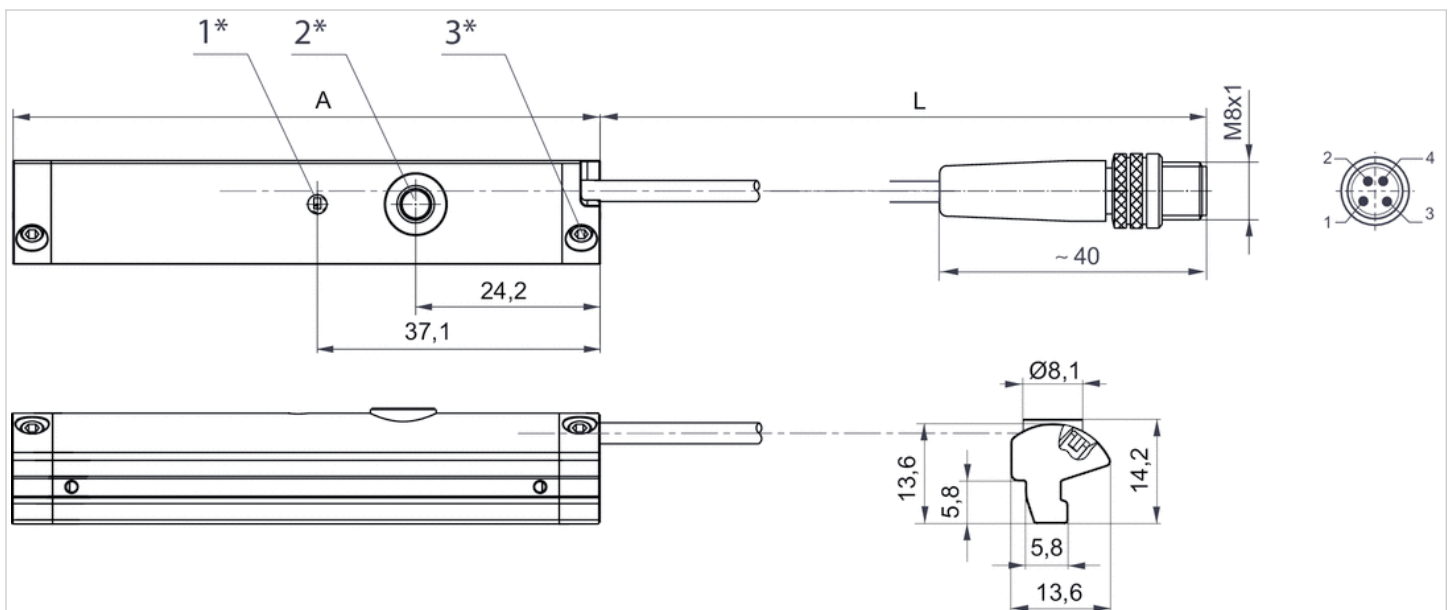
Part No.	Version
R412010142	short circuit resistant Protected against polarity reversal Overload protection
R412010144	short circuit resistant Protected against polarity reversal Overload protection
R412010263	short circuit resistant Protected against polarity reversal Overload protection
R412010265	short circuit resistant Protected against polarity reversal Overload protection
R412010410	short circuit resistant Protected against polarity reversal Overload protection
R412010412	short circuit resistant Protected against polarity reversal Overload protection
R412010414	short circuit resistant Protected against polarity reversal Overload protection
R412010416	short circuit resistant Protected against polarity reversal Overload protection

Technical information

Material	
Housing	Polyamide fiber-glass reinforced
Cable sheath	Polyurethane

Dimensions

Dimensions



1* = LED 2* = teach button 3* = threaded pin M3x11

L = cable length

Pin assignment: 1 = (+), 2 = (OUT 1) 3 = (GND), 4 = (OUT 2), EN 60947-5-7

A = sensor length

Sensor mounting, Series CB1

- for series ST6, SN2, SN6, SN1, SM6, SM6-AL
- to mount on cylinder C12P, ITS



Weight

See table below

Technical data

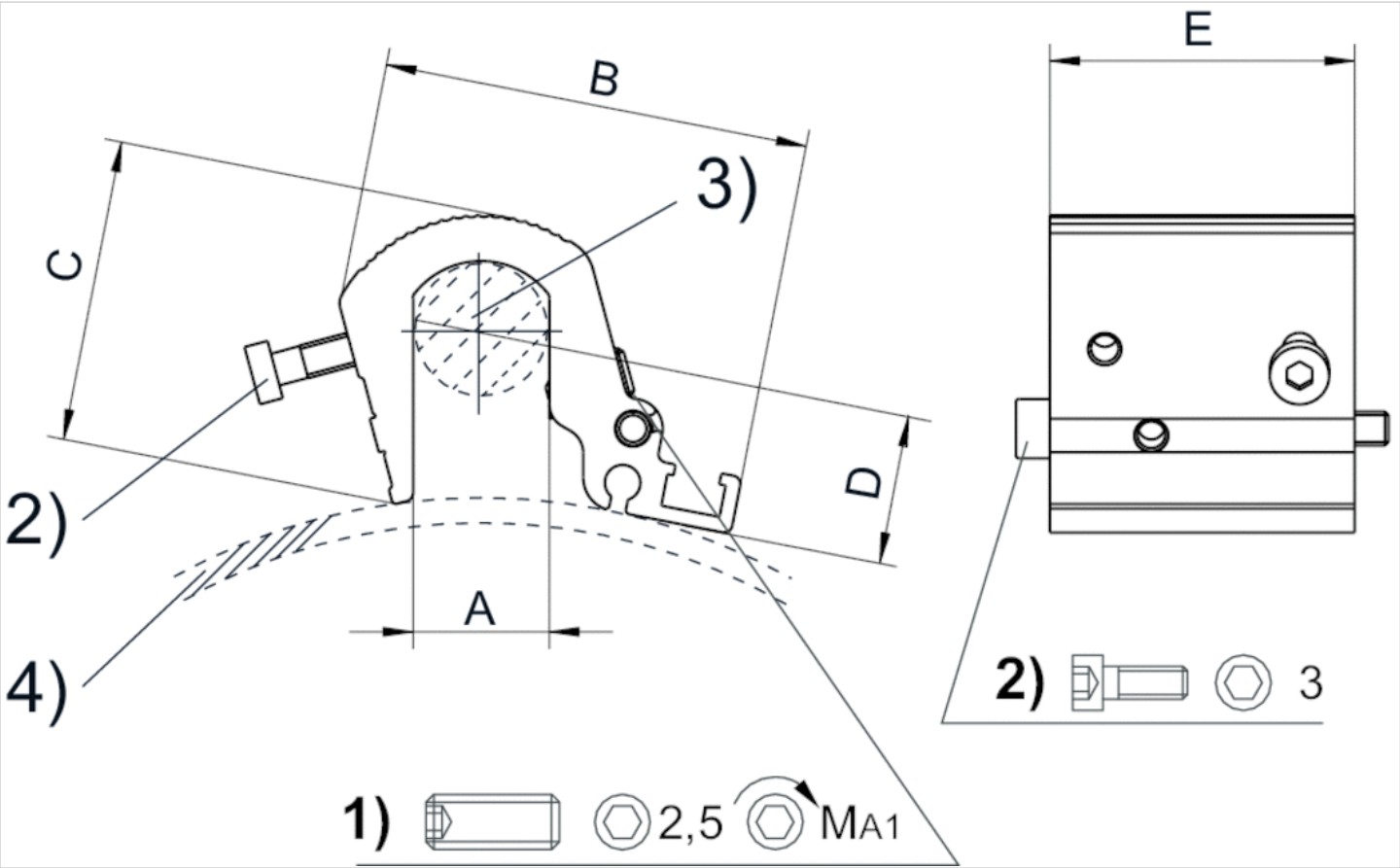
Part No.	Cylinders Ø	Cylinders Ø	for series	Weight
	min.	max.		
R412017979	160 mm	200 mm	ST6, SN2, SN6, SN1, SM6, SM6-AL	0.058 kg
R412017980	250 mm	320 mm	ST6, SN2, SN6, SN1, SM6, SM6-AL	0.073 kg

Scope of delivery: Incl. mounting screws

Technical information

Material	
	Aluminum

Dimensions



1) Clamping threaded pin 2) Mounting screws for sensor 3) Tie rod 4) Cylinder profile

Dimensions

Part No.	Cylinders Ø	A	B	C	D	E	MA1 [Nm]
R412017979	200 mm	16	51	36	6.8	36	2
R412017980	320 mm	24	56	44.5	6.8	36	2

Scope of delivery: Incl. mounting screws

Sensor mounting, Series CB1

- for series ST6, SM6
- to mount on cylinder MNI, ICM



Weight

See table below

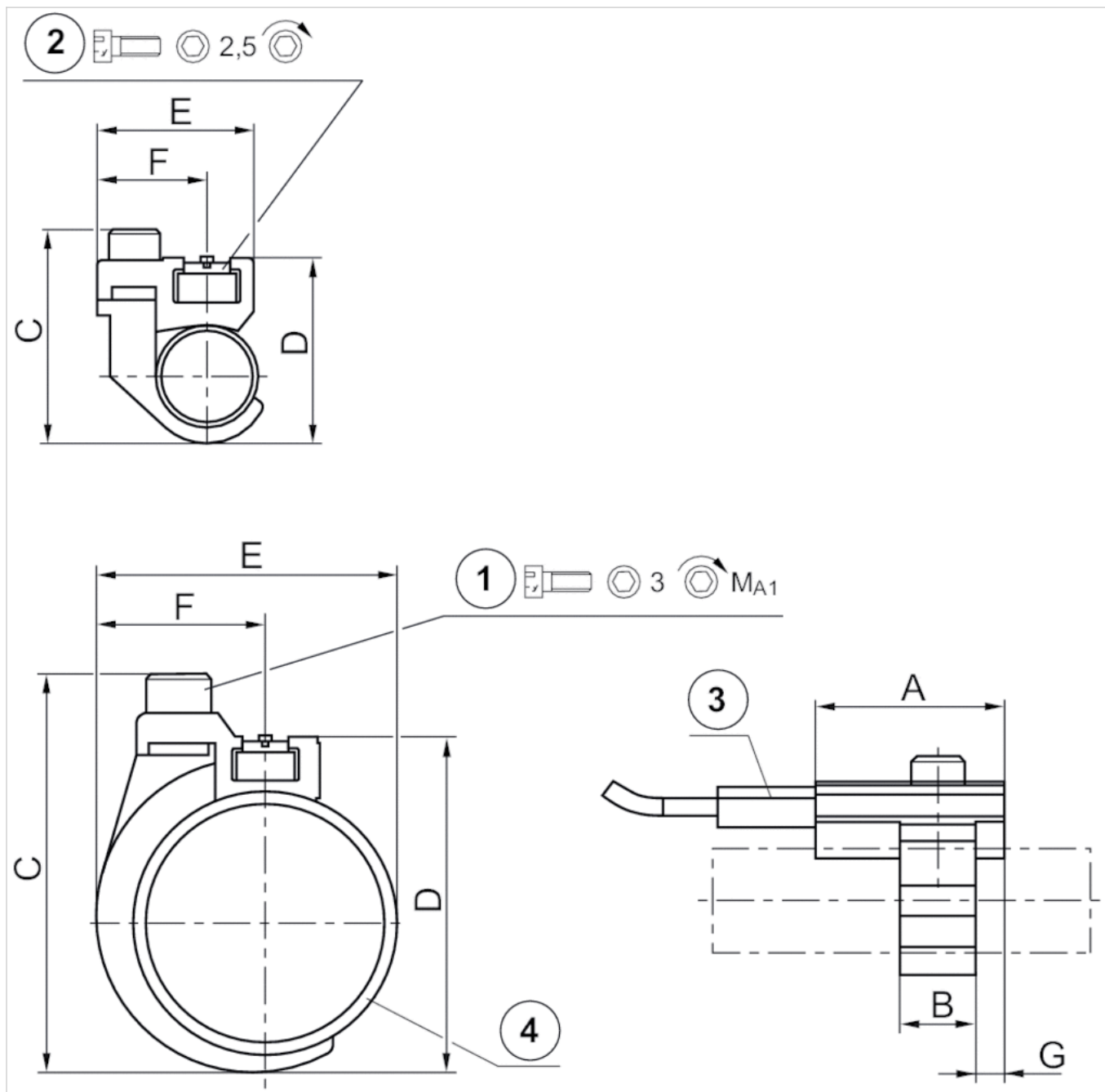
Technical data

Part No.	Cylinders Ø	for series	Weight
	min.		
1827020296	10 mm	ST6, SM6	0.009 kg
1827020297	12 mm	ST6, SM6	0.01 kg
1827020298	16 mm	ST6, SM6	0.014 kg
1827020299	20 mm	ST6, SM6	0.014 kg
1827020300	25 mm	ST6, SM6	0.015 kg

Technical information

Material	
	Aluminum

Dimensions



1) Mounting screw 2) Mounting screw for sensor 3) Sensor 4) Cylinder pipe

Dimensions

Part No.	A	B	C	D	E	F	G	1)	MA1 [Nm]
1827020296	20	8	24	19	17.5	11.8	3	M3x8	1 +0,2
1827020297	20	8	26	22	19	11.8	3	M3x8	1 +0,2
1827020298	20	12	34	30	23	13.8	4	M4x10	2 +0,3
1827020299	20	12	38	32	26	13.8	4	M4x10	2 +0,3
1827020300	20	12	43	37	31	13.8	4	M4x10	2 +0,3

Sensor mounting, Series CB1

- for series ST6, SM6, SN1, SN2

- to mount on cylinder TRB, C12P, CVI, 523



Weight

0.031 kg

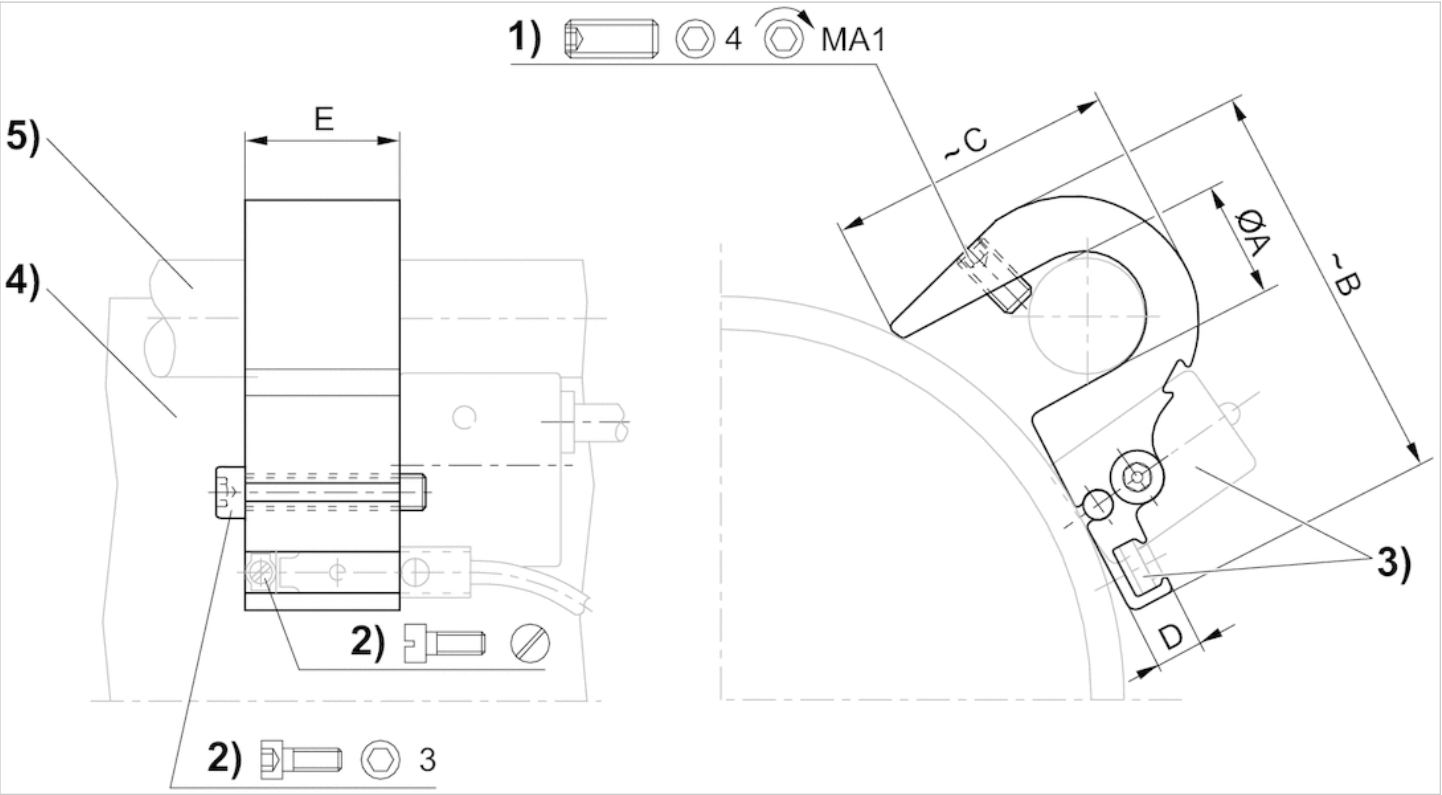
Technical data

Part No.	Cylinders Ø		for series
	min.	max.	
1827020292	125 mm	125 mm	ST6, SM6, SN1, SN2

Technical information

Material	
	Aluminum

Dimensions



1) Clamping threaded pin 2) Mounting screw for sensor 3) Sensor 4) Cylinder profile 5) Tie rod

Dimensions

Part No.	Ø A	B	C	D	E	1)	MA1 [Nm]
1827020292	12	45	29	6.5	21	M5x10	2

Sensor mounting, Series CB1

- for series ST6, SM6
- to mount on cylinder TRB, C12P, 167, CVI, TRR, 523



Weight

See table below

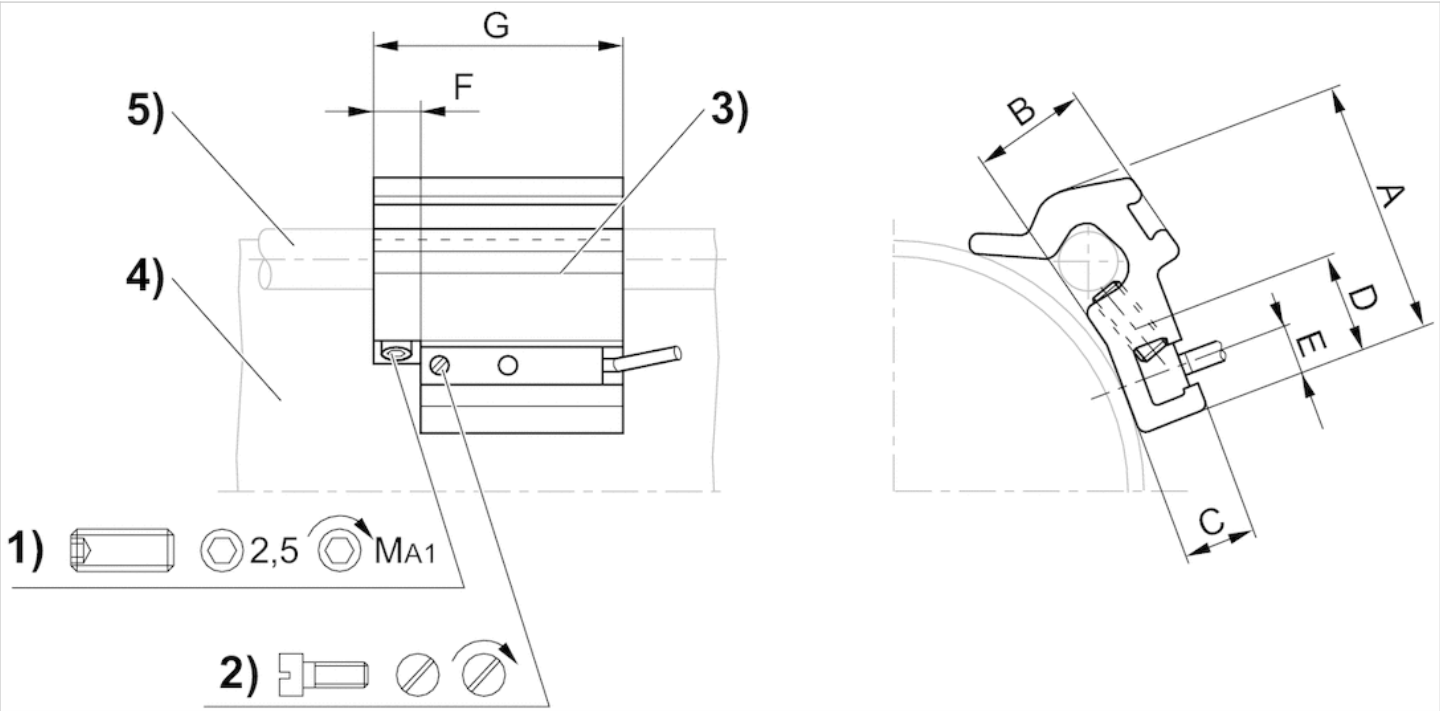
Technical data

Part No.	Cylinders Ø	Cylinders Ø	for series	Weight
	min.	max.		
1827020282	32 mm	40 mm	ST6, SM6	0.016 kg
1827020283	50 mm	63 mm	ST6, SM6	0.029 kg
1827020284	80 mm	100 mm	ST6, SM6	0.042 kg

Technical information

Material	
	Aluminum

Dimensions



1) Clamping threaded pin 2) Mounting screw for sensor 3) Sensor 4) Cylinder profile 5) Tie rod

Dimensions

Part No.	A	B	C	D	E	F	G	1)	MA1 [Nm]
1827020282	26	10	7	14	5	8	40	M5x8	2 ±0,2
1827020283	32.5	15.5	7	14	5	8	40	M5x10	2 ±0,2
1827020284	43	17	6.9	14	5	8	40	M5x16	2 ±0,2

Sensor mounting, Series CB1

- for series ST6, SM6

Weight

0.01 kg

- to mount on cylinder 167

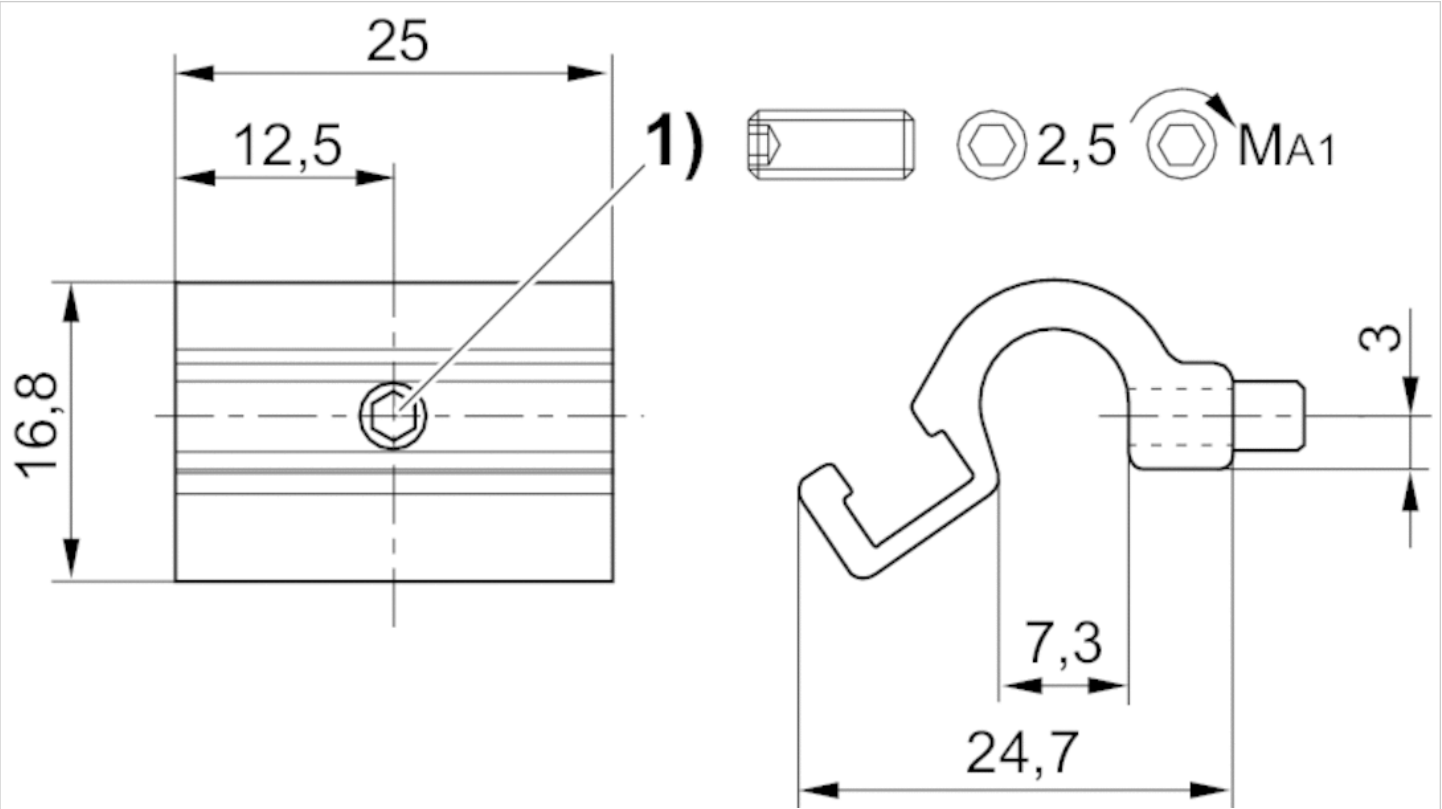
Technical data

Part No.	Cylinders Ø	for series	Scope of delivery
	max.		
R412022357	25 mm	ST6, SM6	1 piece

Technical information

Material	
	Aluminum

Dimensions



1) Mounting screw

Dimensions

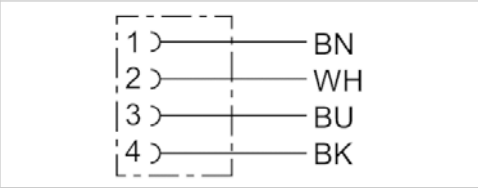
Part No.	MA1 [Nm]
R412022357	1 + 0,3

Round plug connector, Series CON-RD

- Socket M8x1 4-pin A-coded straight 180°
- open cable ends
- with cable
- UL (Underwriters Laboratories)
- unshielded



Ambient temperature min./max.	-40 ... 85 °C
Operational voltage	48 V AC/DC
Protection class	IP67
Wire cross-section	0.25 mm²
Weight	See table below



Technical data

Part No.	Max. current	Number of wires	Cable-Ø	Cable length	Certification	Weight
1834484144	4 A	4	4.5 mm	3 m	UL (Underwriters Laboratories)	0.087 kg
1834484146	4 A	4	4.5 mm	5 m	UL (Underwriters Laboratories)	0.14 kg

Technical information

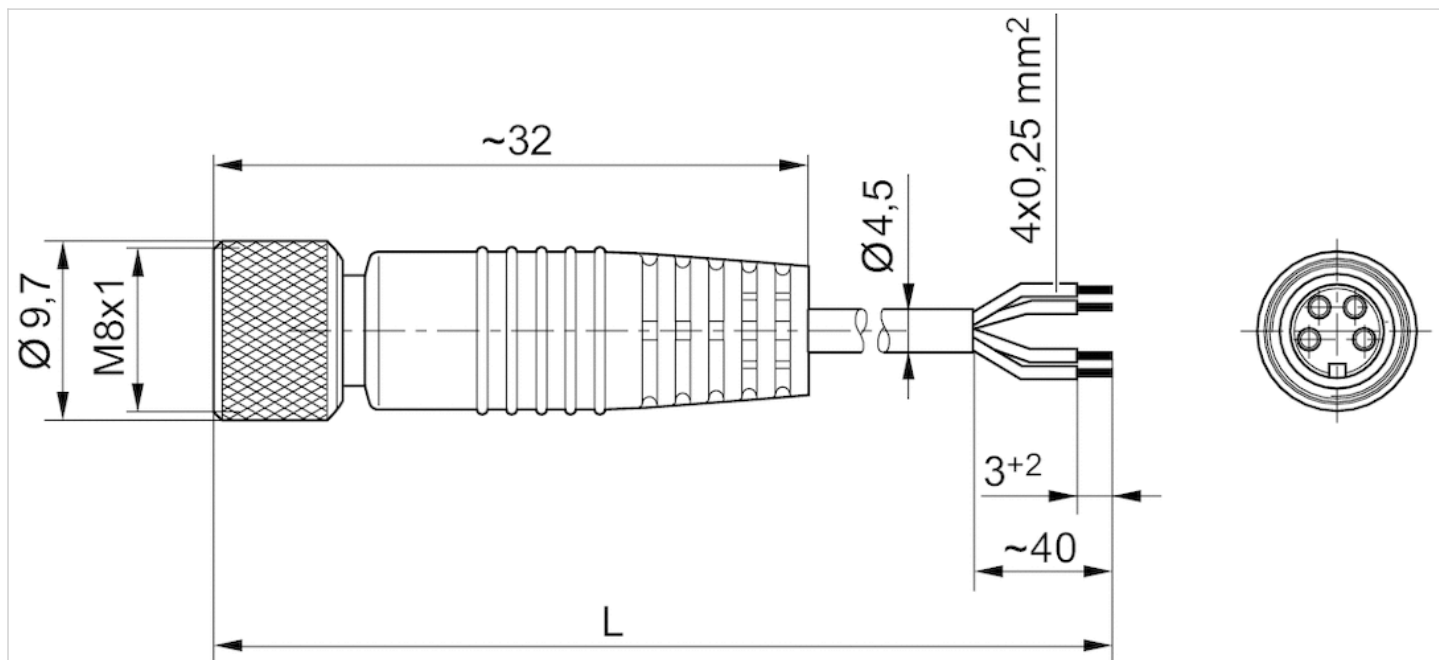
The specified protection class is only valid in assembled and tested state.

Technical information

Material	
Housing	Polyurethane
Cable sheath	Polyurethane

Dimensions

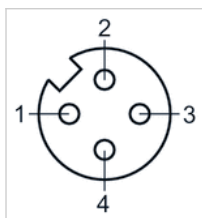
Dimensions



L = length

Pin assignments

Pin assignment, socket



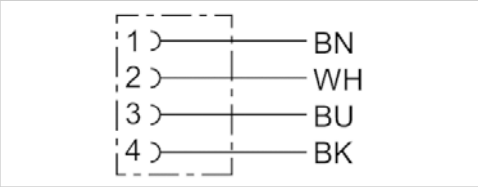
- (1) BN=brown
- (2) WH=white
- (3) BU=blue
- (4) BK=black

Round plug connector, Series CON-RD

- Socket M8x1 4-pin A-coded angled 90°
- open cable ends
- with cable
- unshielded



Ambient temperature min./max.	-25 ... 85 °C
Operational voltage	48 V AC/DC
Protection class	IP67
Wire cross-section	0.25 mm²
Weight	See table below



Technical data

Part No.	Max. current	Number of wires	Cable-Ø	Cable length	Weight
1834484145	4 A	4	4.5 mm	3 m	0.086 kg
1834484147	4 A	4	4.5 mm	5 m	0.141 kg

Technical information

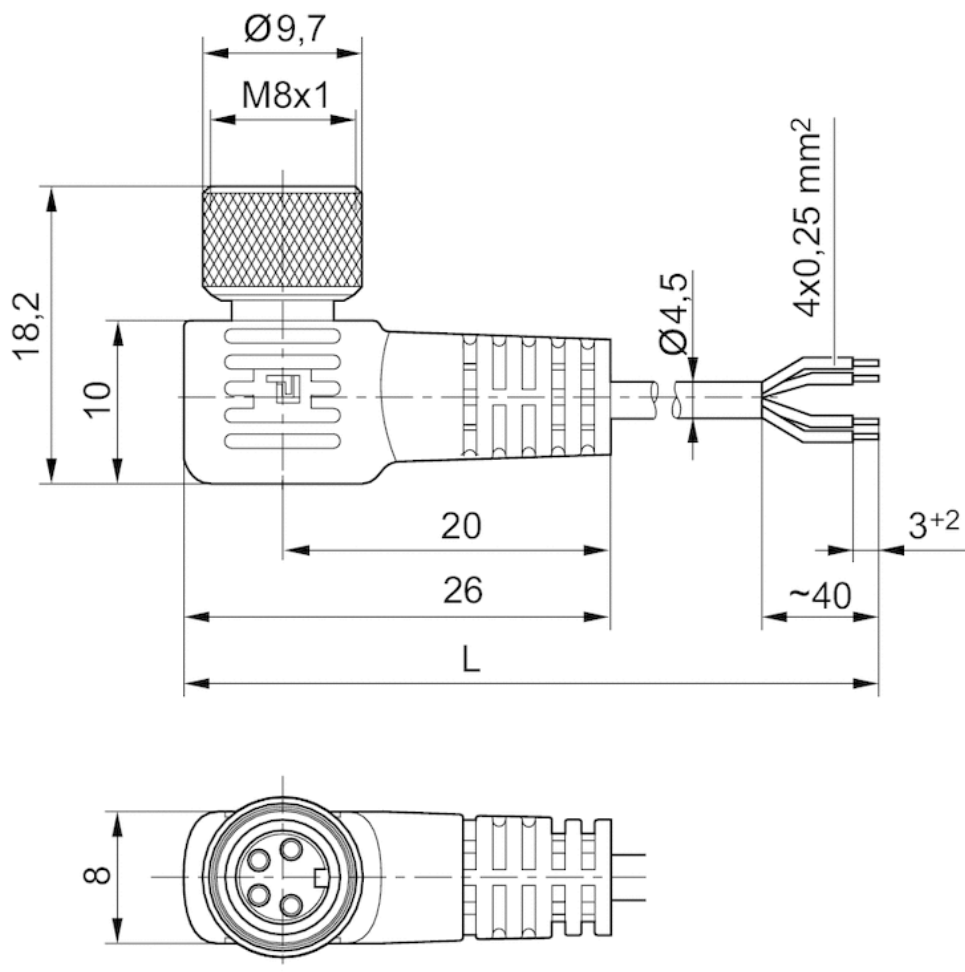
The specified protection class is only valid in assembled and tested state.

Technical information

Material	
Housing	Polyurethane
Cable sheath	Polyurethane

Dimensions

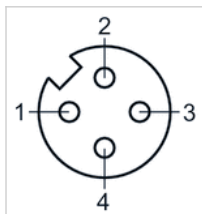
Dimensions



L = length

Pin assignments

Pin assignment, socket



- (1) BN=brown
- (2) WH=white
- (3) BU=blue
- (4) BK=black

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