

Series SM6



AVENTICS™

**AVENTICS Series SM6 Distance
measuring sensors**


EMERSON™

Sensors, Series SM6

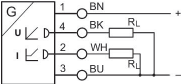
The AVENTICS Series SM6 are analog distance measuring sensors, which ensure a continuous detection of the piston movements in measuring ranges from 32 mm up to 256 mm. A control element on the sensor allows for setting of the zero point and variable selection of the distance measurement range. The compact sensors are also easy to mount – either directly in the cylinder slot or to the profile using clamp mountings.

- Zero point and measurement range settings via teach-in button
- High accuracy and linearity
- Excellent repeatability and reliability through proven hall sensors
- Choice of any mounting position and cable exit
- Mounting from above in the 6 mm slot (â€œdrop-inâ€ mounting)



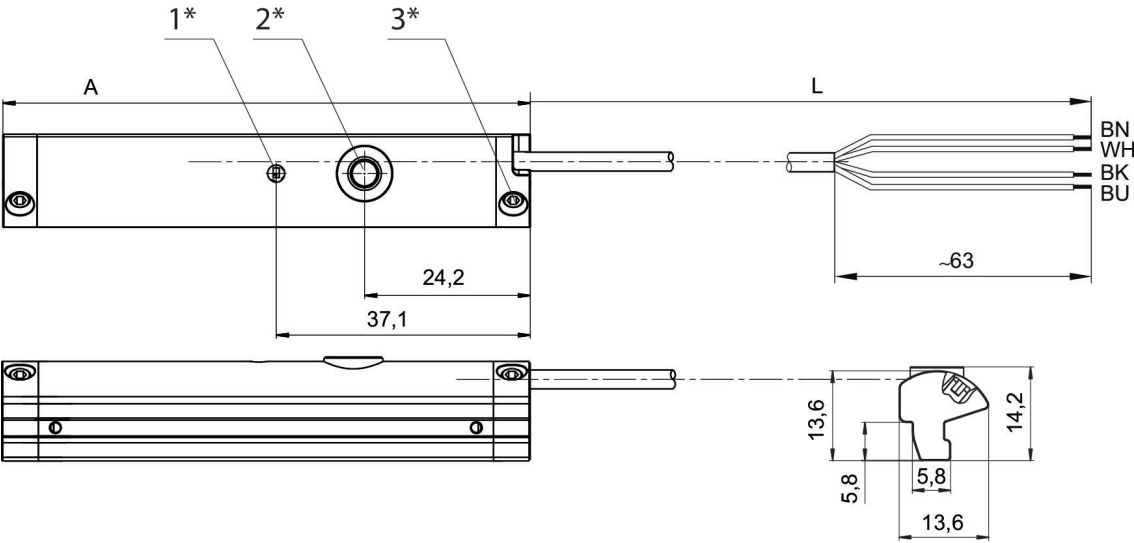
Sensors, Series SM6

PRA
PRE
CCI
KPZ
SSI
GPC
CVI
cULus



Direct mounting for series	Type of contact	Cable length L [m]	max. measuring range [mm]	Overall length Sensor [mm]	Version	Part No.
PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Analog	2	32	45	short circuit resistant, Protected against polarity reversal, Overload protection	R412010141
PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Analog	2	64	77	short circuit resistant, Protected against polarity reversal, Overload protection	R412010143
PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Analog	2	96	109	short circuit resistant, Protected against polarity reversal, Overload protection	R412010262
PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Analog	2	128	141	short circuit resistant, Protected against polarity reversal, Overload protection	R412010264
PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Analog	2	160	173	short circuit resistant, Protected against polarity reversal, Overload protection	R412010411
PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Analog	2	192	205	short circuit resistant, Protected against polarity reversal, Overload protection	R412010413
PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Analog	2	224	237	short circuit resistant, Protected against polarity reversal, Overload protection	R412010415
PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Analog	2	256	269	short circuit resistant, Protected against polarity reversal, Overload protection	R412010417

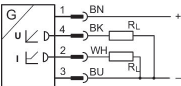
Dimensions



1* = LED 2* = teach button 3* = threaded pin M3x11
L = cable length
(2) WH=white
A = sensor length

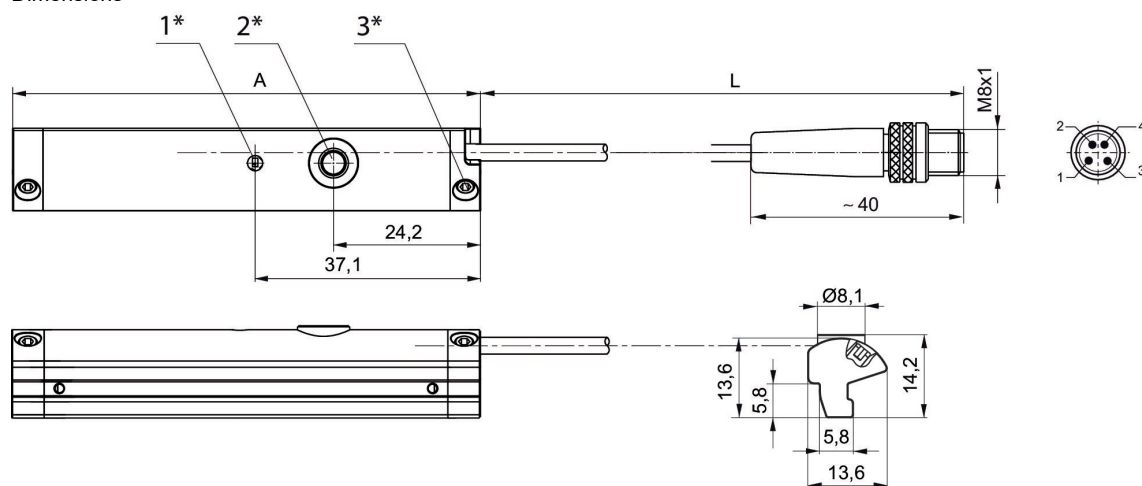
Sensors, Series SM6

PRA
PRE
CCI
KPZ
SSI
GPC
CVI
Plug
M8x1
cULus
4-pin



Direct mounting for series	Type of contact	Cable length L [m]	max. measuring range [mm]	Overall length Sensor [mm]	Version	Part No.
PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Analog	0.3	32	45	short circuit resistant, Protected against polarity reversal, Overload protection	R412010142
PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Analog	0.3	64	77	Protected against polarity reversal, Protected against polarity reversal, Overload protection	R412010144
PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Analog	0.3	96	109	Protected against polarity reversal, Protected against polarity reversal, Overload protection	R412010263
PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Analog	0.3	128	141	Protected against polarity reversal, Protected against polarity reversal, Overload protection	R412010265
PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Analog	0.3	160	173	Protected against polarity reversal, Protected against polarity reversal, Overload protection	R412010410
PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Analog	0.3	192	205	Protected against polarity reversal, Protected against polarity reversal, Overload protection	R412010412
PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Analog	0.3	224	237	Protected against polarity reversal, Protected against polarity reversal, Overload protection	R412010414
PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Analog	0.3	256	269	Protected against polarity reversal, Protected against polarity reversal, Overload protection	R412010416

Dimensions



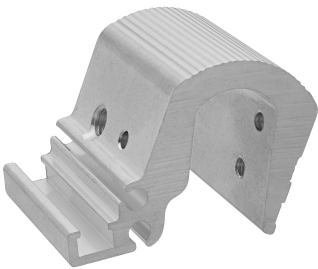
1* = LED 2* = teach button 3* = threaded pin M3x11

L = cable length

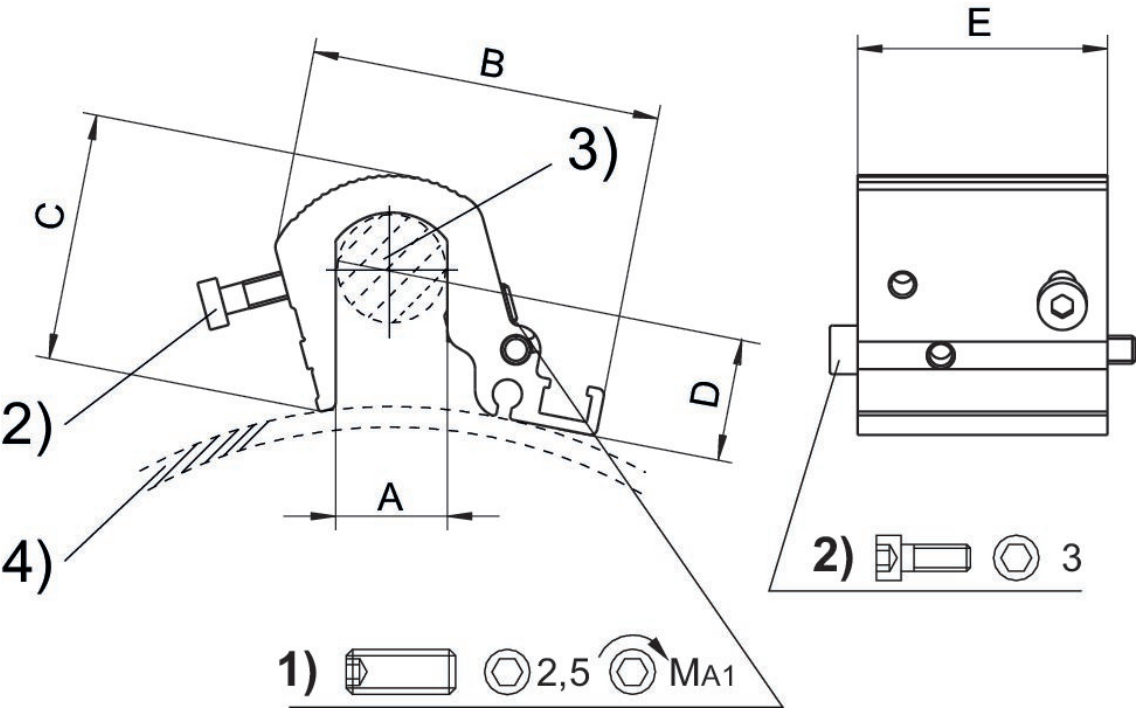
Pin assignment: 1 = (+), 2 = (OUT 1) 3 = (GND), 4 = (OUT 2), EN 60947-5-7

A = sensor length

Sensor mounting, Series CB1



Min. cylinder Ø [mm]	Max. cylinder Ø [mm]	for sensor	Material	Part No.
160	200	ST6, SN2, SN6, SN1, SM6	Aluminum	R412017979
250	320	ST6, SN2, SN6, SN1, SM6	Aluminum	R412017980



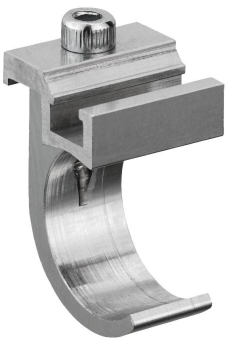
1) Clamping threaded pin 2) Mounting screws for sensor 3) Tie rod 4) Cylinder profile

Cylinders Ø	Part No.	A	B	C	D	E	MA1 [Nm]
160 - 200 mm	R412017979	16	51	36	6.8	36	2
250 - 320 mm	R412017980	24	56	44.5	6.8	36	2

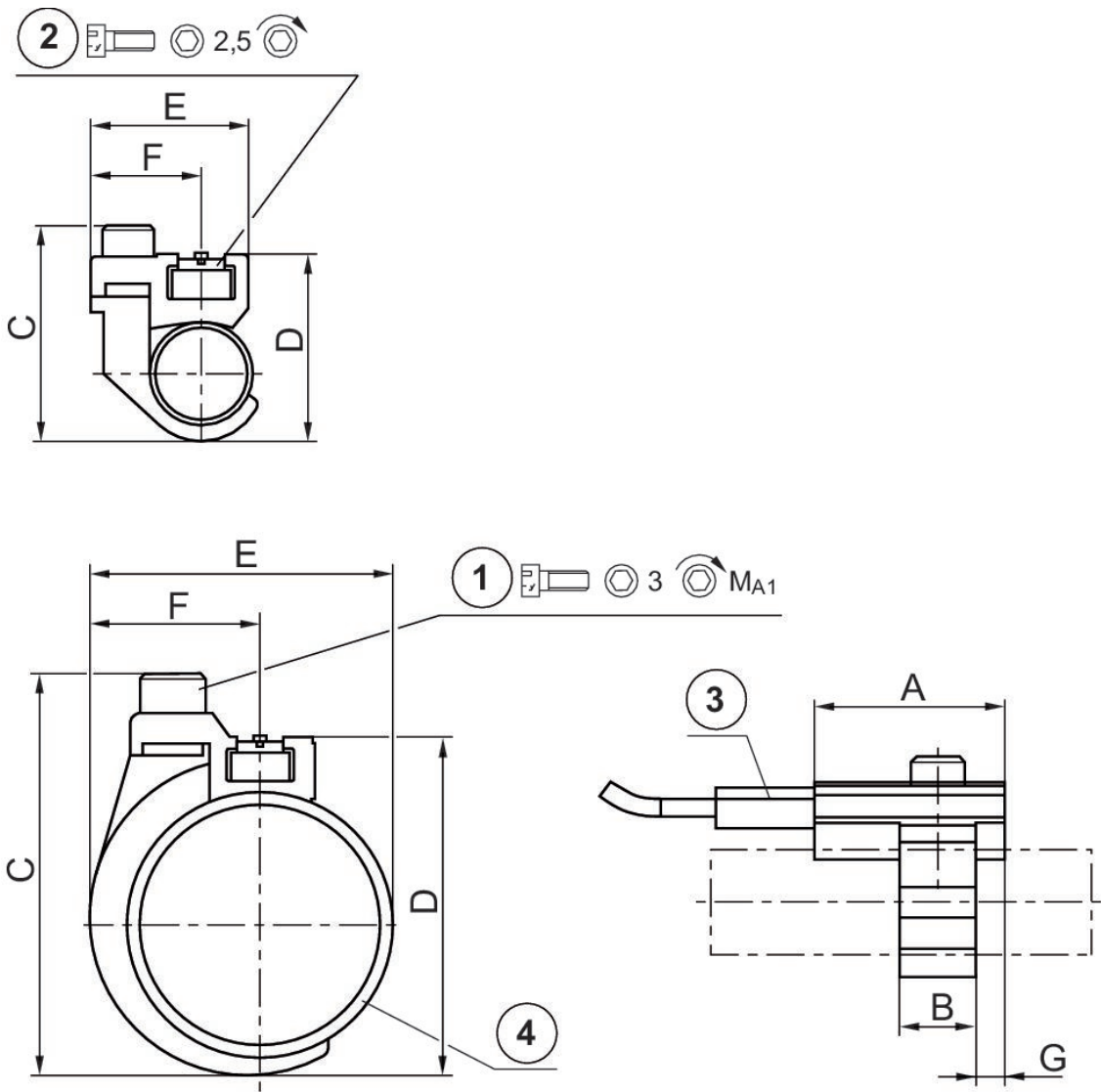
Scope of delivery: Incl. mounting screws

Sensor mounting, Series CB1

ST6
SM6



Min. cylinder Ø [mm]	Material		Part No.
10	Aluminum		1827020296
12	Aluminum		1827020297
16	Aluminum		1827020298
20	Aluminum		1827020299
25	Aluminum		1827020300

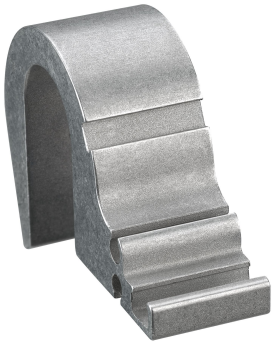


1) Mounting screw 2) Mounting screw for sensor 3) Sensor 4) Cylinder pipe

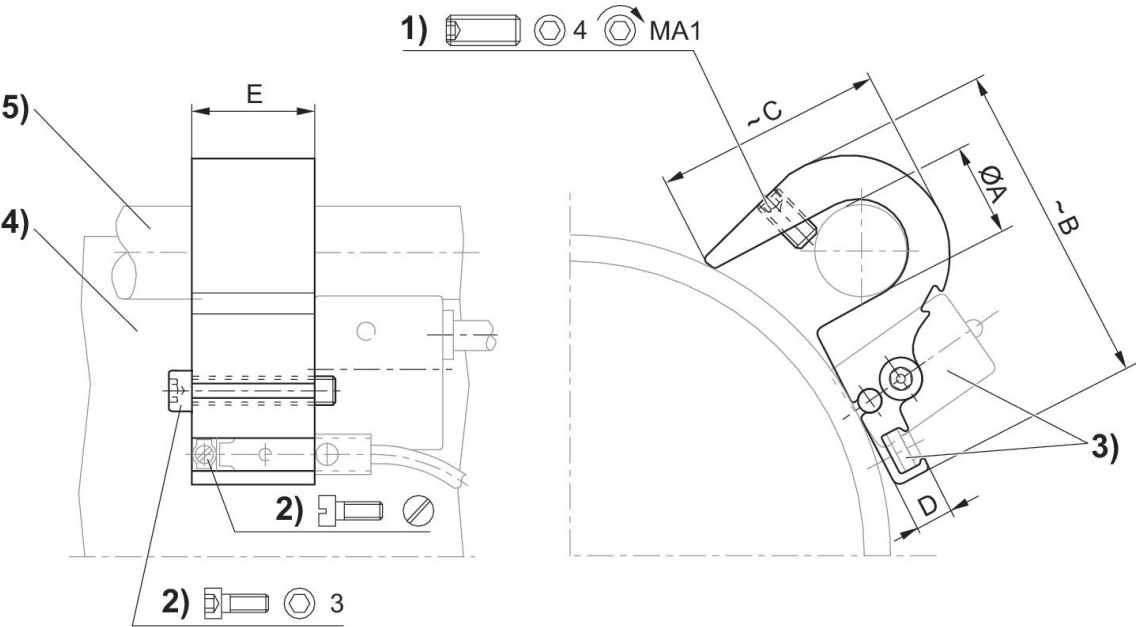
Part No.	Cylinders Ø	A	B	C	D	E	F	G	Mount- ing screw	MA1 [Nm]
1827020296	10 mm	20	8	24	19	17.5	11.8	3	M3x8	1 +0,2
1827020297	12 mm	20	8	26	22	19	11.8	3	M3x8	1 +0,2
1827020298	16 mm	20	12	34	30	23	13.8	4	M4x10	2 +0,3
1827020299	20 mm	20	12	38	32	26	13.8	4	M4x10	2 +0,3
1827020300	25 mm	20	12	43	37	31	13.8	4	M4x10	2 +0,3

Sensor mounting, Series CB1

ST6
SM6
SN1
SN2



Min. cylinder Ø [mm]	Max. cylinder Ø [mm]	Material	Part No.
125	125	Aluminum	1827020292



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

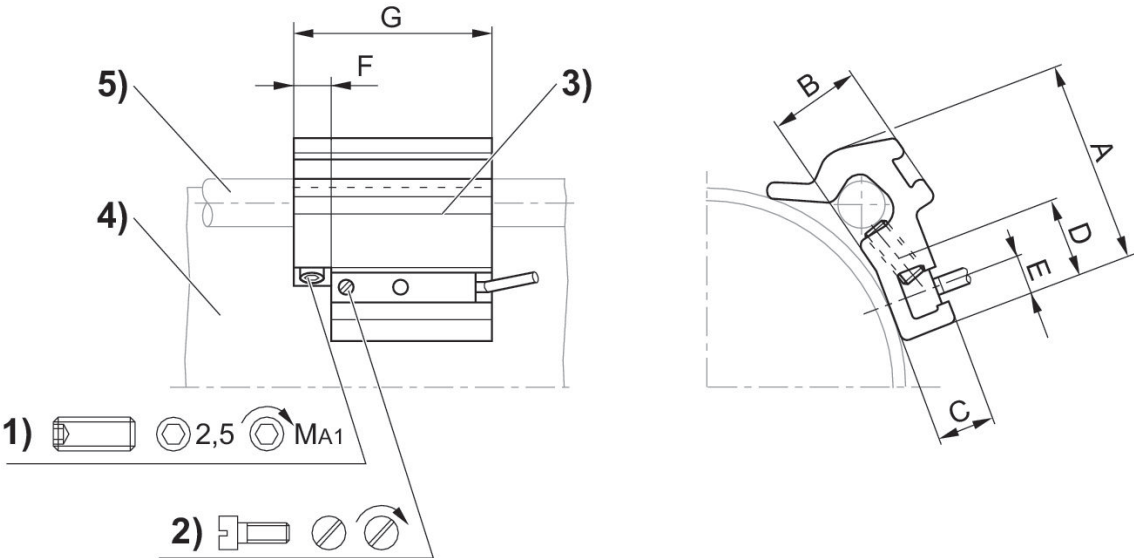
Part No.	Cylinders Ø	Ø A	B	C	D	E	Clamping threaded pin	MA1 [Nm]
1827020292	125 mm	12	45	29	6.5	21	M5x10	2

Sensor mounting, Series CB1

ST6
SM6



Min. cylinder Ø [mm]	Max. cylinder Ø [mm]	Material	Part No.
32	40	Aluminum	1827020282
50	63	Aluminum	1827020283
80	100	Aluminum	1827020284



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

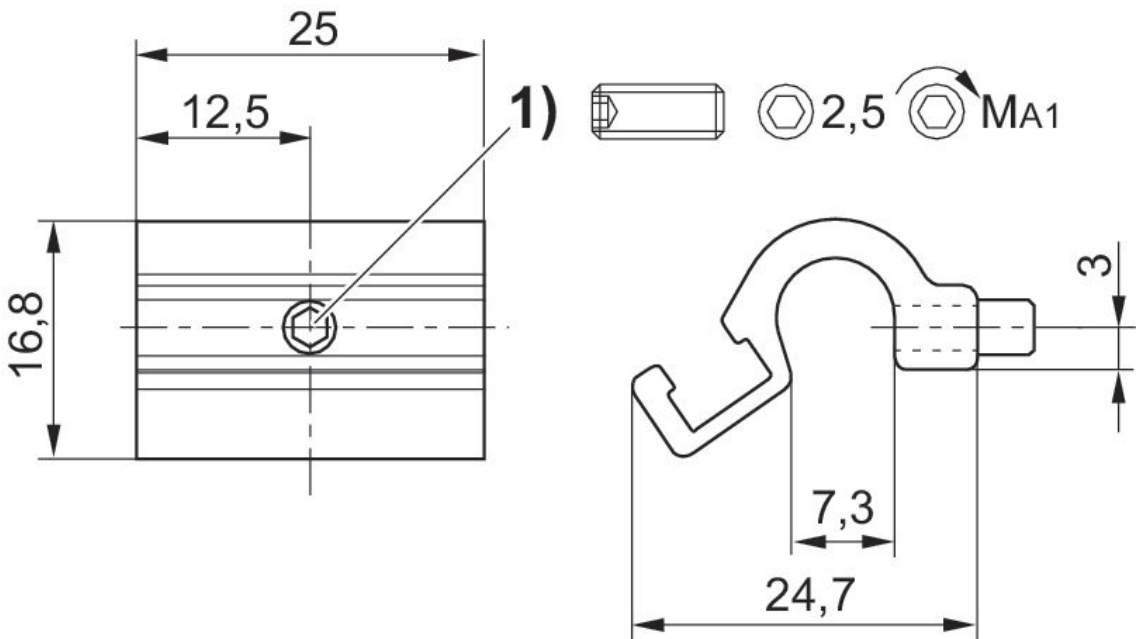
Part No.	Cylinders Ø	A	B	C	D	E	F	G	Clamping threaded pin	MA1 [Nm]
1827020282	32 - 40 mm	26	10	7	14	5	8	40	M5x8	2 ±0,2
1827020283	50 - 63 mm	32.5	15.5	7	14	5	8	40	M5x10	2 ±0,2
1827020284	80 - 100 mm	43	17	6.9	14	5	8	40	M5x16	2 ±0,2

Sensor mounting, Series CB1

ST6
SM6



Max. cylinder Ø [mm]	Material	Part No.
25	Aluminum	R412022357

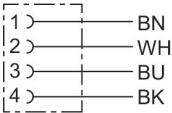


1) Mounting screw

Part No.	Cylinders Ø max.	MA1 [Nm]
R412022357	25 mm	1 + 0,3

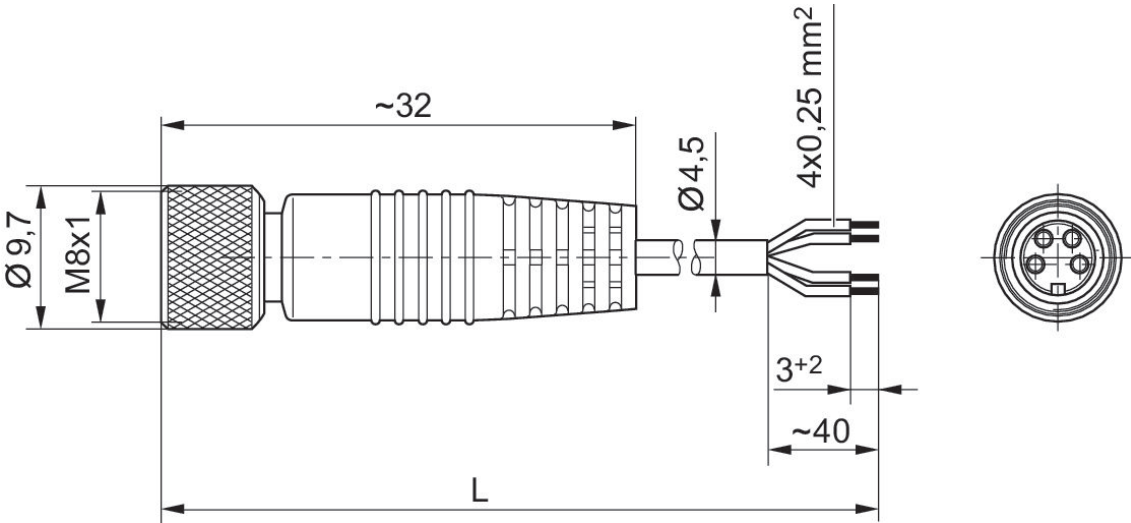
Round plug connector, Series CON-RD

Socket
M8x1
4-pin



Operational voltage	Current [A]	Shielding	Electrical connection 1, type	Electrical connection 1, thread size	Electrical connection 1, coding	Electrical connection 2, type	Cable length [m]	Cable-Ø [mm]	Wire cross-section [mm²]	Min. ambient temperature [°C]	Max. ambient temperature [°C]	Part No.
48 V AC/DC	4	unshielded	Socket	M8x1	A-coded	open cable ends	3	4.5	0.25	-40	85	1834484144
48 V AC/DC	4	unshielded	Socket	M8x1	A-coded	open cable ends	5	4.5	0.25	-40	85	1834484146

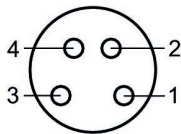
Dimensions



L = length

1834484144, 1834484146

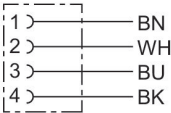
Pin assignment, socket



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

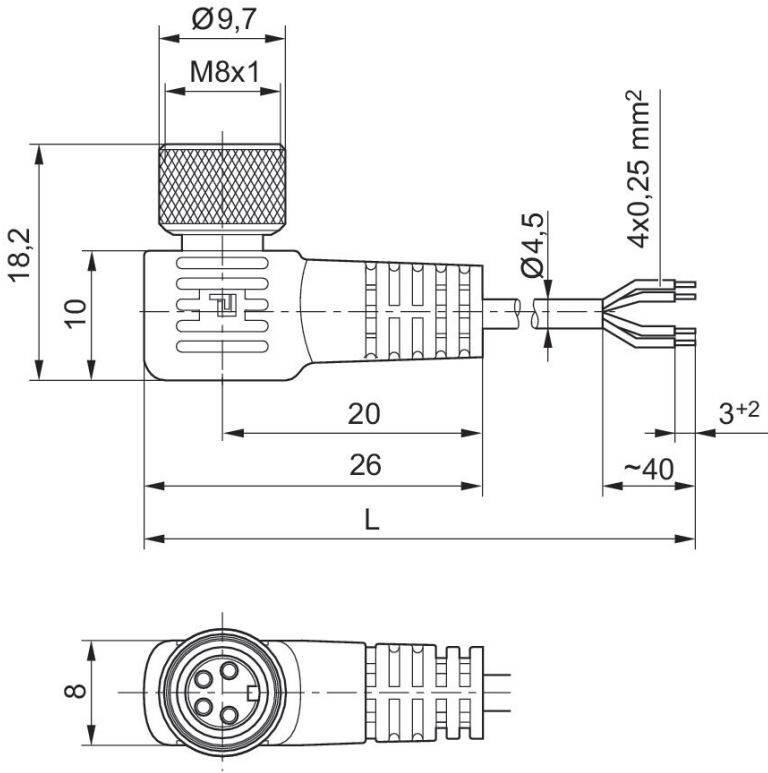
Round plug connector, Series CON-RD

Socket
M8x1
4-pin



Operational voltage	Current [A]	Shielding	Electrical connection 1, type	Electrical connection 1, thread size	Electrical connection 1, coding	Electrical connection 2, type	Cable length [m]	Cable-Ø [mm]	Wire cross-section [mm²]	Min. ambient temperature [°C]	Max. ambient temperature [°C]	Part No.
48 V AC/DC	4	unshielded	Socket	M8x1	A-coded	open cable ends	3	4.5	0.25	-25	85	1834484145
48 V AC/DC	4	unshielded	Socket	M8x1	A-coded	open cable ends	5	4.5	0.25	-25	85	1834484147

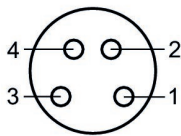
Dimensions in mm



L = length

1834484145, 1834484147

Pin assignment, socket



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

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air supply management



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