

Sensors, Series SM6-AL

- with cable
- Plug, M8x1, 4-pin
- with distance measuring sensor, measurement range 107 - 1007 mm
- IO-Link
- Analog
- Indirect mounting for series PRA, ITS, RTC, CVI



Certificates	cULus
Ambient temperature min./max.	-20 ... 70 °C
Protection class	IP65, IP67
Output signal	0 - 10 V DC, 4 - 20 mA
Quiescent current (without load)	35 mA
Current signal	4 ... 20 mA
Maximum load (analog current output)	500 Ω
Residual ripple	≤ 10 %
sampling interval	1,15 ms
Resolution,max. measuring range	typ. 0,03 % FSR
Repetitive precision,max. measuring range	typ. 0,06 % FSR
Linearity deviation	0,5 mm
Sampling speed,Partial stroke	1,5 m/s
Sampling speed,Full stroke	3 m/s
Display	2 LED
Vibration resistance	10 - 55 Hz, 1 mm
Shock resistance	30 g / 11 ms

Technical data

Part No.	Type of contact	Cable length L	max. measuring range	Overall length Sensor A
R412010880	Analog	0,3 m	107 mm	109 mm
R412010881	Analog	0,3 m	143 mm	145 mm
R412010882	Analog	0,3 m	179 mm	181 mm
R412010883	Analog	0,3 m	215 mm	217 mm
R412010884	Analog	0,3 m	251 mm	253 mm
R412010885	Analog	0,3 m	287 mm	289 mm
R412010886	Analog	0,3 m	323 mm	325 mm
R412010887	Analog	0,3 m	359 mm	361 mm
R412010888	Analog	0,3 m	395 mm	397 mm
R412010889	Analog	0,3 m	431 mm	433 mm
R412010890	Analog	0,3 m	467 mm	469 mm
R412010891	Analog	0,3 m	503 mm	505 mm
R412010892	Analog	0,3 m	539 mm	541 mm
R412010893	Analog	0,3 m	575 mm	577 mm
R412010894	Analog	0,3 m	611 mm	613 mm
R412010895	Analog	0,3 m	647 mm	649 mm
R412010896	Analog	0,3 m	683 mm	685 mm
R412010897	Analog	0,3 m	719 mm	721 mm

Part No.	Type of contact	Cable length L	max. measuring range	Overall length Sensor A
R412010898	Analog	0,3 m	755 mm	757 mm
R412010899	Analog	0,3 m	791 mm	793 mm
R412010900	Analog	0,3 m	827 mm	829 mm
R412010901	Analog	0,3 m	863 mm	865 mm
R412010902	Analog	0,3 m	899 mm	901 mm
R412010903	Analog	0,3 m	935 mm	937 mm
R412010904	Analog	0,3 m	971 mm	973 mm
R412010905	Analog	0,3 m	1007 mm	1009 mm

Part No.	Incl. number of sensor clamp pairs	Current signal
R412010880	2 piece	4 ... 20 mA
R412010881	2 piece	4 ... 20 mA
R412010882	2 piece	4 ... 20 mA
R412010883	2 piece	4 ... 20 mA
R412010884	2 piece	4 ... 20 mA
R412010885	3 piece	4 ... 20 mA
R412010886	3 piece	4 ... 20 mA
R412010887	3 piece	4 ... 20 mA
R412010888	3 piece	4 ... 20 mA
R412010889	3 piece	4 ... 20 mA
R412010890	4 piece	4 ... 20 mA
R412010891	4 piece	4 ... 20 mA
R412010892	4 piece	4 ... 20 mA
R412010893	4 piece	4 ... 20 mA
R412010894	4 piece	4 ... 20 mA
R412010895	4 piece	4 ... 20 mA
R412010896	5 piece	4 ... 20 mA
R412010897	5 piece	4 ... 20 mA
R412010898	5 piece	4 ... 20 mA
R412010899	5 piece	4 ... 20 mA
R412010900	6 piece	4 ... 20 mA
R412010901	6 piece	4 ... 20 mA
R412010902	6 piece	4 ... 20 mA
R412010903	6 piece	4 ... 20 mA
R412010904	6 piece	4 ... 20 mA
R412010905	6 piece	4 ... 20 mA

Part No.	Version
R412010880	short circuit resistant, Protected against polarity reversal, Overload protection
R412010881	short circuit resistant, Protected against polarity reversal, Overload protection
R412010882	short circuit resistant, Protected against polarity reversal, Overload protection
R412010883	short circuit resistant, Protected against polarity reversal, Overload protection
R412010884	short circuit resistant, Protected against polarity reversal, Overload protection
R412010885	short circuit resistant, Protected against polarity reversal, Overload protection
R412010886	short circuit resistant, Protected against polarity reversal, Overload protection

Part No.	Version
R412010887	short circuit resistant, Protected against polarity reversal, Overload protection
R412010888	short circuit resistant, Protected against polarity reversal, Overload protection
R412010889	short circuit resistant, Protected against polarity reversal, Overload protection
R412010890	short circuit resistant, Protected against polarity reversal, Overload protection
R412010891	short circuit resistant, Protected against polarity reversal, Overload protection
R412010892	short circuit resistant, Protected against polarity reversal, Overload protection
R412010893	short circuit resistant, Protected against polarity reversal, Overload protection
R412010894	short circuit resistant, Protected against polarity reversal, Overload protection
R412010895	short circuit resistant, Protected against polarity reversal, Overload protection
R412010896	short circuit resistant, Protected against polarity reversal, Overload protection
R412010897	short circuit resistant, Protected against polarity reversal, Overload protection
R412010898	short circuit resistant, Protected against polarity reversal, Overload protection
R412010899	short circuit resistant, Protected against polarity reversal, Overload protection
R412010900	short circuit resistant, Protected against polarity reversal, Overload protection
R412010901	short circuit resistant, Protected against polarity reversal, Overload protection
R412010902	short circuit resistant, Protected against polarity reversal, Overload protection
R412010903	short circuit resistant, Protected against polarity reversal, Overload protection
R412010904	short circuit resistant, Protected against polarity reversal, Overload protection
R412010905	short circuit resistant, Protected against polarity reversal, Overload protection

Technical information

Holders for cylinder series PRA are included in the scope of delivery. For cylinder series ITS, please order the appropriate holders separately.

FSR: Full Scale Range, max. measurement range

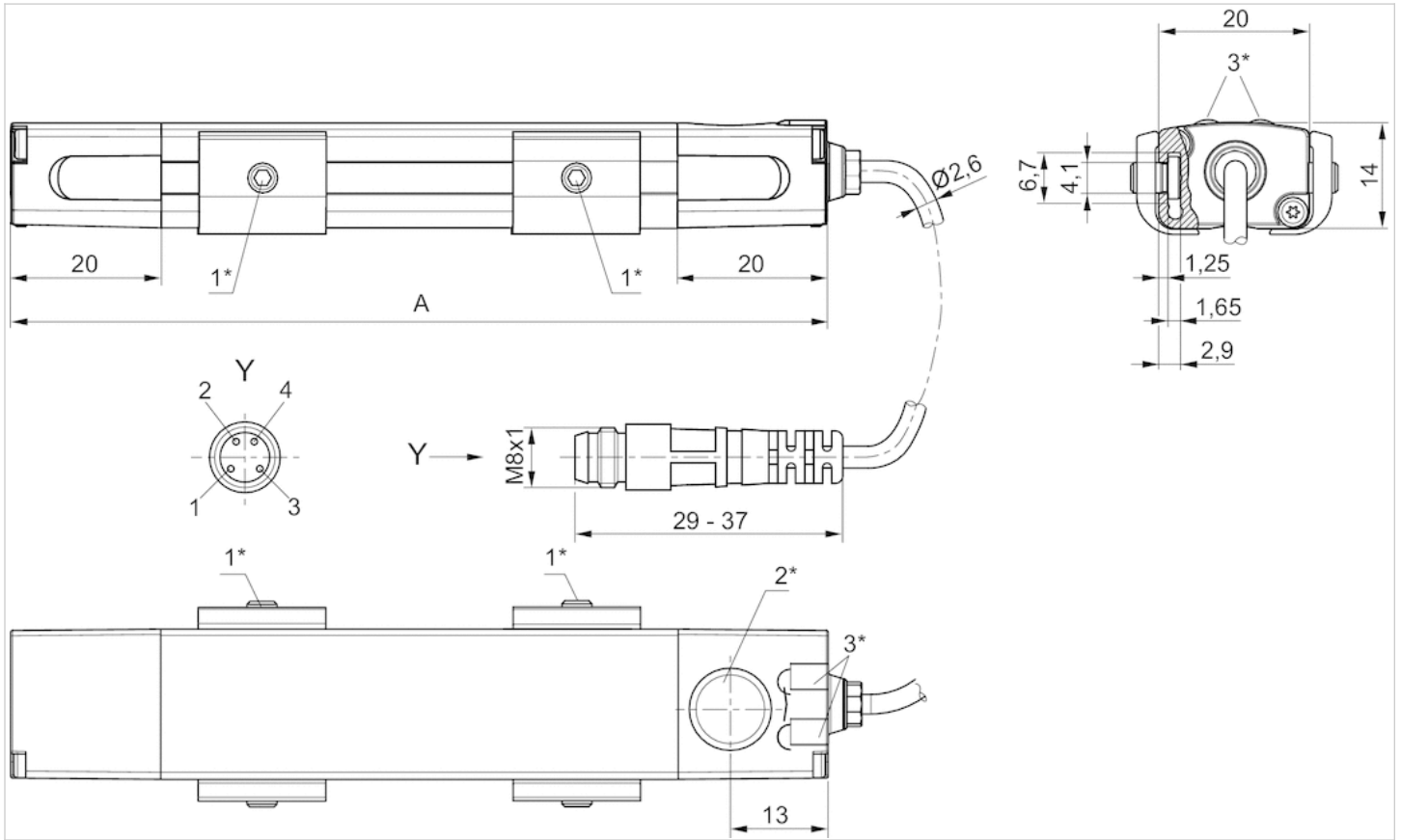
The IO-Link device description (IODD) for the SM6-AL distance measuring sensor is available for download in the Media Centre.

Technical information

Material	
Housing	Aluminum
Cable sheath	Polyurethane
End caps	Polyamide

Dimensions

Dimensions



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

A = sensor length

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

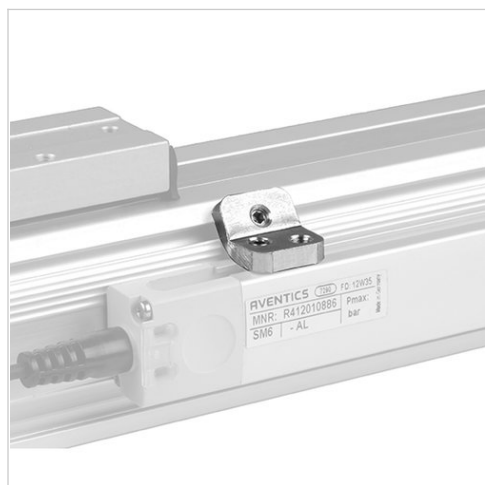
LED 1: yellow = measuring operation, red = error

LED 2: green = voltage signal, blue = current signal

Sensor mounting, Series CB1

- for series SM6-AL

- to mount on cylinder RTC



Weight

0,007 kg

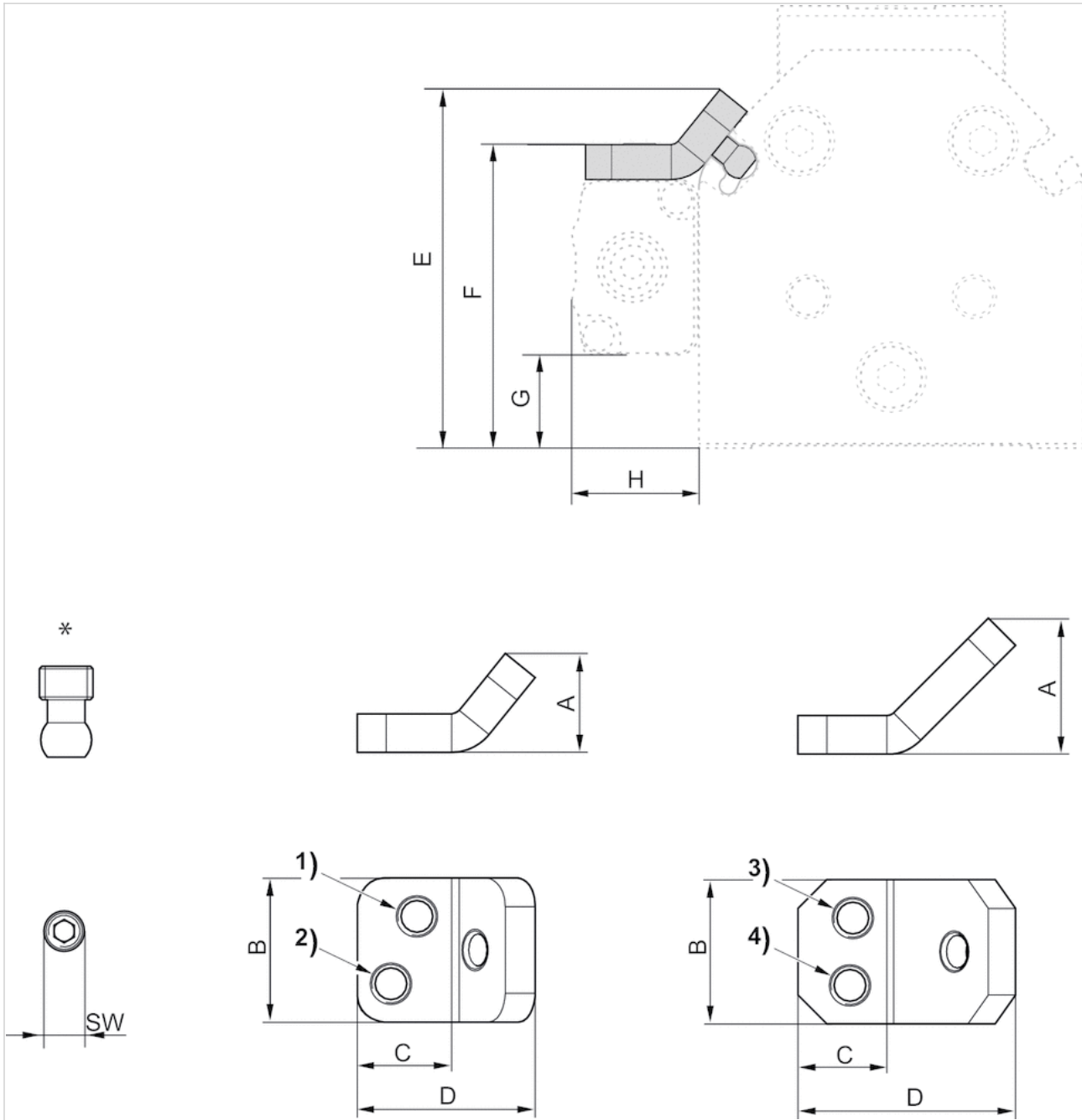
Technical data

Part No.	for series	Scope of delivery
R412022298	SM6-AL	1 piece

Technical information

Material
Aluminum

Dimensions



* Threaded pin (brass)

2 clamp mounting sets for SM6-AL 109 - 469 mm
 3 clamp mounting sets for SM6-AL 505 - 793 mm
 4 clamp mounting sets for SM6-AL 829 - 1009 mm

Dimensions

Part No.	Piston Ø		A	B	C	D	E
R412022298	25324050	1)2)3)4)	10,310,314,214,2	15151515	9,89,89,29,2	18,518,522,622,6	4146,75560,6
	F		G		H		SW
	34,740,445,250,5		10,716,421,126,5		14,414,414,414,4		2222

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

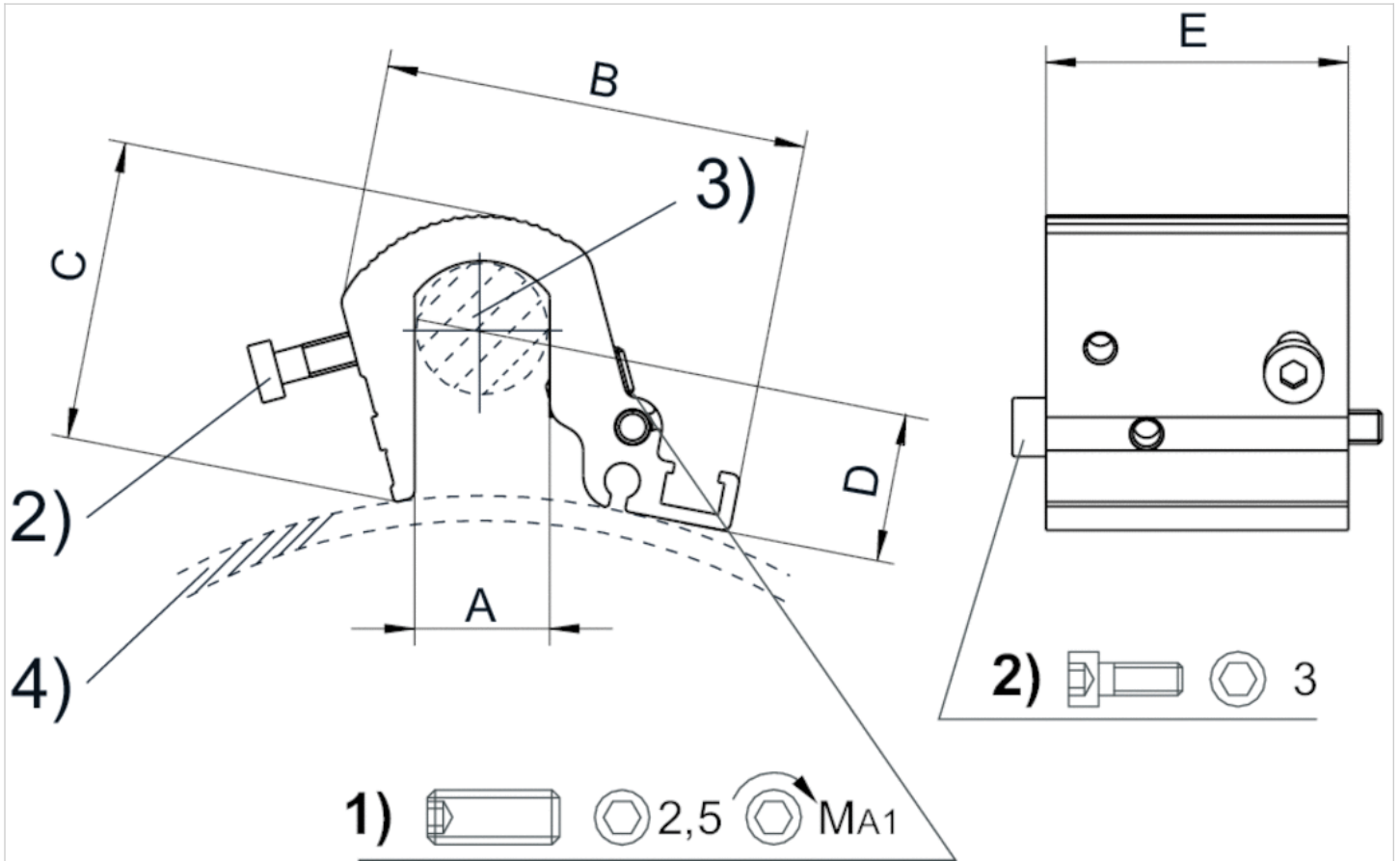
Part No.	Cylinders Ø	Cylinders Ø	for series	Weight
	min.	max.		
R412017979	160 mm	200 mm	ST6, SN2, SN6, SN1, SM6, SM6-AL	0,058 kg
R412017980	250 mm	320 mm	ST6, SN2, SN6, SN1, SM6, SM6-AL	0,073 kg

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

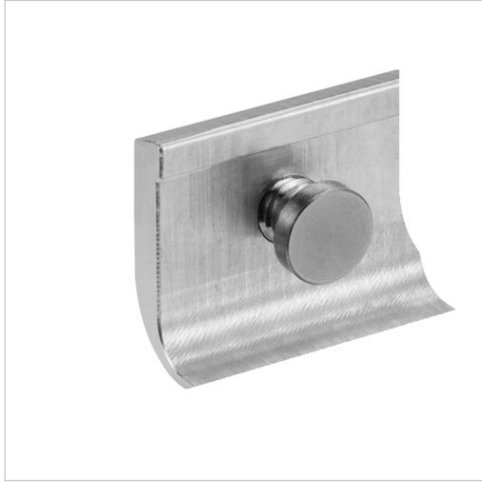
Dimensions

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

- for series SM6-AL



Weight

0,015 kg

Technical data

Part No.	for series	Scope of delivery
R412010906	SM6-AL	2 piece

Technical information

Material
Aluminum

Dimensions

