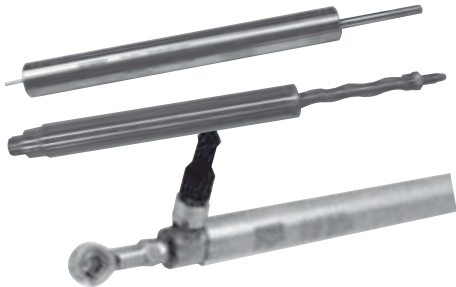


DC/DC LVDTs, 20MM DIAMETER : SX20MER - SX20MECR - SX20MEC2R SERIES



Main advantages :

- Integrated signal conditioner
- Rugged
- Stainless Steel housing
- Economical
- Modularity
- Reinforced core rod 6mm dia.



RANGE OVERVIEW




The SX20ME DC/DC LVDT is designed to be used without any external signal conditioner.

It delivers a 4/20mA and 0-10V calibrated output proportionnal to the stroke, and requires a 24VDC power supply.

From a single housing , several configurations are available :

Cable or connector output, gauge head & spring, shivel joints, radial or axial cable.

SELECTION GUIDE

Models	Characteristics	Options
SX20 MER	 Standard sensor Cable output	Gauge head Swivel joints
SX20 MECR	 M12 connector output	Gauge head
SX20 MEC2R	 M12 connector output Shivel joints Guided core rod	None

GENERAL SPECIFICATIONS (AT 25 °C)

Electrical stroke :	± 2.5 to ± 150 mm
Power supply :	24 VDC ± 10 VDC
Consumption (except current output) :	15 mA typical, 30 mA maxi
Calibrated current output :	4-20 mA ± 1 %
Maximum acceptable load :	(Power supply V -3) / 0.02 Ohms
Voltage output :	0/10 V ± 1 %
Voltage output impedance :	500 Ohms
Linearity :	± 0.25 % FS, except stroke $\pm 2,5$; ± 5 and ± 150 mm : ± 0.5 % FS
Output accuracy :	< 0.5 % FS, except stroke ± 150 mm : < 1 % FS
Bandwidth :	375 Hz ± 10 % (second order)
Electrical noise :	< 10 mV peak to peak, 3 mV rms
Zero thermal drift :	< 80 ppm $^{\circ}$ C / FS
Sensitivity thermal drift :	< 300 ppm $^{\circ}$ C / measure
Operating temperature :	- 40 $^{\circ}$ C to + 85 $^{\circ}$ C
Shock resistance :	100 g / 11 ms
Vibration resistance :	10 g rms (20 to 2000 Hz)
Protection :	IP66 or IP67 (according to models)
Electronic board protection :	Tropicalization

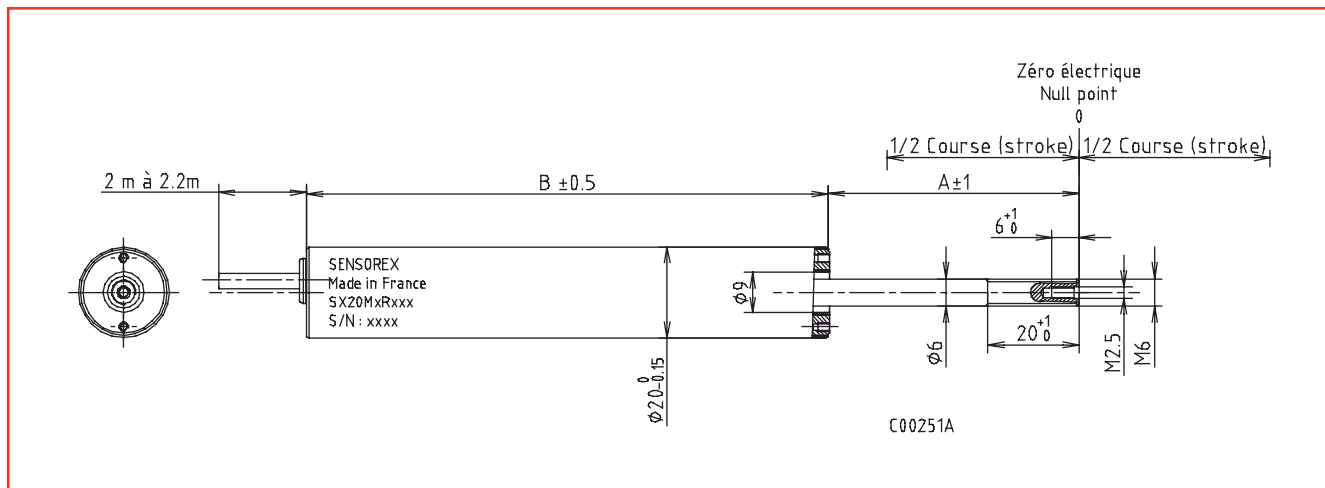
Test reports for 4-20 mA and 0/10 V outputs are supplied.

SX20MER : CABLE OUTPUT



INTERFACE DRAWING & SPECIFICATIONS

Standard sensor : Non guided core rod



Models		SX20 MER005	SX20 MER010	SX20 MER020	SX20 MER030	SX20 MER050	SX20 MER100	SX20 MER200	SX20 MER300
Stroke (mm)	Electrical stroke	± 2,5	± 5	± 10	± 15	± 25	± 50	± 100	± 150
	Mechanical stroke	± 7,5	± 7,5	± 12,5	± 17,5	± 27,5	± 52,5	± 102,5	± 152,5
Electrical specifications at 3.5 KHz / 2.2V rms / 23°C	Current output sensitivity (µA/mm) ± 1 %	3200	1600	800	533	320	160	80	53
	Voltage output sensitivity (mV/mm) ± 1 %	2000	1000	500	333	200	100	50	33
Environnement	Operating Temperature	- 40 to + 85 °C							
	IP	66							
Dimensions (mm)	A	40	40	55	65	80	125	205	250
	B	99	99	115	144	173	259	400	495
	C	199	199	230	269	313	444	665	805

CONNECTION

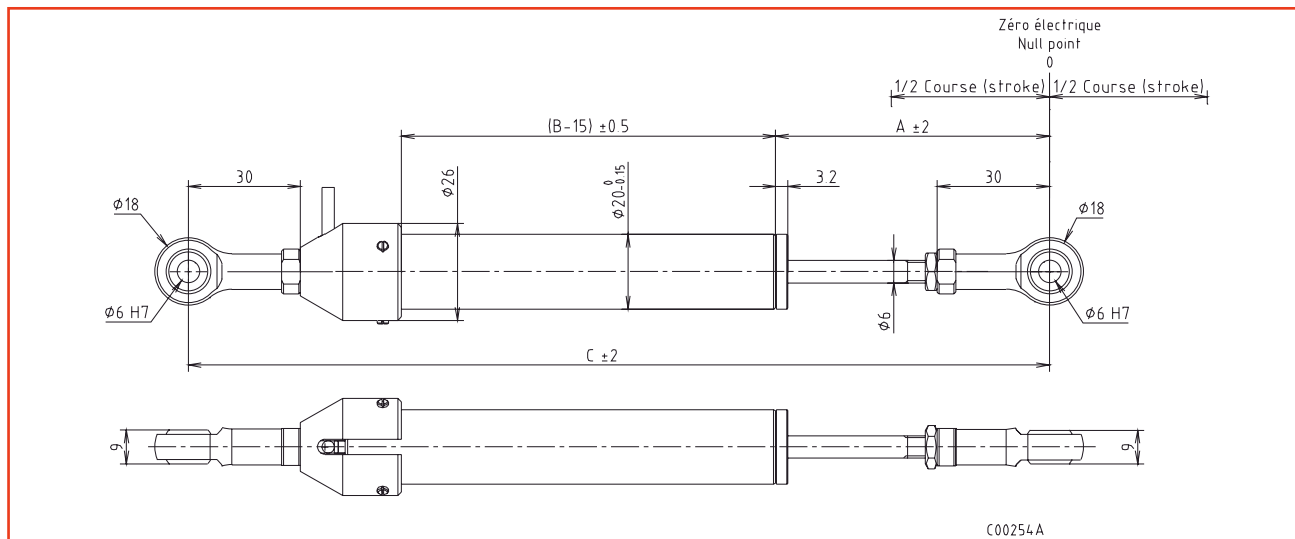
Wire color	Function
Red	+ VDC (power supply)
Blue	0 VDC (power supply)
White	Voltage output 0/10 V
Green	Current output 4/20 mA
Yellow	Low point

Nb : 0 VDC & low points are connected to each other inside the sensor.
The cable shielding is linked to the sensor's housing.

SWIVEL JOINTS OPTION

This option can be factory mounted before shipping. It includes the joints and their supports, and the core rod guide.

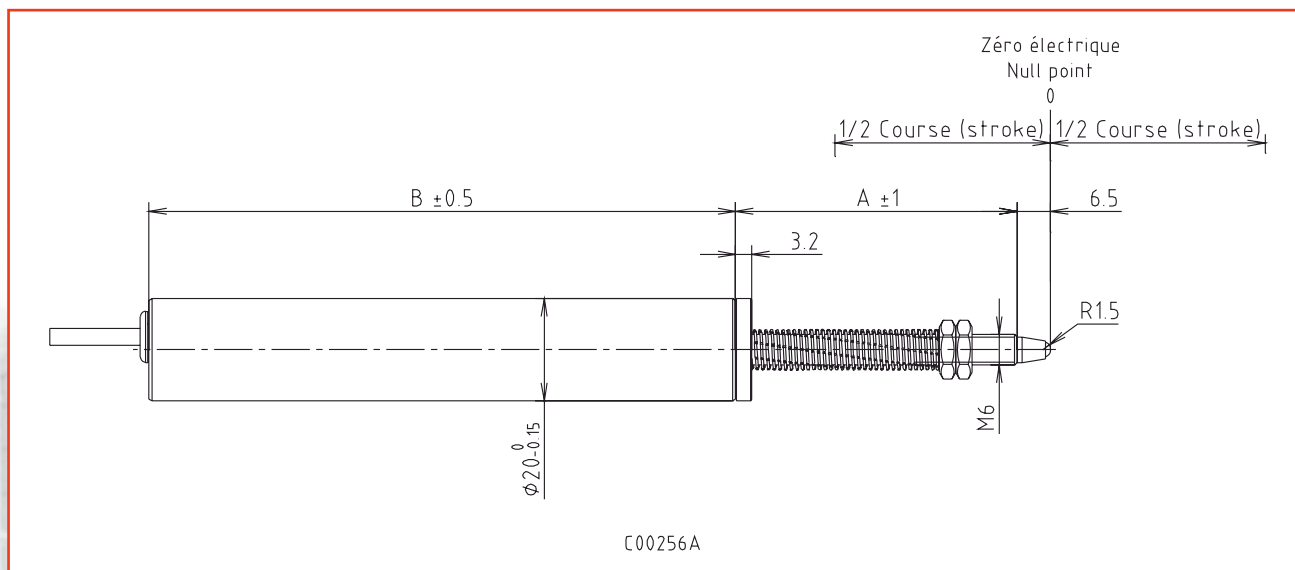
Interface drawing with swivel joints option



GAUGE HEAD OPTION

Can be factory mounted. Includes core rod guide, spring & probe tip (M2.5 standard).

Interface drawing with gauging head option



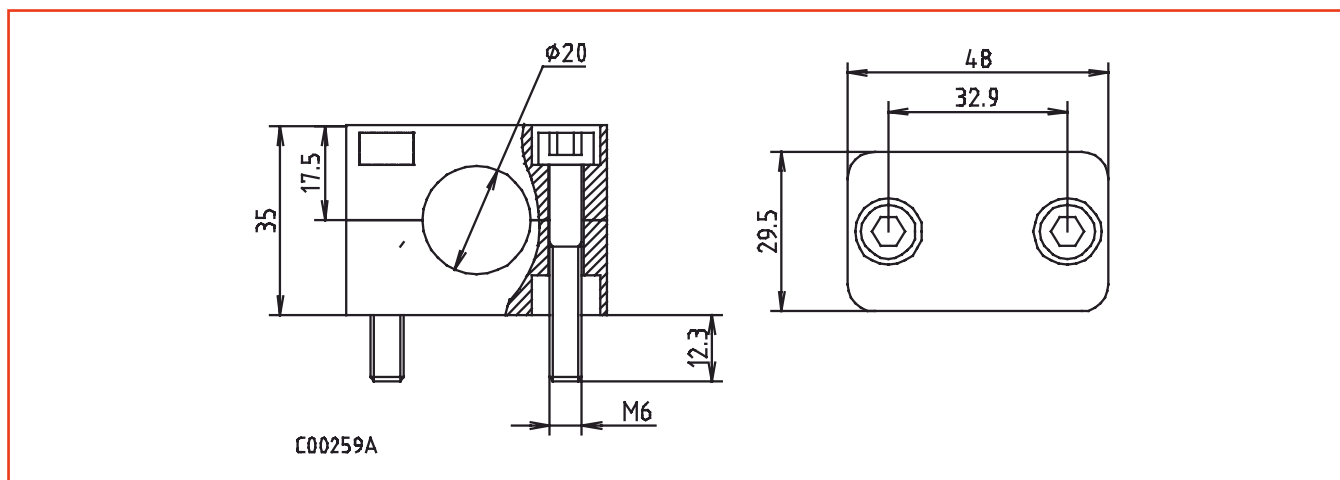
NB : The spring is not available with gauge head option for stroke 300mm.

Strength at Zero position and spring stiffness.

Sensor ref.	Stroke [mm]	Strength at Zero [N]	Stiffness [N/mm]
SX 20 MER 005	± 2.5	1,07	0,030
SX 20 MER 010	± 5	0,87	0,026
SX 20 MER 020	± 10	0,98	0,015
SX 20 MER 030	± 15	0,83	0,015
SX 20 MER 050	± 25	0,90	0,010
SX 20 MER 100	± 50	2,38	0,023
SX 20 MER 200	± 100	2,36	0,012
SX 20 MER 300	± 150	/	/


ACCESSORIES

Mounting Flanges ; ref. BCX20P



SELECTION GUIDE

- LVDT alone

SX20MER xxx 
 |
 Total stroke

Options & accessories must be ordered separately, as follows :

- Gauge head option for SX20MER / MECR

Pxxx - SX20MER/MECR
 |
 Total stroke

- Swivel joints option for SX20MER

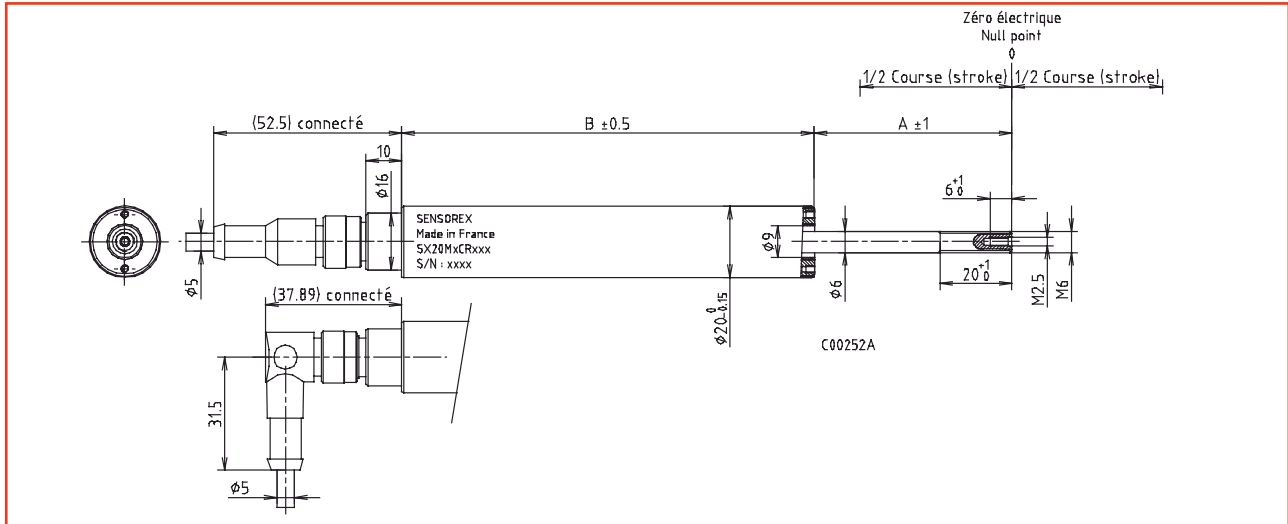
R-SX20MER

SX20MECR : M12 CONNECTOR OUTPUT



INTERFACE DRAWING & SPECIFICATIONS

Standard sensor : Non guided core rod



Models		SX20 MECR005	SX20 MECR010	SX20 MECR020	SX20 MECR030	SX20 MECR050	SX20 MECR100	SX20 MECR200	SX20 MECR300
Stroke (mm)	Course électrique	± 2,5	± 5	± 10	± 15	± 25	± 50	± 100	± 150
	Course mécanique	± 7,5	± 7,5	± 12,5	± 17,5	± 27,5	± 52,5	± 102,5	± 152,5
Electrical specifications at 3.5 KHz / 2.2V rms / 23°C	Sensibilité nominale Sortie courant (µA/mm) ± 1 %	3200	1600		533	320	160	80	53
	Sensibilité nominale Sortie tension (mV/mm) ± 1 %	2000	1000	500	333	200	100	50	33
Environnement	Operating Temperature	- 40 to + 85 °C							
	IP	67							
Dimensions (mm)	A	40	40	55	65	80	125	205	250
	B	99	99	115	144	173	259	400	495

CONNECTION

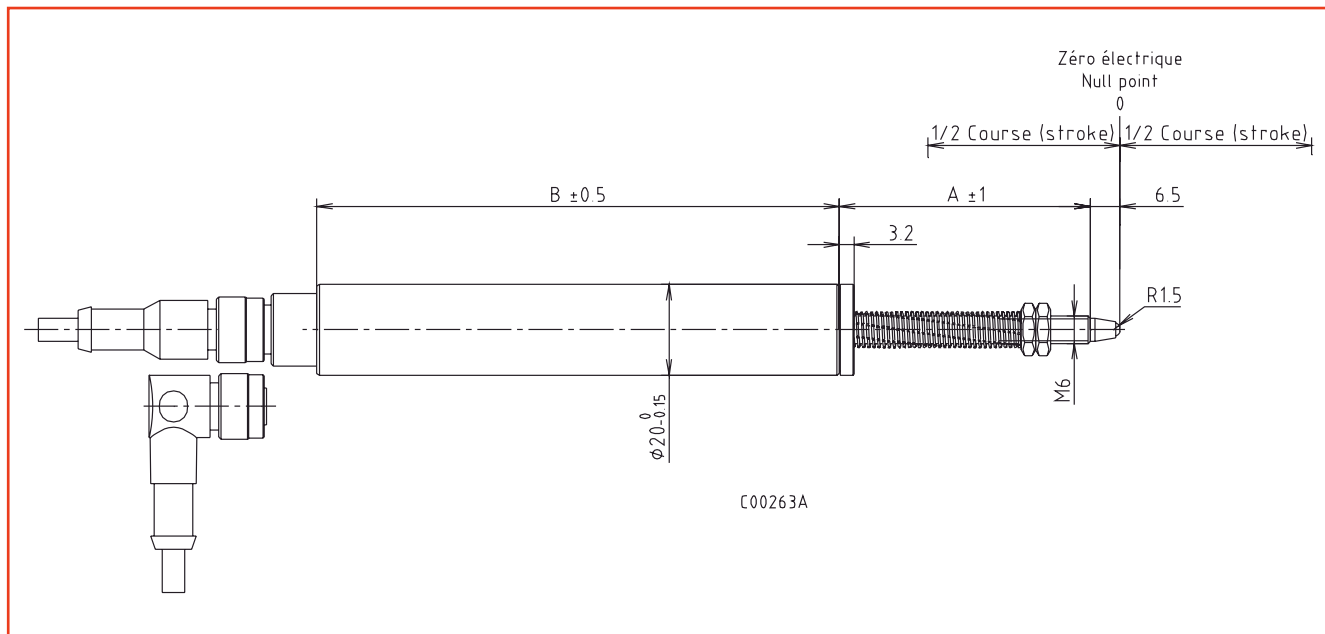
Pins	Wire color	Function
1	Brown	+VDC (power supply)
2	Blue	0 VDC (power supply)
3	White	Voltage output 0/10 V
4	Black	Current output 4/20 mA
5	Grey	Low point

Nb : Shielding linked to the connector

GAUGE HEAD OPTION

Can be factory mounted. Includes core rod guide, spring & probe tip (M2.5 standard).

Interface drawing with gauging head option







NB : The spring is not available with gauge head option for stroke 300mm.

Strength at Zero position and spring stiffness.

Sensor ref.	Stroke (mm)	Strength at Zero (N)	Stiffness (N/mm)
SX 20 MECR 005	± 2,5	1,07	0,030
SX 20 MECR 010	± 5	0,87	0,026
SX 20 MECR 020	± 10	0,98	0,015
SX 20 MECR 030	± 15	0,83	0,015
SX 20 MECR 050	± 25	0,90	0,010
SX 20 MECR 100	± 50	2,38	0,023
SX 20 MECR 200	± 100	2,36	0,012
SX 20 MECR 300	± 150	/	/

ACCESSORIES

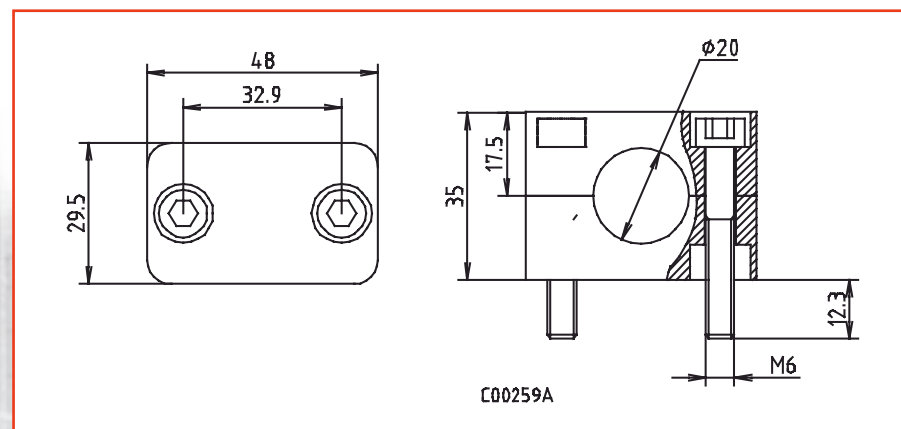
Axial or radial cable

	Axial shielded cable, M12 female connector, 5 pins		Radial shielded cable, M12 female connector, 5 pins	
Length	2 m	10 m	2 m	10 m
Reference	690 15 04 05	690 15 04 06	690 15 04 07	690 15 04 08
Working Temp. : - 20 to + 85 °C				

Female plug for shielded cable

	Axial female plug for shielded cable dia.4 to 6mm, 5 pins
Reference	690 15 04 09
Working Temp. : - 40 to + 85 °C	

Mounting Flanges ; ref. BCX20P



SELECTION GUIDE

- Sensor alone :

SX20MECR_XXX *Sxi*

Total stroke

Options & accessories must be ordered separately, as follows :

- Gauge head option for SX20MER / MECR

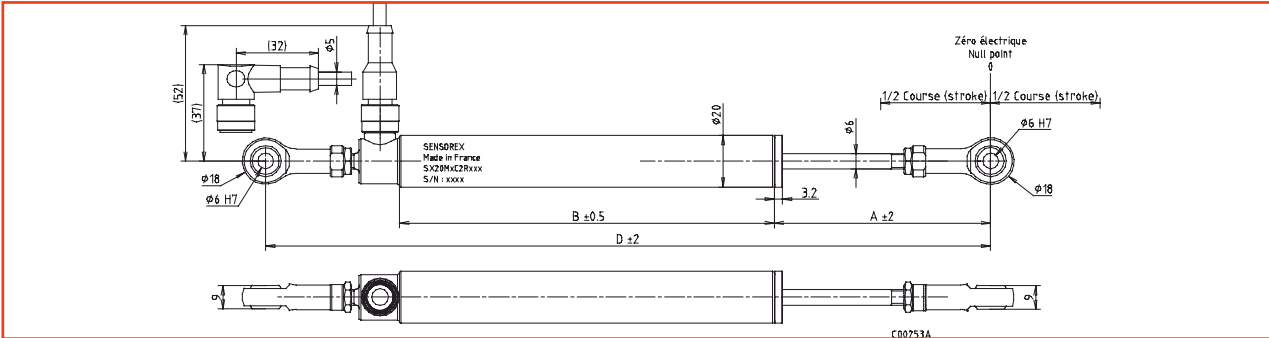
P_{XXX} - SX20MER/MECR

Total stroke



SX20MEC2R : M12 CONNECTOR OUTPUT, SWIVEL JOINTS, CORE ROD GUIDE

INTERFACE DRAWING & SPECIFICATIONS



Models		SX20 MEC2R005	SX20 MEC2R010	SX20 MEC2R020	SX20 MEC2R030	SX20 MEC2R050	SX20 MEC2R100	SX20 MEC2R200
Stroke (mm)	Electrical stroke	± 2,5	± 5	± 10	± 15	± 25	± 50	± 100
	Mechanical stroke	± 7,5	± 7,5	± 12,5	± 17,5	± 27,5	± 52,5	± 102,5
Electrical specifications at 3.5 KHz / 2.2 V rms / 23°C	Current output sensitivity (µA/mm) ± 1 %	3200	1600	800	533	320	160	80
	Voltage output sensitivity (mV/mm) ± 1 %	2000	1000	500	333	200	100	50
Environnement	Operating Temperature	- 40 to + 85 °C						
	IP	67						
Dimensions (mm)	A	40	40	55	65	80	125	205
	B	99	99	115	144	173	259	400
	D	203,5	203,5	239	278,5	322,5	453,5	674,5

CONNECTION

Pins	Wire Color	Function
1	Brown	+ VDC (power supply)
2	Blue	0 VDC (power supply)
3	White	Voltage output 0/10 V
4	Black	Current output 4/20 mA
5	Grey	Low point

Nb : Shielding linked to the connector

ACCESSORIES

Axial or radial cable

	Axial shielded cable, M12 female connector, 5 pins		Radial shielded cable, M12 female connector, 5 pins	
Length	2 m	10 m	2 m	10 m
Reference	690 15 04 05	690 15 04 06	690 15 04 07	690 15 04 08
Working Temp. : - 20 to + 85 °C				

Female plug for shielded cable

	Axial female plug for shielded cable dia. 4 to 6mm, 5 pins
Reference	690 15 04 09
Working Temp. : - 40 to + 85 °C	

SELECTION GUIDE

- Sensor alone

SX20MEC2R xxx

└── Total stroke

Accessories must be be ordered separately