Sensorex®

High performance LVDT sensor- digital & analogue outputs
SX20MD

Characteristics

- Integrated digital electronics
- Robust design and stainless steel housing
- Error compensation
- M12 connector
- Digital RS485 and analogue outputs

Applications

- Monitoring and sounding of large structures
- High accuracy dimensional control
- Industrial instrumentation in severe environments

Meggitt（Sensorex）SX20MD combines the advantages of LVDT technology（strength, reliability, contactless）with digital electronics.

The output signal, which is proportional to the core rod position, is available as both analog （0/10V and 4/20mA）and digital（RS485）in MODBUS protocol. All three signals can be used at the same time.

A digital hybrid module（HCN）is used to improve the sensor's accuracy, notably the thermal drift and non-linearity.

This allows a non-linearity better than ±0.05% of full scale on the output signal.

Measurement range is from ±2.5mm to ±150mm. Gauge head kit is supplied as standard （without spring return for stroke 300mm）.
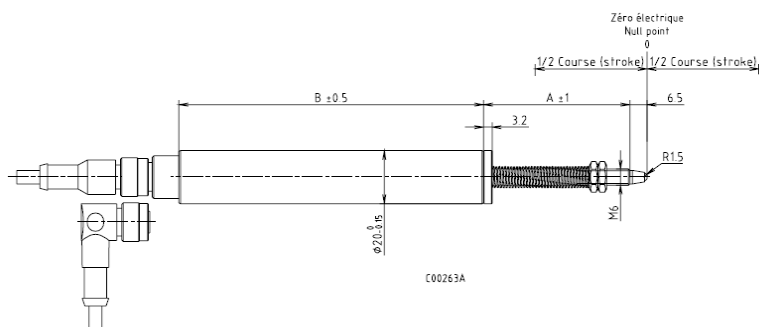
Meggitt Sensing Systems

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Sensorex®

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Dimensions

Electrical stroke	A (mm)	B (mm)
±2.5mm	40	99
±5mm	40	99
±10mm	55	115
±15mm	65	144
±25mm	80	173
±50mm	125	259
±100mm	205	400
±150mm	250	495

General specifications at +25°C

Electrical stroke	±2.5mm to ±150mm
Power supply	12V to 30V
Consumption	30 mA max (except current output)
Outputs	Current (4-20mA) / Voltage (0/10V) & digital (RS485 ModBus)
Accuracy at 22.5°C(1)	±0.1% of FS max (strokes ±2.5mm to ±100mm) ±0.2% of FS max (stroke ±150mm)
Non linearity	±0.05% of FS max (strokes ±2.5mm to ±100mm) ±0.1% of FS max (stroke ±150mm)
Zero thermal drift	±0.18% of FS max (strokes ±5mm to ±150mm) ±0.3% of FS max (stroke ±2.5mm)
Sensitivity thermal drift	±0.3% max (strokes ±5mm to ±150mm) ±0.5% max (stroke ±2.5mm)
Output noise	< 0.01% of FS within the bandwidth
Bandwidth	Adjustable from 1Hz to 100Hz

Meggitt Sensing Systems

Our measurement product competencies:
LVDTs | Inertial systems | Inclinometers | Accelerometers | IMU |
MEMS sensors | Servo-inclinometer | Conditioners

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（1）Accuracy at ambient temperature includes non-linearity, scale factor and offset errors. If the sensor is re-calibrated by the user, ambient accuracy will only include the non linearity error. To calculate accuracy over a given temperature, the thermal drift error of sensitivity and zero must be added to the accuracy at ambient.

Electrical specifications at +23°C

Electrical stroke （mm）	±2.5	±5	±10	±15	±25	±50	±100	±150
Nominal sensitivity current output （μA/mm）	3200	1600	800	533	320	160	80	53
Nominal sensitivity voltage output （mV/mm）	2000	1000	500	333	200	100	50	33

Selection guide

Electrical stroke （mm）	Current calibration- ref.	Voltage calibration- ref.
±2.5mm	690150602	690150601
±5mm	690150612	690150611
±10mm	690150622	690150621
±15mm	690150632	690150631
±25mm	690150642	690150641
±50mm	690150652	690150651
±100mm	690150662	690150661
±150mm	690150672	690150671

Options

Designation	Product reference
2 meter shielded cable straight female plug	690150410
10 meter shielded cable straight female plug	690150411
5 meter shielded cable bent female plug	690150412
10 meter shielded cable bent female plug	690150413
Straight female plug for shielded cable	490534221

The CD Rom supplied with the SX20MD includes software for configuration, acquisition and visualization （on Windows）. Libraries for lab view, C, dll, and user manual are also included.

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