



Sensorex®

High performance LVDT sensors – Ø12mm SX12K/W



Meggitt (Sensorex) SX12 range is a high performance LVDT series. They are particularly suitable for severe environment applications (high temperature and pressure), and where accuracy and outstanding reliability are needed.

Two different versions of LVDT are available :

- **SX12K**: 2 meter or 10 meter shielded cable output, Max. Operating temperature 200°C, (option), Max. operating pressure 250 bar (option), rugged for extreme environments
- **SX12W**: 6 wire output, Max. Operating temperature 200°C (option), Max. operating pressure 350 bar (option), compact, easy to integrate

These sensors are AC/AC. They should be connected to a signal conditioner model SX3120.

Characteristics

- Very high MTBF (Main Time Between Failure)
- Low non-linearity error (<0.15% of Full Scale)
- Very low thermal drift (<150ppm/°C)
- Protection IP66

Applications

- Test benches
- Special machines
- Tests on vehicles
- Automated production lines

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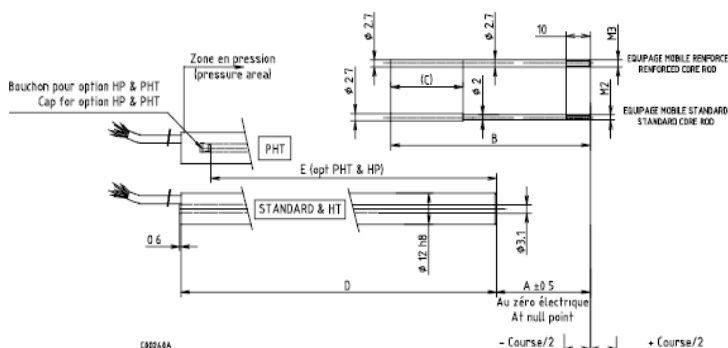
Our measurement product competencies:
LVDTs | Inertial systems | Inclinoimeters | Accelerometers | IMU |
MEMS sensors | Servo-inclinometer | Conditioners

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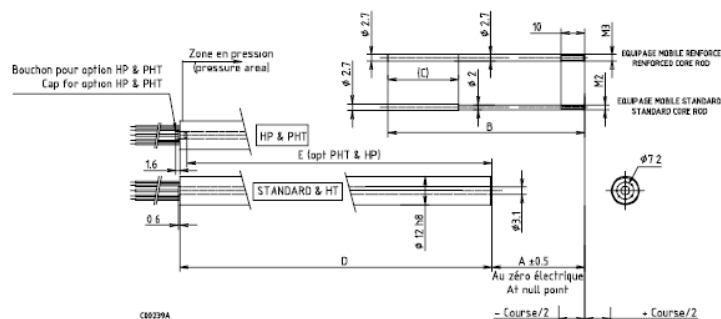
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SX12K



SX12W



Dimensions

Electrical strokes	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)
±3 mm	33	61.8	21.7	58.5 (38.5/SX12W)	34.9
±5 mm	33	61.8	21.7	58.5 (38.5/SX12W)	34.9
±10 mm	40.4	85.5	29.3	86.5 (67/SX12W)	63.4
±20 mm	50.2	116	40.8	116.5 (97/SX12W)	93.4
±30 mm	59.8	136	41.4	136.5 (117/SX12W)	113.4
±50 mm	80.4	175.5	41.2	174.5 (155/SX12W)	151.4
±75 mm	105.5	243	56	244.5 (225/SX12W)	221.4
±100 mm	126.9	300	69.2	302.5 (284/SX12W)	280.4
±125 mm	145.5	357	80	369.5 (352/SX12W)	348.4
±150 mm	170	408	80	423.5 (404/SX12W)	400.4

Contact

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Environmental characteristics

Operating range	-40°C to +125°C - option +200°C
Vibrations	12grms / 10Hz to 2000Hz
Shocks	1000g/ 2ms
Protection	IP 66

General specifications at +25°C

Electrical stroke	±3mm to ±150mm
Primary power supply	2.2Vrms nominal (6V peak to peak)
Frequency (primary excitation)	3500 Hz nominal (400Hz to 15kHz)
Consumption	≤10mW
Resolution	Infinite
Hysteresis	Non measurable
Non linearity	< 0.15% of FS (except for ranges ±125mm & ±150mm= <0.25% of FS)
Thermal drift	<150ppm/°C
Zero null voltage	≤0.5% of FS
Dielectric strength	500Vdc/ 1 min
Insulation resistance	≥ 1000 MΩ / 500 Vdc

Electrical specifications at +23°C

Electrical stroke (mm)	±3	±5	±10	±20	±30	±50	±75	±100	±125	±150
Mechanical stroke (mm)	±6	±6	±18	±30	±37	±56	±83	±107	±136	±162
Sensitivity (mV/V/mm) ±5%	56	56	39	19	9	9	9	7.2	3.7	4.4
Primary impedance (Ohms) ±20%	750	750	1250	2000	3000	2400	1500	3700	2800	1450
Secondary impedance (Ohms)	<200	<200	<330	<300	<200	<400	<550	<750	<600	<450
Phase primary/ secondary	<±6°	<±6°	<±6°	<±6°	<±6°	<±6°	<±6°	<±6°	<±6°	<±6°

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Selection guide

SX12K	Ref. 2m cable	Ref. 10m cable	Ref. 2m cable + HT	Ref. 10m cable + HT	Ref.2m cable + PHT	Ref.10m cable + PHT
±3 mm	690150100	690150200	690150101	690150201	690150102	690150202
±5 mm	690150110	690150210	690150111	690150211	690150112	690150212
±10 mm	690150120	690150220	690150121	690150221	690150122	690150222
±20 mm	690150130	690150230	690150131	690150231	690150132	690150232
±30 mm	690150140	690150240	690150141	690150241	690150142	690150242
±50 mm	690150150	690150250	690150151	690150251	690150152	690150252
±75 mm	690150160	690150260	690150161	690150261	690150162	690150262
±100 mm	690150170	690150270	690150171	690150271	690150172	690150272
±125 mm	690150180	690150280	690150181	690150281	690150182	690150282
±150 mm	690150190	690150290	690150191	690150291	690150192	690150292

SX12W	Standard	HP	HT	PHT
±3 mm	690150000	690150003	690150001	690150002
±5 mm	690150010	690150013	690150011	690150012
±10 mm	690150020	690150023	690150021	690150022
±20 mm	690150030	690150033	690150031	690150032
±30 mm	690150040	690150043	690150041	690150042
±50 mm	690150050	690150053	690150051	690150052
±75 mm	690150060	690150063	690150061	690150062
±100 mm	690150070	690150073	690150071	690150072
±125 mm	690150080	690150083	690150081	690150082
±150 mm	690150090	690150093	690150091	690150092

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