Linear Variable Displacement Transducer (LVDT) Specifications

Inductive transducers measure static and dynamic displacements. When used with carrier frequency measuring bridges the LVDT output may be converted to linear movements by using appropriate accessories. For example, tensile and compressive forces, pressure of gases and liquids, thickness of materials, and transverse moments may be measured.

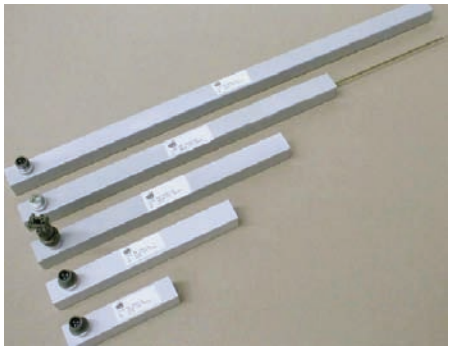
The design incorporates an innovative compensation coil which is wound directly over the measuring coil to insure extremely small temperature drift.

The transducer permits dynamic measurements up to 1250 Hz. The differential coil of the PR 9350 series consists of a coil with two windings and a solenoid plunger with a ferromagnetic core which moves within the coil. If the tracing pin is placed precisely in the middle of the coil, the impedance of both windings is identical. The impedance of the windings will increase on one side and decrease on the other side if the tracing pin with the ferromagnetic core moves from the middle position to one of the ends of the transducer.

By complementing the windings with resistors to a Wheatstone bridge, and by supplying this bridge with a carrier frequency, the measuring output of the bridge reads a voltage which is proportional to the displacement of the tracing pin.

The tracing pin is freely movable and has a threaded rod (M3) for the mechanical adaptation to the measuring target. On top of the housing there is a 3-pole cannon socket for the electric connection.

Inductive transducers of type PR 9350 are used with the 6410 monitor.



- High resolution over entire range
- Small hysteresis, high accuracy
- Compact design, low mass of tracing pin means negligible effective force on target
- Rugged construction, hermetically sealed
- Measuring range ±12 to ±150 mm (.47 to 5.91 in)

Technical Data	
Sensitivity for nominal measuring range	270 mV/V (bridge output per 1 V supply voltage)
Supply voltage	5 Vrms
Linearity error	2% of the total range (related to the ± range limits of the transducer)
Carrier frequency	3 to 5 kHz
Permissible environmental temperature	-20 to +120˚ C (-4 to 248˚ F)
Temperature	Sensitivity 0.1% / K
Nominal inductance	solenoid plunger in middle position: 20 + 20 mH maximum displacemet: 7 + 26 mH 50% displacement: 13 + 26 mH driven out: 5 + 5mH
Capacitance	250 pF (each winding)
Standard accessories	connector: cannon MS 3106E10SL-3S Solenoid plunger with M3 threaded rod

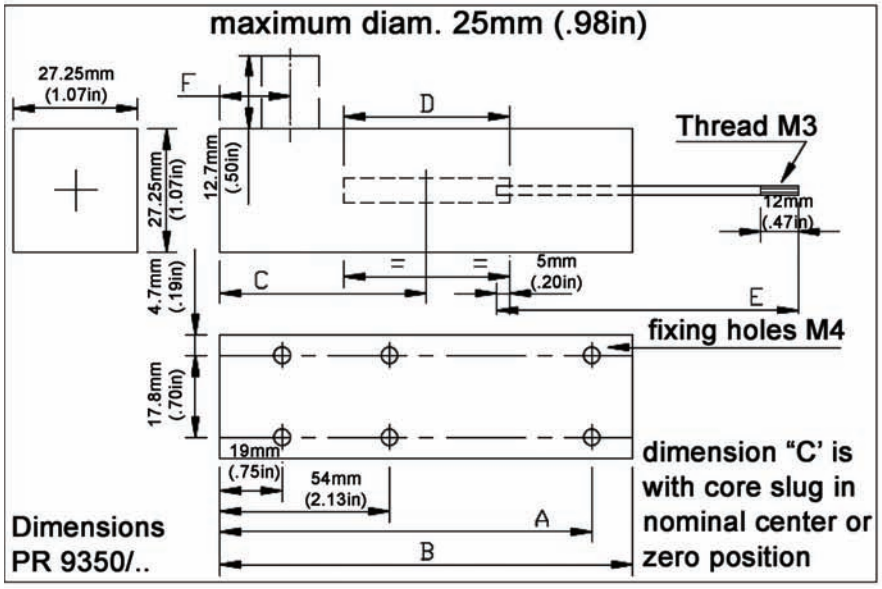
PR 9350 Series:

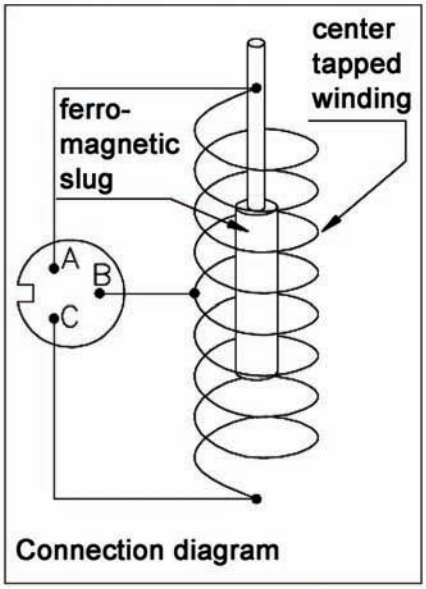
Type-Nr.	nominal measuring range	Approx weight	Dimensions						Ordering Code
			A	B	C	D	E	F	
PR 9350/01	-.47 to .47 in	170g (6oz)	4 holes	76.6mm (3.02in)	39.2mm (1.54in)	60.3mm (2.37in)	85.1mm (3.35in)	16.00mm (.63in)	9408 093 50011
PR 9350/02	-.98 to .98 in	255g (8.99oz)	108.0mm (4.25in)	127.6mm (5.00in)	65.4mm (2.57in)	76.2mm (3.00in)	123.2mm (4.85in)	19.0mm (.75in)	9408 093 50021
PR 9350/04	-1.97 to .1.97 in	370g (13.05oz)	197.0mm (7.76in)	229.0mm (9.02in)	112.0mm (4.41in)	150.0mm (13.78 in)	144.1mm (5.67in)	25.4mm (1.00in)	9408 093 50041
PR 9350/06	-2.92 to .2.95 in	510g (17.99oz)	311.0mm (12.24in)	330.0mm (12.99in)	169.5mm (6.67in)	200.0mm (7.87in)	238.1mm (9.37in)	25.4mm (1.00in)	9408 093 50061
PR 9350/08	-3.94 to .3.94 in	660g (23.28oz)	413.0mm (16.26in)	432.0mm (17.01in)	218.8mm (8.61in)	247.7mm (9.75in)	292.1mm (11.50in)	25.4mm (1.00in)	9408 093 50081
PR 9350/12	-5.91 to .5.91 in	860g (30.34oz)	616.0mm (24.25in)	635.0mm (25.00in)	319.9mm (12.59in)	342.9mm (13.50in)	311.2mm (12.25in)	25.4mm (1.00in)	9408 093 50121

Specifications Sheet
August 2011

CSI 6500 Machinery Health™ Monitor

Dimensions





Ordering Information

Model Number	Product Description
PR 9350	Linear Variable Displacement Transducer

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