

Class 3

High Pressure Square-Head Cylinders



NOPAK LINEAR DISPLACEMENT TRANSDUCER SYSTEM

NLDT SYSTEM SWITCH NUMBER

AVAILABLE IN:
CLASS 6
 (pictured)
CLASS 3



DESIGN AND PERFORMANCE FEATURES

- Non-contacting design - no wear, no friction, no noise and no adjustments.
- Completely solid state.
- Both analog and digital outputs are available.
- Quartz crystal time reference.
- Withstands corrosive environments and pressures up to 3000 PSI.
- Feedback sensor inside cylinder is protected from debris and mechanical damage.
- Absolute output, not incremental - no loss of position at restart.

NOPAK has a linear displacement transducer that is designed for use in air or hydraulic cylinder actuators. The transducer, available in lengths up to thirty feet, is threaded into the cylinder and sealed to withstand the pressures of hydraulic fluid. A permanent magnet is mounted on the piston end of the cylinder rod, and is used to determine the position of the piston inside the cylinder. Double ended rods not applicable.

HERE'S HOW IT WORKS: It simply measures the time interval required for an electric current pulse to travel between two points. The two points of measurement are the fixed magnet located on the piston position

and the sensor at the end of the transducer probe. This concept has been successful in eliminating considerable expense for potentiometers, tach generators, encoders, racks, pinions, and other special hardware.

ADVANTAGES PLUS: Includes a non-contact operation, no wear, no noise generation, high reliability, infinite resolution (analog), high linearity (.05%), excellent repeatability (.002%), and direct digital output if required.

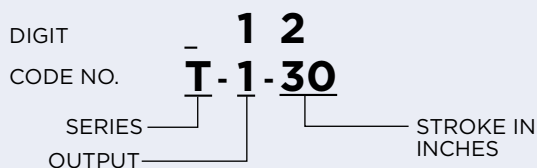
LDT Systems can be adapted to all NOPAK P6, H6 and H3 cylinder diameters with a 1-3/8" diameter rod or larger.

We welcome the opportunity to discuss your applications and help you supply your needs.

NLDT SPECIFICATIONS

Electrical stroke	Standard - up to 25 feet.
Null	Positioned as required.
Null adjustment	2% of total stroke nominal.
Scale adjustment	1% of total stroke nominal.
Non-linearity	Less than $\pm 0.05\%$ of full range.
Repeatability	Better than $\pm 0.001\%$ of full range.
Temperature coefficient of scale factor	Transducer: less than 0.00011 inch/°F + [3 ppm/°F per inch of full stroke]. Analog Output Module: 20 ppm/°F.
Frequency response	Stroke dependent. 200 Hz to 50 Hz is typical for lengths of 12 inch to 100 inch respectively - wider response frequencies are available upon request. For digital systems, output is updated at discrete intervals.
Hysteresis	Less than 0.0008 in. maximum.
Output	Analog: 0 to +10 VDC, 4 to 20 mA ungrounded (others available). Digital: pulse width modulated signal, TTL compatible.
Operating impedance	10 ohms.
Operating temperature range	-35°F to 150°F (transducer probe to 180°F).
Storage temperature range	-40°F to 180°F.
Operation in hydraulic fluid	The .375 inch dia. transducer probe is capable of operating in hydraulic fluid and will withstand 3,000 PSI operating pressure.

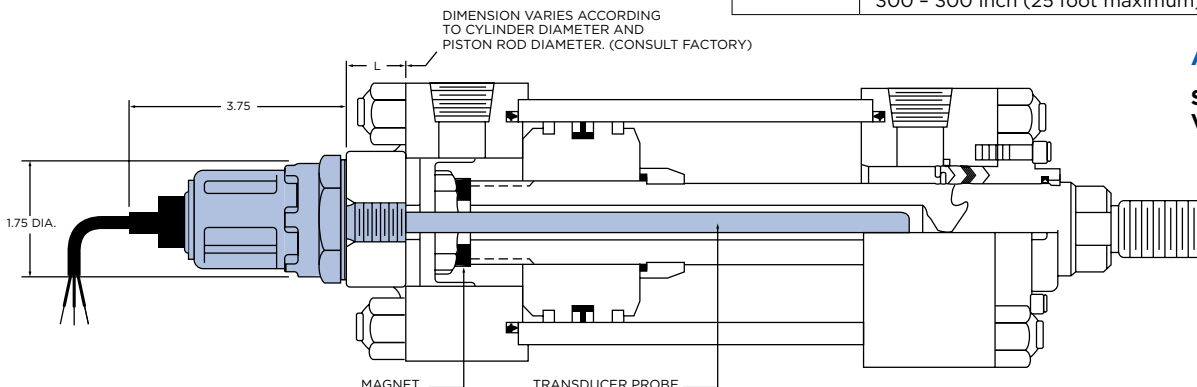
HOW TO ORDER



When ordering: Code Number must be completed using options listed at right.

For further detailed information contact your NOPAK distributor.

DIGIT	DESCRIPTION
FIRST	OUTPUT 1. 0 to +10 VDC w/Analog Output Module 2. 0 to +10 VDC w/built-in Analog Personality Module (Eliminates separate Analog Output Module) 3. 4 to 20 MA grounded w/Analog Output Module 4. Half digital w/Digital Personality Module 5. Full digital w/Digital Personality Module and Digital Counter Card. Specify Binary or BCD. 6. Digital with RS422 Personality Module 7. Others (specify)
SECOND	ELECTRICAL STROKE IN INCHES (Example: 12.75 inches) 1 - 1 Inch through 300 - 300 Inch (25 foot maximum)



ALSO AVAILABLE

Servo or Proportional Valve Footprint