Displacement Transducers
Series DDCP

- **Displacement Ranges +0.10" to +1.00"**
- **Cable or Connector Options**
- **Choice of Temperature Ranges**
- **DC Operation +12 or +28 VDC**

The Columbia DDCP Series transducers are completely self-contained displacement measurement systems that operate from a low voltage DC power supply or battery. They permit highly accurate readout and recording of an output signal directly without auxiliary signal conditioning electronics. These sensors combine a unique linear differential transformer sensing system with a miniature solid-state oscillator / demodulator and amplifier in a compact design. The precisely calibrated scale factor provides an accurate, low impedance voltage output which is directly proportional to the linear movement of the shaft assembly relative to the transducer body.

Electrical Specifications:
INPUT VOLTAGE: +12 VDC Nominal (+11 to +16 VDC) @ 30 mA Max.
OR +28 VDC Nominal (+22 to +32 VDC) @ 30 mA Max.
SIGNAL OUTPUT: +5 VDC Corresponding to +/- rated displacement
OUTPUT CURRENT: +5 mA DC Maximum @ Full Scale Output
OUTPUT IMPEDANCE: 10 Ohms Nominal

Environmental Specifications:
TEMPERATURE RANGE: -40 Deg F To +200 Deg F w/Integral Electronics
OR -40 Deg F To +500 Deg F w/Remote Electronics
SHOCK: 30 G, 11 mSec
VIBRATION: 20 G to 2KHz, 0.15" D.A.
HUMIDITY: 98% R.H., Non-Condensing

Materials:
HOUSING & SHAFT: 18-8 Stainless Steel
**SHAFT BEARINGS:** Oilite® Bronze Sleeve Bushing
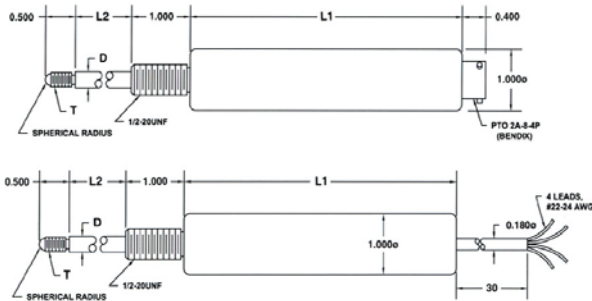
Model	Rated Displacement (Inch)	Linear Range (Inch)	Spring Rate (# Per Inch)	Linearity (% Full Range)	Sensitivity (mV / 0.001")	Accuracy (% Full Range)	Dimensions (Refer to Outline)				Weight (Gm)
							L1	L2 (Full Ext.)	D	T	
DDCP-0100	+0.10	0.2"	2.0	+0.25%	50.0	+0.5%	4.735	0.45	0.187	6-32	242.4
DDCP-0250	+0.25	0.5"	2.0	+0.5%	20.0	+1%	6.215	0.75	0.187	6-32	278.9
DDCP-0500	+0.50	1.0"	2.0	+0.5%	10.0	+1%	7.895	1.35	0.250	10-32	331.3
DDCP-1000	+1.00	2.0"	1.5	+0.5%	5.0	+1%	10.245	2.50	0.250	10-32	380.6

I/O Termination ID

Pin Conn	Lead Color	Function
A	Red	+ DC Input
B	Black	Power Return *
C	Blue	Signal Output
D	Brown	Signal Return *

* Signal and Power Returns are electrically common
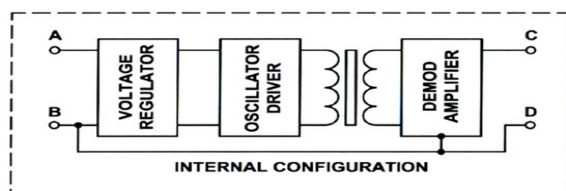
Ordering Information:

DDCP XXXX - X X X - X

Series
Displacement: +/-**x.xxx** Inch
Input Power = **x**
0 = +22 to +32 VDC (+28 VDC Nominal) @ 30 mA Max.
2 = +11 to +16 VDC (+12 VDC Nominal) @ 30 mA Max.
Termination = **x**
2 = 4-Conductor Cable, 30" Long
3 = Connector PT02A-8-4P w/Mating Connector
Temperature = **x**
0 = -40 Deg F To +200 Deg F (Standard)
T = -40 Deg F To +500 Deg F w/Remote Electronics
Option Codes
"**S**" Suffix = Spring-Loaded Shaft Assembly (Standard)
"**N**" Suffix = No Internal Springs (Optional)