# HX-P420 Series Installation Guide

Wiring and Circuit Diagram

Model HX-P420
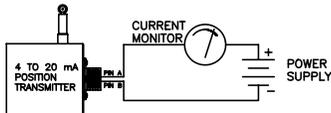
The 4 to 20 mA output transducer is a 2-wire, loop powered device. The transducer, power supply, and current monitor must be connected in series as illustrated above.

The minimum supply voltage is a function of total loop resistance. It may be calculated using the formula:

$$V(Min.) = (0.02 \times Load\ Res.) + 9\ VDC$$

It may also be determined from the accompanying graph, shown at right.

When mounting, insure that the baseplate of the transducer is grounded to earth ground. For best noise immunity, use twisted pair

shielded cable between the transducer and the electrical interface. The shield of the cable should be open at the transducer and grounded at the electrical interface.

With small blade type screwdriver (.105" max. blade width X .023" max. blade thickness), adjust the *Zero* and *Span* controls on the transducer to set the 4 and 20 mA output limits. **Note:** The *Zero* and *Span* controls are somewhat interactive and may require several iterations to obtain the desired zero and maxi-
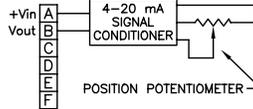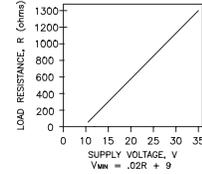
Excitation Voltage ..**9 to 35 VDC**
Total Loop resistance Per Graph

mum settings. Extend the transducer's cable (on angular position transducers, rotate shaft) to the desired zero position (must be within 0% to 30% of range). Adjust the *Zero* control so that the output current is 4 mA. Then extend the cable (on angular position transducers, rotate shaft) to the desired maximum position (must be within 80% to 100% of range). Adjust the *Span* control for maximum output current of 20 mA. Recheck the zero setting and adjust if necessary. Recheck the Span setting and readjust if necessary.

Dimensional Information
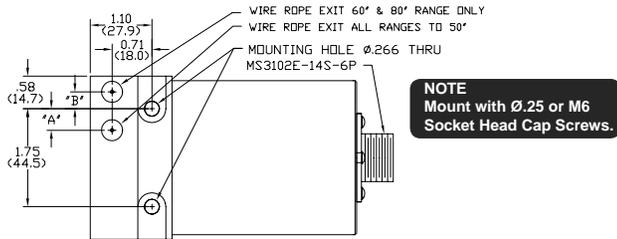
NOTE
Mount with Ø.25 or M6 Socket Head Cap Screws.

RANGE	"A"	"B"
2", 10"	.54 (13.7)	—
3", 15", 30"	.38 (9.6)	—
4", 20", 40"	.22 (5.6)	—
5", 25", 50"	.06 (1.5)	—
60"	—	.09 (2.3)
80"	—	.33 (8.4)

Ø.19 (4.8 mm) ON MODELS WITH ADJUSTABLE ZERO AND SPAN, REMOVE THESE SCREWS TO ACCESS ADJUSTMENT POTENTIOMETERS
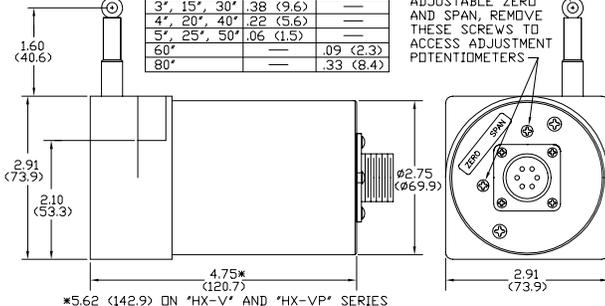
Alternate Wire Rope Exit

Note: Dimensions in brackets are millimeters.

RANGE	"A"	"B"	"C"
2", 10"	1.12 (28.4)	1.79 (45.5)	1.21 (30.7)
3", 15", 30"	.96(24.4)	1.95 (49.5)	1.37 (34.8)
4", 20", 40"	.80 (20.3)	2.11 (53.6)	1.53 (38.9)
5", 25", 50"	.64 (16.3)	2.27 (57.7)	1.69 (42.9)
60"	.49 (12.4)	2.42 (61.5)	1.84 (46.7)
80"	.25 (6.4)	2.66 (67.6)	2.08 (52.8)

Alternate Wire Rope Exit

MOUNTING SURFACE
MOUNTING HOLES
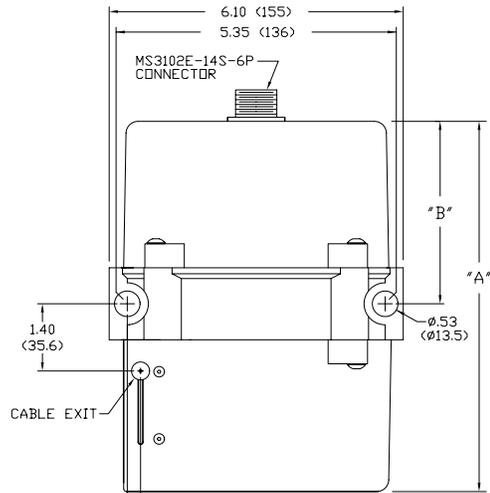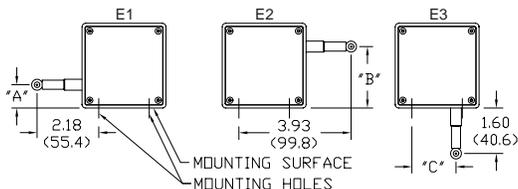
NOTE
Mount with Ø.50 or M12 Socket Head Cap Screws

RANGE	DIM "A"	DIM "B"
RANGES TO 800'	7.70 (195.6)	3.80 (96.5)
1000' TO 2000'	11.0 (280.0)	5.60 (142.0)
V & VP 500' TO 800'	9.50 (241.3)	5.60 (142.0)
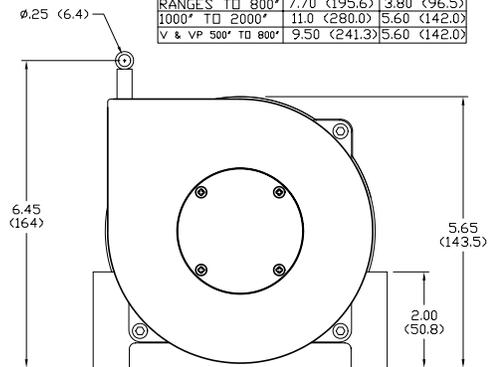
DIMENSIONS IN BRACKETS ARE MILLIMETERS

Alternate Wire Rope Exit