

# JX-HM SERIES

## HALL EFFECT, ANALOG OUTPUT



The UniMeasure JX-HM series linear position measuring transducer is a relatively low cost device for use in moderate duty applications in hostile wet or dry environments. The chemical resistant thermoplastic case provides IP-67 (NEMA 6) ingress protection for applications where exposure to wash down, rain, oil and other liquids may occur. An integral dust wiper insures that the wire rope stays clear of debris as it is extracted and retracted.

The sensing device is a non-contacting multi-turn absolute magnetic encoder which is not susceptible to wear in a vibrating or dithering environment. The unit is available with either a current output (4 to 20mA or 0 to 20mA) or a voltage output (0 to 5V, 0 to 10V,  $\pm 5V$  and  $\pm 10V$ ). Removal of a sealed access hatch on the rear of the unit (See FIG 1 below) reveals DIP switches that may be used for selecting the desired voltage or current outputs, and also push buttons that may be used for programming the zero and span settings. Zero and span may be set anywhere within the range of the transducer.

The standard electrical connection includes a M12 sealed 4 position connector. For applications not requiring a connector, a bulkhead fitting with a length of multi-conductor electrical cable is available. One of four possible electrical connection locations on the transducer body may be specified when ordering. The wire rope exit direction may also be specified at time of order or may be user adjusted at time of installation.



### SPECIFICATIONS

#### GENERAL

Measurement Range .....	See Range Table below
Sensing Device .....	Non-Contact Hall Effect Device
Linearity .....	$\pm 0.10\%$ Full Scale
Repeatability .....	$\pm 0.03\%$ Full Scale
Construction .....	Thermoplastic Body
Wire Rope .....	$\varnothing 0.034$ (0.86 mm)
	Nylon Jacketed Stainless Steel
Wire Rope Tension .....	28 oz. (7.8N)
Weight .....	2 lb. (.9 Kg)
Life	
150" Range .....	500,000 full stroke cycles
300" Range .....	250,000 full stroke cycles
400" Range .....	40x10 <sup>6</sup> lineal inches
CVR System .....	Protection from accidental free release of wire rope (optional)

#### ENVIRONMENTAL

Operating Temperature .....	-25°C to 75°C
Storage Temperature .....	-50°C to 80°C
Operating Humidity .....	100% R.H.
Vibration .....	15 G's 0.1 ms max.
Shock .....	50 G's 0.1 ms max.
Ingress Protection .....	IP-67 (NEMA 6)

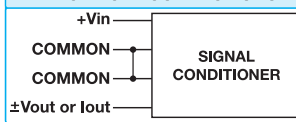
#### ELECTRICAL

Excitation Voltage .....	4.9 to 30 VDC
Power Consumption	
JX-HM4 .....	840 mW max
JX-HM5 .....	500 mW max
Protection .....	Reversed Polarity
Zero Set Adjustment Range .....	Anywhere in Range
Span Set Adjustment Range .....	Anywhere in Range
OUTPUT	
JX-HM4 Model .....	4 to 20 mA, 0 to 20mA
Output Load .....	550 Ohm Max.
JX-HM5 Model .....	0 to 5, 0 to 10, $\pm 5$ , $\pm 10$ VDC
Output Load .....	10K Ohm Min.

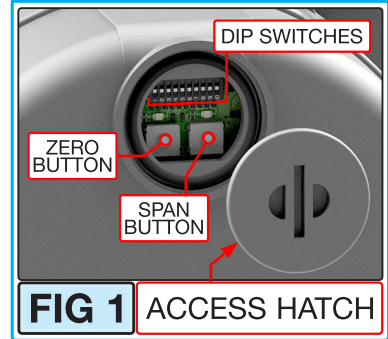
#### ELECTRICAL CONNECTION

Standard .....	M12 Sealed plastic connector 4 position
Option .....	Bulkhead Fitting w/ electrical cable

#### ELECTRICAL CONNECTIONS



#### ZERO & SPAN ACCESS



### MODEL NUMBER CONFIGURATION

**JX-HM** - **E** - **0** - **1** **2** **3** - **4** **5** **6** - **7** **8** **9**

### BASIC CONFIGURATION (FOR ALL RANGES)

**JX-HM4-150-N11-10N-N1M**

**E ELECTRICAL OUTPUT**

4..... 4 to 20 mA  
User selectable 4-20mA, 0-20mA.  
**Unit ships in 4 to 20mA output mode.**

5..... 0 to 10 VDC  
User selectable 0-5V, 0-10V,  $\pm 5V$ ,  $\pm 10V$ .  
**Unit ships in 0 to 10V mode.**

**0 RANGE**

150..... 150" (3.8m)  
300..... 300" (7.5m)  
400..... 400" (10.1m)

**1 WIRE ROPE**

N.....  $\varnothing 0.034$  (0.86 mm)  
Nylon Jacketed Stainless Steel

**2 WIRE ROPE TENSION**

1..... Standard

**3 WIRE ROPE EXIT DIRECTION**

USE NUMBER DESIGNATORS SHOWN

□=STANDARD LOCATION

**4 INGRESS PROTECTION**

1..... IP-67 (NEMA 6)

**5 0..... Required Designator**

**6 CVR SYSTEM\***

N..... Omit CVR System  
C..... Include CVR System

\* CVR system offers protection from accidental free release of wire rope. Since system response is negatively impacted by CVR system, it is only suggested for slow moving applications or where wire rope may be attached and unattached often.

**7 N..... Required Designator**

**8 ELECTRICAL CONNECTION LOCATION**

USE NUMBER DESIGNATORS SHOWN

□=STANDARD LOCATION

**9 ELECTRICAL CONNECTION**

M..... Connector M12 with Mating Connector  
L..... Connector M12 with **No** Mating Connector\*\*  
\*\*Electrical cable with mating connector may be ordered separately as item number **10544-xM** where 'x' is the required length in meters.

1..... Bulkhead Fitting + 1 m (3') Electrical Cable  
2..... Bulkhead Fitting + 2 m (6.5') Electrical Cable  
3..... Bulkhead Fitting + 3 m (10') Electrical Cable  
4..... Bulkhead Fitting + 4 m (13.5') Electrical Cable  
5..... Bulkhead Fitting + 5 m (16.5') Electrical Cable  
6..... Bulkhead Fitting + 6 m (20') Electrical Cable  
7..... Bulkhead Fitting + 7 m (23') Electrical Cable  
8..... Bulkhead Fitting + 8 m (26') Electrical Cable

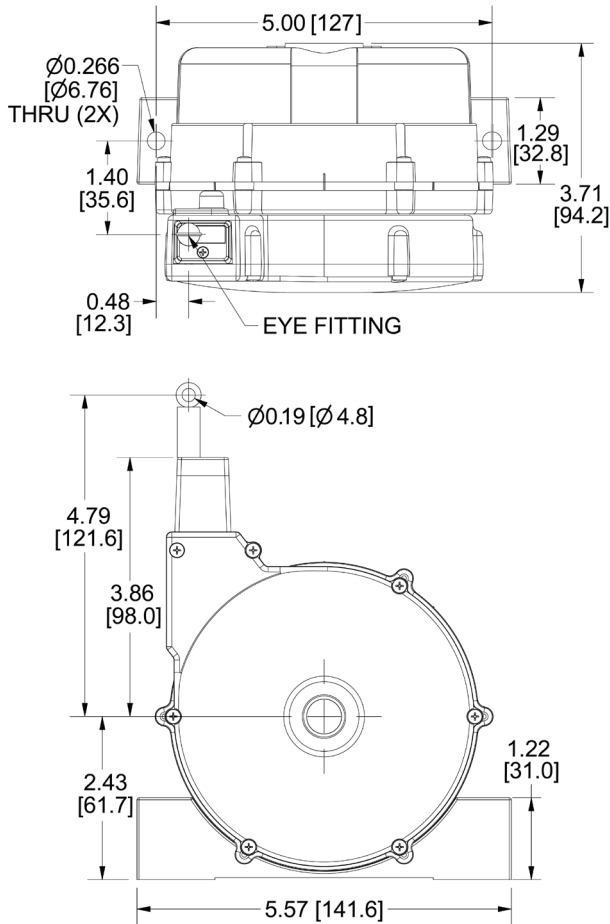
### ADDITIONAL OPTIONS

#### Controlled Velocity Retraction (CVR) System

The CVR system offers protection from accidental free release of the wire rope. The system slows wire rope retraction to a safe speed that avoids damage that can occur during a free release. It is highly recommended for applications where the wire rope may be manually extended and retracted or in applications where the wire rope may be disconnected and reconnected often in the measuring system.

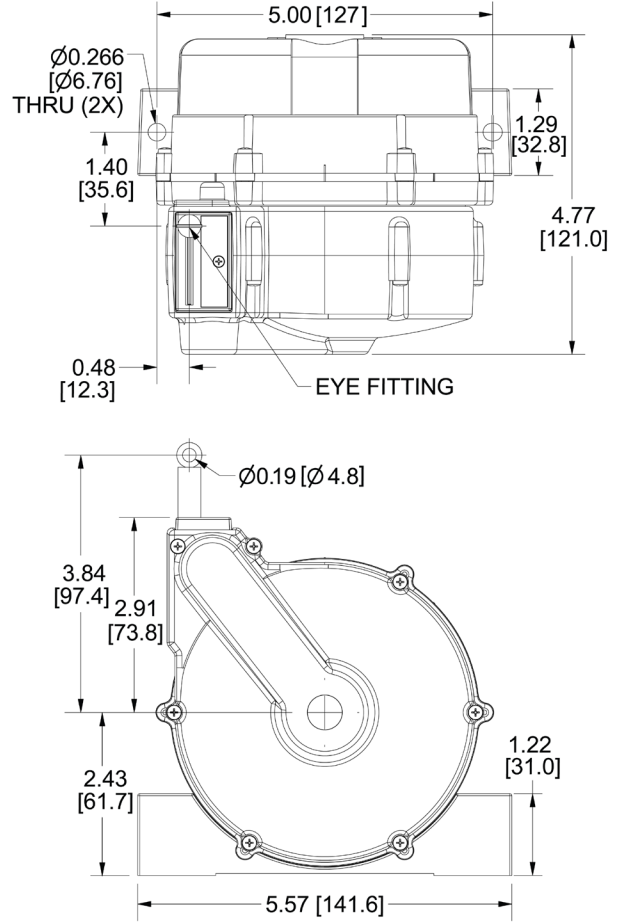
### DIMENSIONAL INFORMATION

#### JX SERIES – RANGE 150" (3.8 m)



Dimensions in brackets are millimeters

#### JX SERIES – RANGES 300" (7.5 m) & 400" (10.1 m)



Dimensions in brackets are millimeters