

# **SIZE 30 SERIES RH** **WHEELED INCREMENTAL SHAFT ENCODER**



Starting at US \$520.00 S.R.P. List Price  
(A ch only) with Std. 12" cir. wheels  
(Urethane Tire)

## **FEATURES**

**WORLD  
ENCODERS**

brand, Made in USA

- The RH encoder, also known as a Pulse Position Indicator (PPI), generates tracking pulses for web applications when used with barcode laser scanners or CCD vision systems.
- It typically is equipped with two 12 inch or 30 centimeter circumference measuring wheels that ride directly on the conveyor belt or web, eliminating any slippage problems typically encountered with shaft encoders.
- With its double wheel construction, the encoder is self-aligning when allowed to pivot freely from its integral arm.
- The encoder's weight is sufficient to maintain contact when mounted above the moving material.
- Special mounting accessories are also available.

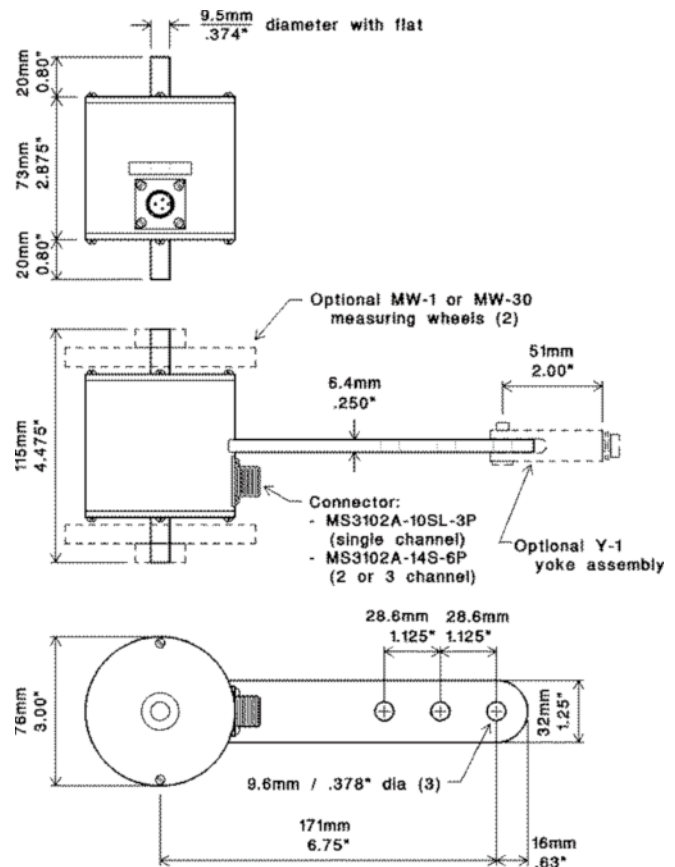
## **Electrical**

Pulse per Revolution	Up to 1200 P/R, 1800, 3600 (A ch only)
Output Format	Single Ended (A ch.) Dual Square Wave in Quadrature (A & B ch.) Dual Square Wave in Quadrature with Index (A, B, Z ch.)
Supply Voltage (V) & Output Circuit	
8-30	Pull-up Resistor TTL, Current Sinking (Max. 50mA)
5-26C	Open Collector 7273 (Max. 50mA)
5-26D, 5-26DH	Diff. Line Driver 7272 (Max. 100mA)
5-26PP	Push-Pull 7272 (Max. 50mA)
120ACT	AC120v, Triac Output
Frequency Response	100kHz
Duty Ratio	50±25%
Phase Shift	25±12.5%
Index Signal Width	100±50%

## **Mechanical**

Shaft Diameter	3/8"
Shaft Type	Dbl. ended
Shaft Loading	Axial: 10 lbs. Max. Radial: 25 lbs. Max.
Rated Speed	6000 RPM
Materials	Aluminum Case (Anodized) Shaft: 303 Stainless
Weight	1.5 lb. (700g)

## **DIMENSIONS**



# SIZE 30 Series RH Wheeled Incremental Shaft Encoder

Model	Channels	Resolution	Voltage/Output	Measuring Wheel
<b>RH</b>	<input type="checkbox"/> - <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> / <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ORDERING INFORMATION				
<b>RH</b>	<b>Blank:</b> Sgl-ended (A ch. Only) <b>Q:</b> Quadrature (A & B ch.) <b>QZ:</b> Quadrature w/index (A, B, & Z ch.) <b>P:</b> Programmable w/Sgl-ended (A ch.)	24 360 60 500 100 512* 120 600* 180* 720* 200* 1000 240 1024 250* 1200 300* 1800** 3600**	8-30 = Pull-up Resistor TTL Current Sinking 8~30vdc 5-26C = Open Collector 5~26vdc 7273 (NPN w/o resistor) 5-26D = Diff. Line Driver 7272 5~26vdc (MS 6 pin, A & B ch) 5-26DH = Diff. Line Driver 7272 5~26vdc (MS 10 pin, A, B & Z ch) 5-26PP = Push-Pull 5~26vdc 7272 120ACT = 120vAC Triac**	<b>MW-1:</b> Std. (2) MW-1-B wheels 3" dia., 12" cir., 3/8" wide Options: <b>MW-1W:</b> 1" wide, 12" cir. <b>MW-30W:</b> 1" wide, 30 cm cir. <b>MW-30:</b> 3/8" wide, 30 cm cir.

PRICING INFORMATION				
Model	Channels	Resolution	Anti-Jitter	Voltage/Output
<b>RH</b>	<b>Blank:</b> A Ch. Only N/C <b>*Q:</b> A & B Ch. Add \$30.00 <b>*QZ:</b> A, B & Z Ch. Add \$80.00 <b>P:</b> Prog. Add \$30.00	<b>24 Thru 360</b> N/C <b>500 Thru 1200</b> Add \$30.00 <b>1800** 3600**</b> Add \$50.00	<b>Blank:</b> Std. <b>AJ:</b> Add \$40.00	8-30: (Pull-up) N/C 5-26C: Add \$25.00 (Open Collector) 5-26D Add \$25.00 (Line Driver) 5-26PP Add \$25.00 (Push-Pull) 120ACT Add \$70.00 (120vAC Triac)
Base Price \$490.00				

Standard Stock Items: Shipped immediately. \*Lead Time: 7 - 10 days to ship. \*\*Available: A ch only

PART NUMBER	LIST PRICE	PART NUMBER	LIST PRICE
RH-500/8-30MW-1	\$520.00	<b>Measuring Wheels for Replacement (Urethane Tire)</b>	
RHQ-1000/5-26DLMW-1	\$575.00	#MW-1-B 3" Dia, 12" Circumference 3/8" wide, 3/8" Hub I.D."	\$50.00
RH-1000/8-30MW-1	\$520.00	#MW-1W-B 3" Dia, 12" Circumference 1" wide, 3/8" Hub I.D.	\$50.00
RH-1024/8-30MW-1	\$520.00	#MW-30-B 30cm Circumference 3/8" wide, 3/8" Hub I.D.	\$50.00
RH-1200/8-30MW-1	\$520.00	#MW-30W-B 30cm Circumference 1" wide, 3/8" Hub I.D.	\$50.00
<b>Best Selling Models for Conveyors</b>		<b>Mating Connector with 10-20 Ft. Cable Assembly</b>	
RH-4AJ/24PMW-1	\$560.00	#C3-3-10CF (A ch. only Sgl. ended) MS 3 pin mating w/10ft cable (3 wires)	\$35.00
RH-24AJ/12CMW-1	\$530.00	#C6-4-10CF (A, B ch) MS 6pin mating w/10ft cable (4 wires)	\$40.00
RH-P240AJ/8-30MW-1	\$590.00	#C6-6-10CF (A, B & Z chs.) or (A, $\bar{A}$ , B, $\bar{B}$ , chs.) MS 6 pin mating w/10ft cable (6 wires)	\$40.00
RH-P600AJ2/8-30MW-1	\$590.00	#C6-6-20CF MS 6 pin mating w/20ft cable (6 wires)	\$80.00
RH-P600AJB/8-30MW-1	\$590.00	#C10-9-10LD (A, $\bar{A}$ , B, $\bar{B}$ , Z, $\bar{Z}$ chs.- Linedriver) MS10 pin mating w/10ft cable (9 wires)	\$85.00
RHQZ360/5-26DHW1M226	\$595.00		
<b>Mounting Bracket</b>			
#Y-1 York Ass'y w/1/4"-28 Bolt	\$15.00		
#Y-3 York Ass'y w/3/8"-16 Bolt	\$15.00		
#MB-UB2 Offset Mtg. Bracket w/7" Arm	\$60.00		
#MB-UB2A Offset Mtg. Bracket w/11.25" Arm	\$70.00		
#MB-UB3 Under-Belt Center Hgt. Foot Bracket w/2 springs tension controlled	\$90.00		
#MB-UB4 Under-Belt Mtg. Bracket w/2 springs tension controlled	\$85.00		

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# SIZE 30 SERIES RH

## WHEELED INCREMENTAL SHAFT ENCODER

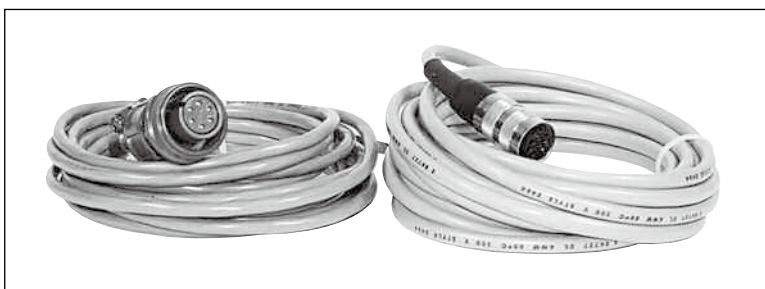
### Environmental

Temperature	Operating: 0 ~ 70°C Storage: -10 ~ 85°C
Operation Humidity	35-85% without condensation
Vibration	Max 10g (58 to 500 Hz)
Shock	50g (11 ms duration)
Enclosure	IP-54/NEMA 12

### Wiring Diagram

PIN #	3 Pin Sgl-ended	6 Pin Sgl-ended	Same Wire Color	6 pin Diff. Line Driver	Same Wire Color
A	Common	Common	Black	Common	Black
B	Supply Voltage	Supply Voltage	Red	Supply Voltage	Red
C	—	Z ch.	Brown	A ch.	White
D	A ch.	A ch.	White	A not ch.	Blue
E	—	B ch.	Green	B ch.	Green
F	—	N/C	—	B not ch.	Brown
Mating Connector	3 Pin=MS3102A-10SL-3P	6 Pin=MS3102A-14S-6P			
Mating connector with 10 ft Cable Ass'y	A ch only 3 Pin	Part #C6-3-10CF (3 wires)			
	A, B, Z, ch 6 Pin	Part #C6-6-10CF (6 wires)			

### Mating Connector with 10 ft cable ass'y



### Diff. Line Driver 10 pin-MS conn.

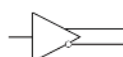
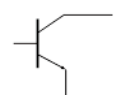
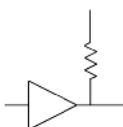
MS10 Connector Pin	Function	Wire Color
A	Output +A	White
B	Output +B	Green
C	Output +Z	Yellow
D	Supply Volts	Red
E	not used	—
F	Common	Black
G	Case Ground	Shield
H	Output -A	Blue
I	Output -B	Brown
J	Output -Z	Orange

Mating Connector (10 pin)

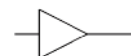
#DMS3106E18-1S \$38.00 (order separately)

### Outputs

- **Pull Up Resistor (Current Sinking)** An NPN transistor with a pull-up resistor and capable of sinking 50ma of current per output. This type of encoder output is used with a PLC or other control device that sources current. Current flows out of the PLC to the encoder, which uses the NPN transistor to represent binary logic by optionally switching the current source to ground.
- **7273 Open Collector (NPN)** For applications requiring an uncommitted output. The output voltage level can be pulled up with an external resistor to a maximum of 30vdc. Maximum sink current is 50ma. per output.
- **Push-Pull (7272)** This general purpose output functions as a PNP transistor for applications requiring a current sourcing output. It functions as an NPN transistor with 3.3K pull-up for applications requiring a current sinking output. This output is TTL compatible when used with a 5vdc supply. Maximum source / sink current is 50 ma. per output.



- **Differential Line Driver (7272)** An 7272 differential line driver that generates complimentary outputs: A / -A, B / -B, and Z / -Z as needed. The encoder must be operated at 5-26 vdc, input and output.
- **120vac Triac** an optically isolated triac capable of directly driving most 120 vac loads up to 2 amps (ms) without the use of any external components. It includes a zero crossing detector that switches the triac on and off synchronously at near zero volts. The triac output can be directly interfaced to AC inputs on most PLCs and other motion controllers. Only available with 120 vac supply voltage.



## OPTIONAL PARTS:

### Order Separately

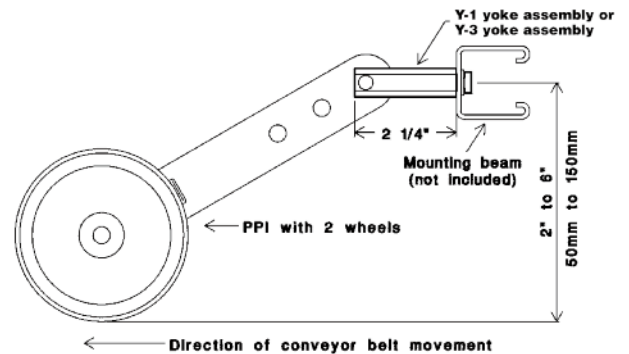
#### ● Yoke Assembly

Size	Mt. Beam Size	Part No.	List Price
2.25"L x 5/8"	1/4" - 28	Y-1	\$15.00
2.25"L x 5/8"	3/8" - 16	Y-3	\$15.00

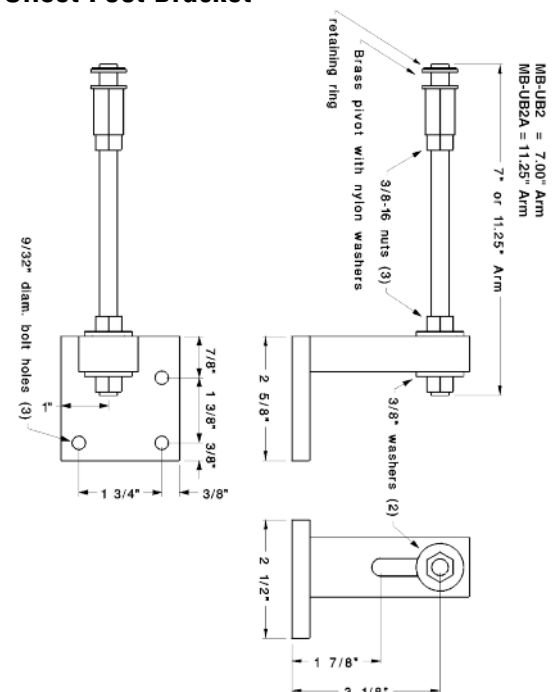
#### ● Offset Foot Bracket

Size	Part No.	List Price
3.125"H x 7.00" Arm	MB-UB2	\$60.00
3.125"H x 11.25" Arm	MB-UB2A	\$70.00

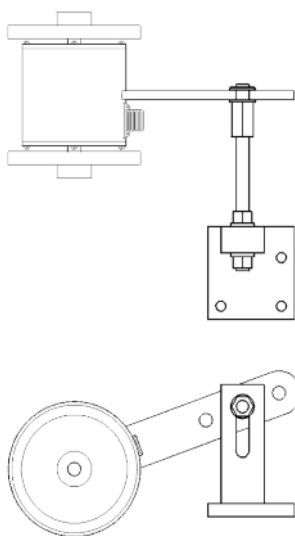
#### Yoke Assembly



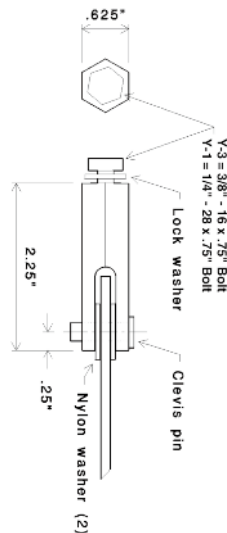
#### Offset Foot Bracket



#### w/ Offset Foot Bracket



#### Yoke Assembly



#### MB-UB3 / Under-Belt Center Hgt Bracket

List Price \$90.00

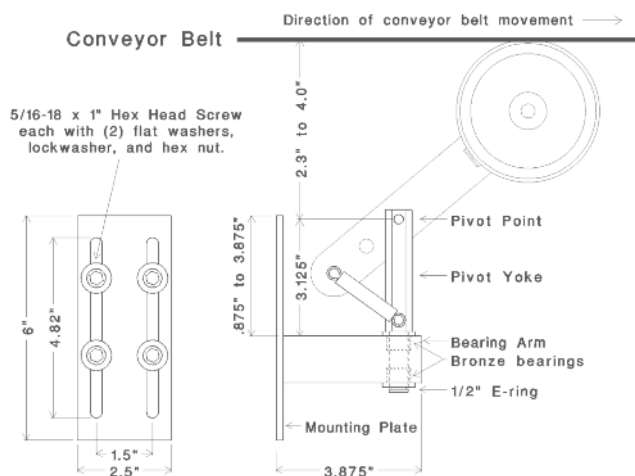


Figure 1: MB-UB3 Assembly (shown with PPI)

#### MB-UB4 / Under-Belt Center Hgt Bracket

List Price \$85.00

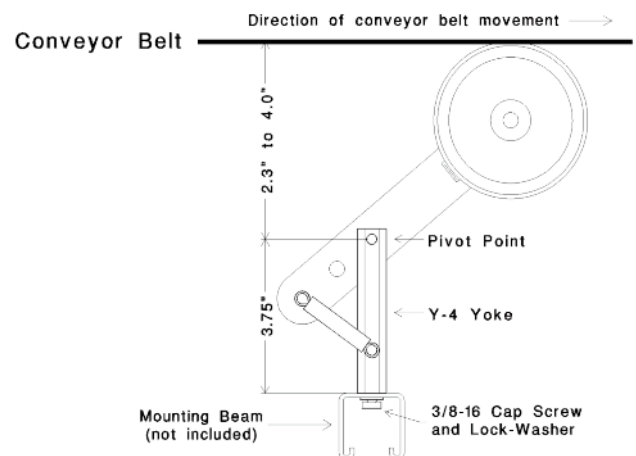


Figure 1: MB-UB4 Assembly (shown with PPI)