

ROTARY ENCODER

Quick Reference Guide





Shaft Encoders

Shaft encoders are precision feedback devices that directly couple to a rotating shaft, generating a defined number of electrical pulses for each full revolution. These encoders are ideal for applications requiring accurate angular or positional feedback. Available in a variety of compact and standard body sizes, shaft encoders offer robust construction, flexible mounting options, and compatibility with a wide range of shaft diameters and control systems.

R14



R20-P



RBL



RBS



RBX



RB20



RG



RL



RS



R20



RJ



RL-P



RS-P



Model	Counts per Revolution (CPR) Range															Programmable	Anti-Jitter	Up to 600	Up to 1200	Up to 2400	Up to 10,000
	Size 20	Size 22-25	Size 30	Cylindrical	3" Square Flange	.187"	1/4"	5/16"	3/8"	1/2"	5/8"	4mm	6mm	8mm	10mm						
R14							X						X								X*
RB20	X					X	X	X	X			X	X	X	X						X
R20	X					X	X	X	X			X	X	X	X		X		X		
R20-P	X					X	X	X	X			X	X	X	X	X	X				240*
RG		X					X	X	X								X			X	
RJ		X							X								X			X	
RBL			X						X	X	X			X	X		X				X
RL			X						X	X	X			X	X		X		X		
RL-P			X						X	X	X			X	X	X	X				300*
RBS				X			X	X	X	X											X
RS				X			X	X	X	X							X		X		
RS-P				X			X	X	X	X						X	X				480*
RBX					X				X								X	X			

Shaft Couplings



Model
Flexible Shaft Coupling

AE087-10-10
AE087-12-10
AE087-8MM-8MM
AE100-12-12
AE100-12-10MM
AE100-10MM-10MM
AE100-12MM-10MM
AE100-12MM-12MM

Bore to Bore

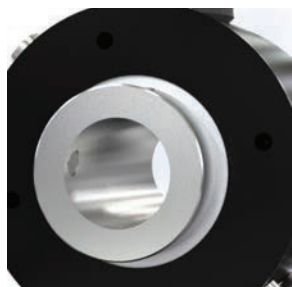
5/16" to 5/16"
3/8" to 5/16"
8mm to 8mm
3/8" to 3/8"
3/8" to 10mm
10mm to 10mm
10mm to 12mm
12mm to 12mm

Rigid Shaft Coupling

MB-085
MB-085-.375
MB-085-.75
MB-085-M30

3/8"D to 1"D
3/8"D to 3/8"D
3/8"D to 3/4"D
3/8"D to 30mmD

See page 6
for mounting
options.



Hollow Shaft Encoders

Hollow shaft encoders feature a through-bore or blind-bore design, allowing the encoder to mount directly onto a rotating shaft without the need for couplings or adapter hardware. This “floating” installation reduces mechanical complexity and minimizes space requirements while enhancing alignment tolerance. A tether or flexible mounting bracket prevents housing rotation and compensates for shaft run out, increasing overall system longevity. Multiple housing sizes and configurations are available to suit diverse industrial applications.

HSB20



HS25



HRL



HRS-P



HS20



HS25-P



HRL-P



HS20-P



HS30



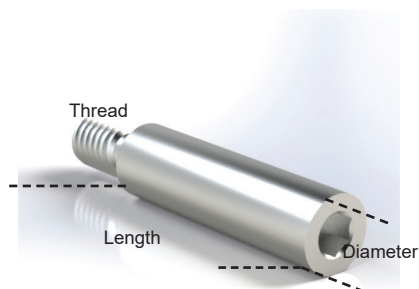
HRS



Model	Size 20	Size 25	Size 30	Cubical	3/16"	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"	7/8"	1"	6mm	8mm	10mm	12mm	16mm	25mm	Programmable	Anti-Jitter	Up to 600	Up to 1200	Up to 2400	Up to 10,000
HSB20	X					X	X	X	X	X				X	X	X	X	X						X	
HS20	X					X	X	X	X	X				X	X	X	X	X			X	X			
HS20-P	X					X	X	X	X	X				X	X	X	X	X		X					512*
HS25		X			X	X	X	X						X	X	X					X	X			
HS25-P		X			X	X	X	X						X	X	X				X	X				600*
HS30			X						X	X	X	X	X					X	X		X	X			
HRL			X			X	X	X	X	X	X	X	X			X	X	X	X		X	X			
HRL-P			X			X	X	X	X	X	X	X	X			X	X	X	X		X	X			436*
HRS				X		X	X	X	X	X	X	X	X			X	X	X	X		X	X			
HRS-P				X		X	X	X	X	X	X	X	X			X	X	X	X		X	X			256*

*Consult factory for higher programmable CPR.

Shaft Stubs



Model Shaft Stub

MB-ST-M10 AE087-12-10	10mm	27mm	M8 x 1.25
MB-ST-M12 AE100-12-12	12mm	44mm	M10 x 1.5
MB-ST-M12A	12mm	25mm	M10 x 1.5
MB-ST.250 AE100-12MM-10MM	1/4"	1.7"	10-24
MB-ST.250A	1/4"	.94"	10-24
MB-ST.312	5/16"	1.72"	1/4-20
MB-ST.375	3/8"	1-3/4"	5/16-18
MB-ST.5	1/2"	1.8"	3/8-16
MB-ST.5A	1/2"	1.1"	3/8-16

Roll Pin Shaft Stub

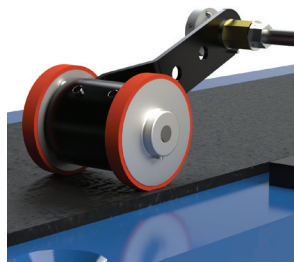
MB-SR.375	3/8"	2.25"
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Diameter

Length

Thread

See page 6
for mounting
options.



Wheel Encoders

Wheel encoders convert linear surface motion into precise digital feedback by riding directly on moving material. Featuring low starting torque and high-friction tread surfaces, these encoders ensure consistent engagement with minimal slippage. Each measuring wheel is precision-ground to exact circumferential dimensions, ensuring an accurate pulse count per unit of linear distance traveled. Ideal for cut-to-length, packaging, and labeling systems, wheel encoders deliver reliable feedback in dynamic environments.

RB21



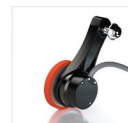
RB22



RBH



RW



R21



R22



RH



R21-P



R22-P



RH-P



See page 6
for *mounting options*.

Model	Size 20	Size 30	Single Wheel	Dual Wheel	MW8	MW10	MW11	MW20	MW30	MW1W	MW30W	MW1R	MW30R	Counts per Revolution (CPR) Range							
														Programmable	Anti Jitter	Up to 800	Up to 1200	Up to 2400	Up to 10,000		
RB21	X		X		X	X	X	X	X	X	X	X	X							X	
R21	X		X		X	X	X	X	X	X	X	X	X		X	X					
R21-P	X		X		X	X	X	X	X	X	X	X	X	X	X	X	X*				
RB22	X			X	X	X	X	X	X	X	X	X	X							X	
R22	X			X	X	X	X	X	X	X	X	X	X		X	X					
R22-P	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X*				
RBH		X		X			X		X	X	X	X	X							X	
RH		X		X			X		X	X	X	X	X		X				X		
RH-P		X		X			X		X	X	X	X	X	X	X	X	X*				
RW																					X*

*Consult factory for higher programmable CPR.

To obtain Maximum Linear Measurement, divide CPR by wheel circumference.

MW8
8" circumference



MW1
12" circumference



MW30W
30cm circumference
1" wide



MW-6S-C
6" circumference



MW20
20" circumference



MW30
30" circumference



MW1R
12" circumference
with replacement
o-ring



MW-6KS-C
6" circumference
Knurled



MW10
10" circumference



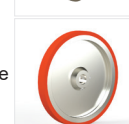
MW1W
12" circumference
1" wide



MW30R
30cm circumference
with replacement
o-ring



MW-20S-C
20cm circumference





Absolute Encoders

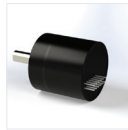
Absolute encoders provide unambiguous shaft position information by outputting a unique digital code for each angular increment within a single revolution. Unlike incremental encoders, absolute models do not require a homing sequence at power-up—position is instantly known, even if the shaft was moved while powered off. These encoders are ideal for safety-critical and high-precision positioning tasks. A broad selection of body sizes, resolution formats, and communication interfaces are available to meet application-specific needs.



MR30



SR12



Model	Modular	Size 30	Size 12	7 Bit Res	8 Bit Res	9 Bit Res	10 Bit Res	11 Bit Res	Grey Code	Natural Binary	Custom Code	Parallel	Serial	Analog	1kHz Sample Rate	2kHz Sample Rate	3kHz Sample Rate
MR30/31				X	X	X	X	X	X	X		X		X		X	
SR12				X	X	X	X		X	X		X	X	X		X	

See page 6
for *mounting*
options.

Mounting Options

SEE WEBSITE FOR COMPLETE LISTING.

	R20, R20, R20-P	RG	RJ	RL, RL, RL-P	RS, RS, RS-P	R14	H20, H20, H20-P	H25, H25-P	H30	HRL, HRL-P	HRS, HRS-P	R21, R21, R21-P	R22, R22, R22-P	R24, R24, R24-P	RW
RWB															X
MB-56C									X						
MB-FB1				X				X	X	X	X				
MB-FB2	X	X	X	X			X								
MB-FB2A	X	X	X	X			X								
MB-FB2B	X	X	X	X			X								
MB-FB3							X								
MB-FB5				X				X	X	X	X				
MB-FB5C				X				X	X	X	X				
MB-FB14						X									
MB-FL5				X											
MB-UB6												X	X	X	
MB-5PY	X	X	X												
MB-75	X	X	X												
MB-76	X	X	X												
MB-FL	X	X	X												
MB-FL2	X	X	X												
MB-FL3	X	X			X										
MB-FL4	X	X	X												
MB-FL6	X	X	X												
MB-FL9						X									
MB-KOYO	X	X	X												
MR-RD	X	X	X												
MB-RD2	X	X	X												
MB-UB2												X	X	X	
MB-UB2A												X	X	X	
MB-UB2G	X	X	X												
MB-UB2AS					X										
MB-UB2G	X	X	X												
MB-UB2S					X										
Y-1														X	
Y-1G	X	X	X									X	X		
Y-2														X	
Y-2A														X	
Y-2G	X	X	X									X	X		
Y-3														X	
Y-3G	X	X	X	X								X	X		
Torsion Spring												X	X	X	
MB-UB1												X	X	X	
MB-UB1 M185												X	X	X	
MB-UB1A												X	X	X	
MB-UB1M												X	X	X	
MBUB3												X	X	X	
MB-UB3G	X	X	X												
MB-UB4												X	X	X	
MB-UB4W												X	X	X	

RWB
Mounting
Bracket



MB-56C
Protective
Cover



MB-FB1
Flexible Mounting
Bracket



MB-FB2
Flexible Mounting
Tether



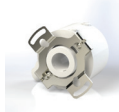
MB-FB2A
Flexible Mounting
Tether



MB-FB2B
Rigid Mounting
Tether



MB-FB3
Flexible Mounting
Bracket



MB-FB5
Flexible Mounting
Tether



MB-UB6
Rigid Under Belt
"L" Bracket



MB-DB14
Flexible Mounting
Tether



MB-FL2
Flange Adapter



MB-FL3
Flange Adapter



MB-FL4
Flange Adapter



MB-FL6
Flange Adapter



MB-FL8
Adapter Kit For
Conveyor Roller
Bearing



MB-FL8A
Adapter Kit For
Conveyor Roller
Bearing With Shaft
Guards



MB-RD
Measuring
Wheel Arm



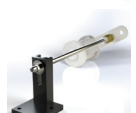
MB-FL9
Flange Adapter



MB-UB2
Offset Mounting
Bracket
7" Arm



MB-UB2A
Offset Mounting
Bracket
11.25" Arm



Y-1
Yoke Assembly
With 1/4"-
28 Bolt



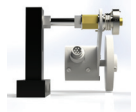
Y-1G
Wheel Encoder
Mounting Yoke,
1/-28 cap screw



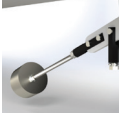
Y-2
Yoke Assembly
For MB-UB1



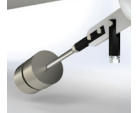
**Torsion
Spring**



MB-UB2
Under-Belt
Counter-Weight



MB-UB1A
Under-Belt
Counter-Weight



MB-UB3
Spring Loaded
Under-Belt



MB-UB4
Spring Loaded



Encoder Cables



12mm 4-pin



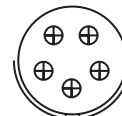
MS 3-pin



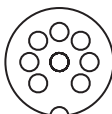
M12 5-pin



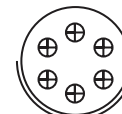
MS 5-pin



M12 8-pin



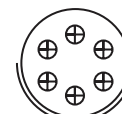
MS 6-pin



16mm 6-pin



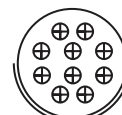
MS 6-pin



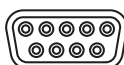
16mm 8-pin



MS 10-pin



DB 9-pin



	3-Wire	4-Wire	5-Wire	6-Wire	8-Wire	9-Wire	2 Pair Braided	Pullman output	Line Driver
12mm 4-pin	X	X							
16mm 6-pin	X	X	X						
16mm 8-pin		X	X	X					
DB-9-pin	X	X	X	X	X			X	X
MS 3-pin	X						X		
MS 5-pin	X	X	X	X				X	X
MS 6-pin	X	X	X	X					X
MS 10-pin		X		X	X	X			X

Standard Lengths = 10ft, 20ft, 3m, 6m
Custom Lengths Available



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About Us...

TRI-TRONICS® Co. Inc., together with Photocraft, offers a wide range of rotary encoders for industrial automation and motion feedback control. For more than 60 years, we have provided innovative solutions for real-world applications. We understand our customers have a job to do and have no time for issues. That is why every one of our products is individually tested for durability and reliability, so they stand the test of time.

Our mission is to amaze our customers, improve their business, and promote mutual prosperity. We recognize that our customers are kings and no two companies are alike. This is why we tailor solutions to fit your needs and will do whatever it takes to help you succeed.

All our products are assembled in the United States at our 28,000-sq. ft. facility in Tampa, FL. Our agile workforce attends to the needs of our customers - big or small - to complete requests with short turnaround times.



TRI-TRONICS COMPANY, INC.
7705 Cheri Court • Tampa, FL 33634
(800) 237-0946 • www.ttco.com

