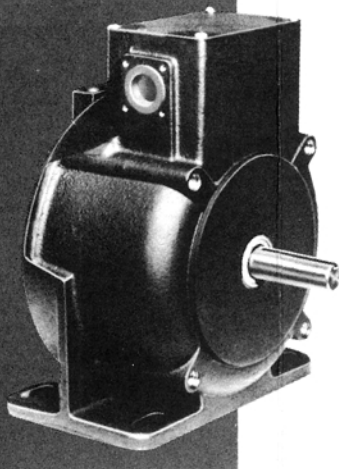


# Series 60P Rotopulser® Encoders

## Rotopulser®



- Mechanically and environmentally rugged
- 56C face and foot mounting
- Up to 2500 PPR with optional marker
- Interchangeable (bolt-for-bolt) with "C" face mount tachs BC42 & 46

The Series 60P Mill-Duty Rotopulser® is the most rugged incremental encoder package available. It is designed to provide long-term, precision, digital measurements. The Series 60P is constructed to maintain transducer alignments and measurements isolated from external shaft loads.

Easier and more convenient installations are provided with NEMA 56C face or foot mounting options. These units are provided with line driver outputs as a standard feature for longer cable lengths (hundreds of feet) and/or higher electrical noise immunity.

Note: For unidirectional speed sensing applications, refer to Series 78 Mill-Duty Rotopulsers® for a non-optical, higher temperature magnetic sensing alternative.

### Electrical

**Power Requirements:** 5 to 15 VDC max.  
115 mA max. plus load requirements

**Frequency Response:** 50 kHz

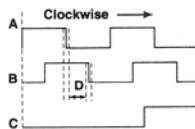
**Minimum Free Path:** Between any A and B transition (Distance D) will not be less than

12.5% of one full electrical cycle. This includes effects of jitter, phase and symmetry shifts.

**Mating Connector:** 10-pin: style MS3106A-18-1S, Dynapar Part No. MCN-N6

### Electrical Output

Note: Signal C (Marker) is low for the first 180° of shaft rotation clockwise (as viewed from shaft end), and is high for the next 180°.



## Typical Applications

- Motor drive speed feedback
- Back-gage positioning
- PLC and electronic counter inputs
- Speed, draw and length controls
- Winding and roll monitoring
- Finishing equipment, extruders, and test equipment
- Precision, economical replacement for DC tach when used with a Dynapar frequency-to-voltage converter
- The drive manufacturer's standard.

## SPECIFICATIONS

### Mechanical & Environmental

**Slew Speed:** 3600 RPM

**Shaft Diameter:** 5/8"

**Inertia:** 285 gm-cm<sup>2</sup> max.

**Typical Starting Torque:** 15 oz-in

**Bearings:** Motor Duty Bearings

**Weight:** 10 lbs.

**Shaft Loading:** Radial: 45 lbs. overhung;  
Axial: 15 lbs.

**Operating Temp. Range:** 0 to 54°C

## Here's what makes the 60P so rugged and reliable . . .

Precision die-cast aluminum housing with external and internal surfaces plated, painted and baked for good corrosion resistance.

Shaft seals (optional).

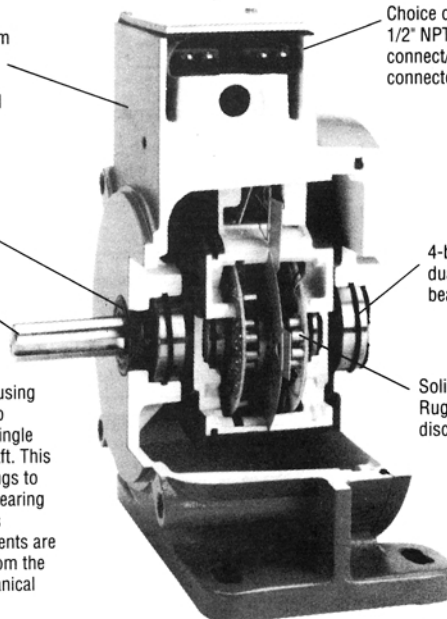
Heavy-duty 5/8" diameter shafts.

The internal transducer housing and bearings are allowed to mechanically float on the single continuous heavy-duty shaft. This allows the two outer bearings to become the primary load bearing elements. The transducer's alignments and measurements are therefore better isolated from the effects of long-term mechanical wear and abuse.

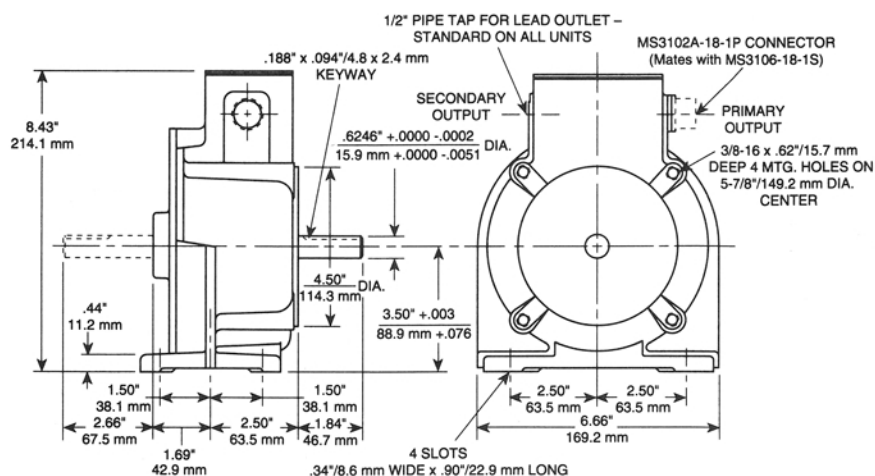
Choice of screw terminals with 1/2" NPT conduit entry or quick connect/disconnect MS pin connector.

4-bearing construction with dual housing and extra wide bearing span.

Solid state LED's standard. Rugged mylar or photoplast disc (no glass disc).



## Approximate Dimensions



Compatible with NEMA 56 and 56C hardware

## Electrical Output Ratings

Outputs	Voltage Range	Sink (mA)	Source (mA)	Standard IC
Differential Line Driver	5 VDC to 15 VDC max.	40	40	TC4428

## Ordering Information

To choose a model number, follow the table from left to right. Complete the model number with a 4-digit code for choice of pulses per revolution (PPR).

Output Waveforms	Shaft	Terminations	Model No.
<b>Bidirectional (CW)</b> 	5/8" dia. Single-ended	MS Connector	62-P-MDF - ____ -A-B
		Terminal Strips	62-P-MDF - ____ -T-B
	5/8" dia. Double-ended	MS Connector	62-P-NDF - ____ -A-B
		Terminal Strips	62-P-NDF - ____ -T-B
<b>Dual Isolated</b> 	5/8" dia. Single-ended	MS Connector	62-P-MMF - ____ -A-B
		MS Connector	62-P-NMF - ____ -A-B
	5/8" dia. Double-ended	MS Connector	62-P-MMF - ____ -A-B
		MS Connector	62-P-NMF - ____ -A-B
<b>Bidirectional with Marker</b> 	5/8" dia. Single-ended	MS Connector	63-P-MDF - ____ -A-B
		Terminal Strips	63-P-MDF - ____ -T-B
	5/8" dia. Double-ended	MS Connector	63-P-NDF - ____ -A-B
		Terminal Strips	63-P-NDF - ____ -T-B

Note: Optional purge plugs (2, 1/4" NPT) are available on any of the above models by changing the last digit of the model number from "B" to "C".

**Dual Isolated Outputs:** A secondary set of isolated output signals is available in the same Series 60P housing when "dual isolated" units are selected from the table. Both the primary and secondary outputs are powered and wired independently at 5 to 15 VDC with two 10-pin MS connectors. The dual output option is designated so that two isolated feedback signals can be provided from a single Series 60P installation — a potential cost savings in some applications.

Also, in the event that the primary outputs stop functioning, the primary cable and wiring can easily be moved to the secondary output side.

**Note: The secondary output cable cannot be moved to the primary side without rewiring the cable.**

The primary connector is located on the right side of the Rotopulser when viewed from the "C" face (4 face mounting holes on 5-7/8 dia. B.C.).

## Electrical Connections

Function (If Used)	MS Pin No.	Terminal Strip Connector No.	Dynapar No. 14004190010* Cable Acc'y Color Code
Signal A	B	1	RED
Signal A	G	12	BLK
Signal B	D	3	BLU
Signal B	H	11	BLK
Signal C (Marker)	A	4	GRN
Signal C	I	10	BLK
+V	E	5	WHT
Common	C	2	BLK
Shield	F	6	SHIELD
Not Used	J	7, 8, 9	—

Dual Isolated Output Units		
Function (If Used)	Primary	Secondary
Signal A	B	B
Signal A	G	G
Signal B	D	D
Signal B	H	H
Primary Power	E & J	—
Primary Common	C & I	—
Secondary Power	—	J
Secondary Common	—	I
Shield	F	F
Not Used	A	A, E & C

\*This is a mating connector/cable assembly described in the Encoder Accessories section of this catalog. Color-coding information is provided here for reference.

PPR	Option Code	PPR	Option Code	PPR	Option Code
1	0001	150	0150	530	0530
2	0002	180	0180	550	0550
4	0004	192	0192	600	0600
5	0005	200	0200	625	0625
6	0006	203	0203	720	0720
10	0010	240	0240	750	0750
12	0012	250	0250	800	0800
15	0015	256	0256	805	0805
18	0018	300	0300	833	0833
20	0020	306	0306	900	0900
25	0025	315	0315	1000	1000
40	0040	360	0360	1024	1024
45	0045	375	0375	1200	1200
50	0050	382	0382	1250	1250
60	0060	384	0384	1270	1270
64	0064	390	0390	1500	1500
90	0090	400	0400	1800	1800
96	0096	402	0402	2000	2000
100	0100	430	0430	2160	2160
120	0120	450	0450	2250	2250
125	0125	500	0500	2400	2400
127	0127	508	0508	2500	2500
128	0128	512	0512		

Other counts available, consult factory.