

Boston Gear offers a complete range of accessories for use with our AC and DC Ratiotrol controllers. All components have been selected for their compatibility to the systems.

TABLE OF CONTENTS

REMOTE CONTROL STATIONS.....	48
DC TACHOMETER GENERATORS	49
AC TACHOMETER GENERATOR DOUBLE C-FACE	50
DC TACHOMETER GENERATOR DOUBLE C-FACE	50
MAGNETIC PICKUP ASSEMBLIES	51
DIGITAL PULSE TACHOMETER	52
ANALOG METER	52
DIGITAL METER.....	53

REMOTE CONTROL STATIONS

The remote control stations shown on these pages may be used with one or more controller. The listings indicate control functions, components and the controllers with which each remote control station may be used. Dimensions are shown for NEMA 1 enclosures. Consult factory for dimensions on other NEMA enclosures. NEMA definitions are on Page 127.

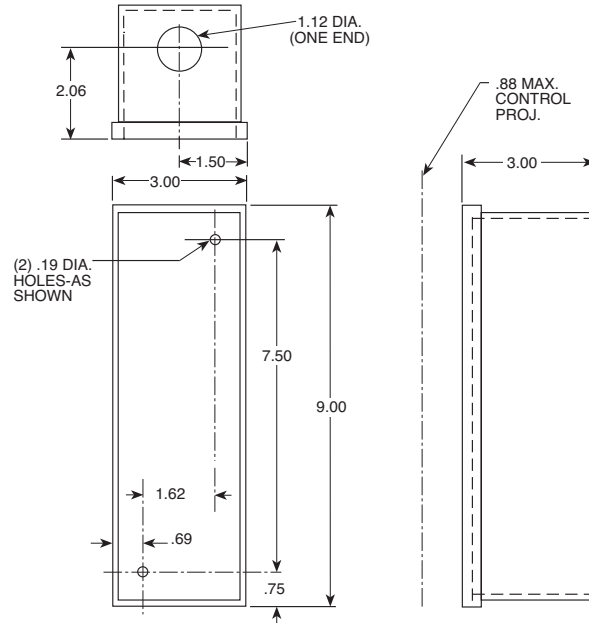
ORDER BY CATALOG NUMBER OR ITEM CODE

Control Elements			Use With Controller Models	Remote Station	
Pushbuttons	Switches	Pots		Catalog Number	Item Code
Run, Stop	—	Motor Speed Jog Speed	RBA, RBS, VES	RCS1	69362
Run, Stop	Run/Jog	Motor Speed	RBA(U,UB), RBS(U,UB), VES(U,UB)	RCS3C	58098
Run, Stop	Run/Jog	Motor Speed Jog Speed	RBA, RBS, VES	RCS3D	58099
Fwd, Rev, Stop	—	Motor Speed	RBA(M,MB), RBS(M,MB),	RCS6	60239

(CONTINUED)

ACCESSORIES

REMOTE CONTROL STATIONS (Continued)



ORDER BY CATALOG NUMBER OR ITEM CODE

Control Elements			Use With Controller Models	Remote Station	
Pushbuttons	Switches	Pots		Catalog Number	Item Code
—	Run/Stop/Jog	Motor Speed	RBA(U,UB), RBS(U,UB), VES(U,UB)	RCS16	58102
—	Run/Stop/Jog,	Motor Speed	RBA(M,MB),	RCS17	58103

DC Tachometer Generator



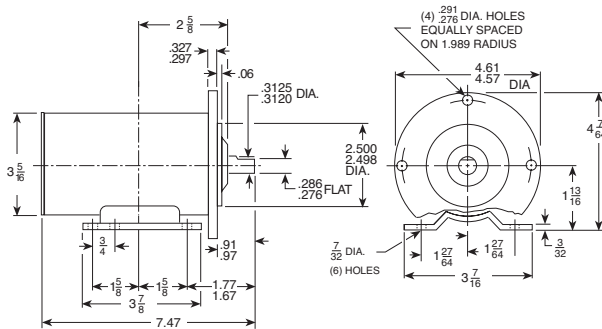
Tachometer Generators are used to sense (monitor) motor shaft speed and to supply a voltage signal to a meter for speed indication, to another control to set its speed (follower or "Slave") or to signal speed changes to the control associated with the motor (tachometer feedback).

Boston Gear offers three models to allow a variety of applications, flange mounted to adapt to rear of motors (with adapters), foot mounted for belt driven applications and one unit which can be both foot or flange mounted.

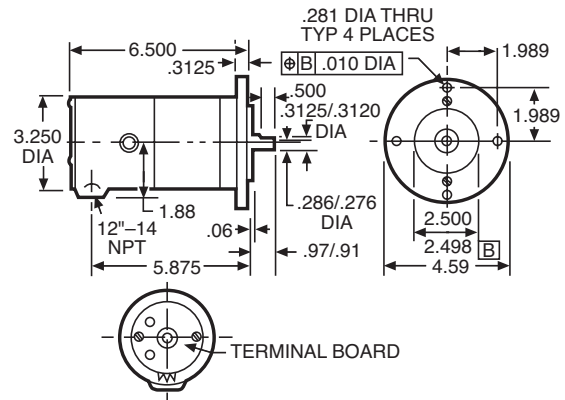
ORDER BY CATALOG NUMBER OR ITEM CODE

Output per 1000 RPM	Mounting	Catalog Number	Item Code	Driving Torque (oz. in.)	Max RPM	Inertia (lb. in ²)	Ripple %
50 VDC	Foot/flange	TG-3	38614	1.5	5000	1.4	1.5
50 VDC	Flange	TG3C-P	19170	1.5	5000	1.4	.5
50 VDC	Foot	TG3F-P	19171	1.5	5000	1.4	.5

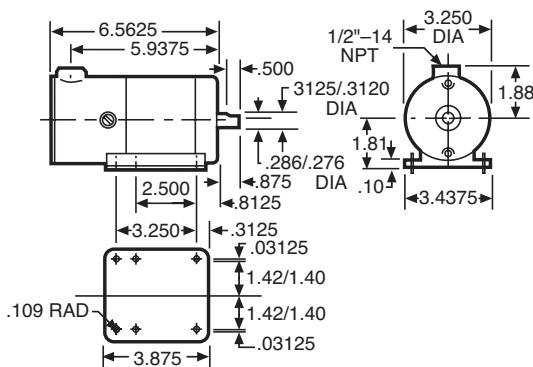
DIMENSIONS



TG3



TG3C-P



TG3F-P

ADAPTERS

Flange mounted generator can be mounted on certain motors capable of supporting its size and weight as shown below:

ORDER BY CATALOG NUMBER OR ITEM CODE

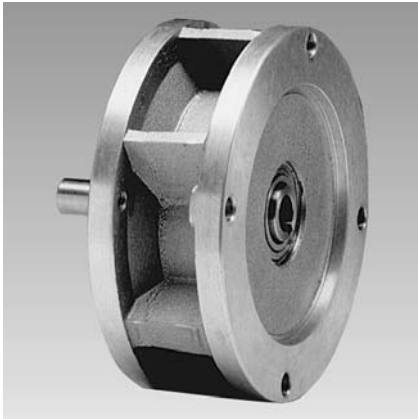
For Use With Motors	Adapter Required	
	Catalog Number	Item Code
18300ATF-B	TGAB3*	66795

*Requires coupling BG11-3-5-5 Coupling

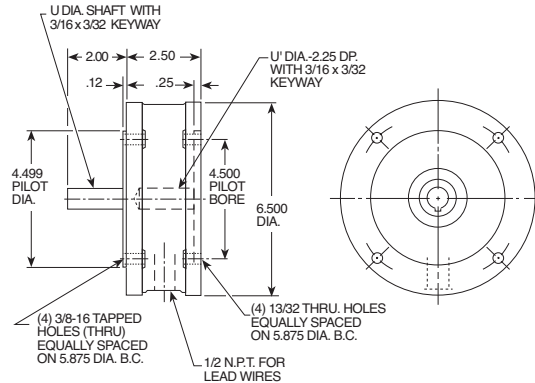
ACCESSORIES

AC Tachometer Generator, Double C-Face

TG50A Series



These self-contained AC voltage generators produce a 2 phase linear output voltage proportional to speed. There are two gray leads (1st phase) and two black leads (2nd phase) in each generator. The generator output voltage, of 50 VAC/1000 RPM, can be used with a meter for speed indication or in a Tachometer follower or Tachometer feedback system. These generators will fit any standard NEMA 56C, 180C or 140TC frame motor. To prevent excessive loading, external connections to the generator should not total less than 25K ohms. This unit is designed for use between a C-Face motor and a flanged reducer, it is not intended for overhung loads on output shaft.

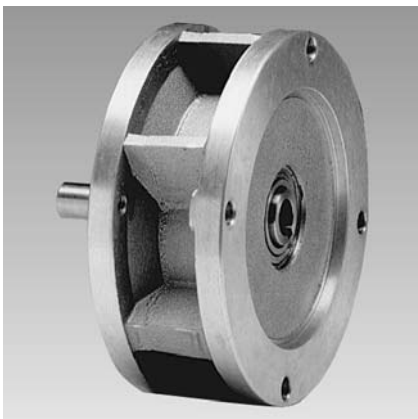


ORDER BY CATALOG NUMBER OR ITEM CODE

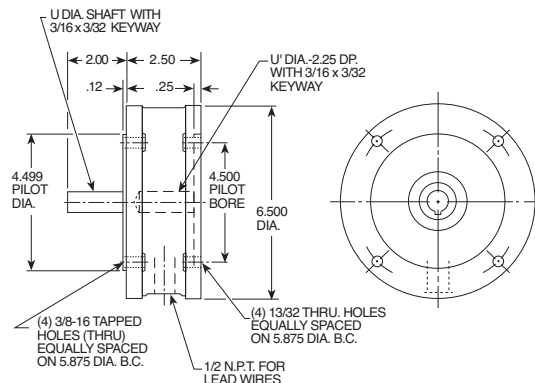
Voltage Output/ 1000 RPM	Max. Speed RPM	Catalog Number	Item Code	NEMA C-Face	Bore Code	Temperature Constant (Per Degree F)	U Output Dia.	U' Input Dia.	Approx. Weight (Lbs.)
50 VAC	6000	TG50A56C	60153	56C	B5	.04 Volt	.6245/.6250	.6257/.6252	7
50 VAC	6000	TG50A140TC	60154	180C-140TC	B7	.04 Volt	.8745/.8750	.8757/.8752	7

DC Tachometer Generator, Double C-Face

TG35D Series



These self-contained DC voltage generators produce a linear output voltage proportional to speed. The generator output voltage of 35 VDC/1000 RPM can be used with a meter for speed indication or in a Tachometer follower or Tachometer feedback system. These generators will fit any standard NEMA 56C, 180C or 140TC frame motor. To prevent excessive loading, external connections to the generator should not total less than 50K ohms. Not for use with regenerative controllers. This unit is designed for use between a C-Face motor and a flanged reducer, it is not intended for overhung loads on output shaft.



ORDER BY CATALOG NUMBER OR ITEM CODE

Voltage Output/ 1000 RPM	Max. Speed RPM	Catalog Number	Item Code	NEMA C-Face	Bore Code	Temperature Constant (Per Degree F)	U Output Dia.	U' Input Dia.	Approx. Weight (Lbs.)
35 VDC	2000	TG35D56C	50477	56C	B5	.04 Volt	.6245/.6250	.6257/.6252	7
35 VDC	2000	TG35D140TC	50478	180C-140TC	B7	.04 Volt	.8745/.8750	.8757/.8752	7

BOSTON GEAR®

Magnetic Pick-up Assemblies



Magnetic pickup assemblies are used to deliver a 60 pulse per revolution signal for use with a tachometer to display the accurate speed of a motor.

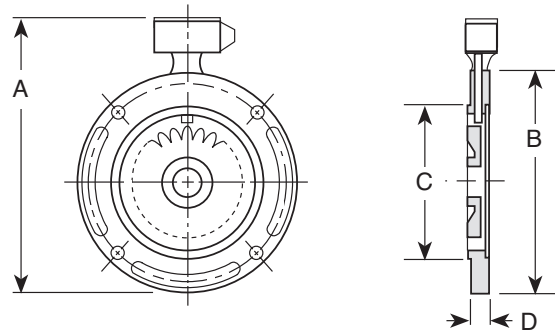
The assemblies contain a 60 tooth gear, C-face adapter with conduit box and sensor.

ORDER BY CATALOG NUMBER OR ITEM CODE

Catalog Number	Item Code	NEMA C-FACE	Bore Code
MPA56C	60254	56C	B5
MPA140TC	60255	140TC	B7
MPA180TC	60256	180TC	B9
MPA210TC	60257	210TC	B11
MPA250TC	60258	250TC	B13

ALL DIMENSIONS IN INCHES				
NEMA C-FACE	A	B	C	D
56C, 140TC	9.32	6.50	4.500	.750
180TC, 210TC, 250TC	12.63	9.62	8.500	.875

DIMENSIONS



Inline Amplifier and Pulse Shaper for Magnetic Pick-ups

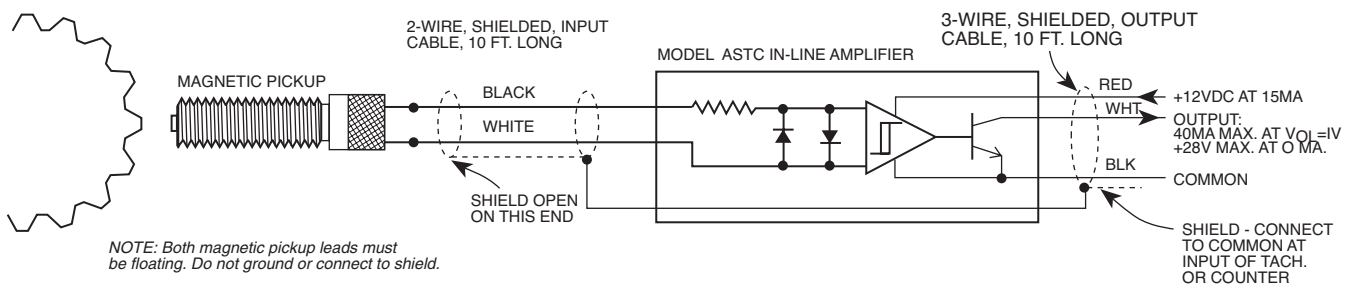
ASTC Series

The ASTC boosts magnetic pickup signals by a factor of more than 100, and provides an NPN Open-Collector pulse output which is compatible with the DPT-1A and DPT-2A meters. The ASTC can be used at pulse rates to 10KHz. The NPN O.C. output is current limited to 40mA. The unit is epoxy encapsulated in a 3/4" Dia. stainless steel shell, with overall dimensions of 0.9"D x 4.5"L including Neoprene strain-reliefs on each end. In installations where long signal runs are to be made it is advisable to keep the ASTC close to the pickup and let its output cable make the long run. Input and output cables should not be run in conduit, cable troughs, or bundles with power or control voltage lines. Operating temperature is -18° to +60°C.

ORDER BY CATALOG NUMBER OR ITEM CODE

Catalog Number	Item Code
ASTC	19132

NOTE: This amplifier is recommended when using two or more meters (DPT series) from one magnetic pulse pick-up signal. Also when the meter is more than ten feet from the signal source.



ACCESSORIES

5 Digit Digital Pulse Tachometers

DPT Series

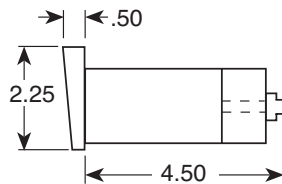
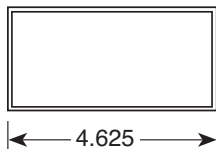


The DPT Series of digital tachometers are completely field programmable. The display updates to a new reading at the conclusion of each time base. The time base is set with switches, giving a choice of time bases from .001 seconds to 32.76 seconds in minimum increments of .001 seconds. In addition these tachometers have programmable decimal points and frequency doubling at the flip of a switch. This feature provides a count pulse at both the leading and trailing edges of the input pulse, which doubles the input information rate and allows the time base to be reduced by half.

Frequency doubling allows shorter update times for the readout for those applications where a longer rate is objectionable and otherwise unavoidable. For example, frequency doubling permits a 30 second time base to be used where a 60 second time base would normally be required.

When using two or more generators on the same magnetic pick-up signal or for distances over ten feet, it is recommended to use the ASTC amplifier shown on Page 51.

DIMENSIONS



ORDER BY CATALOG NUMBER OR ITEM CODE

A.C. Line	Catalog Number	Item Code
115V	DPT-1A	48862
230V	DPT-2A	48863

Analog Meter

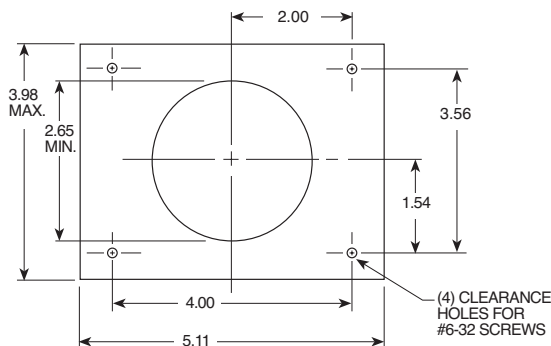


The RMA-1 meter is a 4-1/2" rectangular meter with additional printed circuitry and adjustment pot to permit the indication of RPM when connected to the various AC and DC voltages present on motor armatures and tachometer generators. Five voltage ranges are provided to permit inputs of 50 VAC or 50 VDC to 500 VDC.

The meter face is readily removed to enable you to substitute a face with special calibration, such as 0-100%, reducer RPM, FPM, etc.

- Accuracy ±2% full scale**
- Tracking ±2%**
- Repeatability 2%**
- Balance (Horizontal to vertical) ±1%**
- Temperature Effect (15°-35°C) 1%**
- Damping Factor 2.5 min.**
- Response Time 1.5 sec. max.**

DIMENSIONS



ORDER BY CATALOG NUMBER OR ITEM CODE

Catalog Number	Item Code	Approx. Weight
RMA-1	60879	1 Lb.

Digital Meter



The RMD-1 digital meter is low cost, reliable, accurate and physically interchangeable with existing 4-1/2 inch rectangular analog meters. Four input ranges accept minimum signals from 50 mV to 500 VDC, to read full scale (1999). The 20 turn calibration pot allows the output to be scaled to the indication required.

DISPLAY: 4 active digits (0 to 1999). 0.5 inch LED non-blinking with a 0.25 second update period. Optional decimal point before last digit.

INPUT SIGNAL FREQUENCY: Minimum fixed frequency input is 40 Hz. Minimum variable frequency input to produce maximum readout is 200 Hz. Maximum variable frequency input is 2000 Hz.

INPUT SIGNAL VOLTAGE: Minimum input to produce full reading is 50 millivolts dc, 100 millivolts ac. Maximum input voltage is 500 VDC, 460 VAC.

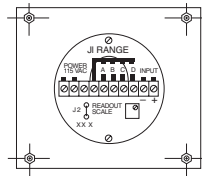
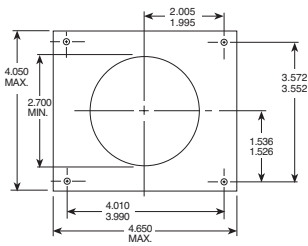
INPUT SIGNAL DEVICE: Any AC or DC shunt providing a 50 mV. or larger signal. An AC or DC signal source. A fixed pulse area digital tachometer.

READOUT LINEARITY: 0.5% F.S. ± 1 count.

POWER REQUIREMENTS: 115 VAC ± 10 V, 2 watts. Meter circuit is entirely isolated from line and case.

OVERRANGE: Indication by "EEE". 500% signal input over-voltage protection on all scales except high voltage scale.

DIMENSIONS



ORDER BY CATALOG NUMBER OR ITEM CODE

Catalog Number	Item Code	Approx. Weight
RMD-1	60880	1 Lb.