

Auxiliary Section

AUXILIARY SECTION

Auxiliary Devices found in this section include items that are applicable to a variety of Dynamatic® products. Instead of being repeated in multiple product sections, they are located once in this section for Adjustable Speed Drives. All items in each subsection are presented in alphabetical order.

It is the responsibility of those specifying any auxiliary device in this section to ensure compatibility with the Dynamatic® drive or controller that they are to be used with. Order auxiliary devices by Model Number, Part Number and/or Mod Code if given, otherwise by Description.

AC GENERATORS	A generator is necessary to furnish a signal to the Dynamatic® controller if control of output speed is required. An internal Alnico Generator is furnished with most Dynamatic® Adjustable Speed Drives. For some models an external G-2 Generator is mounted on a bracket and belted to the output shaft as standard. The generators listed below can be furnished loose for customer mounting. The generator mounting charge is for mounting an external generator on a unit that normally does not have provisions for this external generator (generator sold separately).			
	Description	Volts Per 1000	Speed Range (RPM)	Part Number
	G-2 Open Drip-Proof	15, 30 or 45	50-5000	000-88470-0100
	G-4 Explosion Resistant	15, 30 or 45	50-5000	000-88473-0100

Specifications

Recommended Load Impedance:

Minimum – 10,000 Ohms
Maximum – 100,000 Ohms

Type:

AC with 12 pairs of poles, 12 cycles per revolution.

Linearity:

Deviation is 2.4% of maximum output at 1800 RPM with 10,000 Ohm load.

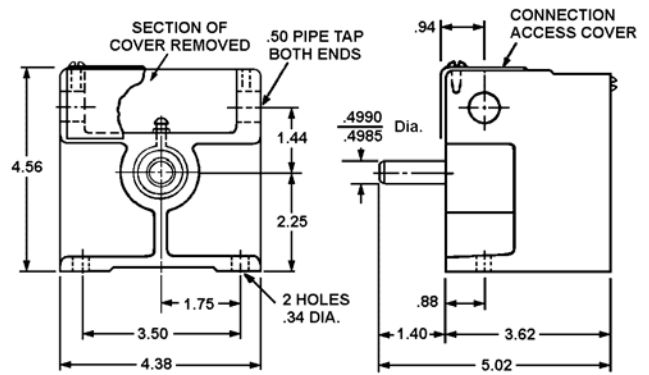
Deviation is 0.8% of maximum output at 1800 RPM with 100,000 Ohm load.

Wiring Diagram

Model G-2 & G-4 Generators

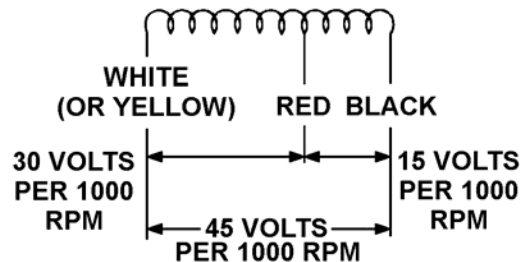
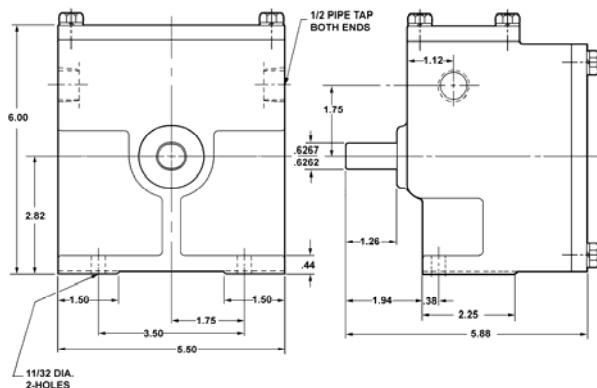
For 1200 RPM use White (or Yellow) and Black.
For 1800 RPM use White (or Yellow) and Red.
For 3600 RPM use Red and Black.

G-2 GENERATOR



B-32850

G-4 Generator



B-49852

DIMENSIONS ARE IN INCHES

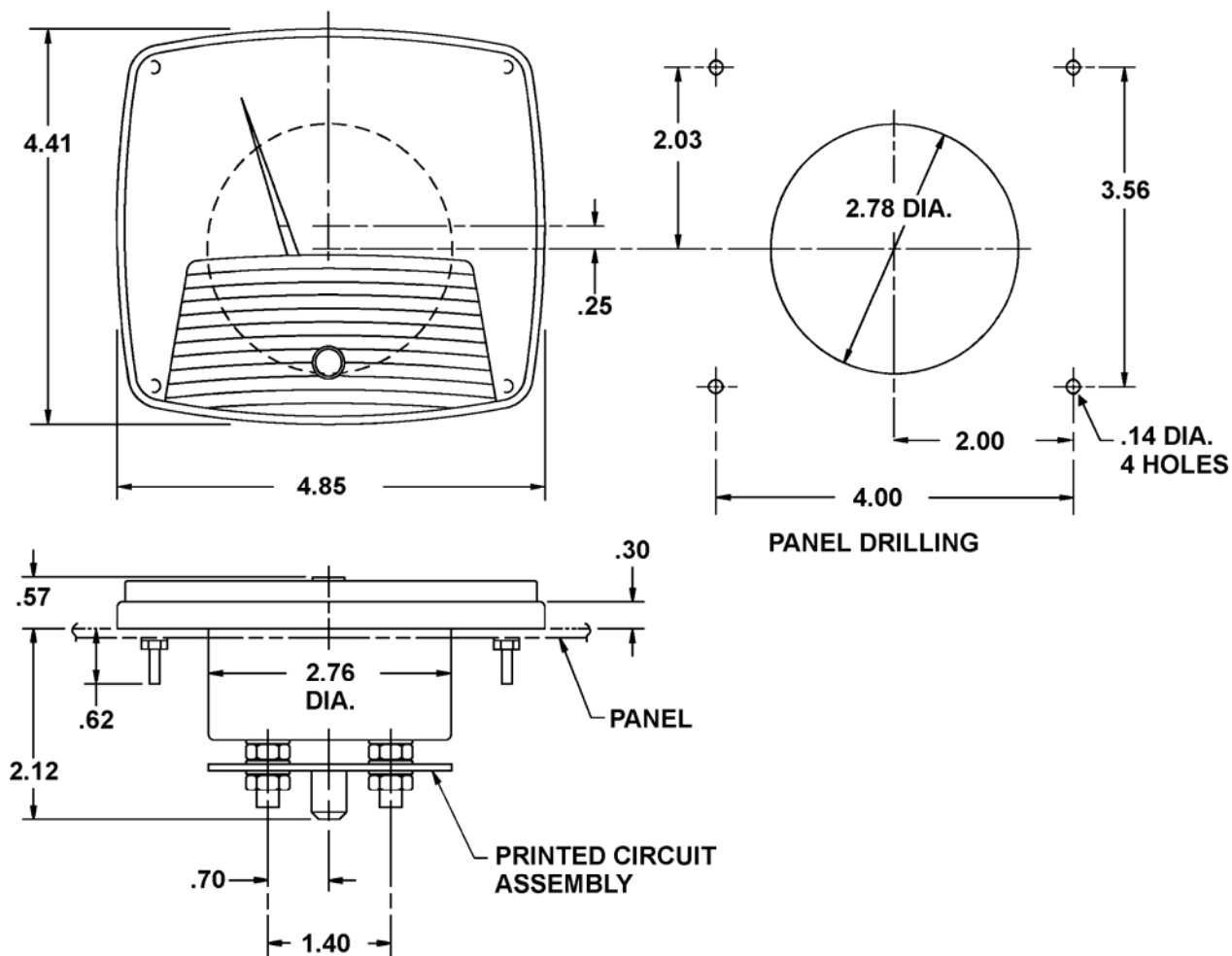
Auxiliary Devices

INSTRUMENTATION

Analog Meters	Part Number
Standard calibrations for Analog Meters are 1200 or 1800 RPM. For special calibration consult factory.	
4.5" Tachometer	37-162-XXXX
4.5" Tachometer calibrated in Strokes Per Minute (SPM). (Specify maximum value at time or order.)	15-396-XXXX

Panel Mounted Meter Outline Dimensions

4.50" METER FOR PANEL MOUNTING

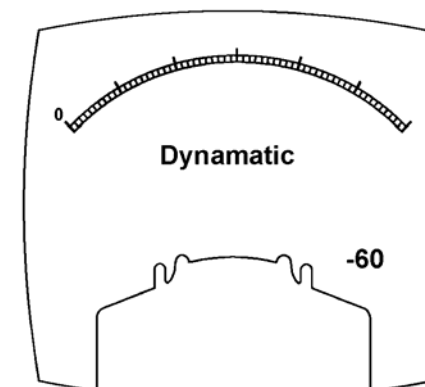
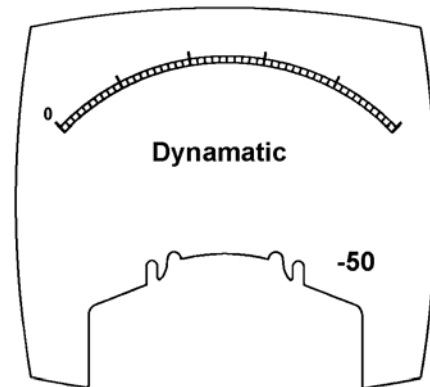
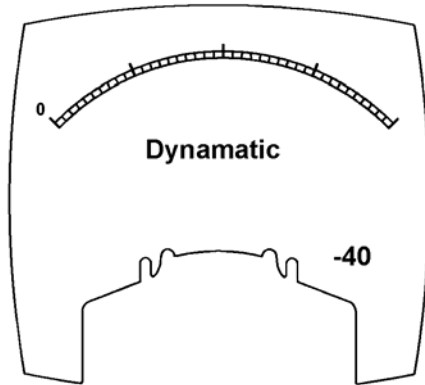
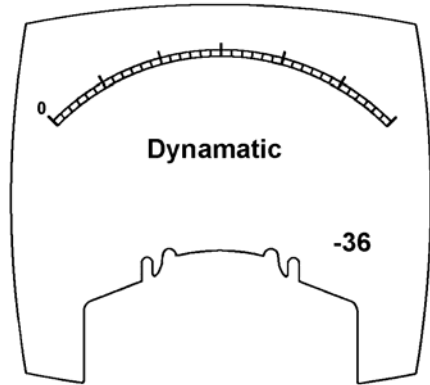
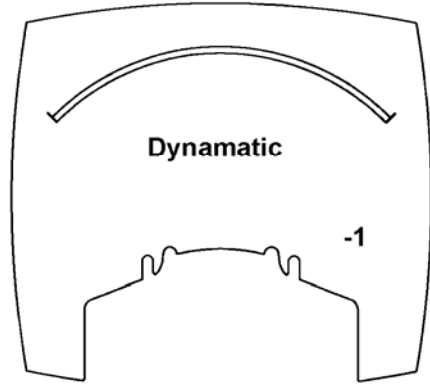


37-162/B

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Auxiliary Devices
Meter Calibration Face Drawings

SPECIAL DIAL CALIBRATION DATA



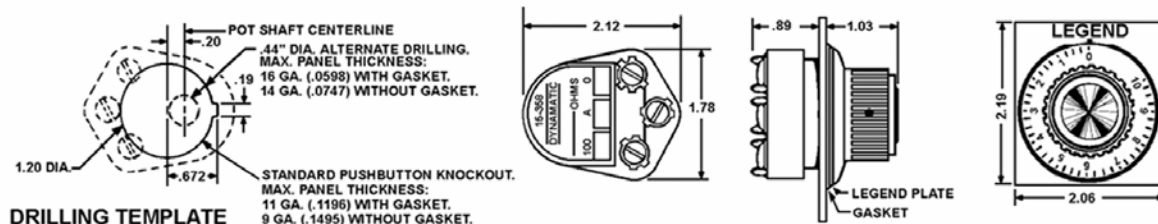
37-163-

Auxiliary Devices

Potentiometers		Part Number
Standard resistance values for applicable controllers are as follows:		
1K Ohm	Run Speed (for Mark III)	15-393-507
1K Ohm	Dancer Pot Assy. in NEMA 12 Enclosure with 49-309-102 Pot (for Mark III)	72-38240-1
1K Ohm	4 Watt Dancer Pot Assy. (for Mark III)	49-319-102
1K Ohm	3 Watt Dancer Pot – No Stops (for Mark III)	49-309-102
2.5K Ohm	Run Speed (for 3000, 4000 & 4050)	15-393-607
2.5K Ohm	Manual Speed (for 4000 & 4050)	15-393-612
2.5K Ohm	Torque (for 3000, 4000 & 4050)	15-393-620
2.5K Ohm	Press Drive Speed Pot	15-358-252
2K Ohm	Dancer Position – No Stops (for Mark III)	49-309-202
5K Ohm	Run Speed Pot Assy.	15-393-707
5K Ohm	Dancer Position (for 4000 & 4050)	15-393-715
5K Ohm	3 Watt Dancer Pot Assy. (for 4000 & 4050)	49-309-502
5K Ohm	Dancer Pot Assy. in NEMA 12 Enclosure – No Stops (for 4000 & 4050)	15-330-536
25K Ohm	Ratio (for 4000 & 4050)	15-393-1106
25K Ohm	Thread Speed (for 4000 & 4050)	15-393-1110
25K Ohm	Torque - used for Torque Potentiometer when Torque/Speed Modification is required (for 4000 & 4050)	15-393-1120

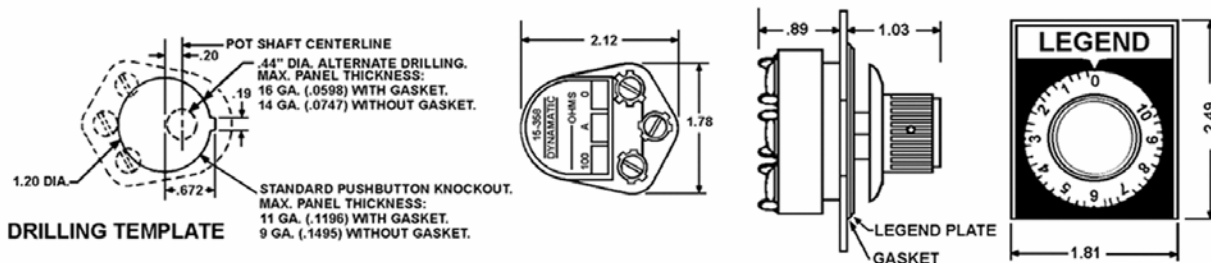
Potentiometer Outline Dimensions

2 WATT ENCAPSULATED, WITH LARGE KNOB AND DIAL

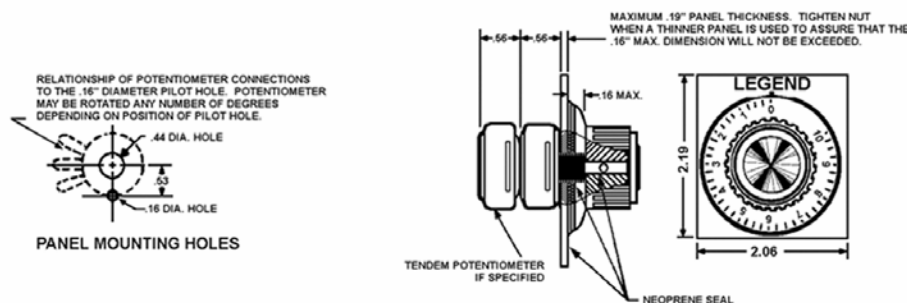


15-358A

2 WATT ENCAPSULATED, WITH SMALL KNOB AND DIAL



2 WATT TANDEM



DIMENSIONS ARE IN INCHES

Auxiliary Devices

OPERATOR STATIONS

Fractional Control Operator's Station

Description	Part Number
Operator's Station, basic Speed Control (standard), includes Run Speed Potentiometer and Start/Stop Rocker Switch	28-000381-0010

Model 3000 Control Operator's Station Selection Table

Modification	Station Element Description	Part Number
Basic Speed Control	Run Speed Pot & Start/Stop Pushbuttons	28-000202-0034
Torque Control	Torque Pot & Start/Stop Pushbuttons	28-000202-0035

Models 4000, 4050 and EC-2000 Control Operator's Station Selection Table

Modification	Station Element Description	Part Number
Basic Speed Controller	Run Speed Pot & Start/Stop Pushbuttons.	28-000202-0027
Accel/Decel, Linear	Run Speed Pot & Start/Stop Pushbuttons.	28-000202-0027
Accel/Decel, Linear & Separately Adjustable Jog	Run Speed Pot, Jog/Run Selector Switch & Start/Stop Pushbuttons.	28-000203-0022
Braking, Adjustable	Run Speed Pot & Start/Stop Pushbuttons.	28-000202-0027
Braking, Adjustable & Jog at Run Speed	Run Speed Pot, Jog/Run Selector Switch & Start/Stop Pushbuttons.	28-000203-0021
Cascade, Man/Auto	Manual Speed Pot, Ratio Pot, Man/Auto Selector Switch & Start/Stop Pushbuttons.	28-000348-0002
Dancer Position	Position Pot & Start/Stop Pushbuttons.	28-000202-0029
Dancer Position & Mutuatrol®	Position Pot & Start/Stop Pushbuttons (4000 Only).	28-000202-0029
Follower, Instrument Signal, Man/Auto		
a. Ratio Pot Internal	Manual Speed Pot, Man/Auto Selector Switch & Start/Stop Pushbuttons (not available on EC-2000).	28-000203-0024
b. Ratio Pot External	Manual Speed Pot, Ratio Pot, Man/Auto Selector Switch & Start/Stop Pushbuttons.	28-000348-0004
Follower, Tachometer, Man/Auto	Manual Speed Pot, Ratio Pot, Man/Auto Selector Switch & Start/Stop Pushbuttons.	28-000348-0004
Jog at Run	Run Speed Pot, Jog/Run Selector Switch & Start/Stop Pushbuttons.	28-000203-0021
Jog, Separately Adjustable	Run Speed Pot, Jog/Run Selector Switch & Start/Stop Pushbuttons.	28-000203-0021
Mutuatrol	Run Speed Pot & Start/Stop Pushbuttons.	28-000202-0027
Mutuatrol & Jog at Run Speed	Run Speed Pot, Jog/Run Selector Switch & Start/Stop Pushbuttons (4000 only).	28-000203-0021
Threading - Thread Pot Internal	Run Speed Pot, Thread/Run Selector Switch & Start/Stop Pushbuttons.	28-000203-0023
Torque Control	Torque Pot & Start Stop Pushbuttons	28-000202-0028
Torque/Speed Control	Run Speed Pot, Torque Pot, Torque Speed Selector Switch & Start/Stop Pushbuttons.	28-000348-0003
Torque Limit Control	Run Speed Pot & Start/Stop Pushbuttons.	28-000202-0027
Torque Limit & Jog at Run Speed	Run Speed Pot, Jog/Run Selector Switch & Start/Stop Pushbuttons.	28-000203-0021

Auxiliary Devices

OPERATOR STATIONS

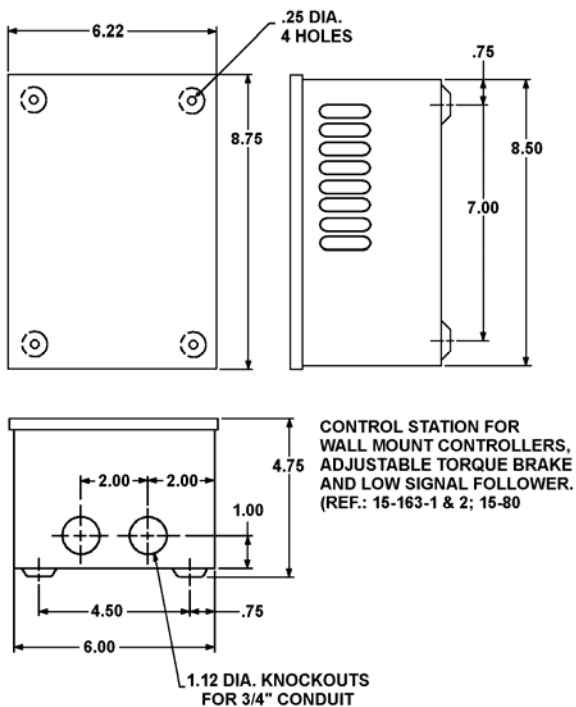
Mark III Controller Operator's Station Selection Table

Modification	Station Element Description	Part Number
Basic Speed Controller	Run Speed Pot, Run/Jog Roto-Pushbutton & Stop Pushbuttons.	28-000202-0009
Braking, Emergency Stop	Run/Jog Roto-Pushbutton, Stop Pushbutton, Emergency Stop Pushbutton (Mushroom Head) & Speed Pot.	CD-000400-0001
Cascade, Automatic (Slave)	Start Pushbutton, Stop Pushbutton & Ratio Pot.	CD-000400-0002
Cascade, Man/Auto (Slave)	Run/Jog Roto-Pushbutton, Stop Pushbutton, Speed Pot, Ratio Pot & Man/Auto Selector Switch.	CD-000400-0003
Dancer Position - Take-up	Run/Jog Roto-Pushbutton, Stop Pushbutton & Dancer Position Pot.	CD-000400-0005
- Pay-off	Run/Jog Roto-Pushbutton, Stop Pushbutton & Dancer Position Pot.	CD-000400-0006
Follower, Instrument Signal, Automatic	Run/Jog Roto-Pushbutton & Stop Pushbutton.	28-000201-0002
Follower, Instrument Signal, Man/Auto	Run/Jog Roto-Pushbutton, Stop Pushbutton, Speed Pot, & Man/Auto Selector Switch.	28-000203-0007
Follower, Tachometer, Automatic	Run/Jog Roto-Pushbutton & Stop Pushbutton.	28-000201-0002
Follower, Tachometer, Man/Auto	Run/Jog Roto-Pushbutton, Speed Pot, Trimmer Pot, Man/Auto Selector Switch & Stop Pushbutton.	28-000204-0007
Jog, Separately Adjustable	Run Pushbutton, Jog Pushbutton, Stop Pushbutton & Run Speed Pot.	28-000203-0005
Jog, by Separate Pushbutton	Run Pushbutton, Jog Pushbutton, Stop Pushbutton & Run Speed Pot.	28-000203-0005
Potentiometer, Chassis Mounted	Run/Jog Roto-Pushbutton & Stop Pushbutton.	28-000201-0002
Tension Control, Straight Line	On Pushbutton, Off Pushbutton & Tension Pot.	28-000202-0015
Threading	Jog/Thread Roto-Pushbutton, Run Pushbutton, Stop Pushbutton & Run Speed Pot.	28-000203-0003
Torque Control	Run/Jog Roto-Pushbutton, Stop Pushbutton & Current Pot.	28-000202-0011
Torque Regulator	Run/Jog Pushbutton, Stop Pushbutton & Torque Pot.	CD-000400-0004

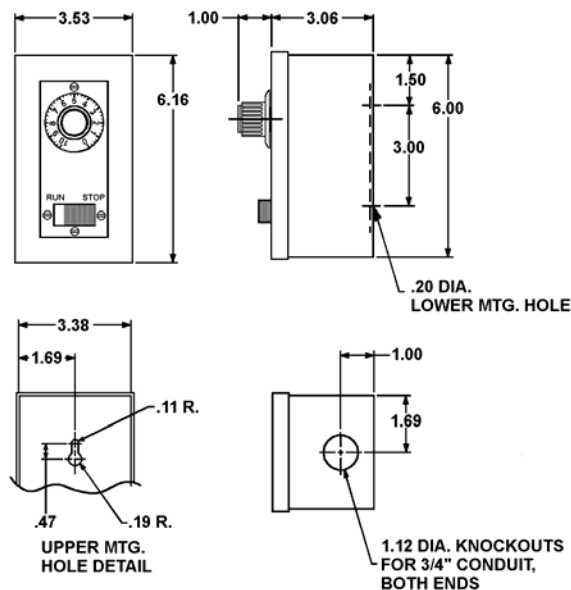
Auxiliary Devices

Operator Station Enclosure Outline Drawings for FAS Controllers

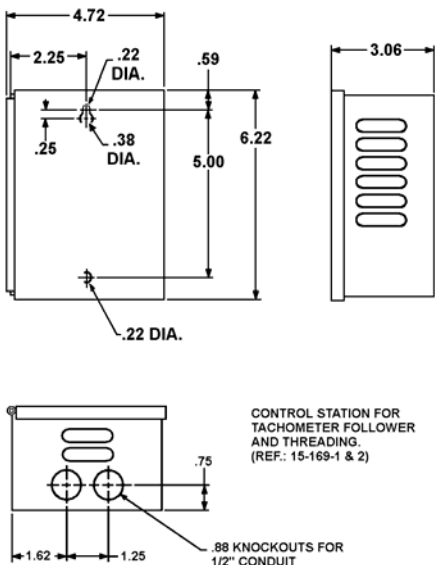
NO. 15-163-* AND 15-80 CONTROL STATIONS



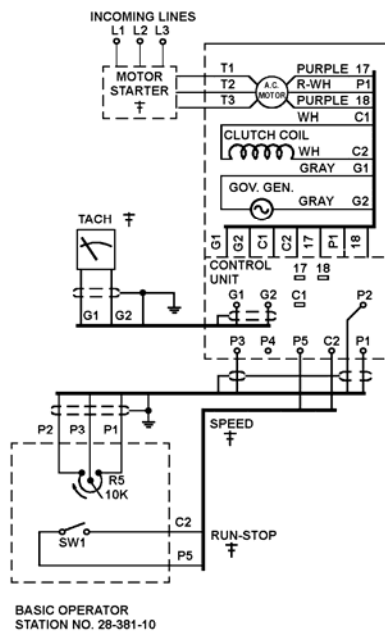
NO. 28-381-* A CONTROL STATIONS



NO. 15-169-*B CONTROL STATIONS



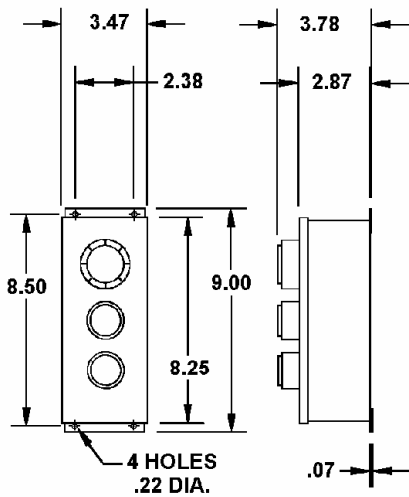
FAS CONTROL CONNECTION DIAGRAM



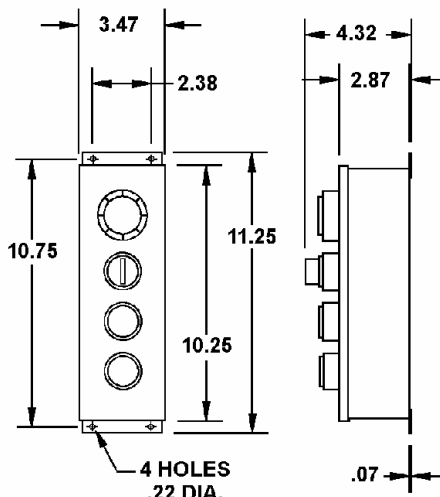
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Auxiliary Devices

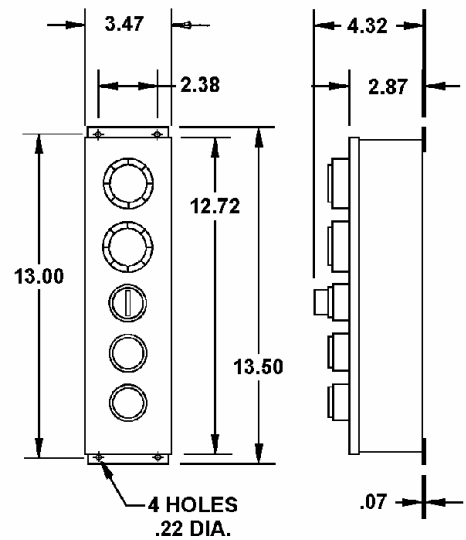
Operator Station Outline Drawings



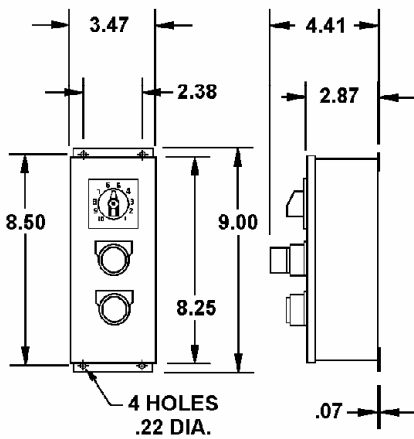
3 ELEMENT P/N 28-202-27, 28 & 29



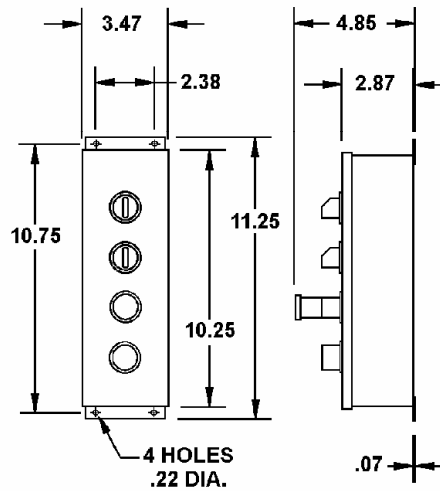
4 ELEMENT P/N 28-303-21, 22, 23 & 24



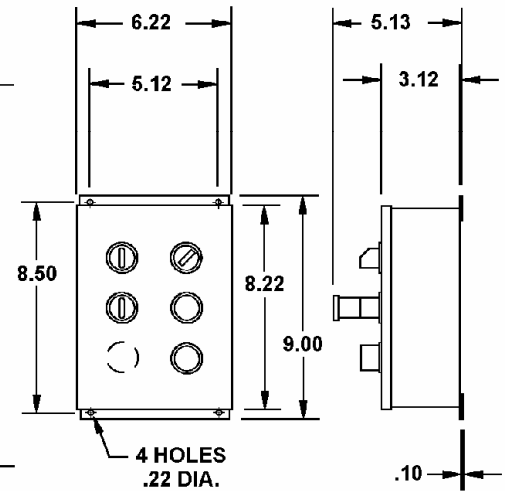
5 ELEMENT P/N 28-348-1, 2, 3 & 4



3 ELEMENT P/N 28-202-09, 10, 11, 15 & 16



4 ELEMENT P/N 28-202-3, 5 & 7

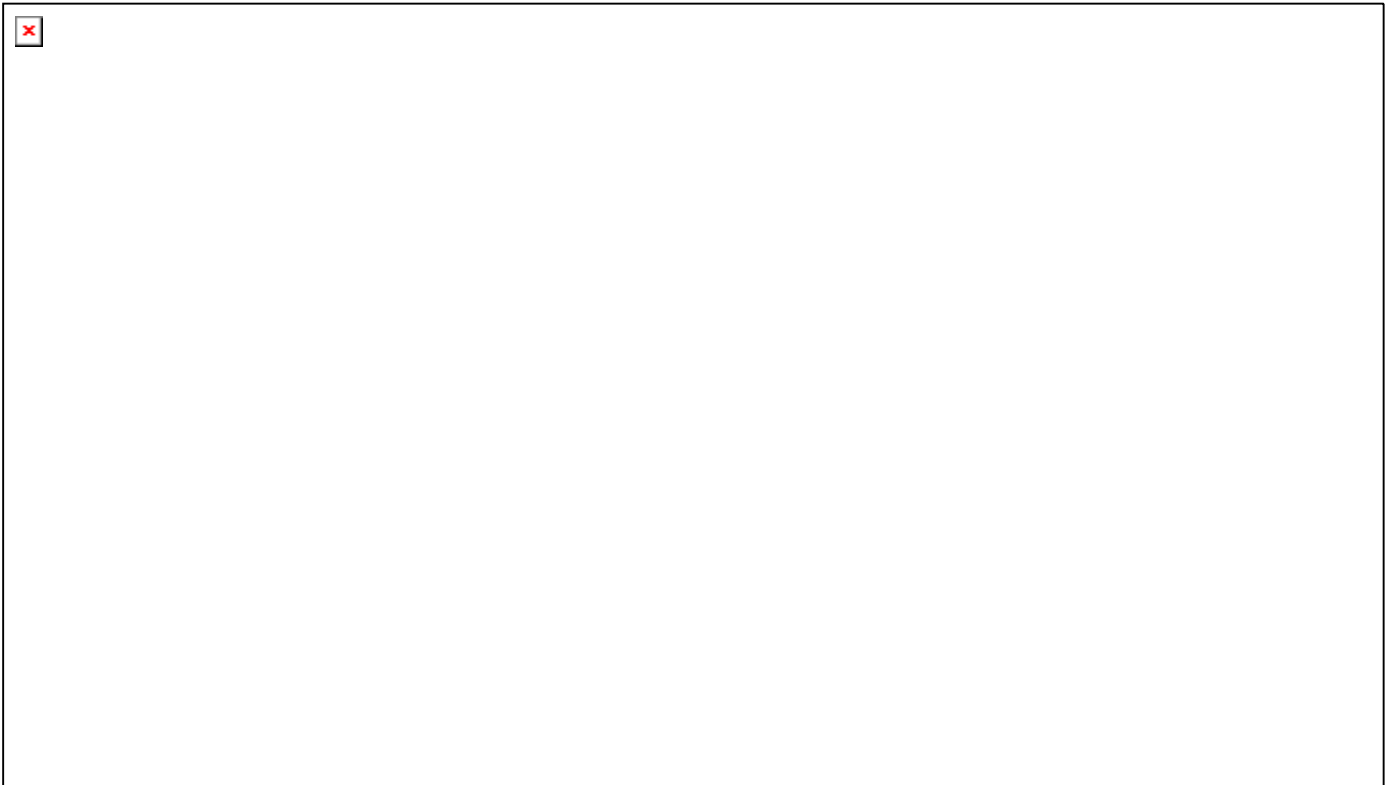


5 ELEMENT P/N 28-204-7 & 18

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Auxiliary Devices

NEMA 12 Operator Station Enclosure Outline Drawings



No Holes	C	F	H	L	W
1	2.75	2.38	4.00	4.50	3.46
2	2.75	2.38	6.25	6.75	3.46
3	2.75	2.38	8.50	9.00	3.46
4	2.75	2.38	10.75	11.25	3.46
6	3.00	5.38	10.00	10.50	6.46
9	3.00	7.62	10.00	10.50	8.72
12	3.00	7.62	12.25	12.75	8.72
16	3.00	9.88	12.25	12.75	10.96
20	3.00	9.88	14.50	15.00	10.96

DIMENSIONS ARE IN INCHES

Auxiliary Devices

INPUT TRANSFORMERS

Model 3000 Input Transformers (Loose) with 115 VAC Secondary

These center-tapped transformers provide input power for Model 3000 controllers that do not receive their power from a motor winding of the drive.

Input Transformer Selection Table

Input Voltage (Single Phase)	Part Number
230/460 VAC, 50/60 Hz	64-000175-0001
208 VAC, 50/60 Hz	64-000175-0002
390 VAC, 50/60 Hz	64-000175-0003
575 VAC, 50/60 Hz	64-000175-0004
115 VAC, 50/60 Hz	64-000175-0013

Model 4000 Input Transformers (Loose) with 115 VAC, CT Secondary

These center tapped transformers provide input power for Model 4000 controllers that do not receive their power from a motor winding of the drive or for AT and DCD drives.

Input Transformer Selection Table

Input Voltage (Single Phase)	Part Number
230/460 VAC, 50/60 Hz	64-000926-0001
208 VAC, 50/60 Hz	64-000926-0002
390 VAC, 50/60 Hz	64-000926-0003
575 VAC, 50/60 Hz	64-000926-0004
115 VAC, 50/60 Hz	64-000926-0005

Model 4050 Input Transformers (Loose) with 115 VAC, CT Secondary

These center tapped transformers provide input power for Model 4050 controllers that do not receive their power from a motor winding of the drive or for AT and DCD drives.

Input Transformer Selection Table

Input Voltage (Single Phase)	Part Number
230/460 VAC, 50/60 Hz	64-000361-0001
208 VAC, 50/60 Hz	64-000361-0002
390 VAC, 50/60 Hz	64-000361-0003
575 VAC, 50/60 Hz	64-000361-0004
115 VAC, 50/60 Hz	64-000361-0008

Model EC-2000 Input Transformer for Std. 8A Version

These center tapped transformers provide input power for Model 4050 controllers that do not receive their power from a motor winding of the drive or for AT and DCD drives.

Input Transformer Selection Table

Input Voltage (Single Phase)	Part Number
230/460 Pri/115 Sec	64-000400-0001

Auxiliary Devices

CURRENT TRANSFORMERS

Current Transformer Assemblies Selection Table

Part Number	Full Load Motor Amps
15-000018-0005	5 Amps
15-000018-0048	48 Amps
15-000018-0060	60 Amps
15-000018-0072	72 Amps
15-000018-0090	90 Amps
15-000018-0120	120 Amps
15-000018-0180	180 Amps
15-000018-0200	200 Amps
15-000018-0250	250 Amps
15-000018-0300	300 Amps
15-000018-0400	400 Amps
15-000018-0500	500 Amps
15-000018-0600	600 Amps
15-000018-0800	800 Amps

The above current transformer assemblies are comprised of current transformer, terminal block and burden resistor mounted and wired on a flat panel.

Current Transformers Only Model EC-2000 Selection Table

Part Number	Full Load Motor Amps
64-000020-0005	5 Amps
64-000020-0048	48 Amps
64-000020-0060	60 Amps
64-000020-0072	72 Amps
64-000020-0090	90 Amps
64-000020-0120	120 Amps
64-000020-0180	180 Amps

Furnished taped and dipped with mounting strap and wire.

Current Transformers Only Model EC-2000 Selection Table

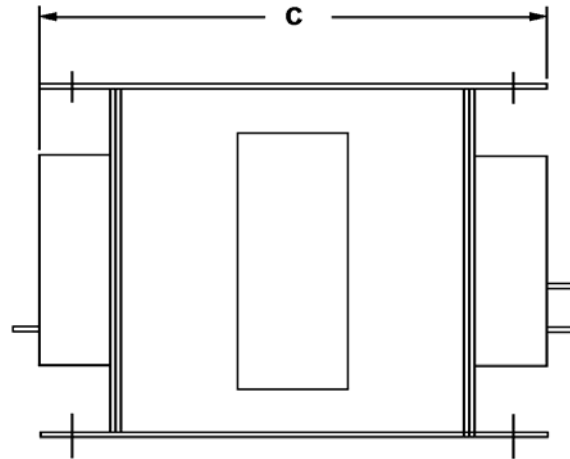
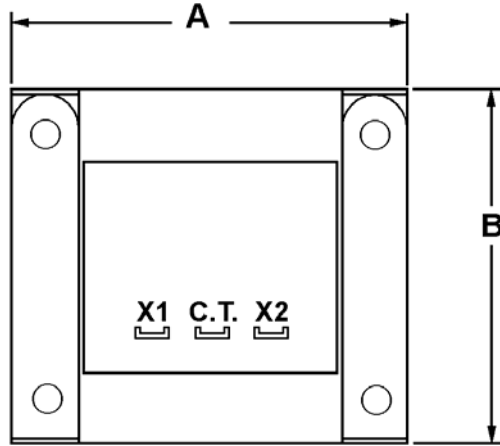
Part Number	Full Load Motor Amps
64-000031-0003	200 Amps
64-000031-0004	250 Amps
64-000031-0005	300 Amps
64-000031-0006	400 Amps
64-000031-0007	500 Amps
64-000031-0008	600 Amps
64-000031-0009	800 Amps

Furnished in molded mounting case and terminals.

Auxiliary Devices

Loose Input Transformer Outline Drawings

Input Transformers (Loose)



Input Voltage Single Phase	Controller Model Number	A	B	C	Secondary VA	Weight (Lbs.)	Drawing Number
230/460V	3000	5.25	4.62	6.00	500	16	64-175-1 B
208V	3000	5.25	4.62	6.00	500	16	64-175-2 B
390V	3000	5.25	4.62	6.00	500	16	64-175-3 B
575V	3000	5.25	4.62	6.00	500	16	64-175-4 B
115V	3000	5.25	4.62	6.00	500	16	64-175-13 B
230/460V	4000	4.50	3.81	6.38	350	15	64-926-1 B
208V	4000	4.50	3.81	6.38	350	15	64-926-2 B
390V	4000	4.50	3.81	6.38	350	15	64-926-3 B
575V	4000	4.50	3.81	6.38	350	15	64-926-4 B
115V	4000	4.50	3.81	6.38	350	15	64-926-5 B
230/460V	4050	5.75	4.38	7.50	1012	24	64-361-1 B
208V	4050	5.75	4.38	7.50	1012	24	64-361-2 B
390V	4050	5.75	4.38	7.50	1012	24	64-361-3 B
575V	4050	5.75	4.38	7.50	1012	24	64-361-4 B
115V	4050	5.75	4.38	7.50	1012	24	64-361-8 B

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