
"E L I N C O"
"G" F R A M E
M O T O R S

*Superseded by 47-E
dated Nov. 10, 1950*

Bulletin 47-D

June 10, 1949

ELECTRIC INDICATOR COMPANY, STAMFORD, CONNECTICUT

"ELINCO" "G" frame A.C. Motors are made as Split Phase and Capacitor Start Types with internal centrifugal switch, or as Capacitor Start and Run Motors. They are available either as Induction Motors or as Synchronous Motors.

The dimensions of either type are identical and are shown on Drawing #A-1094.

The end bells and housing of this frame are cast aluminum, machined to very close tolerances to insure concentric air gap between rotor and stator. The stator and rotor are made of thin, high quality, silicon steel laminations which are assembled and riveted under pressure. The windings are of formvar or formex type insulated wire. After coils are wound in stator, the assembly is preheated to expel moisture, then impregnated with clear phenolic varnish and baked. The lead wires are cotton covered asbestos insulation, rayon covered rubber insulation or nylon jacketed extruded plastic, and are of ample size to carry currents. The rotor stack is pressed on carbon steel shaft and all surfaces ground concentric from centers. The rotor is mounted on selected, precision, felt seal ball bearings, prelubricated with a grease that will last a year or more in most applications. A fan, mounted on rotor shaft, blasts a stream of air over windings to keep motor temperatures within safe limits.

The centrifugal switch has been designed with minimum number of moving parts. All parts subject to wear have been made extra large to prevent breakage.

Provision has been made in rear end bell to allow installation of automatic reset type Klixon thermal switch when required.

A stamped steel base is provided for mounting.

All parts of this motor subject to corrosion have been plated or otherwise treated to make them as corrosion resistant as possible.

As with all other "ELINCO" Motors, this frame has been designed so that special modifications required for your assembly can be provided for without large, additional expense. Special shafts, double end shafts, face mounting or other special requirements have been or can be furnished. Standard flange mounted units are illustrated on Drawing #A-1481.

Standard motors are finished with a baked, blue mottletone or black wrinkle, but other special finishes can be furnished.

"ELINCO" "G" frame Motors are built as single and three phase machines. They can be readily supplied for two phase operation, with either balanced phases, or one phase wound for control purposes for servo applications.

Single phase machines are built for split phase starting or for single or dual value capacitor operation.

Induction and Synchronous Motors are available both in squirrel cage and hysteresis types. Hysteresis units are described in our Bulletin #49-A.

Characteristics of some typical Induction Type, 115 volt, 60 cycle, single phase, continuous duty units are shown below.

Type	Style	HP	Speed	Torque at Full Load In.Lbs.	Starting Torque In.Lbs.	Pull-Up Torque In.Lbs.	Cap.* Value
GS-241	SPS	1/10	1700	3.6	6.2	5.2	None
GS-263	SPS	1/10	3450	1.8	2.5	2.3	None
G-250	SVC	1/15	1080	3.8	3.5	---	12 MFD
G-323	SVC	1/30	1135	1.9	1.4	---	8 MFD
		1/90	500	1.4	1.0	---	5 MFD

*Capacitors should be oil filled units rated for 220 volt A.C. operation.

Characteristics of some typical Synchronous Type, 115 volt, 60 cycle, single phase, continuous duty units are shown below.

Type	Style	HP	Speed	Torque at Full Load In.Lbs.	Starting Torque In.Lbs.	Pull-In Torque In.Lbs.	Cap.** Value
GS-197	SPS	1/20	1800	1.75	2.8	2.7	None
GS-295	DVC	1/12	1800	2.92	3.2	3.15	8/8
GS-333	DVC	1/15	3600	1.17	1.4	1.60	24/6

**These units require an A.C. electrolytic capacitor rated 220 volt A.C. for starting, and an oil filled capacitor rated 220 volt A.C. for running. Capacitors are listed, from left to right, starting and running, respectively.

SPS - Split Phase Starting SVC - Single Value Capacitor
DVC - Dual Value Capacitor

Characteristics of some typical three phase, 60 cycle units are as follows:

Type	Voltage	HP	Speed	Torque at Full Load In.Lbs.	Starting Torque In.Lbs.	Pull-In Torque In. Lbs.	Duty
G-234	220	1/20	1800	1.75	9.0	2.2	Cont.
G-320	220	1/6	3500	3.0	4.5	---	Cont.

Special units, designed for high starting torque and for constant torque applications, are also made in single and three phase types. These are applicable for take-up and re-wind motors for film, tape, etc., as well as many other types of service. Some typical units of this type are shown below.

Single Phase, 60 Cycle

Type	Voltage	Style	Speed No Load	Locked Rotor Torque In. Lbs.	Capacitor* Value	Duty
G-288	115	SVC	540	4.7	8.0	Blast
G-289	115	SVC	500	0.7	1.5	Cooled
G-302	115	SVC	1700	2.6	8.0	Cont.
G-399	115	SVC	1150	5.0	7.0	Inter.
						Inter.

*Capacitors should be oil filled units rated for 220 volts A.C. operation.

Three Phase, 60 Cycle

Type	Voltage	Speed No Load	Locked Rotor Torque In. Lbs.	Duty
G-290	208	800	1.3	Cont.
G-291	208	750	.68	Cont.
G-232	208	1795	22.0	Inter.

Single, two and three phase A.C. Generators of the permanent magnet type are also available in this frame, in a variety of voltage and current ratings. These units are customarily designed for 60 cycle output at 3600 RPM.

Two such units are shown below, both for single phase service.

Type	Full Load Voltage	Max. Power Output Watts	No Load Voltage	Power Factor	Wave Form
G-334	120	30	153	.75	Excellent
GE-367	12.0	40	---	Unity	----

A new "GL" frame, one inch longer than the existing "G" unit is now under development, and units will become available corresponding to those shown above. This unit is designed to deliver approximately 50% more power for a given type or, for the same output, to operate with lower temperature rise.

"ELINCO" CATALOGS AND BULLETINS
Including Descriptive Material, Drawings and
General Performance Data on Units Shown.

Catalog #43

A.C. Voltage and Sine Wave Generators in frames BS, FS and FB.
D.C. Motors and Voltage Generators in frames B, F, CB and FB.
Drag Cup Motors and Induction Generators in frames B and F.
Self-Synchronous Units in frames B, F, FB and J.

Bulletin #45

Midget Induction and Synchronous Units, not including Hysteresis types, in frames BS, FS and FBS. Ratings range from 1/200 to 1/1000 HP.

Bulletin #46

A.C. and Sine Wave Generators in frames ASP and ALP.
D.C. Motors and Generators, series, shunt, separately excited and permanent magnet fields in frames ASC and ALC.
Induction and Synchronous Motors, not including Hysteresis types, in 1/20 to 1/250 HP in ASP, ALP, ASPS or ALPS, single value capacitor, split phase, two or three phase units.
Governor Controlled Constant Speed Motors in D.C. shunt, series or permanent magnet field, and A.C. or Universal series motors.

Bulletin #47

Induction and Synchronous Motors, not including Hysteresis types, in 1/6 to 1/90 horsepower range in G frame.
Single, two and three phase A.C. Generators, bi-polar or multi-polar with permanent magnet fields, in C frame.

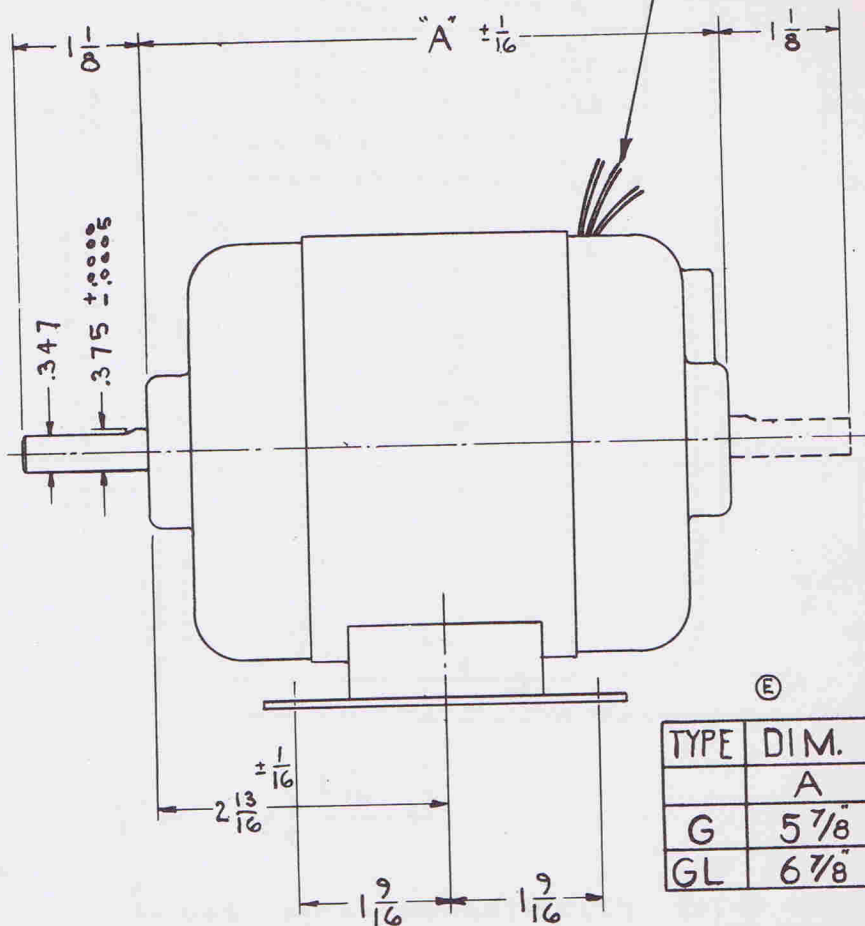
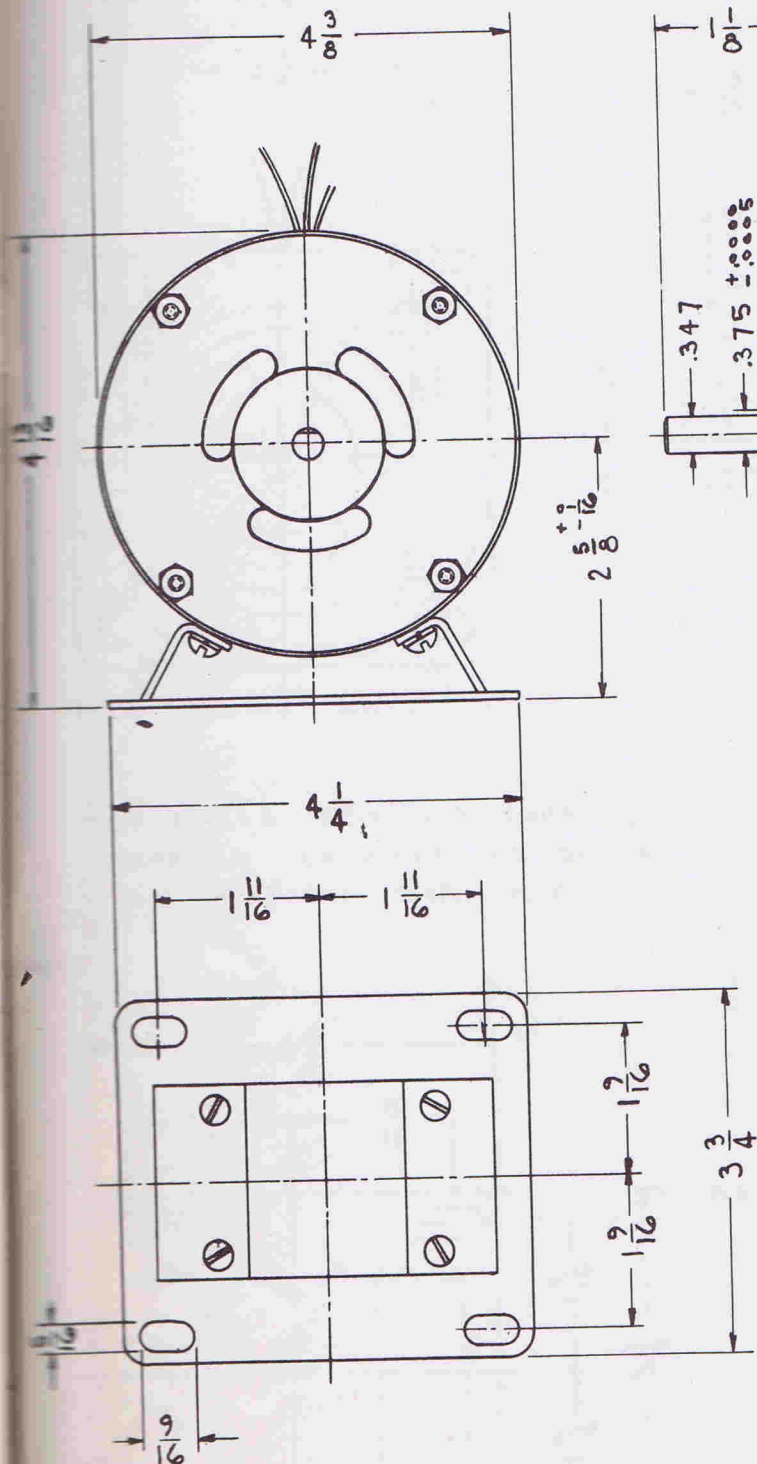
Bulletin #48

All Hysteresis Units for both synchronous and sub-synchronous applications. This bulletin, at present, lists single speed units in horsepower ranges from 1/20 to 1/150, built as ASH, ALH and GH units. The listings will be extended to include from 1/16 HP in GH unit to 1/750 HP in BSH unit.
Dual Speed Units from 1/40 to 1/200 HP are listed, and listings are to be extended to 1/20 HP to 1/1200 HP.
A new, three speed unit will soon be listed.

Catalog "FB"

Permanent Magnet A.C. and D.C. Generators and D.C. Motors.
Shunt and Series Wound D.C. Motors and Generators.
Split Field Series Motors for A.C. and D.C.
Split Field Separately Excited Motors for servo applications.
Universal Motors.

FLEXIBLE LEADS
APPROX. 12" LONG



E	
TYPE	DIM.
	A
G	5 7/8
GL	6 7/8

MADE WITH DOUBLE END SHAFT WHEN
REQUIRED IN WHICH CASE TYPE NO. IS
FOLLOWED BY SUFFIX "D"

NOTES:

HOUSING AND END BELLS MADE
OF CAST ALUMINUM.
BASE MADE OF PRESSED STEEL.
FELT SEAL BALL BEARINGS.

ELECTRIC INDICATOR CO.

STAMFORD, CONN.

OUTLINE OF TYPE "G", AND "GL"

FRAME

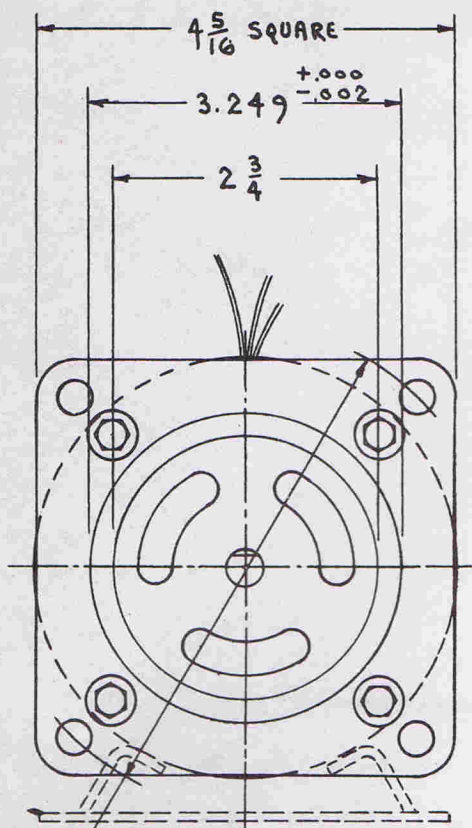
REVISED	DATE	APPROVED
1-31-47		
6-1-48		
2-7-48		
4-8-49		

THIS DRAWING MUST NOT BE USED
FOR CONSTRUCTION UNTIL DATED
AND SIGNED AS CHECKED AND
APPROVED

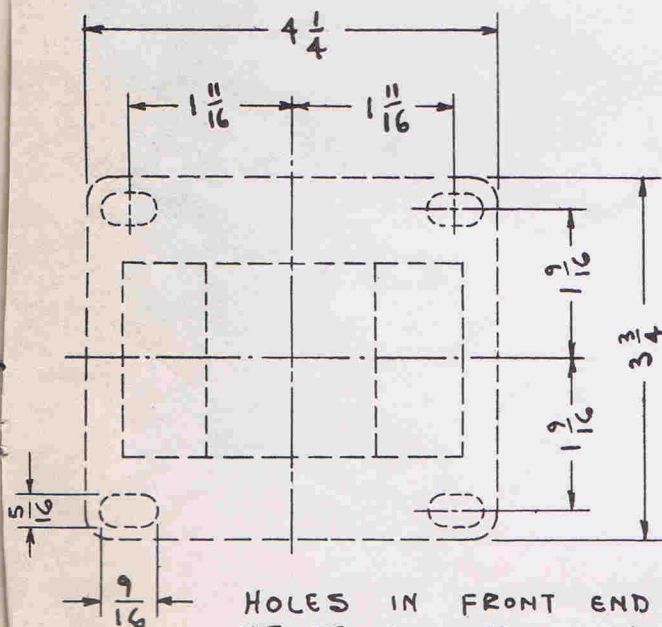
DESTROY ALL PRINTS MADE
PREVIOUS TO DATE OF LAST REVISION

MADE: J. M. R. DATE: 12-11-46
CHECKED: R. K. APPROVED
SCALE = HALF SIZE

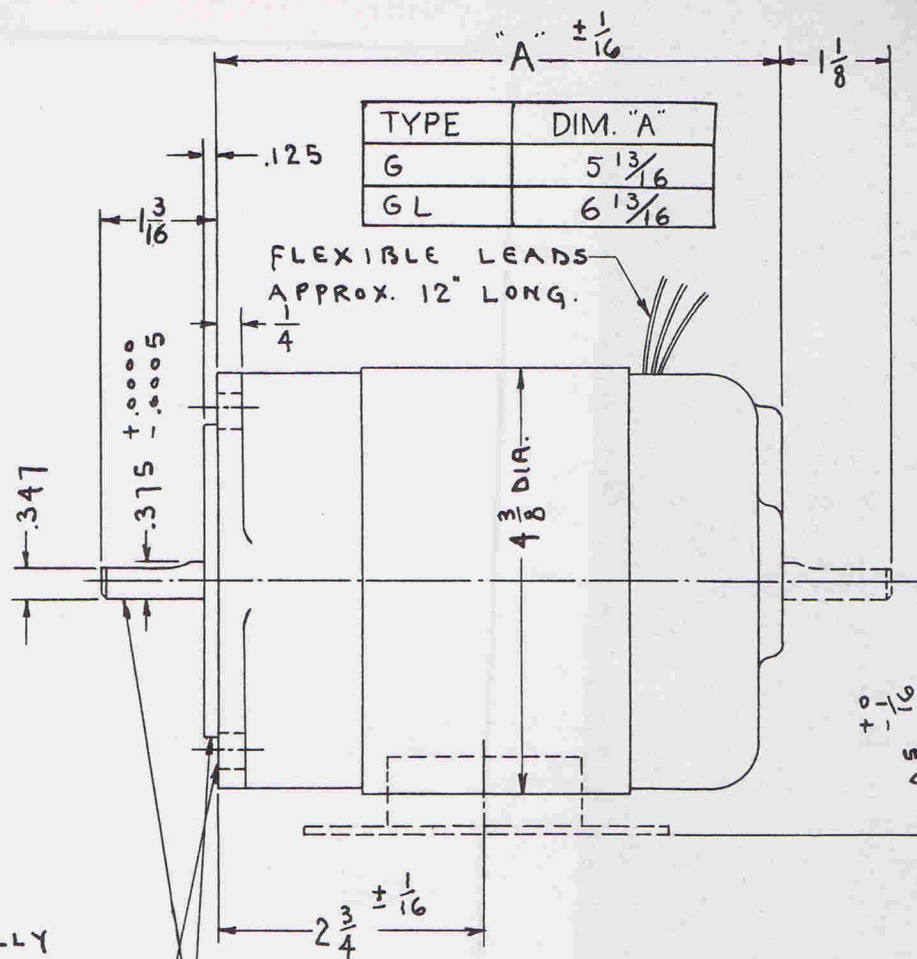
No. A-1094-F



4 HOLES .344 DIA. EQUALLY SPACED LOCATED AS SHOWN ON A 5.000 DIA. B.C.



HOLES IN FRONT END BELL ARE FOR VENTILATION AND MUST NOT BE BLOCKED WITHOUT APPROVAL OF OUR ENGINEERING DEPT.



TYPE	DIM. "A"
G	5 ¹³ / ₁₆
GL	6 ¹³ / ₁₆

FLEXIBLE LEADS APPROX. 12" LONG.

.005 MAX. ECCENTRICITY TOTAL INDICATOR READING ON THESE TWO SURFACES.

THIS SURFACE TO BE SQUARE WITH SHAFT WITHIN .005 TOTAL INDICATOR READING

NOTES.

MADE WITH DOUBLE END SHAFT WHEN REQUIRED IN WHICH CASE TYPE NO. IS FOLLOWED BY SUFFIX "D" MOUNTING BASE FURNISHED ONLY WHEN SPECIFIED ON ORDER. HOUSING AND END BELLS MADE OF CAST ALUMINUM. BASE MADE OF PRESSED STEEL. FELT SEAL BALL BEARINGS.

OUTLINE OF STYLE "G" MOTORS FOR FLANGE MOUNTING

DRAWN BY J.M.R.

DATE 8-31-48

APP'D. R.K.

SCALE NONE

ELECTRIC INDICATOR COMPANY

STAMFORD, CONN.

No. A-1481

6-6-49 ADDED TABLE

4-6-49 CORRECTED DIM.

3-1-48 CORRECTED DIM.

REVISIONS