



GE INDUCTION HEATING AND MELTING CAPACITORS

Watercooled Designs - Catalog Number 19L series

FUNCTION: FOR USE IN TANK AND/OR TUNING CIRCUITS.

TERMINALS: COPPER STUDS -TIN PLATED.
THE CURRENT RATING IS UP TO 300 AMPS RMS
CONTINUOUS; MAXIMUM.

COPPER TUBE:
THE CURRENT RATING IS UP TO 2400 AMPS RMS
CONTINUOUS MAXIMUM; PER PAIR

BUSHING:
ELECTRICAL GRADE PHENOLIC FOR INDOORS USE ONLY.
AN INSTRUCTION SHEET IS AVAILABLE FOR BUSHING
CHANGEOUT.

WASHER:
GE USES A SPLIT RING SILICON BRONZE ON THE STUD
TERMINAL ONLY.

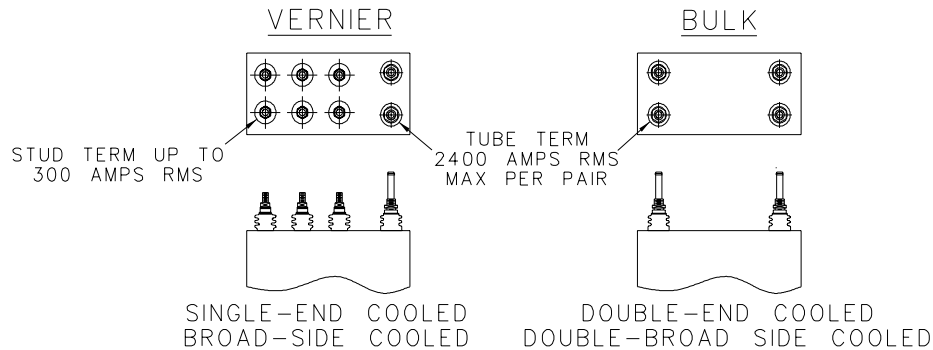
PRESSURE SWITCH:
TEXAS INSTRUMENTS SPST RATED 12 PSI NORMALLY
CLOSED; NON-RESETTING IS THE STANDARD PRESSURE
SWITCH.
THE STANDARD MOUNTING OF THE PRESSURE SWITCH IS ON
THE TOP OF THE CASE.
OEM'S NORMALLY SPECIFY PRESSURE SWITCHES ON THEIR
CAPACITORS. GE REQUIRES PRESSURE SWITCHES ON
METALLIZED DIELECTRIC CAPACITORS.
AN INSTRUCTION SHEET IS AVAILABLE FOR FIELD
CHANGEOUT OF THE PRESSURE SWITCH.



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COMMON INDUSTRY NAMES FOR TERMINAL ARRANGEMENT



CASE:

USUALLY ALUMINUM -- 50 & 60 HZ DESIGNS ARE IN STAINLESS STEEL.

DEAD CASE -- COIL TERMINAL IS ISOLATED FROM THE CASE

LIVE CASE -- COIL TERMINAL IS NOT ISOLATED FROM THE CASE, AND IS AT THE SAME VOLTAGE POTENTIAL AS THE CASE.

**THE RECOMMENDED MINIMUM MOUNTING DISTANCE BETWEEN CASES IS ONE INCH.

BRACKETS: HAVE 1/2" x 5/8" MOUNTING SLOTS.

TYPICAL CASE DIMENSIONS -- 6.25Dx13.5Wx22H (INCHES)

MAX. CASE DIMENSIONS -- 8.00Dx22.0Wx28H (INCHES)

<u>CASE THICKNESS:</u>	SIDE PANELS:	0.062 INCHES
	BASE AND COVER:	0.125 INCHES

LIQUID COOLANT: GE RECOMMENDS THE USE OF CLEAN AND/OR DE-MINERALIZED WATER WITH AN EXIT TEMPERATURE NOT TO EXCEED 45°C MAX. ON THE DOUBLE-END COOLED UNITS. THE WATER LOOP SHOULD BE LONG ENOUGH TO AVOID A SHORT CIRCUIT IN THE ELECTRICAL SYSTEM.



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LIFE EXPECTANCY: 15-20 YEARS CONTINUOUS DUTY
ONE YEAR EQUALS 8760 HOURS
FAILURE MODE -- SHORT CIRCUIT

LOSSES: 0.2 TO 0.3 WATTS/KVAR UP TO 5 KHZ
0.5 WATTS/KVAR UP TO 50 KHZ

DIELECTRIC: "*CONVENTIONAL DIELECTRIC SYSTEM*" - EMPLOYS A
BIAXIALLY ORIENTED POLYPROPYLENE FILM/ALUMINUM
FOIL FOR APPLICATIONS WITH STRESS UP TO 1700 V/MIL OR
67 V/MICRON.

DIELECTRIC: "*GEMVAR DIELECTRIC SYSTEM*" THIS IS A METALLIZED
DIELECTRIC. RATINGS AT 60 HZ ARE AIR COOLED.
A PRESSURE SWITCH MUST BE USED WITH THIS TYPE OF
DESIGN. THIS DIELECTRIC SYSTEM IS ALSO USED IN
DC FILTER APPLICATIONS.

DIELECTRIC LIQUID:

ALL FILM UNITS

DIELEKTROL VII

METALLIZED UNITS
LV AC AND FILTER

DIELEKTROL VI



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ELECTRICAL FORMULAS:

For Sinoidal Wave Forms:

$$\text{KVAR} = 2\pi fCV^2$$

$$I_{\text{rms}} = \text{KVAR}/V = 2\pi fCV$$

WHERE:

V = VOLTS KV

f = FREQUENCY KHz

C = CAPACITANCE IN FARADS μF

NOTE: MOST CAPACITORS ARE RATED IN MICRO FARADS (μF).
MANY CAPACITORS ARE RATED IN KVAR. THEREFORE, "VAR" AND
KVAR CAN BE EXPRESSED IN MICRO FARADS AND KILOVOLTS
WITH THE SAME RESULT.

DESIGN LIMITATION:

FOR WATER COOLED UNITS -

- 300 AMP RMS PER TERMINAL MAX.
- 2400 AMPS RMS PER PAIR OF COIL TERMINALS
- 50 KHZ FOR CONVENTIONAL DIELECTRIC SYSTEM



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CUSTOMER INFORMATION:

Name _____

Address _____

Tel # (Country Code) ____ (City Code) ____ (Number) _____

Fax # (Country Code) ____ (City Code) ____ (Number) _____

Customer Specify:

Volts RMS _____

Frequency _____

KVAR Per Case or Bank _____

Live or Dead _____

Case -- Max. Height, if Limited _____

Location of Brackets _____

Bulk or Vernier _____

Quantity Required _____

If waveforms are not sinoidal, then customer should supply us with the waveform.

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