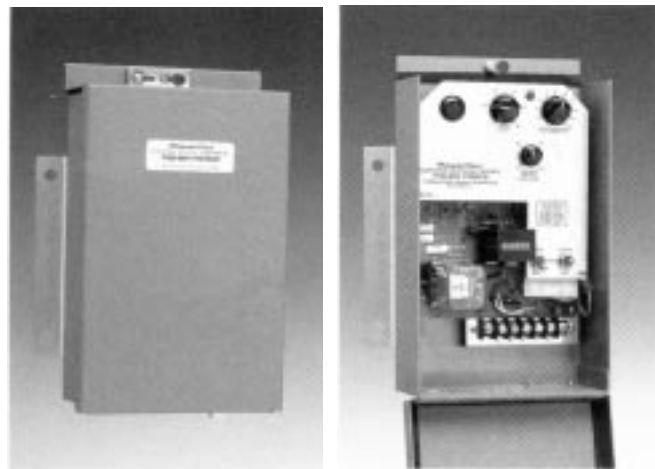
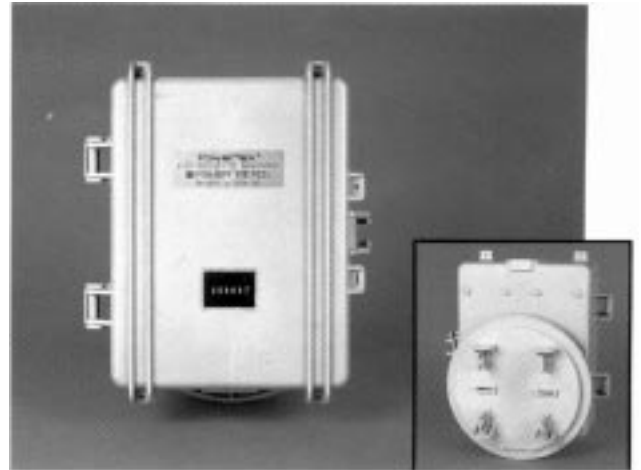


POWERFLEX®

Low Profile Capacitor Switching Controls



- Single function temperature, current, voltage and VAR applications. For time control information refer to the low-cost Fisher Pierce 5680L Series (FP085).
- True RMS voltage and current sensing circuits
- Small, lightweight enclosure.
- Meter socket mounting or bracket mounting.
- All sense and time circuitry completely solid state.
- MOV surge protection on all inputs.
- C.T. inputs are isolated from line and neutral.
- Indicating LED for easy testing of trip and close set points.
- Close operations counter, auto-manual switch, fuse and test jacks, standard on all units.

Fisher Pierce 70A/80A Series of capacitor Switching controls offer the user an economic choice for local capacitor bank switching. These single function controls are packaged in NEMA 3R reinforced Lexan enclosure (70A Series) or aluminum enclosure (80A Series).

The voltage current, VAR and temperature controls utilize a Cap On setting and a bandwidth Cap Off setting. The bandwidth type controls simplify settings and prevent errors.

Temperature controls use electronic temperature sensing integrated circuits. VAR controls use potential transformers and current input (1301, AT929 Series or 5A C.T.) for reactive ampere sensing.

With the exception of VAR sensing, all controls except 120/240, 50/60 Hz. The current signal input for current and VAR controls must be indicated by model number.



General Information

Voltage: Cap On with Cap Off bandwidth added to the Cap On setting. The Bias setting is added to the Cap On setting, similar to bandwidth.

Current: Cap On with Cap Off bandwidth, a percentage of Cap On setting.

VAr: Cap On (lagging amperes reactive) with Cap Off less lagging than Cap On.

Temperature: Cap On (close with temperature increase) with Cap Off degrees below Cap On.
Cap On (close with temperature decrease) with Cap Off degrees above Cap On.

Specifications

INPUT VOLTAGES (ALL MODELS)

105 to 135 Vac, 50/60 Hz (VAr, 60 Hz only)
200 to 260 Vac, 50 Hz (except VAr)

SENSING SIGNALS

Voltage — 2400 Series
105 to 135 and 200 to 260 Vac, 50/60 Hz.

VAr — 4620, 4621 Series
High Accuracy 1301 Series Sensor

VAr — 4608, 4609 Series
5 Aac C.T. secondary

Current — 4844 Series
1301 Series Sensor

Current — 4846 Series
5 Aac C.T. secondary

Temperature — 5732 & 5734 Series
Fisher Pierce Temperature Sensor

VAr — 4608 Series (C.T. 12 Aac max. - Wye System)
4609 Series (C.T. 12 Aac max. - Delta System)

Cap On Ranges: Ar \pm 3% full scale/max. secondary C.T.
current: 0 to 0.3/3, 0 to 1.2/12.

Cap Off Ranges less lagging than Cap On:
0 to 0.45, 0 to 1.8 Ar \pm 2% of setting.

Temperature — 5732 Series
(Close with increasing temperature.)

Cap On Range: 70 to 120°F \pm 3°

Cap Off Range: 2 to 20°F \pm 2°.

Temperature — 5734 Series
(Close with decreasing temperature.)

Cap On Range: 0 to 50°F \pm 3°

Cap Off Range: 2 to 20°F \pm 2°.

OPERATING RANGES AND ACCURACY:

Voltage — 2406 Series
Cap On: 105 to 130 Vac \pm 1 Vac, 7X and 8X Series
200 to 260 Vac \pm 2 Vac, 73 Series.
Cap Off Bandwidth: 1 to 10 \pm 0.5 Vac. (120V input).
2 to 20 \pm 1.0 Vac. (240V input).

Voltage — 2412 Series
Cap On: 105 to 130 Vac, 7X and 8X Series
200 to 260 Vac \pm 2 Vac, 73 Series.
Cap Off Bandwidth: 1 to 10 \pm 0.5 Vac (120V input).
2 to 20 \pm 0.5 Vac (240V input).
Bias: 1 to 10 \pm 0.5 Vac (120V input).
2 to 20 \pm 1.0 Vac (240V input).
Bias Actuation: 2412 - external contact closure.

Current — 4844 Series (1301 Series Sensor)
Cap On Ranges: 1 to 30, 5 to 150, 20 to 600,
60 to 1800 Aac \pm 5% of setting \pm 2% of range.
Cap Off Bandwidth: 60 to 100% \pm 2% of setting.

Current — 4846 Series (C.T. 12 Aac max.)
Cap On Ranges: 0.1 to 3, 0.4 to 12 Aac,
 \pm 5% of setting and \pm 2% of range.
Cap Off Bandwidth: 60 to 100% \pm 2% of setting.

Current — 4847 Series (AT929-10 Sensor)
*Cap On Ranges: 1 to 30, 5 to 150, 20 to 600 Aac
 \pm 5% of setting \pm 2% of range.
Cap Off Bandwidth: 60 to 100% \pm 2% of setting.

VAr — 4620 Series (High accuracy - 1301 - Wye system).
4621 Series (High accuracy - 1301 - Delta system).
Cap On Ranges: Ar \pm 3% full scale/max. line current:
0 to 30/200, 0 to 120/800, 0 to 300/2000.
Cap Off Ranges less lagging than Cap On:
0 to 45, 0 to 180, 0 to 450 Ar \pm 2% of setting.

OUTPUT CONTRACTOR:

10 Aac continuous at 120/240 Vac.
50 Aac, 50% PF, 125 Vac,
6 cycles make only.

LOAD FUSE:

FNM5 slo-blo., 5 Amperes (73, 75, 76 and 86 Series)
FNM10 slo-blo., 10 Amperes (78 and 88 Series)

OPERATING TEMPERATURE:

-30°C to + 60°C

TIME DELAY RANGES:

Voltage, Current and VAr
3-150 seconds, single range.
3-150 and 150-300 dual range.
 \pm 5% of range \pm 5% setting.

Time Switch

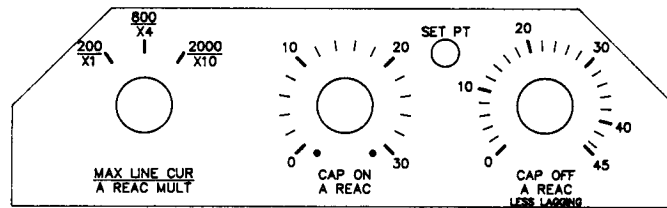
Not Applicable.

Temperature

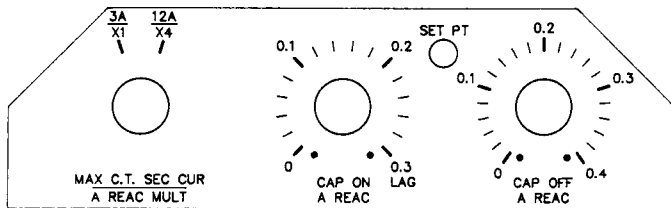
30-120 minutes (60 second test position).

*Do not use AT929 Sensor on a line exceeding 600A continuous

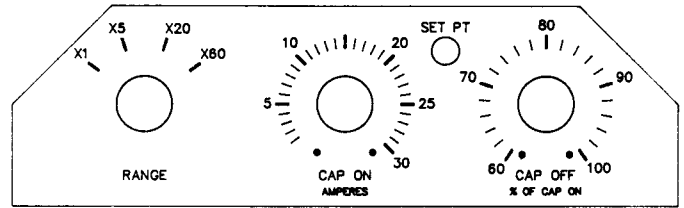
Typical Dial Calibrations



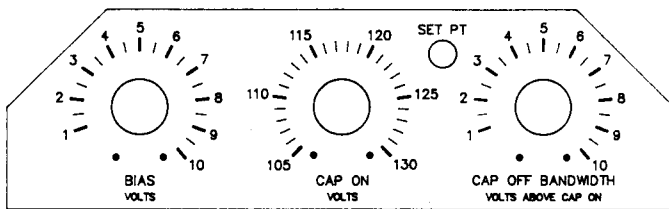
1301 SENSOR INPUT VAR SENSING — 4620/4621 Series



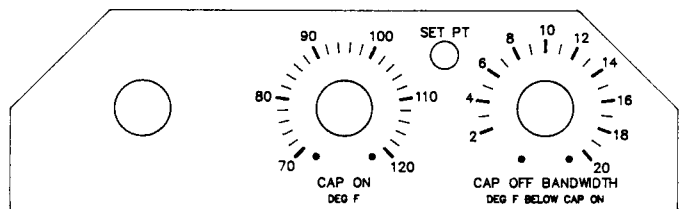
C.T. INPUT VAR SENSING — 4608/4609 Series



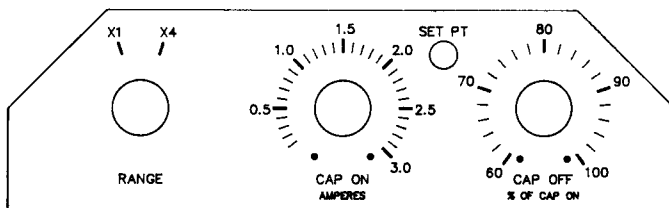
1301/AT929 SENSOR INPUT CURRENT SENSING — 4844/4847 Series



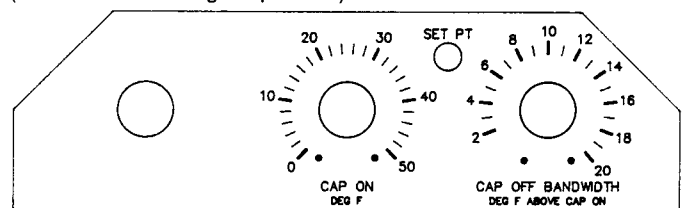
TRUE RMS VOLTAGE SENSING — 2400 Series (120V shown)



TEMPERATURE SENSING — 5732 Series
(Close with increasing temperature)



C.T. CURRENT SENSING — 4846 Series



TEMPERATURE SENSING — 5734 Series
(Close with decreasing temperature)

EXTERNAL METER SOCKET WIRING CODES (Front View of Meter Socket)

EXTERNAL METER SOCKET WIRING NOTES

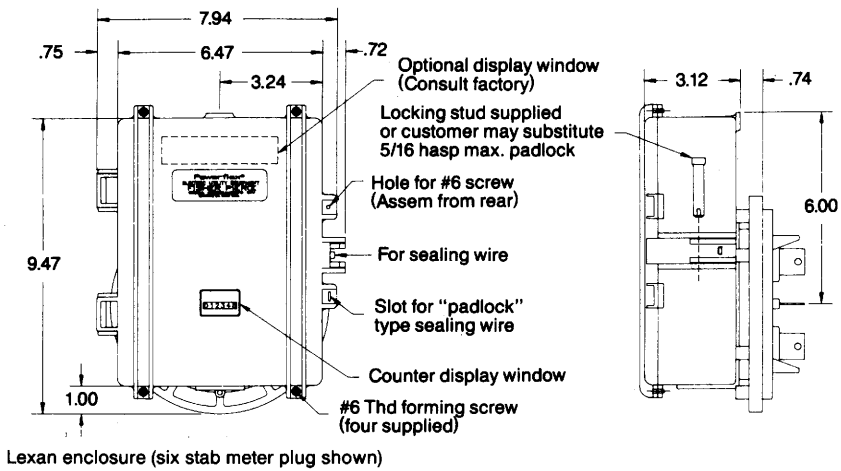
- * (A) 120 Vac Line
- (B) 120 Vac Neutral
- (C) Trip
- (D) Close
- (E) 1301 Sensor white lead
- (F) 1301 Sensor black lead
- (G) Contact close = Bias In

* (A) For safety reasons, in all controls the line stab is shorter than the other stabs.

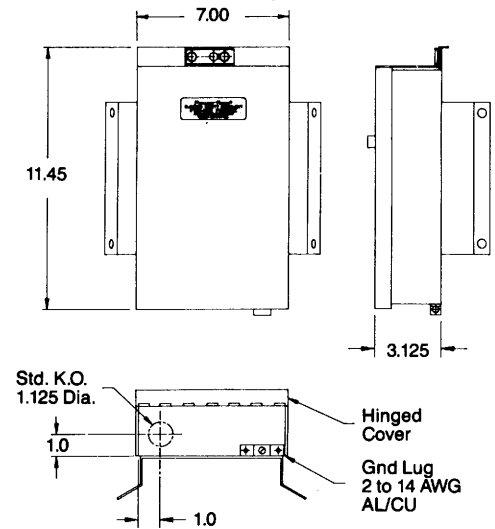
EXTERNAL WIRING CODE (J) WALL OR POLE MOUNTING (80 Series, aluminum enclosure only)

Line Neut Sensor Trip Close

Mechanical Data (All dimensions in inches.)

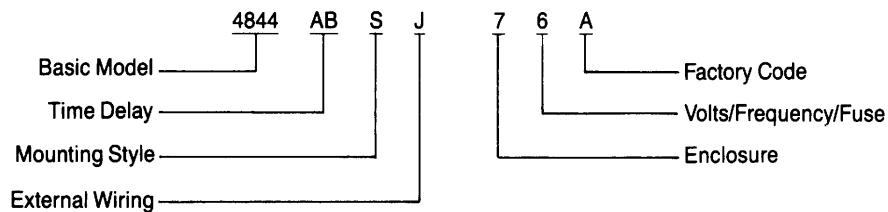


Aluminum Enclosure (pole bracket shown)



Ordering Information To Order: Follow the model number examples as shown; then select from the tables below.

CAPACITOR SWITCHING MODEL NUMBERS



BASIC MODEL

Number	Basic Model
2406	True RMS voltage, no bias
2412	True RMS voltage, bias by external contact
4620	VAR (1301 Ser. input) grounded wye system
4621	VAR (1301 Ser. input) 3W - Delta
4608	VAR (C.T. 12 Aac cont.) grounded wye system
4609	VAR (C.T. 12 Aac cont.) ungrounded delta system
*4844	True RMS current (1301 Ser. input)
4846	True RMS current (C.T.)
4847	True RMS current (AT929-10 Ser. input)
5732	Electronic temperature (70-120°F, close with increase)
5734	Electronic temperature (0-50°F, close with decrease)

MOUNTING STYLE

Code	Mounting Style
S	Six stab meter plug (Lexan or aluminum)
F	Four stab meter plug (Lexan or aluminum)
W	Flat wall bracket (aluminum only)
B	Standard pole bracket (aluminum only)

ENCLOSURE

Code	Enclosure
7	Glass reinforced Lexan (6.5" x 8.6" x 3.1")
8	Aluminum (7.0" x 11.5" x 3.1")

TIME DELAY

Code	Time Delay
AA	3-150 sec. adjustable, one range; Voltage, Current and VAR
AB	3-300 sec. adjustable, two ranges; Voltage, Current and VAR
T	30-120 min.; Temp. only (with 60 sec. test position)

VOLTAGE/FREQUENCY/FUSE

Code	Input	Fuse
3	240 Vac, 50 Hz	5A
5	120 Vac, 50 Hz	5A
6	120 Vac, 60 Hz	5A
8	120 Vac, 60 Hz	10A

Specifications subject to change.