SUPERBUTE™
JKW-7
OUTDOOR CURRENT TRANSFORMER

34500V, 5A to 800A, 50/60Hz
200kV BIL

APPLICATIONS

Designed for outdoor service; suitable for revenue metering. Rated Distribution class with a compact design for maximizing efficiency in solid-state revenue metering applications. Available in a variety of ratio as outlined in the unit selection table below, with additional designs available upon request.

FEATURES

- Weight: 60lbs (unit), 75lbs (shipping)
- Dimensions: 19.88" (h) x 10.88" (w) x 9.51" (d)
- Creep Distance: 27.62" [701.5mm]
- Strike Distance: 16.53" [420mm]
- Insulation: HY-BUTE 60™ Butyl Rubber
- Insulation Class: 200kV BIL, Outdoor
- Design Standard: IEEE C57.13
- Measurement Canada Approval: AE-0540, AE-1060

REFERENCE DRAWINGS & ACCESSORIES

Accuracy Curve(s) at 60Hz

- Single-Ratio
  - 10 A to 200 A, and 400 A - 9689241906
  - 300 A - 9689241907
  - 600 A and 800 A - 9689241908
- Dual-Ratio
  - 10/20 A to 150/300 A and 300/600 A Models,
    Low Ratio - 9932600014
    High Ratio - 9932600015
  - 200/400 A and 400/800 A Models,
    Low Ratio - 9932600016
    High Ratio - 9932600017

Excitation Curve(s)

- 10 A to 200:5 9932600105
- 400:5 9932600207
- 600:5 9932600106

Accessories

- "L" Mounting Brackets 8944634002
- Channel Bracket 5466227001
- Suspension Hooks 8944630001
- Secondary Conduit Box 9689897001

UNIT SELECTION

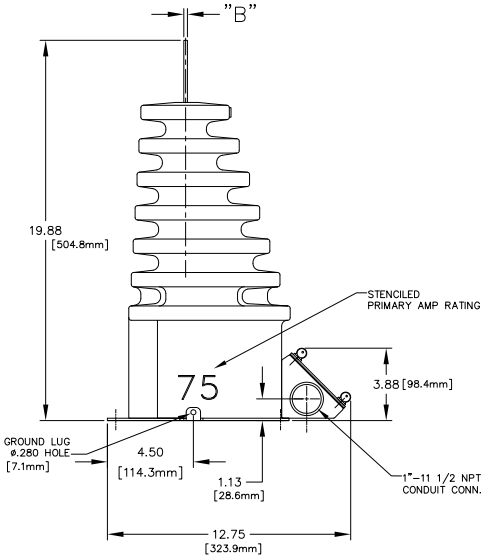
CURRENT RATIO	METER CLASS	RF[1]	MECHANICAL LIMIT, AMPS	1-SEC THERMAL LIMIT, AMPS[2]	CATALOG NUMBER
SINGLE RATIO					
5:5	0.3B0.2	3.0	4000	2250	757X050030
10:5	0.3B0.5	3.0	4000	2250	757X050001
15:5	0.3B0.5	3.0	6000	3375	757X050002
20:5	0.3B0.5	3.0	8000	4500	757X050003
25:5	0.3B0.5	3.0	10000	5625	757X050004
30:5	0.3B0.5	3.0	12000	6750	757X050005
40:5	0.3B0.5	3.0	16000	9000	757X050006
50:5	0.3B0.5	3.0	20000	11250	757X050007
75:5	0.3B0.5	3.0	24975	13875	757X050008
100:5	0.3B0.5	3.0	40000	22500	757X050009
150:5	0.3B0.5	3.0	49950	27750	757X050010
200:5	0.3B0.5	3.0	66600	45000	757X050011
300:5	0.3B0.5	3.0	100000	55500	757X050012
400:5	0.3B0.5	2.5	100000	56000	757X050013
600:5	0.3B0.5	2.0	100000	60000	757X050014
800:5	0.3B0.5	1.5	100000	60000	757X050015
1000:5	0.3B1.8	1.25	100000	60000	757X050016
DUAL RATIO					
10/20:5	0.3B0.2/0.3B0.5	3.0/2.0	4780	2250/2760	757X050018
15/30:5	0.3B0.2/0.3B0.5	3.0/2.0	7980	3375/4500	757X050019
20/40:5	0.3B0.2/0.3B0.5	3.0/2.0	10320	4500/5600	757X050020
25/50:5	0.3B0.2/0.3B0.5	3.0/2.0	12150	5625/6750	757X050021
50/100:5	0.3B0.2/0.3B0.5	3.0/2.0	24900	11250/15000	757X050022
75/150:5	0.3B0.2/0.3B0.5	3.0/2.0	39900	16875/21000	757X050023
100/200:5	0.3B0.2/0.3B0.5	3.0/2.0	49800	22500/25000	757X050024
150/300:5	0.3B0.2/0.3B0.5	3.0/2.0	66600	33750/40500	757X050025
200/400:5	0.3B0.2/0.3B0.5	3.0/2.0	66400	40000/40000	757X050026
300/600:5	0.3B0.2/0.3B0.5	3.0/2.0	99600	63000/63000	757X050027
400/800:5	0.3B0.5/0.3B0.9	2.0/1.5	100000	64000/64000	757X050028

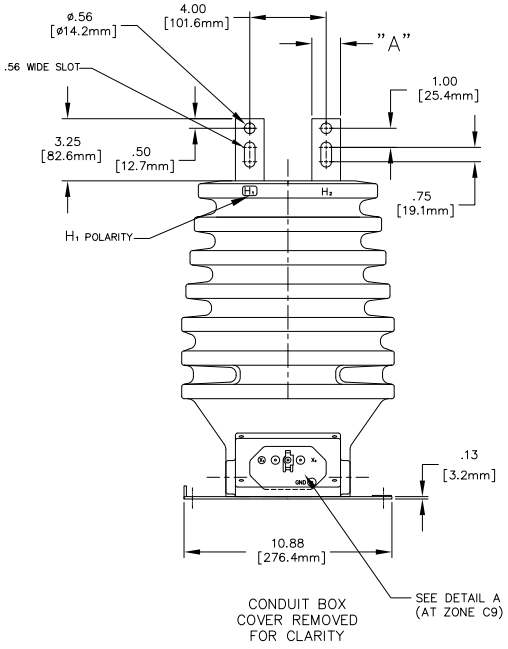
1. *"RF" is defined as Continuous Thermal Rating Factor at 30°C, ambient*
2. *With burden of B-0.1 or greater*

SELECTION GUIDE

PRODUCT CLASS	5KV	8.7KV	15KV	25KV	35KV	46KV	69KV
STATION CLASS	**JKW3**	**JKW4**	**JKW5**	**JKW150**	**JKW200**	**JKW250**	**JKW350**
BIL	60kV BIL	75kV BIL	110kV BIL	150kV BIL	200kV BIL	250kV BIL	350kV BIL
Accuracy, RF	0.3B1.8, RF 1.5	0.3B1.8, RF 1.5	0.3B1.8, RF 1.5	0.3B1.8, RF 2.0/1.5	0.3B1.8, RF 2.0/1.5	0.3B1.8, RF 2.0/1.5	0.3B1.8, RF 2.0/1.5
Relay Class	T100	T100	T200	T200/T400	T200/T400	T200/T400	T200/T400
Creep Distance	12.5"	12.5"	24"	44.1"	56.6"	71.0"	86.6"
Net Weight	40lbs	40lbs	60lbs	323lbs	348lbs	543lbs	593lbs
DISTRIBUTION CLASS	**JCK3**	**JCK4**	**JCK5**	**JKW6**	**JKW7**		
BIL	60kV BIL	75kV BIL	110kV BIL	150kV BIL	200kV BIL		
Accuracy, RF	0.3B0.5, RF 3.0	0.3B0.5, RF 3.0	0.3B0.5, RF 3.0	0.3B0.9, RF 3.0	0.3B0.5, RF 3.0		
Relay Class	- - -	- - -	- - -	T100 or T200	- - -		
Creep Distance	15.5"	15.5"	15.5"	24"	27.6"		
Net Weight	35lbs	35lbs	35lbs	80lbs	72lbs		

DIMENSIONS, MOUNTING & WIRING DIAGRAM





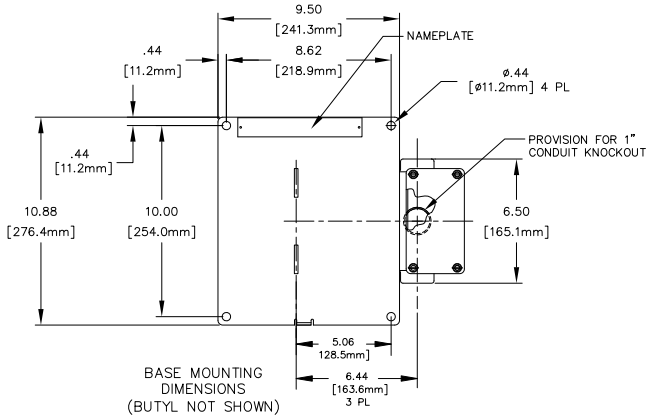
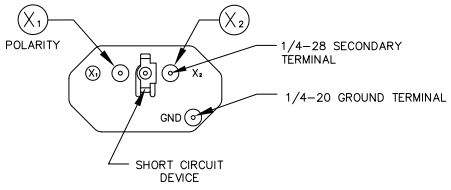
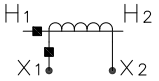


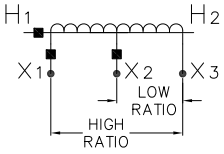
TABLE I		
AMPS	"A"	"B"
10 TO 150	1.50 [38.1mm]	.18 [4.8mm]
200	2.00 [50.8mm]	.25 [6.4mm]
300 TO 1000	2.00 [50.8mm]	.38 [9.5mm]



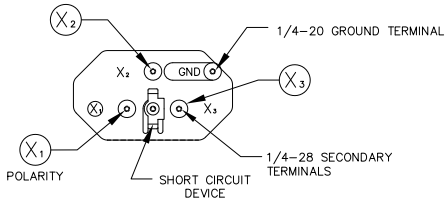
DETAIL A
SINGLE SECONDARY TERMINAL DETAILS



SINGLE SECONDARY
CONNECTION DIAGRAM



TAPPED SECONDARY
CONNECTION DIAGRAM



DETAIL A
TAPPED SECONDARY TERMINAL DETAILS

TYPICAL NAMEPLATE

Current Transformer

Type
JKW-7

Ratio
15:5
Amp

Bil 200kV NSV 34.5kV 50-60 Hz
RF = 3.0 @ 30°C Amb
Acc Cl @ 60Hz 0.3 B-0.1 THRU B-0.5

APPR# AE-0540

Caution: Read GEH-230

Cat. 756X050002

Mfd. 11 14
Ser. 7328595

CONSTRUCTION DETAILS

Insulation

The transformer design is constructed using GE's premium HY-BUTE 60 molded butyl rubber insulation for the transformer body. First introduced in 1955, GE's unique formulation is non-arc tracking and resistant to heat, chemicals, ozone and ultraviolet. This tough, resilient insulating material has proven to be superior in handling mechanical, electrical and environmental extremes, when compared against other insulation designs such as porcelain, urethane or epoxy.

Core & Coil

The core is made from high-quality, grainoriented, low-loss, high permeability silicon steel which is carefully selected and tested under rigidly controlled factory conditions. The core is wound in the direction of the grain to take advantage of the high permeability.

Windings

The primary winding consists of strip wound copper in a circular pattern for the lower ratings, and a single-turn configuration for the higher ratings. This type of construction provides good accuracy, along with the highest fault current withstand characteristics. The secondary winding is made of enamel-insulated copper wire, evenly distributed around the core. This construction reduces leakage flux and provides the best possible accuracy.

Primary Terminals

The primary terminals are flat copper bars, each with one bolt hole and a slot, which facilitates connections to various size cable lugs. The terminal surfaces are tin-plated to reduce contact resistance, and to allow connection to either copper or aluminum conductors.

Secondary Terminals & Conduit Box

The secondary terminals are clamp-type, with a 0.275-inch diameter hole, simplifying the connection of large or multiple secondary wires. The terminals are located on the front of the transformer on the flat butyl surface adjacent to the baseplate. The terminals are made of bronze for excellent durability and corrosion resistance. An internal secondary terminal block secures the secondary terminals, as well as a stud in between the two terminals, which is used as a short-circuit device pivot. The short-circuit device is simple, easy to operate, and is made of sturdy bronze parts to give the highest reliability. It features a large contact area, with the short-circuit device and a slot in the terminal having parallel faces to make and extremely good electrical contact. The contact with the terminal is direct, thus eliminating additional joints or connections.

Testing

Rigorous GE test requirements go beyond ANSI/IEEE routine requirements in order to ensure long term reliability. Test reports are saved electronically and can be e-mailed in various formats upon request.

Ground Terminal

A ground terminal is provided in the secondary compartment for making an optional connection to one of the secondary terminals. The 1/4-20 round-head ground terminal is welded in the baseplate bracket, and is furnished with a nut, cup washer, flat washer, and lock washer.

Polarity

The primary and secondary polarity markers are molded in the insulation. They are thus permanent and integral parts of the transformer and cannot readily be obliterated. The polarity is subtractive.

Baseplate and Mounting

The base is made of stainless-steel. A stainless-steel grounding lug is welded to the baseplate and provides a hole for attaching the grounding connector. Mounting holes or slots are located in each corner of the baseplate. Mounting hardware is supplied with the transformer. The transformer can be mounted with the primary terminals in any position–up, down, or horizontal. It can be bolted directly to a crossarm attached by "U" bolts or suspension hooks, or mounted on double crossarms, using channel brackets. Refer to the Accessories Listing on the transformer data sheet for Catalog Numbers.

Nameplate

The nameplate is made of stainless-steel and located on the base of the transformer. Information is per IEEE designation, laser-engraved for easy-to-read form. Custom barcoding available upon request.

Rating Identification

The primary current rating is identified by large orange digits located on two sides of the transformer. This provides permanent identification that is clearly visible from a distance, and is resistant to fading and abrasion.

Maintenance

These transformers require no maintenance other than an occasional cleaning if installed in an area where air contamination is severe.