

# SUPERBUTE™ JKW-6

## OUTDOOR CURRENT TRANSFORMER

25000V, 5A to 1200A, 50/60Hz  
150kV BIL



### APPLICATIONS

Designed for outdoor service; suitable for operating meters, relays, and control devices. Rated Distribution class with a compact design for maximizing efficiency in solid-state revenue metering applications. Model JKW-6 is also has designs for substation application with higher burden and relay ratings.

### FEATURES

- Weight: 75lbs (unit), 85lbs (shipping)
- Dimensions: 15.94" (h) x 10.88" (w) x 12.38" (d)
- Creep Distance: 24" [609.6mm]
- Strike Distance: 12.51" [318mm]
- Insulation: HY-BUTE 60™ Butyl Rubber
- Insulation Class: 150kV BIL, Outdoor
- Design Standard: IEEE C57.13
- Measurement Canada Approval: T-0327

### REFERENCE DRAWINGS & ACCESSORIES

#### Accuracy Curve(s) at 60Hz

- Single-Ratio
  - 5 A to 300 A, and 600 A; 756X050001 through 756X050011, and 13 - 9689241662
  - 400 A and 800 A; 756X050012 and 756X050014 - 9689241663
- Dual-Ratio
  - Lower Tap Ratings; 756X050041 through 756X050048 - 9689241858
  - Higher Tap Ratings; 756X050041 through 756X050048 - 9689241857

#### Excitation Curve(s)

- 9932600052

#### Accessories





- "L" Mounting Brackets - 8944634001
- Auxiliary "L" Mounting Brackets - 8944270001
- Channel Bracket - 5466227001
- Suspensions Hooks - 8944630001
- Secondary Conduit Box - 9689897001

## UNIT SELECTION

CURRENT RATIO	METER CLASS	RELAY CLASS	RF <sup>1</sup>	MECHANICAL LIMIT, AMPS	1-SEC THERMAL LIMIT, AMPS	CATALOG NUMBER
SINGLE RATIO						
5:5	0.3B0.9	T100	3.0	1850	1000	756X050001
10:5	0.3B0.9	T100	3.0	3700	2000	756X050002
15:5	0.3B0.9	T100	3.0	5550	3000	756X050003
20:5	0.3B0.9	T100	3.0	7400	4000	756X050004
25:5	0.3B0.9	T100	3.0	9250	5000	756X050005
50:5	0.3B0.9	T100	3.0	12500	10000	756X050006
75:5	0.3B0.9	T100	3.0	18750	15000	756X050007
100:5	0.3B0.9	T100	3.0	25000	20000	756X050008
150:5	0.3B0.9	T100	3.0	37500	30000	756X050009
200:5	0.3B0.9	T100	3.0	50000	40000	756X050010
300:5	0.3B0.9	T100	2.8	75000	60000	756X050011
400:5	0.3B0.9	T100	2.5	80000	64000	756X050012
600:5	0.3B0.9	T100	2.0	100000	64000	756X050013
800:5	0.3B0.9	T100	1.5	100000	64000	756X050014
SINGLE RATIO						
10:5	0.3B1.8	T200	1.5	1850	1000	756X050022
15:5	0.3B1.8	T200	1.5	2775	1500	756X050023
20:5	0.3B1.8	T200	1.5	3700	2000	756X050024
25:5	0.3B1.8	T200	1.5	4625	2500	756X050025
50:5	0.3B1.8	T200	1.5	9250	5000	756X050026
75:5	0.3B1.8	T200	1.5	9375	7500	756X050027
100:5	0.3B1.8	T200	1.5	12500	10000	756X050028
150:5	0.3B1.8	T200	1.5	18750	15000	756X050029
200:5	0.3B1.8	T200	1.5	25000	20000	756X050030
300:5	0.3B1.8	T200	1.5	37500	30000	756X050031
400:5	0.3B1.8	T200	1.5	50000	40000	756X050032
600:5	0.3B1.8	T200	1.5	75000	60000	756X050033
800:5	0.3B1.8	T200	1.25	80000	64000	756X050034
1200:5	0.3B1.8	T200	1.0	150000	120000	756X050035
DUAL RATIO						
10/20:5	0.3B0.9/0.3B1.8	T100/T200	2.0/1.5	3700	1000/2000	756X050041
25/50:5	0.3B0.9/0.3B1.8	T100/T200	2.0/1.5	9250	2500/5000	756X050042
50/100:5	0.3B0.9/0.3B1.8	T100/T200	2.0/1.5	12500	5000/10000	756X050043
75/150:5	0.3B0.9/0.3B1.8	T100/T200	2.0/1.5	18750	7500/15000	756X050044
100/200:5	0.3B0.9/0.3B1.8	T100/T200	2.0/1.5	25000	10000/20000	756X050045
150/300:5	0.3B0.9/0.3B1.8	T100/T200	2.0/1.5	37500	15000/30000	756X050046
200/400:5	0.3B0.9/0.3B1.8	T100/T200	2.0/1.5	50000	20000/40000	756X050047
300/600:5	0.3B0.9/0.3B1.8	T100/T200	2.0/1.5	75000	30000/60000	756X050048
400/800:5	0.3B0.9/0.3B1.8	T100/T200	1.5/1.25	100000	40000/80000	756X050049
600/1200:5	0.3B0.9/0.3B1.8	T100/T200	1.5/1.25	125000	50000/100000	756X050050

1. "RF" is defined as Continuous Thermal Rating Factor at 30°C, ambient

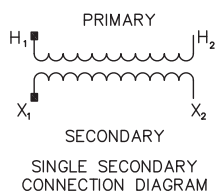
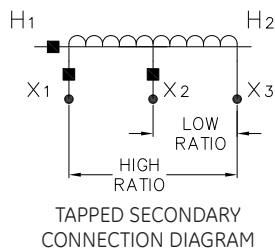
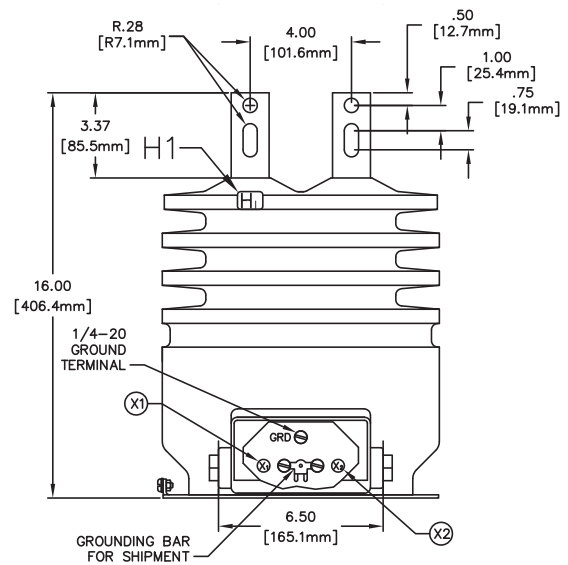
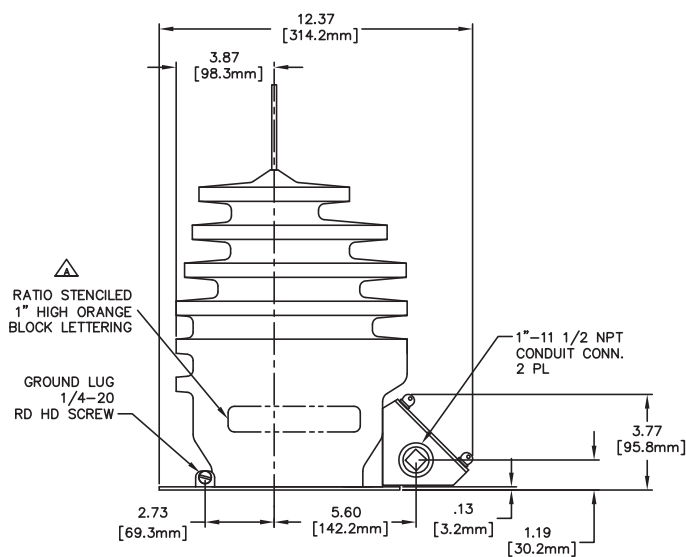
## TYPICAL NAMEPLATE

	Current Transformer	Type	Ratio		
		JKW-6	10:5 Amp		
	Bil 150kV NSV 25kV 50-60 Hz RF = 3.0 @ 30°C Amb Acc Cl @ 60Hz 0.3 B-0.1 THRU B-0.9, T100				
Caution: Read GEH-230		Cat. 756X050002		APPR# T-0087  Mfd. 11 14 Ser. 8814989	

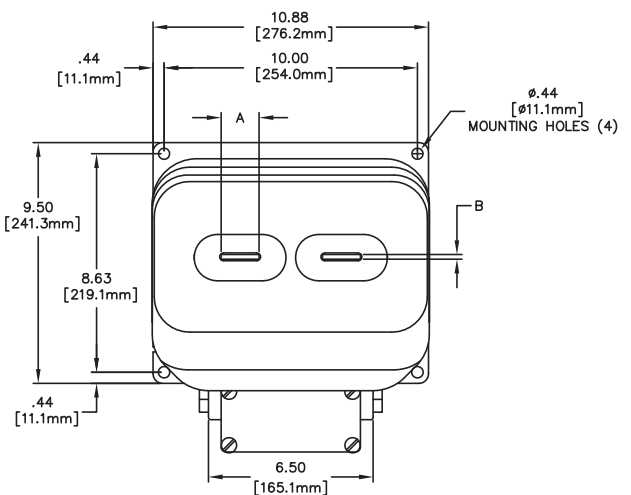
## SELECTION GUIDE

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 &amp; WIRING DIAGRAM



H1/H2 TERMINAL DIMS		
AMPS	A	B
5 TO 75	1.5 (1.38MM)	.19 (4.8MM)
100 TO 200	2 (50.8MM)	.25 (6.4MM)
300 TO 800	2 (50.8MM)	.38 (9.5mm)



## 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 of high-permeability, formed, silicon steel strip. The steel is characterized by having highly directional properties, that is, low core losses and high permeability in the direction of rolling. Full advantage is taken of this property of the steel by the shape and construction of the core. The core has a dispersed-gap construction with interleaved laminations. This type of core provides a construction that will not shift to cause any change in the transformer characteristics. After being assembled into the coils, the core is securely clamped and permanently fastened to the base plate by a heavy steel strap which encircles the core and is welded to the base.

### Windings

The primary winding consists of two coils connected in series. Each coil surrounds one leg of the core. This design reduces leakage losses, thus improving the accuracy of the transformer. It also provides a higher mechanical strength than a single coil construction. The secondary winding consists of two coils connected in parallel. Each coil is located inside the corresponding primary coil and surrounds one leg of the core.

### 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 in a compartment molded in the side of the transformer. The compartment has a molded phenolic cover held by four brass, nickel-plated, captive thumbscrews, which engage a metal insert molded in the rubber. The thumbscrews are drilled to accommodate a seal wire. The compartment also has two openings for 1 inch conduit connection. The secondary terminals are the threaded type, each with cup washer, lock washer and nut. A manually operated, secondary short-circuiting switch is located between the secondary terminal studs.

### 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.