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Distribution Transformers—Medium and High Voltage Section 21

GE-PROLEC® Liquid Filled Secondary Substation Transformers-SST

GE-PROLEC® Secondary Substation Transformers will meet all of your industrial applications for power distribution. These transformers have a robust construction and are designed with the capability to coordinate with a wide diversity of equipment such as switchboards, LIS, MCCs, etc.

Applications

Industrial

- Oil and Gas
- Chemical Industry
- Paper Industry
- Steel Industry
- Cement Industry

Commercial

- Airports
- Stadiums
- Office Building
- Waste Water
- Stores

Utility

- Electric Utilities
- Rural Electric Cooperatives and Municipalities

Features and Benefits

The GE-PROLEC® Difference

- GE-PROLEC® offers a full line of power distribution products (single phase DTs, industrial transformers, power transformers, etc.)

GE-PROLEC® Quality

- GE-PROLEC® Six-Sigma corporate-wide quality initiative ensures quality design and manufacturing.
- ANSI electrical testing performed during manufacture.
- UL label approved.
- ISO-9001 certified
- ISO-14000 certified

Design Characteristics

- Secondary type substation transformer offers a broad selection of design efficiencies to meet specific customer applications.
- Combines vast engineering experience with sophisticated computer aided design tools to increase performance and reduce cost.
- All secondary substation transformers are built in accordance with the following standards:
 - ANSI —NEMA
 - IEEE —ISO
 - ASTM —NEC
 - AWS —NESC

Advantages of Liquid Filled SSTs

- Lower Maintenance
- Higher BILs than Dry Transformers
- Lower Sound
- Lower Losses
- Lower Price

GE-PROLEC® Fits Your Needs—GE-PROLEC® Engineering and Manufacturing new transformers according to your needs

- Determine Transformer Manufacture
- Identify HV and LV Component
- Develop Outline of Substation
- Highlight Critical dimensions and available space
- Identify HV and LV Bushing height arrangement
- Identify Critical features and accessories



General Construction Features

- The liquid insulated, secondary type substation transformer is designed, manufactured and tested in accordance with the latest ANSI Standards.
- Impedance, sound level and voltage connections are in accordance with NEMA Standards.
- The core is constructed with high-grade grain oriented silicone steel laminations to reduce size, sound and losses.
- The coils are rectangular construction utilizing extra strong, electrical grade, adhesive coated paper between turns.
- The core and coil assembly is installed in a sealed tank, immersed in insulated liquid to prevent dirt, moisture and corrosive elements from deteriorating the electrical and mechanical integrity of the transformer. The transformers have four approximately 2.5 percent rated kVA taps. Two above and two below rated primary voltage. These taps are available by means of an externally operated manual tap changer for operation only when transformer is de-energized, with provisions for padlocking the tap changer.

Specifications

Standard Ratings

- 500, 750, 1,000, 1,500, 2,000, 2,500, 3,000, 3,750, 5,000, 7,500, 10,000 kVA
- 65°C rise Standard
- 55°/56°C rise optional

Standard High Voltages

- 2,400, 4,160, 7,200, 12,000, 12,470, 13,200, 13,800, 22,900, 34,500
- BIL (kV) 45 - 200

Standard Low Voltages

- 208, 480, 600, 2,400, 4,160
- BIL (kV) 30 - 60
- Taps are available with all voltages

Liquids Available

- Oil, Silicone, R'Temp, Envirotemp Fluids

Contact Information

GE-PROLEC®

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Distribution Transformers—Medium and High Voltage Section 21

GE-PROLEC® Liquid Filled Secondary Substation Transformers-SST

Weight, Volume, and Dimensions

Oil Filled 65°C Rise HV Copper LV Aluminum

kVA ¹	Height (in.)	Flange to Flange (in.)	Depth (in.)	Oil (gallons)	Weight (lbs.)
750	94	49	66	220	6800
1000	94	54	66	300	9000
1500	94	58	70	350	9600
2000	94	60	72	360	10500
2500	95	62	86	400	13000
3000	99	65	94	480	15600

Silicone Filled 65°C Rise HV Copper LV Aluminum

kVA ¹	Height (in.)	Flange to Flange (in.)	Depth (in.)	Oil (gallons)	Weight (lbs.)
750	98	49	66	220	6900
1000	98	54	70	310	8200
1500	98	58	74	320	9700
2000	98	60	80	360	11900
2500	98	62	88	410	13400
3000	99	65	104	490	15900

Oil Filled 55/65°C Rise HV Copper LV Aluminum

kVA ¹	Height (in.)	Flange to Flange (in.)	Depth (in.)	Oil (gallons)	Weight (lbs.)
750	94	49	66	240	7000
1000	94	54	66	310	8400
1500	94	58	72	360	10000
2000	94	60	88	400	12100
2500	96	62	96	420	13700
3000	99	65	104	490	16100

Silicone Filled 55/65°C Rise HV Copper LV Aluminum

kVA ¹	Height (in.)	Flange to Flange (in.)	Depth (in.)	Oil (gallons)	Weight (lbs.)
750	98	49	70	230	7100
1000	98	54	72	320	8600
1500	98	58	91	330	10100
2000	98	60	96	370	12300
2500	99	62	104	430	14000
3000	99	65	110	500	16400

¹For kVAs not listed, contact factory.

Dimensions and weights are subject to change without notice and should not be used for construction purposes.



Publications and Reference: See Section 22 for a complete list of additional product-related publications

Distribution Transformers—Medium and High Voltage Section 21

GE-PROLEC® Three-Phase Padmount Transformers

When power distribution is needed, the GE-PROLEC® Compad Three-Phase Padmount Transformer can meet all of your distribution needs. Packaged in a neat, clean, modern style olive-green color for a pleasing appearance, the Compad Distribution transformer can provide power to any distribution application while offering the safety advantages of tamper and weather resistant construction.

Features and Benefits

The GE-PROLEC® Difference

- GE-PROLEC® offers a full line of power distribution products (single phase DTs, power transformers, arresters, metering, etc.)
- Access to GE corporate research and development
- Access to GE Capital Services/Leasing

GE-PROLEC® Quality

- GE-PROLEC® Six-Sigma corporate wide quality initiative ensures quality design and manufacturing
- ANSI electrical testing performed during manufacture
- Five quality inspections during manufacture
- ISO-9001 certified
- ISO-14000 certified
- UL label approved

Design Characteristics

- Commercial Transformer offers a broad selection of design efficiencies to meet specific customer applications.
- Combines vast engineering experience with sophisticated computer aided design tools to increase performance and reduce cost
- All three-phase pads are built in accordance with the following standards:
 - ANSI C57.12.00 - liquid immersed
 - ANSI C57.12.22 - live front
 - ANSI C57.12.26 - dead front
 - ANSI C57.12.28 - enclosure integrity
 - ANSI C57.12.29 - enclosure integrity coastal
 - ANSI C57.12.90 - testing
 - ANSI C57.12.00
 - NEMA TR1

General Construction Features

- Removable hinged doors with three point latching
- High voltage compartment is accessible only through low voltage compartment
- Compartment hood/sill removable to facilitate making connections and sliding of unit
- Hinge assemblies are made of corrosion resistant material with 3/8-inch stainless steel hinge pins
- Lifting provisions in accordance with ANSI Standards with 4 lifting lugs
- Jacking and rolling provisions are provided
- Instruction Nameplate mounted in the low voltage compartment door
- LV compartment door can be padlocked using a 1/2-inch diameter shackle—Transformer tank uses sealed tank construction with a welded main cover and tamper resistant handhole

- Provisions for tank grounding in both the high and low voltage compartments
- Tinned, low-voltage bushings, spade-type with 9/16-inch holes spaced on 1 3/4-inch centers
- Tamper and Weather resistant

Contact Information

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Distribution Transformers—Medium and High Voltage Section 21

GE-PROLEC® Three-Phase Padmount Transformers

Specifications

Standard Ratings

- 45-5000 kVA
- 65°C rise, 60 hertz standard, 50 hertz optional

High Voltages

- 4160GrdY/2400-34, 500GrdY/19,920; 2,400-34,500 Delta

Low Voltages

- 208Y/120, 216Y/125, 460Y/265, 480Y/277, 480, 240 and 240 with 120 volt mid-tap in one phase (4160Y/2400, 4160, 2400, 2400/4160Y/2400 for 750 kVA and larger)
- Taps are available for all voltages

Liquids Available

- Oil, Silicone, R'Temp and Envirotemp Fluids

Fusing Options

- Expulsion Fuses
- Bayonet fusing
- Non-loadbreak dry-well current limiting fuseholder
- Loadbreak dry-well fuseholder

Switching Options

- Radial feed switch - 300 amp
- Loop feed switch - 300 amp
- Loop/Radial switch - 300 amp
- Alternate-source switch - 300 amp
- Loop switch with on/off radial switch
- 'T' blade sectionalizing switch
- 'V'blade sectionalizing switch
- Panelboards and breakers
- 400 and 600 amp switches also available

For detailed product information see Product Bulletin JVB-007.

Applications

- Industrial
- Commercial
- Institutional
- Government
- Small and Medium Commercial
- Strip Malls
- Large Retail Stores

Typical Dimensions

kVA	Front-side Height (in.)	Front-side Width (in.)	Total Depth (in.)	Rear-side Width (in.)	Rear-side Height (in.)	Typical Weight (lbs.)
75	63	72	53	71	52	2965
112.5	63	72	53	71	52	3050
150	63	72	53	71	52	3250
225	65	72	55	71	54	3350
300	65	72	55	71	54	3800
500	69	72	55	71	54	4500
750	77	72	74	71	58	6200
1000	77	75	75	71	59	9400
1500	77	76	76	77	67	12200
2000	87	78	79	71	69	13200
2500	87	78	79	71	69	13800

Minimum cable openings: 44.1"x 13.7"



Publications and Reference: See Section 22 for a complete list of additional product-related publications

Distribution Transformers—Medium and High Voltage Section 21

GE-PROLEC® Conventional Single-Phase Pole Type Distribution Transformers

Product Description

- Transformers are Conventional Single-Phase Pole Type, Oil Filled 65°C Rise, 60 Hz, 2 High Voltage bushings meeting all applicable ANSI/IEEE and NEMA Standards.
- Transformers with primary voltage 4800 or less, have side-mounted high voltage bushings.
- Transformers with 277 secondary voltage have only 2 low voltage bushings

Terms and Conditions

- Lead time 7-8 weeks (ready for shipment) after receipt of the Order Entry form in GE-PROLEC®.
- Lead time is subject to change based on factory backlog.
- Prices are FOB Laredo, TX with freight prepaid and allowed to the nearest common carrier delivery point within the continental United States.
- GE Sales Terms and Conditions FN1096 apply.
- If special terms and/or shipping requirements are needed, please consult your Customer Support Engineer.
- All units are designed and manufactured by GE-PROLEC® in our ISO 9001 certified factory located in Monterrey, Mexico.

Notes

- For order quantities greater than 10, consult factory.
- For rating/accessories not included in the price sheet or adders/deduct charts, consult factory.
- Product numbers listed are for pricing/ordering purposes only, the product numbers of units shipped will differ based on the latest design.
- Fax orders to 8*553-2323 or 8*553-2325 / 011 (5281) 8030-2323 or 8030-2325.
- Approval or Record Drawings can be submitted in electronic file (e-mail) upon request, if a hard copy of approval or record drawings is required, please add \$30.00 USD for each set.
- Transformer loss information and weight/dimensions (including outline drawings) are available upon request.

Standards

- ANSI/IEEE
- NEMA



Standard Accessories

- Mineral Oil Type 1
- Standard Aluminum Nameplate
- Pressure Relief Valve
- Provision for GRD connector
- Lifting lugs
- Support lugs
- kVA decal
- 10 kV cover withstand

Reference Publications

GE-PROLEC® Brochure

JVB-004

Contact Information

GE-PROLEC®

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Distribution Transformers-Medium and High Voltage Section 21

GE-PROLEC® Conventional Single-Phase Pole Type Distribution Transformers

2400/4160Y

120-240					240/480				277			
kVA	No Taps		2-2.5% A & B		No Taps		2-2.5% A & B		No Taps		2-2.5% A & B	
	Product No.	List Price	Product No.	List Price	Product No.	List Price	Product No.	List Price	Product No.	List Price	Product No.	List Price
5	T005AAA	\$904.00	T005AAC	\$974.00	T005ABA	\$1001.00	T005ABC	\$1072.00	T005ACA	\$923.00	T005ACC	\$994.00
10	T010AAA	\$979.00	T010AAC	\$1050.00	T010ABA	\$1084.00	T010ABC	\$1155.00	T010ACA	\$1000.00	T010ACC	\$1071.00
15	T015AAA	\$1086.00	T015AAC	\$1157.00	T015ABA	\$1202.00	T015ABC	\$1273.00	T015ACA	\$1110.00	T015ACC	\$1180.00
25	T025AAA	\$1239.00	T025AAC	\$1324.00	T025ABA	\$1371.00	T025ABC	\$1457.00	T025ACA	\$1265.00	T025ACC	\$1351.00
37.5	T037AAA	\$1618.00	T037AAC	\$1703.00	T037ABA	\$1788.00	T037ABC	\$1873.00	T037ACA	\$1652.00	T037ACC	\$1737.00
50	T050AAA	\$2118.00	T050AAC	\$2218.00	T050ABA	\$2340.00	T050ABC	\$2440.00	T050ACA	\$2163.00	T050ACC	\$2263.00
75	T075AAA	\$3388.00	T075AAC	\$3488.00	T075ABA	\$3736.00	T075ABC	\$3836.00	T075ACA	\$3457.00	T075ACC	\$3557.00
100	T100AAA	\$3896.00	T100AAC	\$4024.00	T100ABA	\$4298.00	T100ABC	\$4426.00	T100ACA	\$3976.00	T100ACC	\$4104.00
167	T167AAA	\$5510.00	T167AAC	\$5651.00	T167ABA	\$6075.00	T167ABC	\$6216.00	T167ACA	\$5623.00	T167ACC	\$5764.00

NOTE: See page 21-8 for ADDERS and DEDUCTS.

7200/12470Y

120-240					240/480				277			
kVA	No Taps		2-2.5% A & B		No Taps		2-2.5% A & B		No Taps		2-2.5% A & B	
	Product No.	List Price	Product No.	List Price	Product No.	List Price	Product No.	List Price	Product No.	List Price	Product No.	List Price
5	T005BAA	\$809.00	T005BAC	\$879.00	T005BBA	\$896.00	T005BBC	\$967.00	T005BCA	\$826.00	T005BCC	\$897.00
10	T010BAA	\$858.00	T010BAC	\$928.00	T010BBA	\$951.00	T010BBC	\$1021.00	T010BCA	\$877.00	T010BCC	\$947.00
15	T015BAA	\$1043.00	T015BAC	\$1113.00	T015BBA	\$1154.00	T015BBC	\$1225.00	T015BCA	\$1065.00	T015BCC	\$1136.00
25	T025BAA	\$1121.00	T025BAC	\$1206.00	T025BBA	\$1241.00	T025BBC	\$1327.00	T025BCA	\$1145.00	T025BCC	\$1230.00
37.5	T037BAA	\$1513.00	T037BAC	\$1598.00	T037BBA	\$1672.00	T037BBC	\$1758.00	T037BCA	\$1545.00	T037BCC	\$1630.00
50	T050BAA	\$1798.00	T050BAC	\$1898.00	T050BBA	\$1987.00	T050BBC	\$2087.00	T050BCA	\$1836.00	T050BCC	\$1936.00
75	T075BAA	\$2731.00	T075BAC	\$2831.00	T075BBA	\$3014.00	T075BBC	\$3114.00	T075BCA	\$2788.00	T075BCC	\$2888.00
100	T100BAA	\$3712.00	T100BAC	\$3839.00	T100BBA	\$4096.00	T100BBC	\$4223.00	T100BCA	\$3788.00	T100BCC	\$3916.00
167	T167BAA	\$5809.00	T167BAC	\$5950.00	T167BBA	\$6404.00	T167BBC	\$6545.00	T167BCA	\$5928.00	T167BCC	\$6069.00

NOTE: See page 21-8 for ADDERS and DEDUCTS.

7620/13200Y

120-240					240/480				277			
kVA	No Taps		2-2.5% A & B		No Taps		2-2.5% A & B		No Taps		2-2.5% A & B	
	Product No.	List Price	Product No.	List Price	Product No.	List Price	Product No.	List Price	Product No.	List Price	Product No.	List Price
5	T005CAA	\$840.00	T005CAC	\$910.00	T005CBA	\$931.00	T005CBC	\$1001.00	T005CCA	\$858.00	T005CCC	\$928.00
10	T010CAA	\$862.00	T010CAC	\$933.00	T010CBA	\$956.00	T010CBC	\$1026.00	T010CCA	\$881.00	T010CCC	\$951.00
15	T015CAA	\$962.00	T015CAC	\$1033.00	T015CBA	\$1066.00	T015CBC	\$1136.00	T015CCA	\$983.00	T015CCC	\$1053.00
25	T025CAA	\$1115.00	T025CAC	\$1201.00	T025CBA	\$1236.00	T025CBC	\$1321.00	T025CCA	\$1140.00	T025CCC	\$1225.00
37.5	T037CAA	\$1434.00	T037CAC	\$1519.00	T037CBA	\$1585.00	T037CBC	\$1671.00	T037CCA	\$1464.00	T037CCC	\$1549.00
50	T050CAA	\$1719.00	T050CAC	\$1819.00	T050CBA	\$1901.00	T050CBC	\$2001.00	T050CCA	\$1756.00	T050CCC	\$1856.00
75	T075CAA	\$3010.00	T075CAC	\$3110.00	T075CBA	\$3321.00	T075CBC	\$3421.00	T075CCA	\$3072.00	T075CCC	\$3172.00
100	T100CAA	\$3667.00	T100CAC	\$3795.00	T100CBA	\$4047.00	T100CBC	\$4175.00	T100CCA	\$3743.00	T100CCC	\$3871.00
167	T167CAA	\$5548.00	T167CAC	\$5689.00	T167CBA	\$6117.00	T167CBC	\$6258.00	T167CCA	\$5662.00	T167CCC	\$5803.00

NOTE: See page 21-8 for ADDERS and DEDUCTS.

7970/13800Y

120-240					240/480				277			
kVA	No Taps		2-2.5% A & B		No Taps		2-2.5% A & B		No Taps		2-2.5% A & B	
	Product No.	List Price	Product No.	List Price	Product No.	List Price	Product No.	List Price	Product No.	List Price	Product No.	List Price
5	T005HAA	\$863.00	T005HAC	\$933.00	T005HBA	\$956.00	T005HBC	\$1026.00	T005HCA	\$881.00	T005HCC	\$952.00
10	T010HAA	\$886.00	T010HAC	\$956.00	T010HBA	\$981.00	T010HBC	\$1052.00	T010HCA	\$905.00	T010HCC	\$975.00
15	T015HAA	\$988.00	T015HAC	\$1059.00	T015HBA	\$1094.00	T015HBC	\$1164.00	T015HCA	\$1009.00	T015HCC	\$1080.00
25	T025HAA	\$1146.00	T025HAC	\$1231.00	T025HBA	\$1269.00	T025HBC	\$1354.00	T025HCA	\$1170.00	T025HCC	\$1255.00
37.5	T037HAA	\$1471.00	T037HAC	\$1557.00	T037HBA	\$1627.00	T037HBC	\$1712.00	T037HCA	\$1503.00	T037HCC	\$1588.00
50	T050HAA	\$1765.00	T050HAC	\$1865.00	T050HBA	\$1951.00	T050HBC	\$2051.00	T050HCA	\$1802.00	T050HCC	\$1902.00
75	T075HAA	\$3088.00	T075HAC	\$3188.00	T075HBA	\$3406.00	T075HBC	\$3506.00	T075HCA	\$3151.00	T075HCC	\$3251.00
100	T100HAA	\$3762.00	T100HAC	\$3890.00	T100HBA	\$4151.00	T100HBC	\$4279.00	T100HCA	\$3840.00	T100HCC	\$3968.00
167	T167HAA	\$5690.00	T167HAC	\$5831.00	T167HBA	\$6273.00	T167HBC	\$6414.00	T167HCA	\$5807.00	T167HCC	\$5948.00

NOTE: See page 21-8 for ADDERS and DEDUCTS.

12000

120-240					240/480				277			
kVA	No Taps		2-2.5% A & B		No Taps		2-2.5% A & B		No Taps		2-2.5% A & B	
	Product No.	List Price	Product No.	List Price	Product No.	List Price	Product No.	List Price	Product No.	List Price	Product No.	List Price
5	T005DAA	\$789.00	T005DAC	\$859.00	T005DBA	\$875.00	T005DBC	\$945.00	T005DCA	\$806.00	T005DCC	\$877.00
10	T010DAA	\$867.00	T010DAC	\$938.00	T010DBA	\$961.00	T010DBC	\$1032.00	T010DCA	\$886.00	T010DCC	\$957.00
15	T015DAA	\$958.00	T015DAC	\$1029.00	T015DBA	\$1061.00	T015DBC	\$1132.00	T015DCA	\$979.00	T015DCC	\$1050.00
25	T025DAA	\$1157.00	T025DAC	\$1242.00	T025DBA	\$1281.00	T025DBC	\$1366.00	T025DCA	\$1182.00	T025DCC	\$1267.00
37.5	T037DAA	\$1468.00	T037DAC	\$1553.00	T037DBA	\$1623.00	T037DBC	\$1708.00	T037DCA	\$1499.00	T037DCC	\$1584.00
50	T050DAA	\$1794.00	T050DAC	\$1894.00	T050DBA	\$1983.00	T050DBC	\$2083.00	T050DCA	\$1832.00	T050DCC	\$1932.00
75	T075DAA	\$2777.00	T075DAC	\$2877.00	T075DBA	\$3065.00	T075DBC	\$3165.00	T075DCA	\$2835.00	T075DCC	\$2935.00
100	T100DAA	\$3860.00	T100DAC	\$3988.00	T100DBA	\$4259.00	T100DBC	\$4387.00	T100DCA	\$3940.00	T100DCC	\$4068.00
167	T167DAA	\$5611.00	T167DAC	\$5752.00	T167DBA	\$6186.00	T167DBC	\$6327.00	T167DCA	\$5726.00	T167DCC	\$5867.00

NOTE: See page 21-8 for ADDERS and DEDUCTS.



Publications and Reference: See Section 22 for a complete list of additional product-related publications

Distribution Transformers-Medium and High Voltage Section 21

GE-PROLEC® Conventional Single-Phase Pole Type Distribution Transformers

12470

120-240					240/480				277			
kVA	No Taps		2-2.5% A & B		No Taps		2 -2.5% A & B		No Taps		2 - 2.5% A & B	
	Product No.	List Price	Product No.	List Price	Product No.	List Price	Product No.	List Price	Product No.	List Price	Product No.	List Price
5	T005GAA	\$810.00	T005GAC	\$881.00	T005GBA	\$899.00	T005GBC	\$969.00	T005GCA	\$828.00	T005GCC	\$899.00
10	T010GAA	\$891.00	T010GAC	\$961.00	T010GBA	\$987.00	T010GBC	\$1057.00	T010GCA	\$910.00	T010GCC	\$981.00
15	T015GAA	\$984.00	T015GAC	\$1055.00	T015GBA	\$1090.00	T015GBC	\$1160.00	T015GCA	\$1005.00	T015GCC	\$1076.00
25	T025GAA	\$1188.00	T025GAC	\$1273.00	T025GBA	\$1315.00	T025GBC	\$1401.00	T025GCA	\$1213.00	T025GCC	\$1299.00
37.5	T037GAA	\$1507.00	T037GAC	\$1592.00	T037GBA	\$1666.00	T037GBC	\$1751.00	T037GCA	\$1538.00	T037GCC	\$1624.00
50	T050GAA	\$1841.00	T050GAC	\$1941.00	T050GBA	\$2035.00	T050GBC	\$2135.00	T050GCA	\$1880.00	T050GCC	\$1980.00
75	T075GAA	\$2849.00	T075GAC	\$2949.00	T075GBA	\$3144.00	T075GBC	\$3244.00	T075GCA	\$2908.00	T075GCC	\$3008.00
100	T100GAA	\$3960.00	T100GAC	\$4088.00	T100GBA	\$4369.00	T100GBC	\$4496.00	T100GCA	\$4042.00	T100GCC	\$4169.00
167	T167GAA	\$5755.00	T167GAC	\$5896.00	T167GBA	\$6345.00	T167GBC	\$6485.00	T167GCA	\$5873.00	T167GCC	\$6014.00

NOTE: See ADDERS and DEDUCTS below.

14400/242940Y

120-240					240/480				277			
kVA	No Taps		2-2.5% A & B		No Taps		2 -2.5% A & B		No Taps		2 - 2.5% A & B	
	Product No.	List Price	Product No.	List Price	Product No.	List Price	Product No.	List Price	Product No.	List Price	Product No.	List Price
5	T005EAA	\$834.00	T005EAC	\$904.00	T005EBA	\$924.00	T005EBC	\$995.00	T005ECA	\$852.00	T005ECC	\$922.00
10	T010EAA	\$919.00	T010EAC	\$990.00	T010EBA	\$1018.00	T010EBC	\$1089.00	T010ECA	\$939.00	T010ECC	\$1009.00
15	T015EAA	\$1045.00	T015EAC	\$1116.00	T015EBA	\$1157.00	T015EBC	\$1227.00	T015ECA	\$1068.00	T015ECC	\$1138.00
25	T025EAA	\$1218.00	T025EAC	\$1304.00	T025EBA	\$1349.00	T025EBC	\$1434.00	T025ECA	\$1244.00	T025ECC	\$1330.00
37.5	T037EAA	\$1606.00	T037EAC	\$1692.00	T037EBA	\$1775.00	T037EBC	\$1861.00	T037ECA	\$1640.00	T037ECC	\$1725.00
50	T050EAA	\$1873.00	T050EAC	\$1973.00	T050EBA	\$2071.00	T050EBC	\$2171.00	T050ECA	\$1913.00	T050ECC	\$2013.00
75	T075EAA	\$3183.00	T075EAC	\$3283.00	T075EBA	\$3511.00	T075EBC	\$3611.00	T075ECA	\$3249.00	T075ECC	\$3349.00
100	T100EAA	\$3866.00	T100EAC	\$3993.00	T100EBA	\$4265.00	T100EBC	\$4393.00	T100ECA	\$3946.00	T100ECC	\$4073.00
167	T167EAA	\$5735.00	T167EAC	\$5876.00	T167EBA	\$6322.00	T167EBC	\$6463.00	T167ECA	\$5852.00	T167ECC	\$5993.00

NOTE: See ADDERS and DEDUCTS below.

19920/34500Y

120-240					240/480				277			
kVA	No Taps		2-2.5% A & B		No Taps		2 -2.5% A & B		No Taps		2 - 2.5% A & B	
	Product No.	List Price	Product No.	List Price	Product No.	List Price	Product No.	List Price	Product No.	List Price	Product No.	List Price
5	T005FAA	\$914.00	T005FAC	\$984.00	T005FBA	\$1012.00	T005FBC	\$1083.00	T005FCA	\$934.00	T005FCC	\$1004.00
10	T010FAA	\$1056.00	T010FAC	\$1127.00	T010FBA	\$1169.00	T010FBC	\$1240.00	T010FCA	\$1079.00	T010FCC	\$1149.00
15	T015FAA	\$1161.00	T015FAC	\$1232.00	T015FBA	\$1285.00	T015FBC	\$1355.00	T015FCA	\$1186.00	T015FCC	\$1257.00
25	T025FAA	\$1241.00	T025FAC	\$1326.00	T025FBA	\$1374.00	T025FBC	\$1459.00	T025FCA	\$1268.00	T025FCC	\$1353.00
37.5	T037FAA	\$1758.00	T037FAC	\$1843.00	T037FBA	\$1942.00	T037FBC	\$2027.00	T037FCA	\$1795.00	T037FCC	\$1880.00
50	T050FAA	\$2132.00	T050FAC	\$2232.00	T050FBA	\$2355.00	T050FBC	\$2455.00	T050FCA	\$2177.00	T050FCC	\$2277.00
75	T075FAA	\$3076.00	T075FAC	\$3176.00	T075FBA	\$3394.00	T075FBC	\$3494.00	T075FCA	\$3140.00	T075FCC	\$3240.00
100	T100FAA	\$4125.00	T100FAC	\$4253.00	T100FBA	\$4550.00	T100FBC	\$4678.00	T100FCA	\$4210.00	T100FCC	\$4338.00
167	T167FAA	\$5873.00	T167FAC	\$6015.00	T167FBA	\$6475.00	T167FBC	\$6616.00	T167FCA	\$5994.00	T167FCC	\$6135.00

NOTE: See ADDERS and DEDUCTS below.

ADDERS (before multiplier)

General Accessories

\$2.94 - GDR connector
\$6.72 - Bird guard clip on type (1 per HVB)
\$9.98 - Bird guard hand wheel type (1 per HVB)¹
\$7.67 - SS Nameplate
\$8.61 - 15kV cover withstand
\$8.61 - Mineral oil Type II

HV Arresters²

\$71.40 - 2400 primary
\$60.38 - 7200-12470 primary
\$126.42 - 14400 primary
\$198.66 - 19920 primary

LV NEMA H Spade Connector³

\$13.97 - 5-25 kVA
\$26.99 - 37.5-50 kVA
\$76.02 - 75 kVA
\$100.28 - 100 kVA
N/A - 167 kVA Included by ANSI

¹Bird guard is not needed for 2400 primary voltage.

²Standard is 1 arrester per HVB

³The number of spades depends on the number of LVB. (3) for 120/240 and 240/480 secondary, and (2) for 277 secondary.

DEDUCTS (before multiplier)

Not permitted - HV Bushing 2400 primary
\$23.94 - HV Bushing 7200-12740 primary
\$31.82 - HV Bushing 14400-19920 primary

Nomenclature

LV: Low voltage
HV: High voltage
LVB: Low voltage bushings
HVB: High voltage bushings
SS: Stainless Steel



Distribution Transformers—Medium and High Voltage Section 21

GE Network Transformers

When the highest degree of service continuity is the Critical to Quality requirement the a-c secondary network system is the system to use. GE Network Transformers are also applied in some underground systems other than networks where superior sealing and corrosion protection are of primary importance. These non-network applications also include intertie (step) transformers for interconnecting two different voltage systems (300-3000 kVA, 60-200BIL high voltage, 60-95BIL low voltage). 208Y/120 volt secondaries are also available.

Network Transformers are designed in accordance with ANSI C57.12.40 and constructed with the corrosion resistance equivalent of copper bearing steel:

- Cover and Base 0.50 in. thick
- Tank wall and housings 0.312 in. thick

GE uses a special Network Transformers paint system for added corrosion resistance.

Features and Benefits

- GE Six-Sigma quality initiative ensures superiority in design and manufacture
- Designed for optimal corrosion resistance
- High short-circuit strength
- Low sound level
- Positive sealing facilities
- Insulation system for increased loading capacity
- Designed to minimize losses
- Smaller size
- Smaller footprint
- Designed to provide maximum kVA per cubic foot
- Reduced weight

Specifications

Standard Ratings

- 300-2500 kVA three-phase
- 2.5kV to 34.5 kV high voltage
- 216Y/125 or 480Y/277 low voltage
- 55/65°C or 65°C

Liquids Available

- Oil, Silicone, Envirottemp, or R'Temp fluids



Subway Type Network

(below ground application-frequent/continuous submersion)

Subway Type Network Transformers are designed for frequent submersion and use flat panel radiators with the corrosion equivalence of 0.312 copper-bearing steel. Typical application is grid-type secondary network systems to serve high density load areas of cities.

The Subway Type Network Transformer may also be used in "dry" vault applications if desired.

Vault Type Networks

(above ground "dry" vaults -occasional submersion)

Vault Type Network Transformers are designed for "dry" vaults using lighter weight panel radiators with the corrosion equivalence of 0.093 copper-bearing steel. Typical applications are skyscrapers, high rise apartments, large office or manufacturing facilities where the reliability of a Network System is required.

Contact Information

GE Transformer, Shreveport Operation
7000 Bert Kouns Industrial Loop
Shreveport, LA 71129
Phone: (877) 872-6852



Distribution Transformers—Medium and High Voltage Section 21

GE VR-1 Voltage Regulator

Variation of voltage can have detrimental effects on Utilities and their customers. To prevent customer complaints, loss of revenue due to sub-normal voltage, and increased costs due to higher line losses, GE has designed the VR-1 Voltage Regulator with the utilities in mind. With over 40 years of experience, GE has designed the most reliable regulator ever assembled.

Features and Benefits

Standard Features (External):

- Weather resistant tank and finish
- Three cover bushings
- Hand-hole cover
- Lifting lugs on the tank
- Oil drain and sampling device
- Minimum oil sight gage
- Provisions for mounting line-to-ground surge arresters
- Provisions for grounding tank with clamp-style terminals
- Dial-type position indicator with drag hand and load bonus adjustment
- Provisions for direct-to-pole mounting
- Diagrammatic anodized aluminum nameplate on tank and control cabinet

Standard Features (Internal):

- Switching reactor
- Equalizer windings to balance reactor voltage where necessary
- Self-contained voltage supply for motor and control devices
- Oil level line inside tank to indicate 25°C oil level
- Switching mechanism to have a quick-break, slow make operation, and be provided with electrostatic shielding
- Core and coil assembly to be provided with patterned, epoxy-coated insulation paper and oven-bonded to provide short-circuit withstand as specified by ANSI C57.15.
- By-pass protection for series winding mounted internally using zinc-oxide disks
- Self-contained voltage supply for motor and control devices
- Current transformer

What makes a GE Regulator different?

- Reliability; expected switch life is 2 million operations resulting in up to 40 years of trouble free service
- GE provides 3 control types (VR-1, GE-2011-B and GE-2011-C)
- GE-2011 cabinet equipped with PT disconnect switch and CT shorting switch located in the cabinet, which allows the control/adaptor panel to be changed-out with de-energizing the Regulator
- The GE-2011C is equipped with RS-232, RS-485, and ST type connector for Fiber Optics. (RJ45 Ethernet port optional)
- The GE-2011C is equipped with BECO 2200, BECO 2179, Cooper 2179, DNP3.0, Modbus, UCA2.0, and GP 2179 protocols for SCADA communications

- Both GE-2011 controls can be programmed either from the panel or through a standard RS-232 connector using a serial "null modem" cable and GE-2029A Communications software
- Both GE-2011 controls are equipped with a LCD display. (VFD display optional)
- Motor Capacitor mounted inside the GE-2011 cabinet
- Internal By-pass arrester
- GE regulator is a sealed tank, cover suspended design that allows complete removal of all internals from the top
- GE builds a true 55°C rated design that provides 12% extra continuous loading capability without undue loss of insulation life.

Optional Features

- 304L stainless steel
- Galvanized sub-bases
- Remote cables kits optional up to 50' for pole mounting applications.
- Provide polymer housed PDV-65 and PDV-100 arresters from 3KV through 27KV.
- Provide a variety of bushing terminals, 2-hole terminals, 4-hole terminals, sefcor 4-hole terminals, Anderson connectors suitable for #2-1000MCM conductor, and 1"-14 THD Studs.
- Stainless Steel hardware
- Control Heater with thermostat
- Bird Guards
- Extra Creep Bushings

Specifications

Standard Ratings

- 50 - 833 kVA
- Voltage from 2500 (for 2500/4330Y Volt Circuits, 60kV-BIL) to 19920 Volts (for 34,500 GrdY/19920 Circuits, 150kV-BIL)
- 50 hertz ratings at 10,500, 11,000, 20,000 21,000 and 24,000 up to 250 Amps

Contact Information

GE Transformer, Shreveport Operation
7000 Bert Kouns Industrial Loop
Shreveport, LA 71129
Phone: (877) 872-6852



Distribution Transformers–Medium and High Voltage Section 21

GE VR-1 Voltage Regulator

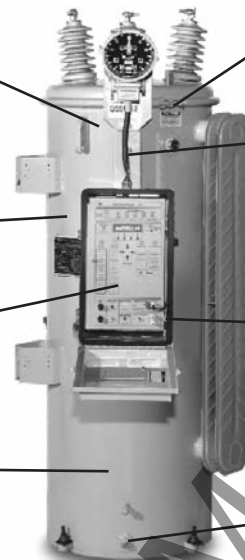
GE Six-Sigma quality ensures superiority in design and manufacture

Internal Zenox Varistor provides optimum surge protection against abnormal voltage surges

A sealed tank, cover-suspended design that allows complete removal of all internals from the top

Laser-etched nameplate

Weather resistant tank and paint finish



Hand-hole on cover

Reliability; expected switch life is 2 million operations which could mean 20 years of trouble free service

GE provides 3 control types (VR-1, GE-2011-B and GE-2011-C)

Oil drain and sampling device

2500 Volts - 60 kV BIL (for 2500/4330Y, 2400/4160Y Volt Circuits)

kVA	Product No.	Load Amps at Raise & Lower 10% Regulation	Approx. Wt. (lbs) Including Oil		Gallons Oil ¹ net @ 7.45 lbs. per Gal.	Approximate Dimensions Over-all Inches		Type
			Ship	Net		Proj. Floor Space	Height	
50	33D3050 ²	200	1330	1230	62	27 X 31	68	Pole
75	33D3075 ²	300	1490	1390	65	32 X 32	70	Pole
100	33D3100 ²	400	1930	1830	86	29 X 40	76	Pole/Station
167	33D3167	668	2200	2100	90	39 X 42	77	Station

5000 Volts - 75 kV (for 5000/8660Y, 4800/8310Y, 2500/4330Y Volt Circuits)

kVA	Product No.	Load Amps at Raise & Lower 10% Regulation	Approx. Wt. (lbs) Including Oil		Gallons Oil ¹ net @ 7.45 lbs. per Gal.	Approximate Dimensions Over-all Inches		Type
			Ship	Net		Proj. Floor Space	Height	
50	33D4050 ²	100	1190	1090	46	24 X 31	66	Pole
100	33D4100 ²	200	1590	1490	61	32 X 37	69	Pole
167	33D4167 ²	334	2250	2150	88	33 X 38	76	Pole
250	33D4250 ³	500	2660	2560	92	34 X 46	83	Station
333	33D4333 ³	666	2900	2800	98	43 X 46	83	Station

¹All regulators are shipped oil-filled.

²These regulators have provisions for direct-to-pole, platform, or crossarm mounting. For crossarm mounting, suspension hooks will be required and may be obtained from hardware manufacturer.

³These regulators are furnished with taps in the control circuit to operate at 2500V and 4800V at rated current.



Publications and Reference: See Section 22 for a complete list of additional product-related publications

Distribution Transformers-Medium and High Voltage Section 21

GE VR-1 Voltage Regulator

7620 Volts - 95 kV BIL (for 7960/13,800Y, 7620/13,200Y, 7200/12470Y Volt Circuits)

kVA	Product No.	Load Amps at Raise & Lower 10% Regulation	Approx. Wt. (lbs) Including Oil		Gallons Oil ¹ net @ 7.45 lbs. per Gal.	Approximate Dimensions Over-all Inches		Type
			Ship	Net		Proj. Floor Space	Height	
38.1	33D5038 ²	50	1100	1000	46	27 X 33	64	Pole
76.2	33D5076 ²	100 ³	1380	1280	57	27 X 35	70	Pole
114.3	33D5114 ²	150 ³	1700	1600	63	32 X 35	71	Pole
167	33D5167 ²	219/232 ^{3,4}	2000	1900	67	34 X 43	75	Pole
250	33D5250	328/347 ^{3,4}	2720	2620	95	38 X 42	83	Station
333	33D5333	438/463 ^{3,4}	3080	2980	100	39 X 42	88	Station
416	33D5416	548/578 ^{3,4}	3380	3280	106	41 X 41	91	Station
509	33D5509	668 ³	3810	3710	125	45 X 45	93	Station

13,800 Volts - 95 kV BIL (suitable for 13,800, 13,200 or 12,000 Volt Circuits at Rated Amperes)

kVA	Product No.	Load Amps at Raise & Lower 10% Regulation	Approx. Wt. (lbs) Including Oil		Gallons Oil ¹ net @ 7.45 lbs. per Gal.	Approximate Dimensions Over-all Inches		Type
			Ship	Net		Proj. Floor Space	Height	
69	33D6069 ²	50	1380	1280	52	27 X 35	72	Pole
138	33D6138 ²	100	1890	1790	64	29 X 35	87	Pole
207	33D6207 ²	150	2600	2500	99	33 X 42	82	Pole
276	33D6276 ²	200	3120	3020	127	32 X 43	92	Pole/Station

14,400 Volts - 150 kV BIL5 (for 14,400/24940Y volt circuits, also 7200/12,470 GRDY circuits at Rated Amperes)

kVA	Product No.	Load Amps at Raise & Lower 10% Regulation	Approx. Wt. (lbs) Including Oil		Gallons Oil ¹ net @ 7.45 lbs. per Gal.	Approximate Dimensions Over-all Inches		Type
			Ship	Net		Proj. Floor Space	Height	
72	33D7072 ²	50	1920	1820	96	29 X 38	79	Pole
144	33D7144 ²	100	2480	2380	102	33 X 40	88	Pole
288	33D7288	200	3290	3190	127	39 X 45	96	Station
333	33D7333	231	4010	3910	161	42 X 47	103	Station
416	33D7416	289	4020	3920	161	43 X 45	103	Station
432	33D7432	300	4340	4240	169	48 X 49	103	Station
500	33D7500	347	4870	4770	168	42 X 49	109	Station
576	33D7576	400	5060	4960	172	48 X 49	109	Station
667	33D7667	463	5450	5350	172	50 X 49	109	Station
720	33D7720	500	5550	5450	194	54 X 53	109	Station

19,920 Volts - 150 kV BIL5 (for 34,500 GRDY/19,920 Volt Circuits)

kVA	Product No.	Load Amps at Raise & Lower 10% Regulation	Approx. Wt. (lbs) Including Oil		Gallons Oil ¹ net @ 7.45 lbs. per Gal.	Approximate Dimensions Over-all Inches		Type
			Ship	Net		Proj. Floor Space	Height	
100	33D8100 ²	50.2	2330	2230	110	29 X 36	94	Pole
200	33D8200	100.4	3040	2940	132	31 X 41	101	Station
333	33D8333	167	4040	3940	160	42 X 49	103	Station
400	33D8400	201	4250	4150	165	48 X 49	103	Station
500	33D8500	251	5490	5390	174	53 X 49	109	Station
667	33D8667	335	5590	5490	177	56 X 51	109	Station
833	33D8833	418 (65C)	5680	5580	197	58 X 53	109	Station

¹All regulators are shipped oil-filled.

²These regulators have provisions for direct-to-pole, platform, or crossarm mounting. For crossarm mounting, suspension hooks will be required and may be obtained from hardware manufacturer.

³Three 7620V regulators can be operated at 7960V, 7620V, 7200V, 5000V, 4800V, 4330V, 4160V, 2500V and 2400V at rated amperes. Units shipped connected for 7200V operation.

⁴These regulators are capable of operation at voltages from 7960V to 2500V. Can apply currents up to the current determined by the rated kVA and the voltage level, provided the operating voltage is from 7200V to 7960V. For voltages below 7200V, the current is limited to the value determined for 7200V operation.

⁵150 kV BIL on S and L, 95 kV BIL on SL.



Distribution Transformers—Medium and High Voltage Section 21

Bushing Potential Device KA-108

The General Electric Type KA-108 Bushing Potential Device is a voltage transforming device for the operation of instruments and relays from high-voltage circuits, 115 kV and above designed with optimal safety, reliability and savings in mind.

Greater Safety

- This potential device has several safety features:
 - A ground switch for removing high-voltage from the device.
 - A spark gap that protects the device circuit from abnormally high surge voltages.
 - A flexible metal covered cable that connects the device to the bushing, so that no live circuits are exposed.



Features and Benefits

- Economical
- High-flexibility
- Adjustable to a variety of HV bushings
- Constant burden capacity
- Rugged construction

Application

The KA-108 bushing potential device is well suited to operate the usual types of relays, synchrosopes, volt-meters, indicating lamps, wattmeters, and similar instruments requiring a potential source of essentially constant ratio and phase relation with respect to the high-voltage circuit. The device's major field of application is in protection and control equipment for generating plants, substations, and transmission lines.

Contact Information

GE Parts Super Center
7602 Woodland Drive
Suite 200
Indianapolis IN 46278
800-331-0436
fax: 513-774-2924
www.partsdirect.ge.com



Publications and Reference: See Section 22 for a complete list of additional product-related publications

NOTES:

Lined area for notes.

