

INSTRUMENT TRANSFORMERS

LG-25-585 and LGX-25-585

Outdoor station post current transformers



Product features

- 25 kV, 150 kV BIL, 60 Hertz
- Outdoor class, 105°C insulation system
- Single, dual, or multiple taps available
- Window opening: 4.5" (115 mm)
- Electrical specifications:
 - Strike: 13.0" (330 mm)
 - Creep: 25.9" (658 mm)
- Approximate weight (without bar): 133 lbs (57 kg)
- Operating temperature range: -50°C through +65°C

Application

The LG-25-585 and LGX-25-585 outdoor current transformers are designed for use on substation structures where bare tubular primary conductors or heavy braided cables are used. When provided with a factory installed primary bar assembly, it provides a pad terminal with a 4-hole NEMA bolt pattern on each end. For applications with an uninsulated bus (bar, tube, or cable), connect the pigtail lead to the bus to equalize the voltage in the window area for corona prevention. If a fully insulated bus (one that has an outer ground sheathing) is used, an equalizing potential connection is not required.

The LGX-25-585 is specifically designed for extended range high accuracy metering duty only.

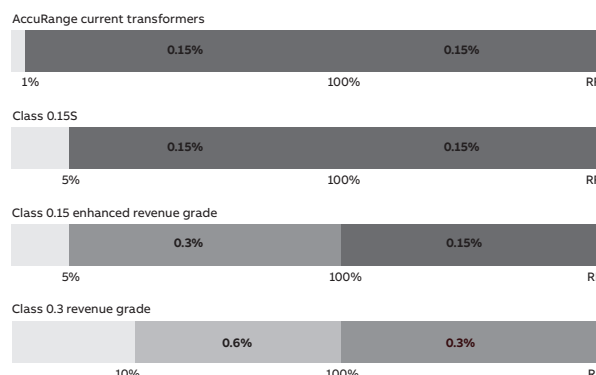
The LG-25-585 and LGX-25-585 outdoor current transformers are designed for use on substation structures where bare tubular primary conductors or heavy braided cables are used.

Construction features

The primary insulator is a cycloaliphatic epoxy (CEP) molded sleeve with a conductive inner lining to prevent corona. The CEP primary tube and the secondary winding are encapsulated in a polyurethane resin for outdoor use. An anodized aluminum nameplate is laser etched and adhered to the body of the unit, adjacent to the secondary junction box. Bright decals indicating the primary rated current are affixed to each side.

High accuracy and extended range

The LGX-25-585 is part of ABB's AccuRange® current transformer family and delivers high accuracy and stable performance over a wide load swing, making it



a great fit for variable load applications. Accuracy is guaranteed to be +/- 0.15% from 1% of nominal current through rating factor. ABB's extended range units deliver savings through improved accuracy metering and reduced inventory.

Terminals

The secondary terminals are 1/4"-20 UNC silicon bronze studs with associated hardware suitable for solid or stranded copper wire up to No. 8 AWG, or ring tongue terminals sized for 1/4" or M7/M8 stud. Hardware should be tightened to compress lock washers, but is not to exceed 50 in-lbF (5.6 N-m).

Primary bars are electro-tin plated, sized for the maximum rated continuous current (primary current X rating factor), and provided with standard NEMA 4-hole pads. Primary bars can also be sized for the rated current or lower – consult factory if desired. The LG-25-585 and LGX-25-585 should not be used to support external bus work, but can support up to 200 pounds (91 kg) on the primary bar for connections. Primary bar kits may be purchased separately and installed in the field.

Mounting

The aluminum baseplate is 0.25" thick (6.4 mm) plain finish aluminum with 0.56" (14 mm) holes, suitable for mounting in the upright or underhung positions. It may also be mounted cantilever with the bus running vertically. In the case of cantilever mounting with bus running horizontally, there is a special baseplate ordering option that must be specified at the time of purchase. This is done by adding "-H" to the end of the style number.

Junction box

Secondary terminals are housed inside an injection molded thermoplastic junction box supplied with two (2) 1"-11.5 NPT hubs. Blank plugs are provided and must be replaced with proper fittings to maintain weathertight protection. A removable cover is attached with four (4) sealing-type thumb screws.

Test reports

Test reports are available and can be e-mailed upon request.

Standards

This unit meets or exceeds all requirements of IEEE C57.13-2016 and can be tested to other standards as requested.

Options

Animal guards are available to place around conductors and prevent entry of foreign objects or animals into the HV tube (ordered separately, the part number for a set of two animal guards for an LG with 4.5" window tube is 123-0098-901). The photos below show the guards separate and inside the window tube. For installation, cut out the center (thinner material) in the geometry and size needed for the conductor. Then slide the conductor through the guards and window tube. After the conductor is anchored in place, press the guard into the tube to seal around the primary conductor.

Optional primary bar kits for field installation available separately.

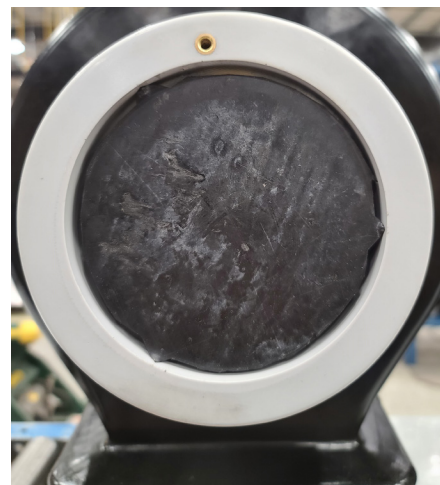
Consult factory for other special needs such as additional ratios, bars sized for lower current, bars rotated from horizontal to vertical position, extended bar lengths, bars with 6-hole pads instead of standard 4-hole, bars with thicker filler pads, etc.

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01 Optional LG animal guard prior to installation.

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02 Animal guard pressed in the window tube of the LG. To install, cut out the center of the guard for the primary conductor pass-through.

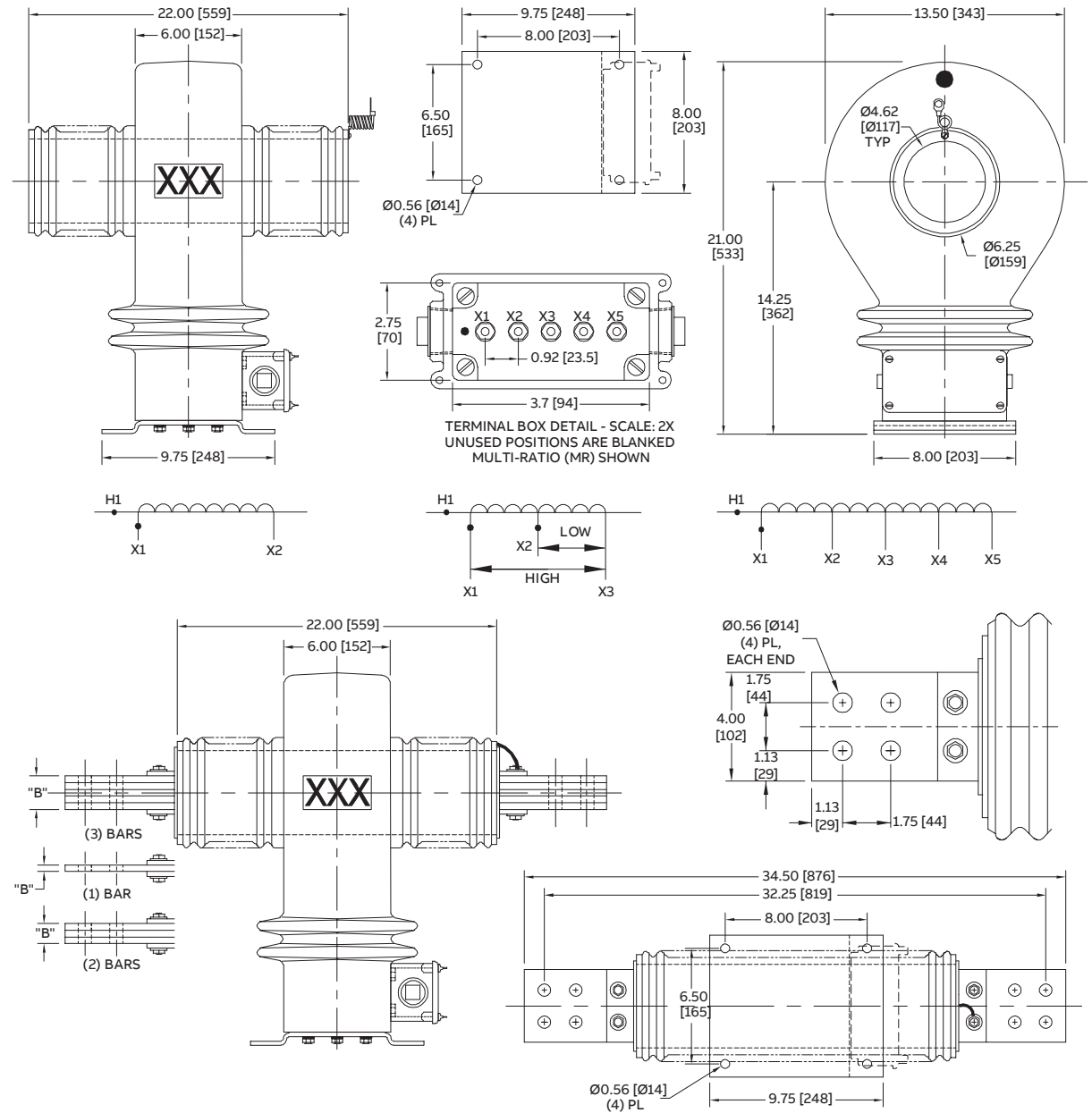


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Dimensions (inches [mm])



Primary bar information

Max. amps 75°C rise	Stack thickness dim. "B"	(No. bars) bar thickness	Bar assembly weight (lbs. [kg])
1200 A	0.25 [6.4]	(1) 1/4"	16 [7.3]
1800 A	0.38 [9.5]	(1) 3/8"	21 [9.5]
2500 A	0.75 [19]	(2) 1/4"	29 [13.2]
3500 A	1.00 [25]	(2) 3/8"	41 [18.6]
6000 A	1.63 [41]	(3) 3/8"	61 [27.7]

Primary bars are selected based on the maximum amps of the primary rated current times the rating factor.

Selection guide for LG-25-585 with 5A secondary

Primary current rating	Rating factor @ 30°C	IEEE metering accuracy	IEEE relaying accuracy	Style number		Primary bar kit (for field installation)
				Window-type	Bar-type	
100	3.0	-	C30	F030100S1	F030100S3	424 0130 901
200	3.0	0.3B-0.2	C50	F030200S1 ¹	F030200S3 ¹	424 0130 901
300	3.0	0.3B-0.5	C100	F030300S1 ¹	F030300S3 ¹	424 0130 901
400	3.0	0.3B-0.9	C100	F030400S1 ¹	F030400S3 ¹	424 0130 901
500	3.0	0.3B-0.9	C150	F030500S1 ¹	F030500S3 ¹	424 0131 901
600	3.0	0.3B-1.8	C200	F030600S1 ¹	F030600S3 ¹	424 0130 901
800	2.0	0.3B-1.8	C300	F030800S1 ¹	F030800S3 ¹	424 0130 902
1000	2.0	0.3B-1.8	C350	F031000S1 ¹	F031000S3 ¹	424 0130 902
1200	2.0	0.3B-1.8	C400	F031200S1 ¹	F031200S3 ¹	424 0130 902
1500	2.0	0.3B-1.8	C400	F031500S1 ¹	F031500S3 ¹	424 0131 902
2000	2.0	0.3B-1.8	C600	F032000S1 ¹	F032000S3 ¹	424 0131 903
2500	2.0	0.3B-1.8	C600	F032500S1 ¹	F032500S3 ¹	424 0131 903
3000	2.0	0.3B-1.8	C400	F033000S1-511	F033000S3-511	424 0131 903
3000	2.0	0.3B-1.8	C800	F033000S1 ¹	F033000S3 ¹	424 0131 903
3500	1.5	0.3B-1.8	C800	F033500S1 ¹	F033500S3 ¹	424 0131 903
4000	1.5	0.3B-1.8	C400	F034000S1-511	F034000S3-511	424 0131 903
4000	1.5	0.3B-1.8	C800	F034000S1 ¹	F034000S3 ¹	424 0131 903
5000	1.5/.2 ²	0.3B-1.8	C400	F035000S1-511	F035000S3-511	424 0131 903
5000	1.5/.2 ²	0.3B-1.8	C800	F035000S1 ¹	F035000S3 ¹	424 0131 903
6000	1.0	0.3B-1.8	C400	F036000S1-511	F036000S3-511	424 0131 903
6000	1.0	0.3B-1.8	C800	F036000S1	F036000S3	424 0131 903
Dual-ratio						
200/400	3.0/3.0	0.3B-0.2/B-0.9	C50/C100	F030200D1 ¹	F030200D3 ¹	424 0130 901
300/600	3.0/3.0	0.3B-0.5/B-1.8	C100/C200	F030300D1 ¹	F030300D3 ¹	424 0130 902
400/800	3.0/2.0	0.3B-0.9/B-1.8	C150/C300	F030400D1 ¹	F030400D3 ¹	424 0130 902
500/1000	3.0/2.0	0.3B-0.9/B-1.8	C100/C200	F030500D1 ¹	F030500D3 ¹	424 0130 902
600/1200	3.0/2.0	0.3B-1.8/B-1.8	C200/C400	F030600D1 ¹	F030600D3 ¹	424 0130 902
750/1500	2.0/2.0	0.3B-1.8/B-1.8	C200/C400	F030750D1	F030750D3	424 0131 902
800/1600	2.0/2.0	0.3B-1.8/B-1.8	C200/C400	F030800D1	F030800D3	424 0131 902
1000/2000	2.0/2.0	0.3B-1.8/B-1.8	C300/C600	F031000D1 ¹	F031000D3 ¹	424 0131 903
1500/3000	2.0/2.0	0.3B-1.8/B-1.8	C400/C800	F031500D1 ¹	F031500D3 ¹	424 0131 903
2000/4000	2.0/.5	0.3B-1.8/B-1.8	C400/C800	F032000D1 ¹	F032000D3 ¹	424 0131 903
Multi-ratio						
400 MR	2.0	0.3B-0.5 ³	C100	F030400M1	F030400M3	424 0130 901
600 MR	2.0	0.3B-1.8 ³	C200	F030600M1	F030600M3	424 0130 901
1200 MR	2.0	0.3B-1.8 ³	C400	F031200M1	F031200M3	424 0130 902
2000 MR	2.0	0.3B-1.8 ³	C600	F032000M1	F032000M3	424 0131 903
3000 MR	2.0	0.3B-1.8 ³	C800	F033000M1	F033000M3	424 0131 903
4000 MR	1.5	0.3B-1.8 ³	C800	F034000M1	F034000M3	424 0131 903

1 - Approved for revenue metering by Measurement Canada, file AE-0703

2 - Reduced rating factor when used with ABB primary bar kits

3 - Metering class accuracy applies to full winding ratio only

Thermal rating (I_{th}): 85 times nominal for 1 second. Mechanical rating (I_{mech}): 220 times nominal first peak.

Additional styles available upon request. Contact your ABB sales representative or call +1-252-827-3212 for more information.

Selection guide for LGX-25-585 with 5A secondary

Primary current rating	Rating factor @ 30°C	IEEE metering accuracy	Metered range, A	Style number		Primary bar kit (for field installation)
				Window-type	Bar-type	
200	4.0	0.15SB-0.2/0.3SB-0.5	2-800	F030200X1NC	F030200X3NC	424 0130 901
300	4.0	0.15SB-0.5/0.3SB-0.9	3-1200	F030300X1NC	F030300X3NC	424 0130 901
400	4.0	0.15SB-0.9/0.3SB-1.8	4-1600	F030400X1NC	F030400X3NC	424 0130 901
500	4.0	0.15SB-0.9/0.3SB-1.8	5-2000	F030500X1NC	F030500X3NC	424 0130 902
600	4.0	0.15SB-1.8	6-2400	F030600X1NC	F030600X3NC	424 0130 902
800	4.0	0.15SB-1.8	8-3200	F030800X1NC	F030800X3NC	424 0131 902
1000	4.0	0.15SB-1.8	10-4000	F031000X1NC	F031000X3NC	424 0131 903
1200	4.0	0.15SB-1.8	12-4800	F031200X1NC	F031200X3NC	424 0131 903
1500	3.0	0.15SB-1.8	15-4500	F031500X1NC	F031500X3NC	424 0131 903
2000	3.0	0.15SB-1.8	20-6000	F032000X1NC	F032000X3NC	424 0131 903

Thermal rating (I_{th}): 150 times nominal for 1 second. Mechanical rating (I_{mech}): 400 times nominal first peak.

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