

Application

Eaton Cooper’s ELF cutout-mounted current-limiting dropout fuse is suitable for protecting pole-mounted transformers. These fuses may be used in place of fuse-links at locations where an eventful transformer failure may affect public safety. Current-limiting dropout fuses can also be used in conjunction with a pressure relief valve on the transformer to reduce clearance of a transformer to buildings. BC Hydro transformers come with a pressure relief device. See ES43 B1-14.

Revision Notes

Updated *Application*. Removed previous *Important Note* section. Added *Revision Notes* and *References* sections. Combined four tables into two in *Notes* as previous Tables 1 and 2 were identical, as were 3 and 4. Substantive changes are marked by green vertical revision lines in the left margin. This revision released concurrently with Standards and Equipment Advisory Information Bulletin 2025-054 *Released ES43 B1-14 and K6-04 and Revised ES43 K6-03*.

References

BC Hydro Distribution Standards

- ES43 B1-14 Minimum Separation from Flammable Dielectric-Filled Equipment to Buildings
- ES43 K6-04 Current-Limiting Dropout Fuses for Overhead Transformers

External Documents

Eaton Cooper Power Series Fusing Equipment Catalog Data CA132027EN ELF current-limiting dropout fuses

Notes

Table 1 and 2 fuse selection tables match the recommendations for pole-mounted transformer protection in Cooper Power Systems document CA132027EN *ELF current-limiting dropout fuses*.

Table 1 – Fuse selection table for single-phase transformers operating at 7.2 kV and three-phase transformer banks operating at 12.47 GrdY / 7.2 kV with Eaton Cooper ELF current-limiting dropout fuses

Transformer size (kVA)	Fuse amp rating (A)	Fuse voltage rating (kV)	Cooper part number	BC Hydro material number
25	6	15	FAK44W6	9700-3854
50	12	15	FAK44W12	9700-3855
75	18	15	FAK44W18	9700-3856
100	20	15	FAK44W20	9700-3857

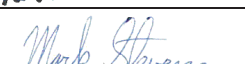
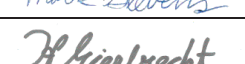
Designed: K. Middleton, P.Eng			Cutout-Mounted Current-Limiting Dropout Fuse Selection	
Checked: K. Middleton, P.Eng				
Reviewed: M. Stevens, P.Eng				
Approved: H. Giesbrecht, P.Eng		Issued: 2025-11-05 Effective: 2025-11-05	DISTRIBUTION STANDARDS 	ES43 K6-03 R1

Table 2 – Fuse selection table for single-phase transformers operating at 14.4 kV and three-phase transformer banks operating at 24.94 GrdY / 14.4 kV with Eaton Cooper ELF current-limiting dropout fuses

Transformer size (kVA)	Fuse amp rating (A)	Fuse voltage rating (kV)	Cooper part number	BC Hydro material number
25	6	23	FAK45W6	9700-3858
50	6	23	FAK45W6	9700-3858
75	8	23	FAK45W8	9700-3859
100	12	23	FAK45W12	9700-3860

Application

This standard applies to overhead transformer protection with a pressure relief device for reduced clearances to buildings with cutout-mounted dropout current-limiting fuses. Dropout current-limiting fuses are installed in standard 25 kV class cutouts. Current-limiting fuses are selected per ES43 K6-03.

Revision Notes

New standard, released concurrently with Standards and Equipment Advisory Information Bulletin 2025-054
Released ES43 B1-14 and K6-04 and Revised ES43 K6-03.

Items Required

Item	Description	Material number	Quantity per single-phase installation	Quantity per three-phase installation
A1	Cutout, fuse, 100 A, polymer body, 25 kV	9600-5747	1	3 if required, see notes
A2	Fuse, current-limiting, dropout	See ES43 K6-03	1	3
J1	Sign, electrical safety, notice, current-limiting fuses required, 275 mm x 195 mm, retroreflective on 0.081" 5052-H38 substrate	9700-2125	1	1
N1	Screw, lag, 3/8" diameter, 3" long, square or hex head, fether drive pt, hot dip galvanized	101-0256	2	2
N2	Washer, flat, 3/8" nominal, galvanized steel, 7/16" inner diameter, 1" outer diameter, 3/32" thick	102-3039	2	2

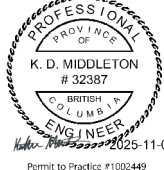
References

BC Hydro Distribution Standards

- ES43 B1-14Minimum Separation from Flammable Dielectric-Filled Equipment to Buildings
- ES43 section JTransformers, Regulators, Capacitors, and Revenue Metering
- ES43 K6-03Cutout-Mounted Current-Limiting Dropout Fuse Selection

External Documents

- CSA 22.3 No. 1Overhead systems

Designed: K. Middleton, P. Eng		Professional of Record 	Current-Limiting Dropout Fuses for Overhead Transformers	
Checked: K. Middleton, P. Eng				
Reviewed: M. Stevens, P. Eng			DISTRIBUTION STANDARDS 	ES43 K6-04 R0
Approved: H. Giesbrecht, P. Eng				
		Issued: 2025-11-05 Effective: 2025-11-05		

Notes

1. Refer to the manufacturer's instructions (packaged with dropout fuse) in conjunction with this standard during assembly.
2. Replace non-standard polymeric cutouts with new 25 kV cutouts (item A1) when retrofitting an existing terminal pole.
3. Remove existing fuse holder from the cutout if required.
4. Install current-limiting fuse sign (item J1) on pole using lag screws and washers (items N1 and N2).
5. Install dropout current-limiting fuses in cutouts per manufacturer's instructions.
6. Structure drawing shown in Figure 1 is typical. This standard may be applied to any standard transformer pole configuration (see ES43 section J).
7. See ES43 K6-03 for fuse selection.
8. Install sign on the same side of the pole as the operational side of the cutout, where practicable. Field adjust sign position as required.

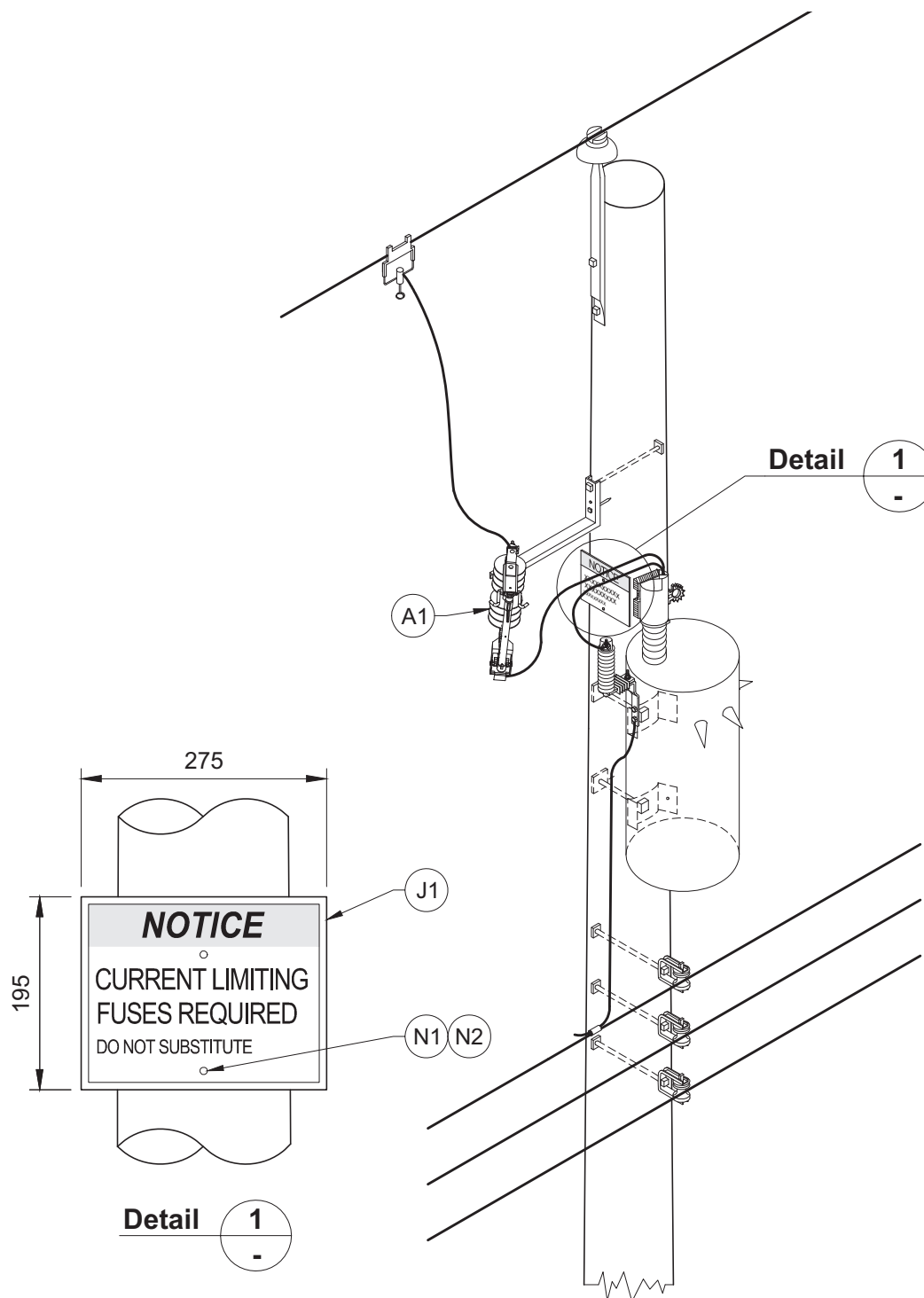


Figure 1 – Current-limiting dropout fuses for overhead transformers typical framing, see note 6