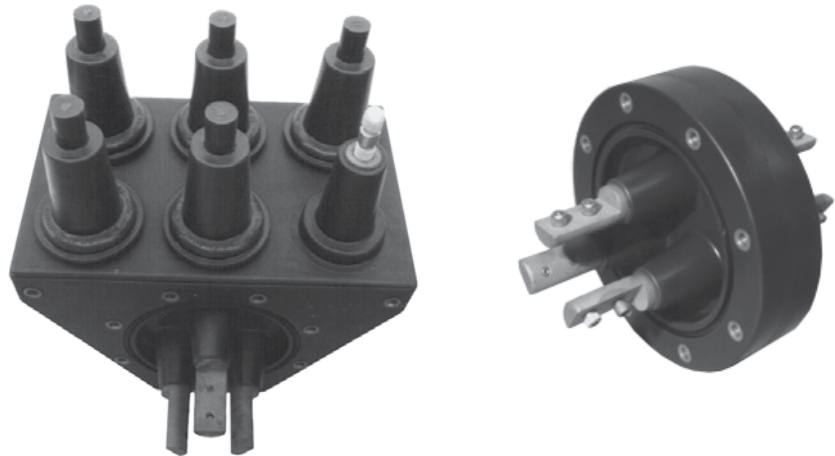


# 200 A and 600 A, 15 and 25 kV cable transition and oil stop modules



## General

Eaton's Cooper Power™ series cable transition modules (CTM) and oil stop modules (OSM) are designed for splicing paper insulated lead cable (PILC) into solid dielectric cable. These modules are fully shielded, submersible, resistant to harsh materials and are designed and tested in accordance with IEEE Std 386™-2006 standard—“Separable Insulated Connector Systems”.

These vacuum cast transition modules are made of a proprietary high quality silica batting resin, possessing a high dielectric strength (600 V/mil) and are available for applications up to 25 kV. The cable transition and oil stop modules are manufactured in 200 A, 600 A, or 900 A configurations. The 200 A transition modules incorporate a universal bushing well design making it possible to use either a 200 A loadbreak or deadbreak bushing well inserts.

The cable transition modules are available in several styles including straight tap, tap and run, and tap transition configurations to accommodate any vault application requirement. Our modules permit easy and reliable construction of single-phase taps or splices from PILC distribution cable feeders. The cable transition module is the only product available in the industry, which allows the direct connection of separable insulated connectors in a splice of this type.

The oil stop modules are available in straight tap and tap transition configurations. The oil stop module is an extension of the cable transition module product line, and is primarily used in situations where dramatic changes in elevation are present over long cable runs. The installation of an OSM helps prevent premature cable failure caused by the migration of oil in paper insulated lead cable.

All cable transition and oil stop modules are equipped with solder lugs and protective covers as a standard. The entrance fittings and mounting brackets are sold separately. The standard modules are for horizontal mounting. For unique transition splicing requirements contact your Eaton representative.

## 900 Amp rating

All cable transition and oil stop modules are manufactured with an internal copper bus bar. A 900 A rating can be achieved on the 600 A bushings when mated with comparably rated all copper mating separable connectors.

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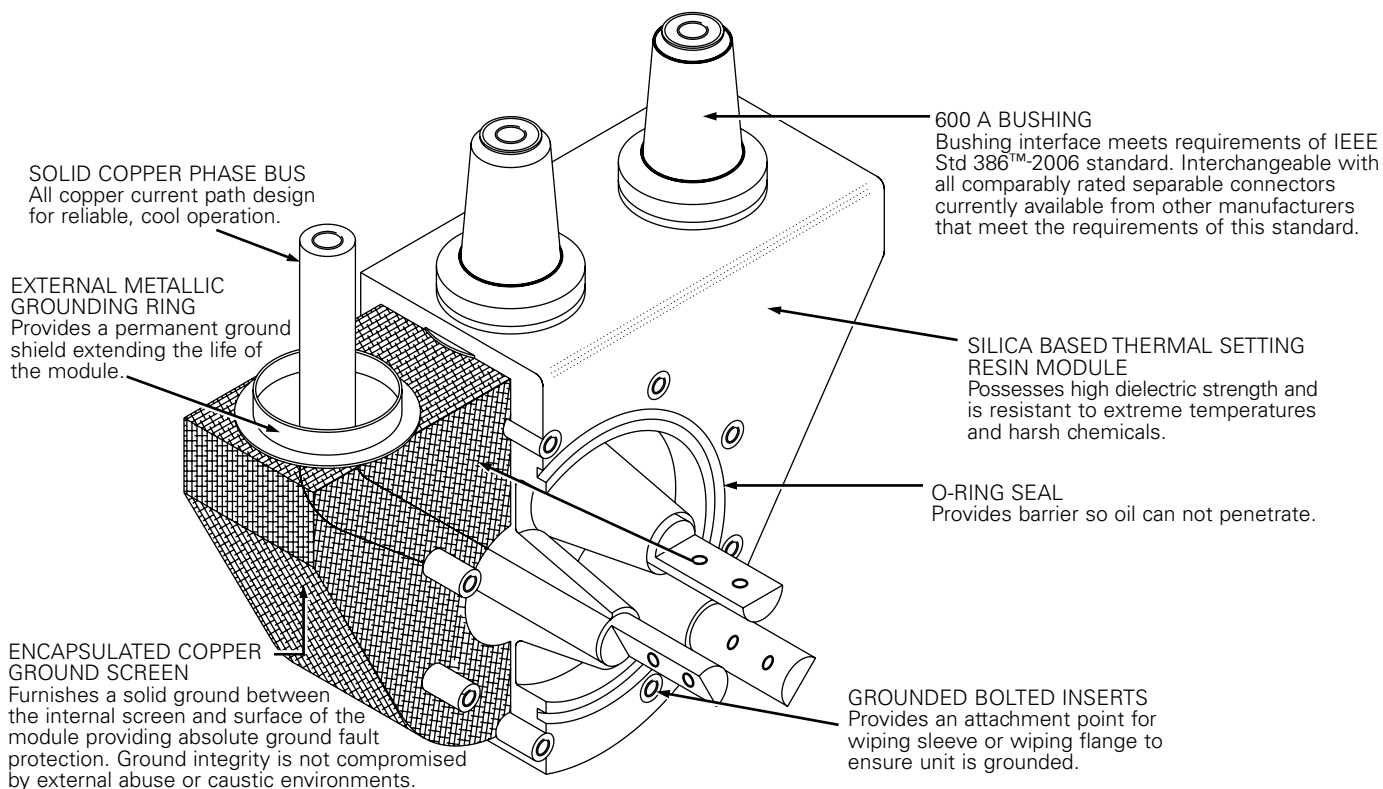


Figure 1. Cut-away view cable transition module, CTM011A.

## Interchangeability

All Eaton's transition modules are designed and manufactured in accordance with IEEE Std 386™-2006 standard and are interchangeable with all comparably rated separable connectors currently available from other major manufacturers that meet the requirements of this standard.

## Installation

The cable transition or oil stop module is assembled onto prepared PILC cable. A wiping sleeve must be used to complete the installation of the transition module. Please refer to detailed installation instructions, which outline the proper procedure for terminations of PILC included with each transition module. 200 A and 600 A connectors are assembled onto the transition modules as described in the appropriate installation instructions for each respective connector.

## Production tests

Tests conducted in accordance with IEEE Std 386™-2006 standard.

- AC 60 Hz 1 Minute Withstand
  - 15 kV Class – 34 kV
  - 25 kV Class – 40 kV
- Minimum Corona Voltage Level
  - 15 kV Class – 11 kV
  - 25 kV Class – 19 kV

Tests conducted in accordance with Eaton requirements:

- Physical Inspection

Table 1. Voltage Ratings and Characteristics

15 kV Class	
Description	kV
Maximum Rating Phase-Ground	8.3
AC 60 Hz 1 Minute Withstand	34
DC 15 Minute Withstand	53
BIL and Full Wave Crest	95
Minimum Corona Voltage Level	11
25 kV Class	
Description	kV
Maximum Rating Phase-Ground	15.2
AC 60 Hz 1 Minute Withstand	40
DC 15 Minute Withstand	78
BIL and Full Wave Crest	125
Minimum Corona Voltage Level	19

Voltage ratings and characteristics are in accordance with IEEE Std 386™-2006 standard.

**Table 2. Current Ratings and Characteristics**

**200 A Class Product**

Description	Amperes
Continuous	200 A rms
Short Time	10,000 A rms symmetrical for 0.17 s 3,500 A rms symmetrical for 3.0 s

**600 A Class Product**

Description	Amperes
Continuous	600 A rms
Short Time	25,000 A rms symmetrical for 0.17 s 10,000 A rms symmetrical for 3.0 s

Current ratings and characteristics are in accordance with IEEE Std 386™-2006 standard.

**Ordering information**

Each Cable Transition and Oil Stop Module contains:

- Thermal Set Cable Transition/Oil Stop Module
- Solder Lugs and Protective Covers
- Installation Instructions

To order 200, 600, or 900 A, 15/25 kV Cable Transition Modules; **See Table 3**

To order Oil Stop Module; **See Table 4**

To order Cable Transition Module Accessories; **See Table 5a and Table 5b**

**Engineered solutions**

Eaton can supply junction bars designed and manufactured for unique applications in a relatively short time. (Exact lead times determined by design feasibility.) For additional assistance, please contact your Eaton representative.

**Table 3. Cable Transition Modules, 15 or 25 kV for 200, 600 and 900 A**

Illustration (not to scale)	Voltage Class	Description		Catalog Number	Dimensions				Weight		
		Transition	Tap		a	b	c	d			
		Straight through	200 A	3 Point	CTM005A	8-1/2" 216 mm	4" 102 mm	9-2/3" 406 mm	8-1/2" 216 mm	18 lb 8 kg	
			600 A	3 Point	CTM012A	9-1/4" 235 mm	2" 51 mm	12-1/2" 318 mm	9-1/4" 235 mm	20 lb 9 kg	
	15 or 25 kV	Tap	200 A	3 Point	CTM015A	14" 356 mm	4-1/2" 114 mm	10-1/4" 260 mm	10" 254 mm	33 lb 15 kg	
				6 Point	CTM025A	14" 356 mm	9" 229 mm	14-3/4" 375 mm	9-7/8" 251 mm	62 lb 28 kg	
			600 A	3 Point	CTM011A	14" 356 mm	4-1/2" 114 mm	10-1/4" 260 mm	14" 356 mm	36 lb 16 kg	
				6 Point	CTM020A	14" 356 mm	9" 229 mm	14-3/4" 375 mm	14" 356 mm	68 lb 31 kg	
			200 A	Straight through & Tap	3 Point	CTM010A	14" 356 mm	4-1/2" 114 mm	16" 406 mm	9-7/8" 251 mm	37 lb 17 kg
					6 Point	CTM024A	14" 356 mm	9" 229 mm	20-1/2" 521 mm	9-7/8" 251 mm	66 lb 30 kg
			600 A	Straight through & Tap	3 Point	CTM009A	14" 356 mm	4-1/2" 114 mm	16" 406 mm	14" 356 mm	40 lb 18 kg
					6 Point	CTM019A	14" 356 mm	9" 229 mm	20-1/2" 521 mm	14" 356 mm	72 lb 33 kg
			200 A	Straight through & Tap	3 Point	CTM029A	14" 356 mm	4-1/2" 114 mm	14-1/4" 362 mm	10" 254 mm	40 lb 18 lb
			600 A		3 Point	CTM030A	14" 356 mm	4-1/2" 114 mm	14-1/4" 362 mm	14" 356 mm	46 lb 21 kg

**Table 4. Oil Stop Modules, 15 or 25 kV, for 200, 600, and 900 A**

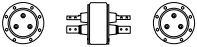
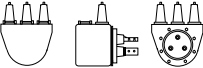



Illustration (not to scale)	Description	Voltage Class	Catalog Number
	Three Phase, 600 A PILC to PILC Splice	15 kV or 25 kV	OSM004

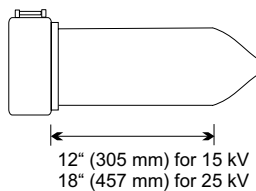
Illustration (not to scale)	Description	Voltage Class	Catalog Number
	Tap Transition, Paper Insulated Lead Cable (PILC) Run to 3 Point 200 A and 3 Point 600 A Tap	15 kV or 25 kV	CTM035A

**Table 5a. Mounting Bracket**

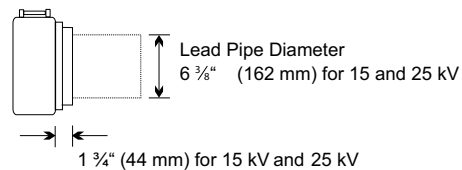
Illustration (not to scale)	Description	Voltage Class	Catalog Number
	Saddle	15 kV or 25 kV	BRK469

**Table 5b. Cable Transition Module Accessories**

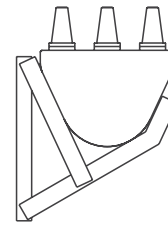
Illustration (not to scale)	Description	Voltage Class	Catalog Number	Illustration (not to scale)	Description	Voltage Class	Catalog Number
	Wiping Sleeve	15 kV 25 kV	WS1112 WS1118		Wiping Flange	15 kV or 25 kV	WS12



**Figure 3. Cable Transition Module shown with Wiping Sleeve.**



**Figure 4. Cable Transition Module shown with Wiping Flange.**



**Figure 2. Cable transition module supported by mounting saddle.**

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