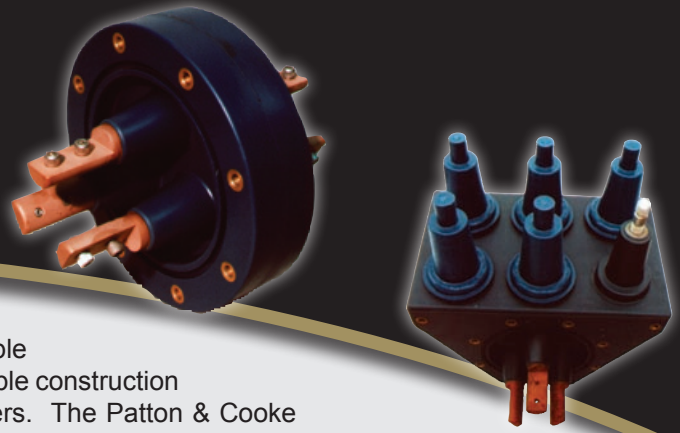




# PATTON & COOKE Cable Transition & Oil Stop Modules



Patton & Cooke Co. presents Cable Transition Modules (CTMs) designed for splicing paper insulated lead cable (PILC) into solid dielectric cable. Our modules allow easy and reliable construction of single phase taps or splices from PILC distribution cable feeders. The Patton & Cooke Cable Transition Module is the only product available that permits the direct connection of separable insulated connectors in a splice of this type.

Available in 200, 600 or 900 Amp, Cable Transition Modules are designed for 15 or 25 kV operation. CTMs are available in straight through, tap and run and tap transition configurations to accommodate any application requirement.

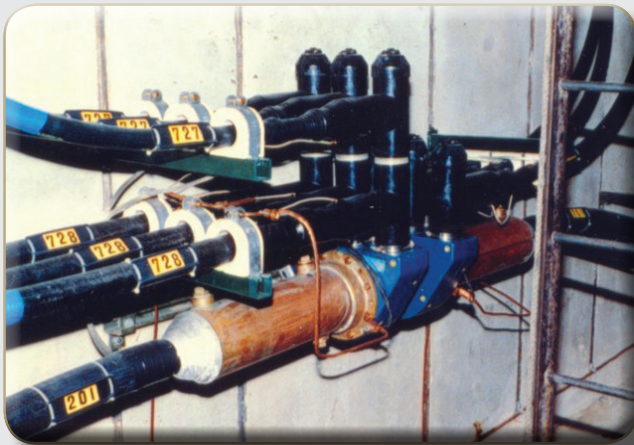
Cast from Patton & Cooke's exclusive thermal setting resin, the modules are void free, fully shielded and completely submersible. Cable Transition Modules are for use with separable insulated connectors manufactured to ANSI/IEEE Standard 386.



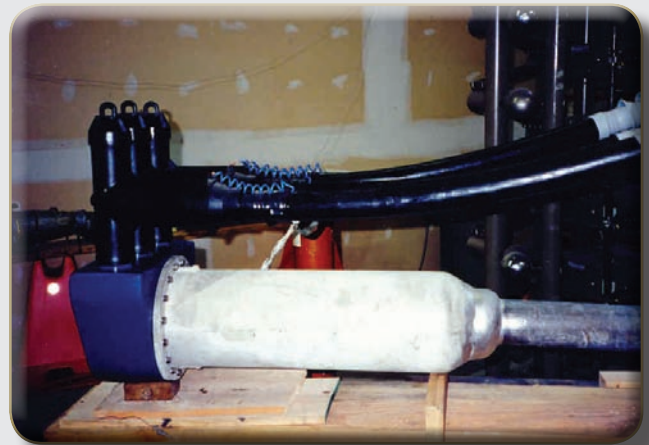
The Oil Stop Module (OSM) is an extension of the Cable Transition Module product line and an example of Patton & Cooke's engineering skill. Installation of an OSM helps prevent premature cable failure caused by the migration of oil in paper insulated lead cable.

Cable Transition and Oil Stop Modules are designed and manufactured with the commitment to quality and service which is synonymous with all Patton & Cooke products.

Contact us for all of your medium voltage splicing solutions.



*Installation using CTM-011A Cable Transition Modules*



*Cable Transition Module shown with wiping sleeve installed*

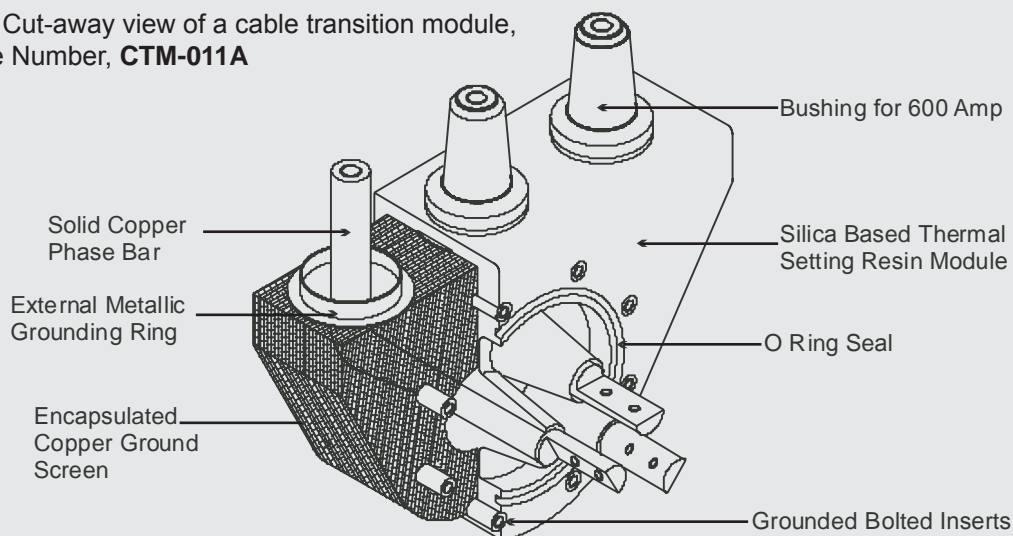


*We make the connection.*

**High Voltage Equipment Solutions. Design and Manufacturing.**

UNIQUE FEATURES	BENEFITS
The CTM transition splice is all encompassing: separable insulated connectors can be installed directly on the module, so a separate junction is not required for this purpose.	<ul style="list-style-type: none"> <li>• Installation process and planning is more convenient</li> <li>• Eliminates the need for an additional splice to install separable insulated connectors</li> <li>• Reduces inventory</li> </ul>
Module vacuum cast from silica based thermal setting resin	<ul style="list-style-type: none"> <li>• Possesses high dielectric strength (600v/mil)</li> <li>• Resistant to extreme temperatures</li> <li>• Resistant to all acids, alkalis and solvents</li> <li>• Superior resistance to mechanical stress fracturing</li> <li>• Prevents amalgamation with rubber separable insulated connectors</li> </ul>
Solid integral mechanical cast design	<ul style="list-style-type: none"> <li>• Module is rigid and will not deform under cable loading</li> <li>• Provides excellent fault current withstand</li> </ul>
Encapsulated copper screen for full ground shielding	<ul style="list-style-type: none"> <li>• Increases strength of module casting</li> <li>• Ground shield is indestructible</li> <li>• Provides superior safety</li> <li>• Reduces liability</li> </ul>
Module is fully submersible	<ul style="list-style-type: none"> <li>• Efficient operation assured regardless of vault condition</li> </ul>
Bushings and universal bushing wells are aligned in parallel on the unit	<ul style="list-style-type: none"> <li>• Vault space is optimized</li> </ul>
Accepts both loadbreak and deadbreak inserts	<ul style="list-style-type: none"> <li>• Offers universal installation capabilities</li> </ul>
External metallic ring on connection interfaces	<ul style="list-style-type: none"> <li>• Ground shield is permanent compared to easily damaged surface applied conductive paint</li> <li>• Extends product life</li> </ul>
200 Amp universal bushing well supplied with replaceable studs	<ul style="list-style-type: none"> <li>• Replaceability of individual components lengthens lifespan of unit</li> <li>• Reduces downtime</li> </ul>
Replaceable studs are electroplated high strength chromium copper	<ul style="list-style-type: none"> <li>• Minimizes damage resulting from over-torquing</li> <li>• Eliminates binding between similar metals</li> </ul>
Replaceable studs have full length internal hex	<ul style="list-style-type: none"> <li>• Allows removal of stud regardless of condition</li> </ul>

**Figure 1:** Cut-away view of a cable transition module, Catalogue Number, **CTM-011A**



## CABLE TRANSITION MODULE CATALOGUE NUMBERS

### Application: Paper Insulated Lead Cable (PILC) Run to Solid Dielectric Tap

Illustration (not to scale)	Voltage Class	Description			Catalogue Number	Dimensions				Weight		
		Transition	Dielectric Tap			PILC Tap	a	b	c		d	
	15 or 25 kV	Straight Through	200 Amp	3 Point	NA	CTM-005A	8 1/2" 216 mm	4" 102 mm	9 3/4" 406 mm	8 1/2" 216 mm	18 lb 8 kg	
			600 Amp	3 Point		CTM-012A	9 1/4" 235 mm	2" 51 mm	12 1/2" 318 mm	9 1/4" 235 mm	20 lb 9 kg	
		Tap	200 Amp	3 Point	NA	CTM-015A	14" 356 mm	4 1/2" 114 mm	10 1/4" 260 mm	10" 254 mm	33 lb 15 kg	
				6 Point		CTM-025A	14" 356 mm	9" 229 mm	14 3/4" 375 mm	9 3/4" 251 mm	62 lb 28 kg	
			600 Amp	3 Point	NA	CTM-011A	14" 356 mm	4 1/2" 114 mm	10 1/4" 260 mm	14" 356 mm	36 lb 16 kg	
				6 Point		CTM-020A	14" 356 mm	9" 229 mm	14 3/4" 375 mm	14" 356 mm	68 lb 31 kg	
			Run & Tap	200 Amp	3 Point	600 Amp	CTM-010A	14" 356 mm	4 1/2" 114 mm	16" 406 mm	9 3/4" 251 mm	37 lb 17 kg
					6 Point		CTM-024A	14" 356 mm	9" 229 mm	20 1/2" 521 mm	9 3/8" 251 mm	66 lb 30 kg
		600 Amp		3 Point	600 Amp	CTM-009A	14" 356 mm	4 1/2" 114 mm	16" 406 mm	14" 356 mm	40 lb 18 kg	
				6 Point		CTM-019A	14" 356 mm	9" 229 mm	20 1/2" 521 mm	14" 356 mm	72 lb 33 kg	
		35 kV	Tap	600 Amp	NA	CTM-033A	15 3/4" 400 mm	5 9/16" 141 mm	17 1/4" 438 mm	16 1/4" 413 mm	84 lb 38 kg	
				600 Amp		6 Point	CTM-034A	15 3/4" 400 mm	11 1/8" 283 mm	22 3/4" 578 mm	16 1/4" 413 mm	152 lb 69 kg

### Application: Paper Insulated Lead Cable (PILC) Run to Solid Dielectric Tap

Illustration (not to scale)	Voltage Class	Description				Catalogue Number	Dimensions				Weight	
		Transition	Dielectric Tap		Dielectric Tap		a	b	c	d		
	15 or 25 kV	Straight through Tap	200 Amp	3 Point	600 Amp	3 Point	CTM-029A	14" 356 mm	4 1/2" 114 mm	14 1/2" 362 mm	10" 254 mm	40 lb 18 kg
			600 Amp	3 Point			CTM-030A	14" 356 mm	4 1/2" 114 mm	14 1/4" 362 mm	14" 356 mm	46 lb 21 kg



#### SELECTION REMINDERS:

- Standard ratings for 15 or 25 kV cable transition modules:  
Impulse Voltage: 95 or 125 kV BIL, Corona Extinction: 11 or 19 kV  
Standard ratings for 35 kV cable transition modules:  
Impulse Voltage: 150 kV BIL, Corona Extinction: 26 kV
- All cable transition modules are standard equipped with solder lugs and protective covers.
- Entrance fittings and mounting brackets are sold separately. See Tables A and B on the following page.
- All cable transition modules are for use with molded separable insulated connectors.
- Standard modules are for horizontal mounting. For unique transition splicing requirements, contact factory.
- For 900 Amp application, contact factory.
- Weights and dimensions are approximate.

#### SELECTION REMINDERS:

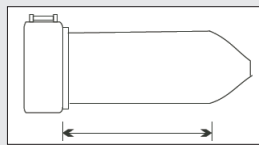
- Standard ratings for 15 or 25 kV cable transition modules:  
Impulse Voltage: 95 or 125 kV BIL, Corona Extinction: 11 or 19 kV  
Standard ratings for 35 kV cable transition modules:  
Impulse Voltage: 150 kV BIL, Corona Extinction: 26 kV
- All cable transition modules are standard equipped with solder lugs and protective covers.
- Entrance fittings and mounting brackets are sold separately. See Tables A and B on the following page.
- All cable transition modules are for use with molded separable insulated connectors.
- Standard modules are for horizontal mounting. For unique transition splicing requirements, contact factory.
- For 900 Amp application, contact factory.
- Weights and dimensions are approximate.

**Table A: Entrance Fittings**

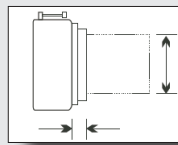
Illustration (not to scale)	Description	Voltage Class	Catalogue Number	Illustration (not to scale)	Description	Voltage Class	Catalogue Number
	Wiping Sleeve	15 kV	WS-11-12		Wiping Flange	15 kV	WS-12
		25 kV	WS-11-18			25 kV	
		35 kV	WS-016A-25			35 kV	

**Table B: Mounting Bracket**

Illustration (not to scale)	Description	Voltage Class	Catalogue Number
	Saddle	15 kV	BRK-469
		25 kV	
		35 kV	BRK-467

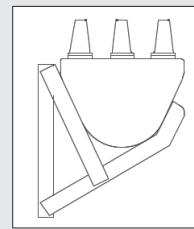


12" (305 mm) for 15 kV  
18" (457 mm) for 25 kV  
25" (635 mm) for 35 kV



1 3/4" (44 mm) for 15 kV and 25 kV  
2" (51 mm) for 35 kV

Lead Pipe Diameter  
6 3/4" (162 mm) for 15 and 25 kV  
8 17/64" (210 mm) for 35 kV



**FIGURE 4: Cable Transition Module supported by Mounting Saddle**

**FIGURE 2: Cable Transition Module shown with Wiping Sleeve**

**FIGURE 3: Cable Transition Module supported by Wiping Flange**

**ELECTRICAL RATINGS FOR CABLE TRANSITION MODULES**

Description	15 kV Class Ratings	25 kV Class Ratings	35 kV Class Ratings
<b>OPERATING VOLTAGE</b> (Maximum continuous line-to-ground, 100% insulation system)	8.3 kV	15.2 kV	21.1 kV
<b>BIL</b> (@ 1.2 x 50 microsecond wave)	95 kV	125 kV	150 kV
<b>WITHSTAND VOLTAGE</b> AC (1 minute) DC (15 minutes)	34 kV 53 kV	40 kV 78 kV	50 kV 103 kV
<b>CORONA EXTINCTION LEVEL</b> (min. @3pC)	11 kV	19 kV	26 kV
<b>CURRENT</b> <b>200 A Class Products</b> Continuous operation: Short-time: <b>600 A Class Products</b> Continuous operation: Short-time:		200A * 10 kA sym. 10 cycles  600 A * 25 kA sym. 10 cycles	

All separable connectors are designed and manufactured to ANSI/IEEE Standard 386 and tested in accordance with IEEE #48.

Ratings are based on ANSI/IEEE standards and do not reflect maximum levels.

Application Considerations: This product is designed for use on grounded "Y" systems. \*Designed for 90°C maximum continuous operating temperature.

For 900 Amp applications, contact factory.

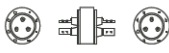
**ENGINEERED SOLUTIONS...**

Patton & Cooke's specialty is designing products for unique applications. Contact us to solve your application challenges.

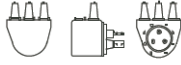
Here are a few examples...

**Oil Stop Modules**

The module was specifically designed for use with oil filled, lead covered cables, installed where there is a distinct difference in elevation, from one end of the cable to the other. The oil stop module helps prevent oil migration and as a result premature cable damage.

Illustration (not to scale)	Description	Voltage Class	Catalogue Number
	Three Phase, 600 Amp PILC to PILC Splice	25 kV	OSM-004
		35 kV	OSM-027

**Cable Transition Modules with 200 & 600 Amp Taps**

Illustration (not to scale)	Description	Voltage Class	Catalogue Number
	Tap Transition, Paper Insulated Lead Cable (PILC) Run to 3 Point 200 Amp and 3 Point 600 Amp Tap	15 or 25 kV	CTM-035A