



## T-BODY ELBOW SURGE ARRESTERS

### 35 kV, 600A, HIGH TOV ARRESTER MODULES

#### KEY FEATURES

- The 600A interface bolts directly to a bushing, saving space and eliminating the need for adaptors
- All MOV elements and end fittings are integrated in a single piece with no glued interfaces
- Void and gap free design ensuring peak performance under the harshest environments
- Tested in accordance with the dead front surge arrester failure mode test for having safe and predictable failure characteristics
- Large diameter MOV elements provide high energy handling capability

TE Connectivity's (TE) Raychem T-Body Elbow Surge Arresters ELB-35 are designed to protect underground cables and medium voltage apparatus from voltage surges due to lightning and switching transients. They combine gapless metal oxide varistor technology in a pre-molded 600A T-body elbow to provide overvoltage protection in a fully shielded and submersible device.

The elbow surge arresters have a 600A interface which is compatible with any 600A bushings that meet IEEE standard 386. Installation is achieved by bolting the elbow surge arresters directly to the bushings. The surge arresters are installed by following the same procedure as standard 35 kV 600A elbows and eliminate the need for bushing extenders and 200A load break interface surge arresters.

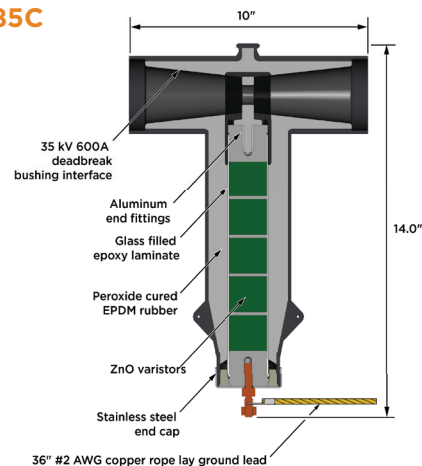
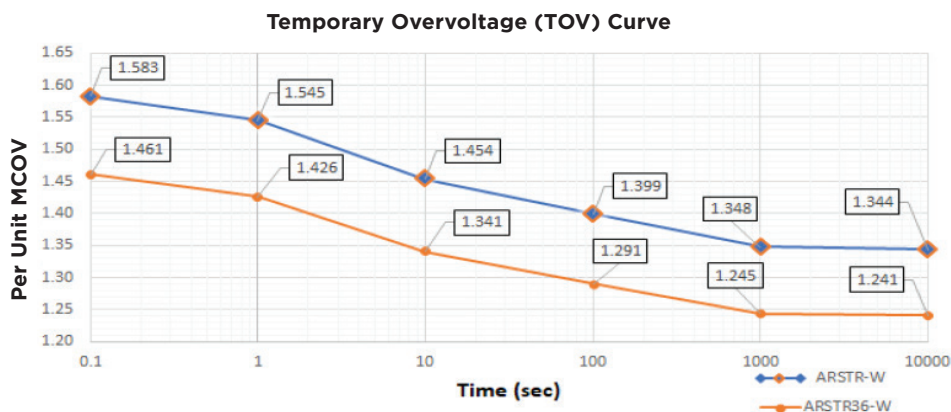
The design incorporates an epoxy fiber module which integrates all MOV components in a single unit.

**Customers can count on consistent, high quality products, driven by TE's proven innovation and backed by our extraordinary customer support.**

## T-Body Elbow Surge Arresters

TE's Raychem T-Body Elbow Surge Arresters are qualified to the latest revision of IEEE C62.11 (2005) and IEEE 386 (2006).

### ELBOW SURGE ARRESTER TEMPORARY OVERVOLTAGE (TOV) CURVE, 85C



PERFORMANCE CHARACTERISTICS		
Surge Arrester Type	Normal Duty	
High Current Short Duration	65 kA, 4 x 10μsec	
Low Current Long Duration	75 A, 2000μsec	
Duty Cycle	10 kA, 8 x 20μsec	
Energy Absorption Rating	5.1 kJ/kV MCOV	
PRODUCTION TESTS		
MOV Blocks	MOV Module	Elbow Surge Arrester Assembly
Residual voltage	Reference voltage	n.a.
Reference voltage	Watts loss	Partial discharge
Leakage current	Partial discharge	Periodic x-ray analysis
Physical examination	-	-
High current impulse (batch)	-	-
Aging (batch)	-	-

Following each of the preceding tests the surge arrester demonstrates thermal recovery at MCOV.

PRODUCT SELECTION INFORMATION						
Part Description	Duty Cycle Rating (kV/rms)	MCOV (kVrms)	Maximum Discharge Voltage (kV crest) 8 x 20 Microsecond Current Wave			
			1.5 kA	5 kA	10 kA	20 kA
ELB-35-600-ARSTR27-W	27	22.0	72.6	79.9	86.5	94.8
ELB-35-600-ARSTR30-W	30	24.4	80.1	88.2	95.4	104.5
ELB-35-600-ARSTR33-W	33	26.8	87.1	95.9	103.8	113.8
ELB-35-600-ARSTR36-W **	36	29.0	87.1	95.9	103.8	113.8

\*\* ARSTR36-W TOV per MCOV curve shown in orange in TOV graphic

PROTECTIVE CHARACTERISTICS												
Ur (kV)	MCOV (kV)	Discharge Voltage 8/20 μs		Protection Margins Based on 5 kA Discharge Voltages		Protection Margins Based on 10 kA Discharge Voltages		TOV Capability (kV)				
		5 kA	10 kA	150 kV BIL	200 kV BIL	150 kV BIL	200 kV BIL	1 s	10 s	100 s	1000 s	10000 s
27	22.0	79.9	86.5	87.7%	150.3%	73.4%	131.2%	34.0	32.0	30.8	29.7	29.6
30	24.4	88.2	95.4	70.1%	126.8%	57.2%	109.6%	37.7	35.5	34.1	32.9	32.8
33	26.8	95.9	103.8	56.4%	108.6%	44.5%	92.7%	41.4	38.9	37.5	36.1	36.0
36**	29.0	95.9	103.8	56.4%	108.6%	44.5%	92.7%	41.4	38.9	37.5	36.1	36.0

RELATED TEST REPORTS | EDR-5506, EDR-5489

Learn more: [TE.com/energy](https://www.te-connectivity.com/energy)

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