

MEDIUM VOLTAGE SURGE ARRESTER HDA SERIES

U_c FROM 1 kV UP TO 41 kV

KEY FEATURES

- Directly molded housing prevents moisture ingress
- Safe failure mode in the short circuit test (pre-fail method)
- Maintenance free
- Superior TOV performance
- High energy handling capability
- Tested in accordance with IEC60099-4
- Superior protection margins
- Hydrophobic EVA housing for outdoor use
- Excellent cantilever and tensile performance
- Excellent mechanical, vibration and impact withstand capability

TE Connectivity's (TE) Raychem pioneered the development of polymeric housed surge arresters in the early 1980's and since 1986 have proven global service experience operating in the worlds toughest environments. At the core of the HDA arrester design is our improved ZnO varistor disk, which has superior thermal and electrical characteristics and stability.

TE's Raychem HDA Ethyl Vinyl Acetate (EVA) surge arresters have been designed and independently tested to meet international standards, IEC60099-4 and to our customers toughest environmental conditions.

This new varistor and design combination results in superior energy handling and TOV performance. The crimped structural construction offers a light weight product with high mechanical strength.

The manufacturing process ensures void free construction and optimum interface sealing. This is achieved by bonding the EVA housing directly to the ZnO discs and aluminium fittings using a TE's Raychem proprietary bonding solution.

Applications include protection of MV networks and equipment from lightning and switching surge related over-voltages in areas with relatively high iso-keranic levels. Suitable for both outdoor and indoor use to protect transformers and cable terminations.

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

Medium Voltage Surge Arrester - HDA Series

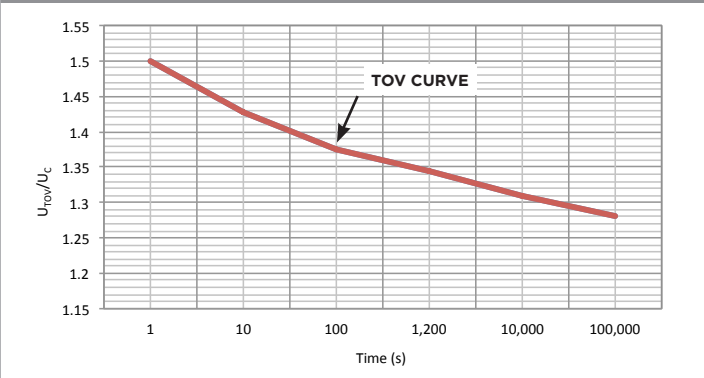
High quality design and manufacturing.
ISO 9001 and 14001 compliant.



TABLE 1: TECHNICAL DATA

Rated discharge current (8/20 μ s)	10 kA
Line discharge class according to IEC 60099-4	class 1
Operating duty impulse withstand current (4/10 μ s)	100 kA
Long duration current impulse (2000 μ s)	400 A
10 second temporary overvoltage, (U_{TOV}/U_c)	1.42
High current short circuit (pre-failing method)	40 kA
Energy	2 long duration impulses 4.2 kJ/kV U_c 2 high current impulses 6.8 kJ/kV U_c
Service conditions -- Ambient temperature	- 60°C to + 60°C
Bending movement -- SSL SLL	400 Nm ⁽¹⁾ 350 Nm
Tensile strength	2000 N
Torque strength	50 Nm

TEMPORARY OVERVOLTAGE WITHSTAND CURVE



U_{TOV} = temporary overvoltage withstand

TABLE 2: PRODUCT SELECTION INFORMATION

Description	U_c kV	U_r kV	Residual Voltage (Using IEC Standard Impulses)				Housing size (see Table 3)	
			Lighting - [8/20 μ s]		Steep Lighting - [1/20 μ s]	Switching - [30/60 μ s]	Standard	Extended
			at 10 kA	at 20 kA	at 10 kA	at 500 A		
HDA-03MA	3	3.75	9.9	10.9	10.2	7.9	1	2
HDA-04MA	4	5	13.2	14.6	13.6	10.5	1	2
HDA-06MA	6	7.5	19.8	21.8	20.4	15.7	1	2
HDA-08MA	8	10	26.4	29.1	27.2	21.0	1	2
HDA-09MA	9	11.25	29.7	32.8	30.6	23.6	1	2
HDA-10MA	10	12.5	33.0	36.4	34.0	26.2	1	2
HDA-12MA	12	15	39.6	43.7	40.8	31.4	1	2
HDA-18MA	18	22.5	59.4	65.5	61.2	47.2	2	-
HDA-20MA	20	25	66.0	72.8	68.0	52.4	2	-
HDA-21MA	21	26.25	69.3	76.4	71.4	55.0	2	-
HDA-24MA	24	30	79.2	87.4	81.6	62.9	2	-
HDA-26M	26	32.5	85.8	94.6	88.4	68.1	3	4 or 5
HDA-27M	27	33.75	89.1	98.3	91.8	70.7	3	4 or 5
HDA-29M	29	36.25	95.7	105.6	98.6	76.0	3	4 or 5
HDA-30M	30	37.5	99.0	109.2	102.0	78.6	3	4 or 5
HDA-33M	33	41.25	108.9	120.1	112.2	86.5	3	5
HDA-36M	36	45	118.8	131.0	122.4	94.3	4	5
HDA-39M	39	48.75	128.7	142.0	132.6	102.0	5	-
HDA-40M	40	50	132.0	145.6	136.0	105.0	5	-
HDA-41M	41	51.25	135.3	149.2	139.4	107.0	5	-

U_c = continuous operating voltage

U_r = Rated voltage

TABLE 3: PRODUCT HOUSING PARAMETERS

Housing Size	Sheds	Impulse Voltage [8/20 μ s] kV	Power Frequency 50 Hz (wet) kV	Flashover Distance (mm)	Creepage Length (mm)	Body Height (mm)	Shed Outer Diameter (mm)
1	5	106	47	176	380	183	123
2	12	190	93	310	830	316	123
3	11	204	98	339	970	343	137
4	13	228	110	378	1125	383	137
5	15	250	122	418	1279	423	137

ORDERING INFORMATION

For accessory range and ordering information please refer to brochure EPP-2131 or e-mail us at surgearresters@te.com.

Example of a complete part description: HDA-12MA-NFF*

* NFF accessories: M12 studs with fasteners for standard cable lug connection

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FOR MORE INFORMATION: TE Technical Support Centers

USA:	+1 (800) 327-6996
France:	+33 3 80 58 3200
UK:	+44 0870-8707500
Germany:	+49 (0) 89 60 89 903
Spain:	+34 916 630 420
Canada:	+1 (905) 475-6222
Mexico:	+52 (0) 55-1106-0800
Latin/S. America:	+54 (0) 11-4733-2200
Benelux:	+32 16 351 731
China:	+86 (0) 400-820-6015
Ireland:	+353 61 470 800