

Safety wherever needed

Low Voltage Surge Arrestors

EFEN Lab No: 07001

SPRAWOZDANIE No. 7 / TEST REPORT No. 7322NBR06
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SPRAWOZDANIE Z BADAŃ – PRÓBA DZIAŁANIA
 TEST REPORT OF OPERATING DUTY TEST

WYKONANO PRZEZ: URZĄDZENIA OGRANICZAJĄCE PRĘDKOŚĆ (OPD)
 ROZDZIELNICE (ROD)

TYTUŁ: ODA Z40

Najbliższe miejsce produkcji: 288 V Zestawienie prób wyrobów: 5-103A
 Nazwa i adres: EFEN Polska Sp. z o.o. ul. Młocznik 20/28
 41-100 Świdnica, woj. Śląskie

WYKONANO PRZEZ: EFEN Polska Sp. z o.o.

DATA WYKONANIA: 12.09.06.18.2006

WYKONANIE PRZEZ: Laboratorium Badawcze Aparatury Rozdzielczej
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Pracownik laboratoryjny: Dr. inż. Albert Czuchra

Ważność: 12 miesięcy

Uninsulated version



Isolated version



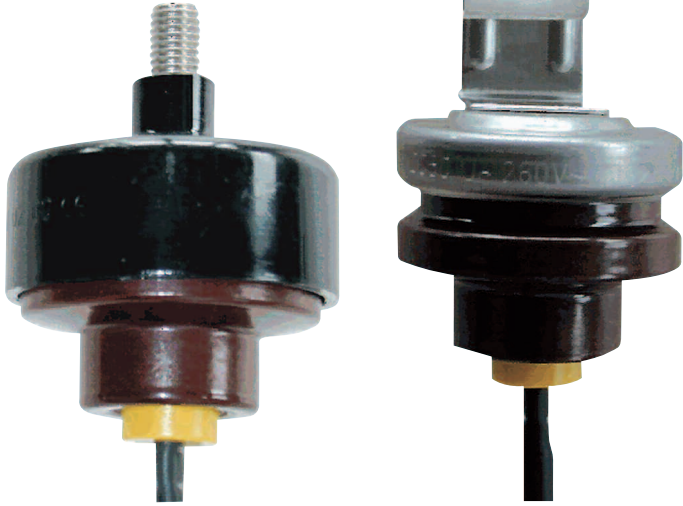
Rope-throwing-off-function



Content

Low Voltage Surge Arresters **350**

Technical data **see page 351**



System

The Low Voltage Surge Arresters are equipped with metal-oxide varistors in a robust and aging-resistant ceramic housing. The devices respond within nanoseconds and with low residual voltages. This ensures a high level of surge protection.

Features

Surge arresters are available as insulated and non-insulated versions for various mounting types and terminals. Triggered surge arresters can easily be identified by the catch cable.

Rope-throwing-off-function



Insulated terminal



Low Voltage Surge Arresters

For more information
see page 351



69611-0040

Low Voltage Surge Arrestors, without „Rope-throwing-off-function“

Properties:

- Without "Rope-throwing-off-function"

Description	Connection possibilities	Length	Order-No.	In kA	Uc V	PU	PG	Price €/pc.
Mounting angle with clamb	Counductor brunch with sleeve	650	69611-0040	5	280	6	NA 1	37,50
Mounting angle with clamb	CuAl-Sleeve	650	69613-0040	5	280	6	NA 1	41,70
Mounting angle with clamb	Counductor brunch with sleeve	650	69811-0040	10	280	6	NA 1	47,10
Mounting angle with clamb	Counductor brunch with sleeve	770	69611-0050	5	280	6	NA 1	37,50
Mounting angle with clamb	Cable lug	770	69612-0050	5	280	6	NA 1	39,60
Mounting angle with clamb	Counductor brunch with sleeve	770	69811-0050	10	280	6	NA 1	47,10
Mounting angle with clamb	Counductor brunch with sleeve	1000	69611-0060	5	280	6	NA 1	38,55
Mounting angle with clamb	Counductor brunch with sleeve	1000	69811-0060	10	280	6	NA 1	49,30
Screw bolt M8 x 25, uninsulated	Unprepared	550	69624-0070	5	280	6	NA 1	35,35
Screw bolt M8 x 25, uninsulated	Counductor brunch with sleeve	650	69621-0040	5	280	6	NA 1	36,50
Screw bolt M8 x 25, uninsulated	Counductor brunch with sleeve	650	69821-0040	10	280	6	NA 1	49,30
Screw bolt M8 x 25, insulated	Counductor brunch with sleeve	650	69641-0040	5	280	6	NA 1	37,50
Screw bolt M8 x 25, insulated	Counductor brunch with sleeve	770	69641-0050	5	280	6	NA 1	37,50
Screw bolt M8 x 25, insulated	Counductor brunch with sleeve	1000	69641-0060	5	280	6	NA 1	37,50
Screw bolt M8 x 25, insulated	Counductor brunch with sleeve	650	69841-0040	10	280	6	NA 1	47,10
Screw bolt M8 x 25, insulated	Counductor brunch with sleeve	650	69941-0040	10	500	6	NA 1	45,50
Screw bolt M8 x 25, insulated	Unprepared	770	69624-5050	5	280	6	netto	on demand
Screw bolt M8 x 25, insulated	Unprepared	770	69644-9050	5	280	6	netto	on demand
Screw bolt M8 x 25, insulated	Unprepared	1000	69621-5160	5	280	6	netto	on demand
Screw bolt M8 x 25, insulated	Unprepared	1000	69721-5160	5	500	6	netto	on demand
Screw bolt M8 x 25, insulated	Unprepared	1000	69741-6160	5	500	6	netto	on demand
Screw bolt M8 x 25, insulated	Unprepared	1000	69741-7160	5	500	6	netto	on demand
Screw bolt M8 x 25, insulated	Unprepared	1000	69741-8160	5	500	6	netto	on demand
Screw bolt M8 x 25, insulated	Unprepared	1000	69744-9060	5	500	6	netto	on demand
Screw bolt M8 x 30, insulated	Unprepared	1000	69764-5160	5	500	6	netto	on demand



69841-0150

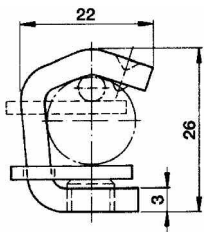
Low Voltage Surge Arrestors, with „Rope-throwing-off-function“

Properties:

- With "Rope-throwing-off-function" - 10kA

Description	Connection possibilities	Length	Order-No.	In kA	Uc V	PU	PG	Price €/pc.
Screw bolt M8 x 25, insulated	Conductor brunch with sleeve	650	69841-0150	10	280	6		on demand

Accessories NA



**Current cable fitting and
prevailing accessories
for overhead lines and
conductor bars.**



69500-0010

Accessories

Description	Order-No.	PU	PG	Price €/pc.
Universal clamb 10 - 120 mm	69500-0010	1	NA 1	6,40
Insulated terminal with M8 x 25 internal thread	69501-0010	1	NA 1	27,80
Insulated tap-off clamp 6 - 70 mm	69502-0010	1	NA 1	17,15
Insulated tap-off clamp 50 - 95 mm	69503-0010	1	NA 1	27,90
Insulated tap-off clamp 50 - 95 mm	69504-0010	1		on demand
Insulated tap-off clamp 50 - 95 mm	69505-0010	1		on demand

Function mode

- Protection of electrical equipment against overvoltage.
- Overvoltages may result from switching operations, earth faults and short circuits or atmospheric discharges.
- With overvoltage, the non-linear resistance lowers in such a way, that the overvoltage is restricted.
- Secondary currents are suppressed by the rapidly increasing resistance.
- The metal oxide varistor with a very high resistance at given operating voltage, responds quickly and does not require any discharging gap.

Product description

- Metal oxide varistor embedded in ceramic insulator.
- Threaded terminal end (screw bolts).
- Mounting angle with clamp, made of stainless steel.
- Current cable fittings and prevailing accessories for overhead lines and conductor bars.
- Insulated, the flexible connecting line (copper) 6 mm² can be chosen either with or without conductor bunch with sleeve.
- The signal colour “yellow” helps to clearly identify a released overvoltage arrester.
- The “rope-throwing-off-function” prevents – by means of a plastic rope being attached to the insulating cap and the connecting line – the uncontrolled line drop with released arrester.

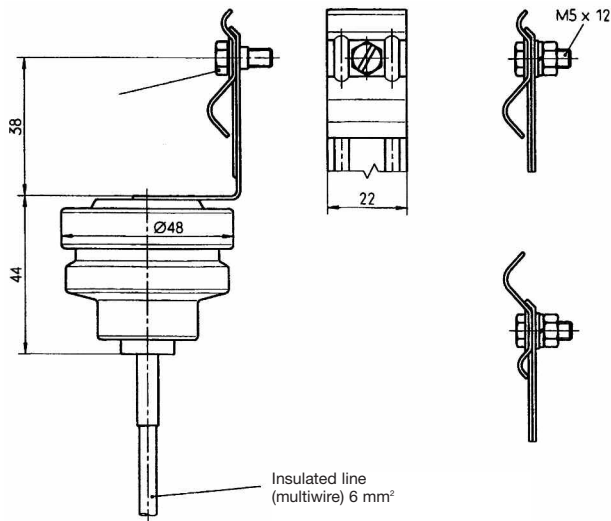
Advantages

- High protection is given to the electrical equipment in the nanosecond range.
- Due to higher current carrying capacity, the 10 kA-type reacts less sensitive and thus reduces service and maintenance costs.
- Compact, waterproof, weather-resisting.

Technical data

EFEN Type		ONA ZnO 5kA 280V	ONA ZnO 10kA 280V	ONA ZnO 5kA 500V	ONA ZnO 10kA 500V
Nominal discharge current	I_N [kA]	5	10	5	10
Norms		IEC 61643-1 03/2005 EN 61643-11 12/2002 VDE 0675 - 6-112007-08			
Maximum continuous operating voltage		II/outdoor			
Maximum discharge current		yes	yes	yes	yes
Residual voltage without earth connection		yes	yes	yes	yes
Maximum continuous operating voltage	U_C [V]	280	280	500	500
Maximum discharge current	I_{MAX} [kA]	25	25	25	25
Residual voltage without earth connection	U_{RES} [V]	851	987	1481	1642
Voltage protection level without earth connection	U_P [kV]	0,9	1,0	1,5	1,8
Residual voltage with earth connection 1 m	U_{RES} [V]	1187	1688	1863	2353
Voltage protection level with earth connection 1 m	U_P [kV]	1,2	1,8	2,0	2,5
Standby power consumption	P_C [mW]	56	56	106	106

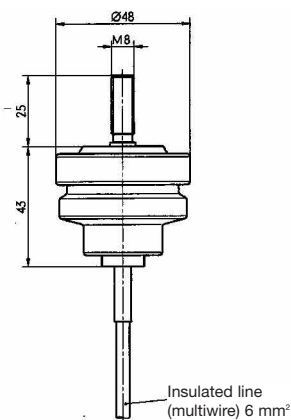
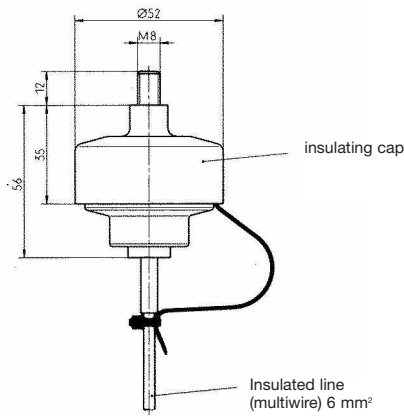
Mounting angle with clamp, made from stainless steel



Connection with screw bolt

Insulated type with "rope-throwing-off-function"

Uninsulated type

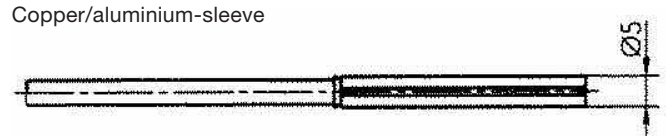
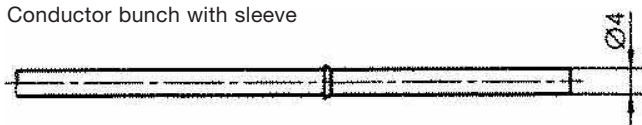


Connection possibilities

Insulated and flexible connection cable (copper), 6 mm², available either prepared or unprepared

Conductor bunch with sleeve

Copper/aluminium-sleeve



Cable lug M10

Unprepared

