FERRAZ

HIGH VOLTAGE LIGHTNING ARRESTERS

EZX LINE
12 TO 36 kV
5 kA-CLASS

- ZINC OXIDE VARISTORS-BASED ARRESTERS
- SILICON ELASTOMER HOUSING
- IEC ZONE III-CLASS OUTDOOR USE
- HIGH CAPACITY ENERGY ABSORPTION
- OPTIONAL END-OF-LIFE INDICATOR
- IN ACCORDANCE WITH IEC 99-4 STANDARD

ELECTRICAL RATINGS

EZX type ref.	**Voltage rating** Ur (kV)	**Continuous operating voltage** Uc (kV)	**Residual voltage** Ures (kV)					**Temporary overvoltage capability for 10 s** (kV)
			1/4 µs wave @ 5 kA	8/20 µs wave				
				@ 2.5 kA	@ 5 kA	@ 10 kA	@ 20 kA	
120	12	9.6	42	36	38	42	48	13.5
150	15	12	55	46	50	56	64	16.8
180	18	14.4	63	53	57	63	72	20.2
210	21	16	77	66	70	78	89	22.4
240	24	18	77	66	70	78	89	25.2
270	27	20	85	72	77	85	98	28.0
300	30	24	105	88	95	106	120	33.6
360	36	28	127	106	115	128	145	39.2

After a preconditioning of two 65 kA shocks

GROUPE CARBONE LORRAINE

TECHNOLOGY

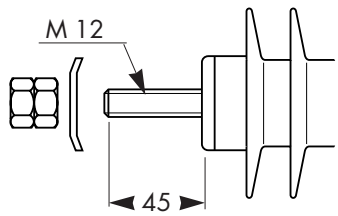
MAIN CHARACTERISTICS

EZX lightning arresters are high voltage distribution arresters.
The stack of ZnO varistors is initially pressurized thanks to metallic discs which give it the necessary flexibility to operate under stress.
These arresters have characteristics in accordance with the IEC 99-4 standard dated 91/11.

Rated discharge current :	5 kA
Maximum high-current impulse (4/10 µs wave)	65 kA
Operating frequency :	48 to 62 Hz
Short-circuit fault current withstand ratings :	16 kA / 0.2 s
Extreme operating temperatures :	- 40° c to 60° c
Maximum bending moment - horizontal installation - :	250 N.m
Energy absorption capacity :	2.3 kJ / kV of voltage rating

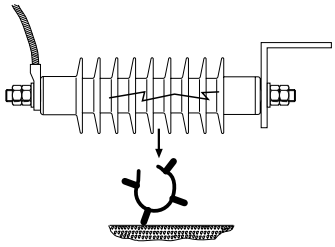
TERMINAL CONNECTIONS

Each 12 mm dia. stud is threaded 45 mm long. and fitted with two nuts and a reversible cable grip washer.
All the arrester metallic parts in contact with conductors are stainless steel-made.



OPTIONAL END-OF-LIFE INDICATOR

The EZX arresters are available with an optional end-of-life indicator.
It is set out between two cooling fins. Its sensibility rating is 150 A.
When the arrester shorts the resultant flashover, generated on the ZnO varistors surface, tries to cross the polymer housing in order to switch over outside.
During the arc creeping the black ring will be sectioned then ejected to the ground by means of slots made in the internal structure of the arrester.

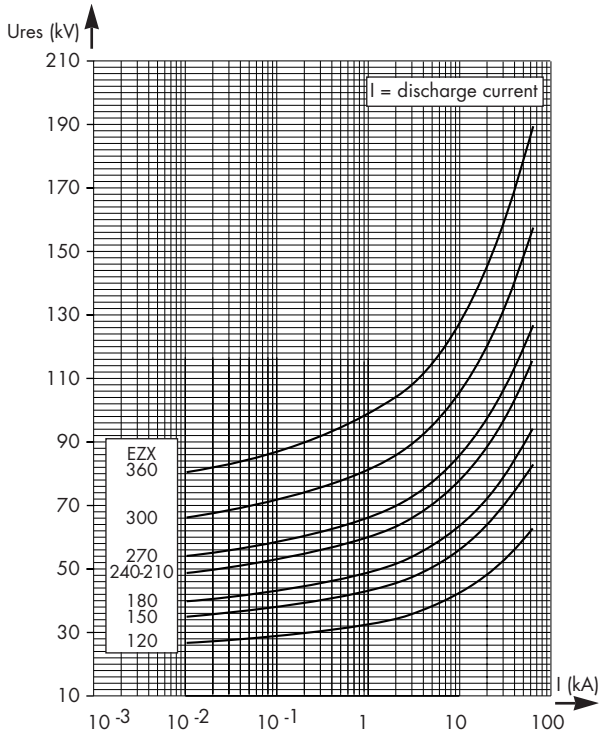


REFERENCE NUMBERS

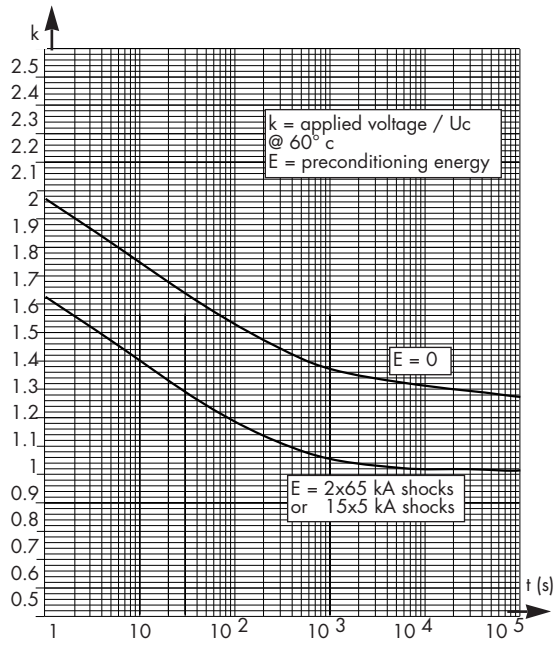
Voltage rating Ur (kV)	Without end-of-life indicator type		With end-of-life indicator type		Weight (kg)	Packaging
	EZX type reference	Reference #	EZX type reference	Reference #		
12	EZX 120	J 206571	EZX 121	Q 206577	2	x 3
15	EZX 150	K 206572	EZX 151	R 206578	2.5	x 3
18	EZX 180	G 206684	EZX 181	H 206685	2.75	x 3
21	EZX 210	L 206573	EZX 211	S 206579	3.5	x 3
24	EZX 240	M 206574	EZX 241	T 206580	3.5	x 3
27	EZX 270	J 206686	EZX 271	K 206687	4.2	x 3
30	EZX 300	N 206575	EZX 301	V 206581	4.5	x 3
36	EZX 360	P 206576	EZX 361	W 206582	5	x 3
For further informations see page 4	**Mounting bracket**	**Reference #**	**Mounting bracket**	**Reference #**	**Weight (kg)**	**Packaging**
	EZX 1	F 206798	EZX 1	F 206798	0.2	x 9
	EZX 2	G 206799	EZX 2	G 206799	0.250	x 9
	EZX 3	H 206800	EZX 3	H 206800	0.3	x 9

PROTECTIVE CHARACTERISTICS

LIMITING CHARACTERISTICS

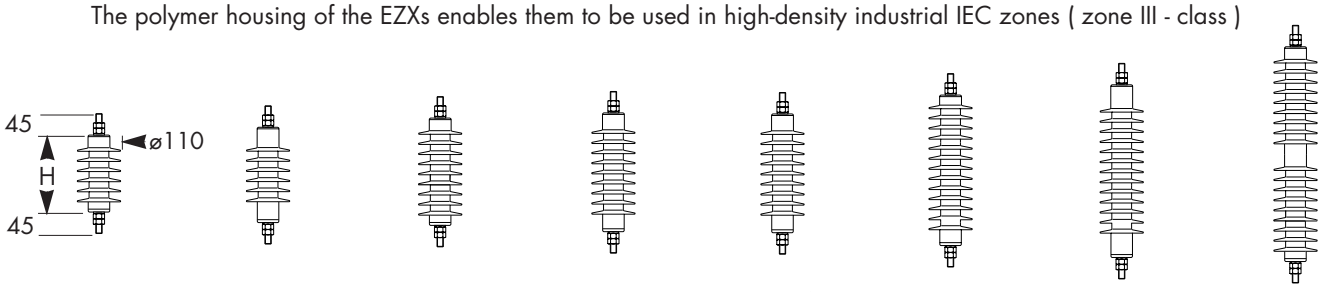


TEMPORARY OVERVOLTAGES WITHSTAND CHARACTERISTICS



PHYSICAL CHARACTERISTICS

The polymer housing of the EZXs enables them to be used in high-density industrial IEC zones (zone III - class)



EZX 120 EZX 150 EZX 180 EZX 210 EZX 240 EZX 270 EZX 300 EZX 360

EZX type reference	Length H (mm)	Nominal creepage (mm)	Housing dielectric withstand		Insulation distance between arresters (mm)	
			Lightning shock withstand rating (kV)	50 Hz-1mn withstand rating (kV)	L	L
EZX 120 / 121	190	480	50	24	70	100
EZX 150 / 151	261	550	65	31	90	150
EZX 180 / 181	261	720	74	35	110	180
EZX 210 / 211	307	760	91	44	130	210
EZX 240 / 241	307	760	91	44	150	240
EZX 270 / 271	373	1030	100	48	160	270
EZX 300 / 301	439	1100	123	60	180	300
EZX 360 / 361	522	1440	150	72	220	360

MOUNTING GUIDE

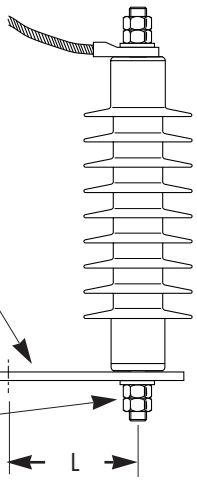
EZX arresters are always fixed by one of the 12 mm dia. threaded terminals. They can be installed either vertically or horizontally but, as well, in any intermediate position.

VERTICAL-TYPE INSTALLATION

Connection to line with aluminium or copper cables from 25 mm2 up to 148 mm2 (with or without 13 mm. dia. socket)

Mounting bracket adapted to insulated NEMA crossarm bracket

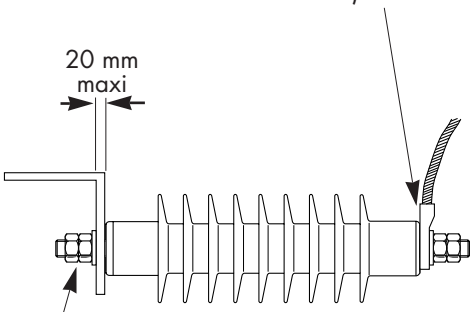
Mouting bracket	L (mm)
EZX 1	100
EZX 2	150
EZX 3	210



A ground conductor can be inserted between the two bottom nuts

HORIZONTAL-TYPE INSTALLATION

Connection to line with aluminium or copper cables from 25 mm2 up to 148 mm2 (with or without 13 mm. dia. socket)



A ground conductor can be inserted between the two bottom nuts

APPLICATION GUIDE

Maximum phase-to-phase operating voltage (kV)	Grounded neutral network		Impedant neutral network		Insulated network with ground faults protection		Insulated network with sustained ground faults	
	Advised model	Temporary overvoltage duration (s)	Advised model	Temporary overvoltage duration (s)	Advised model	Temporary overvoltage duration (s)	Advised model	Temporary overvoltage duration (s)
10	EZX 120	∞	EZX 120	∞	EZX 120	1500	EZX 150	∞
11	EZX 120	∞	EZX 120	∞	EZX 120	200	EZX 150	∞
13.2	EZX 120	300	EZX 120	90	EZX 150	300	EZX 180	∞
14.5	EZX 120	70	EZX 120	30	EZX 150	80	EZX 210	∞
15	EZX 120	45	EZX 150	400	EZX 150	45	EZX 210	∞
16.5	EZX 150	300	EZX 150	90	EZX 180	65	EZX 240	∞
20	EZX 180	80	EZX 180	30	EZX 210	45	EZX 270	∞
22	EZX 180	20	EZX 210	90	EZX 240	65	EZX 300	∞
24.2	EZX 210	70	EZX 210	30	EZX 270	70	EZX 300	∞
30	EZX 270	65	EZX 270	30	EZX 300	45	—	—
33	EZX 270	20	EZX 300	90	EZX 360	110	—	—
36.2	EZX 300	70	EZX 360	250	EZX 360	30	—	—

The advised models have been subjected to a preconditioning of two 65 kA shocks

W600066 11/94
CP1P/ 1P 12006 GB

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