

## Power Supply Systems Lightning Arrester Class I



### FBB-80, FBB-100 and FBS-100

Modules FBB-80, FBB-100 and FBS-100 are one part of modular units of surge protection intended for mounting on DIN rail 35 mm. They are used for the protection of L.V. power supply systems against surges at direct lightning stroke. Therefore, they create an integral part of building protection and its installations against surge effects. FBB-80, FBB-100 and FBS-100 contain a high power gas discharge tube rated for max. lightning impulse current  $I_{imp} = 80$  kA (10/350),  $I_{imp} = 100$  kA (10/350). FBS-100 is based on spark gap technology for max. lightning impulse current  $I_{imp} = 120$  kA (10/350). These arresters are mainly used if there is an overhead line as a low voltage supply to a building or if there are residual current circuit breakers in protected facility. These types fulfil construction demands posed on class I for lightning arresters. The recommended use is in the Lightning Protection Zones Concept at the boundaries of LPZ  $O_{A(B)}$  -1 according to IEC 1312 -1 in low voltage power supply systems TNS, TT and IT. These types are in these applications mainly used for equipotential bonding between N and PE (equipotential busbar).

Type		FBB-80	FBB-100	FBS-100
Arrester class		I		
Use		N/PE		
Rated voltage(max.continuous operating voltage)	$U_c$	255 V/50 Hz		
Insulation resistance	$R_i$	>1000M $\Omega$		
Max.discharge current $I_{max}(8/20)$	$I_{max}$	120 kA	150 kA	160 kA
Nominal discharge current $I_n(8/20)$	$I_n$	60 kA	75 kA	80 kA
Max. lightning impulse current $I_{imp}(10/350)$	$I_{imp}$	80 kA	100 kA	120 kA
Charge	Q	40 As	50 As	
Specific energy	W/R	1600 kJ/ $\Omega$	2500 kJ/ $\Omega$	
Voltage protection level at $I_{imp}$	$U_p$	<1,3kV		<2kV
Follow current extinguishing capability at $U_c$	$I_f$	100A <sub>rms</sub>		<300A <sub>rms</sub>
Response time	$t_A$	<100 ns		
Lightning impulse sparkover voltage 1,2/50 $\mu$ s	$U_p$	<1,5kV		
Operating temperature range	$\theta$	-40 to + 80°C		
Recommended cross-section of the connected conductors (at tightening moment of clamps 4Nm)		25mm <sup>2</sup> (solid) 16mm <sup>2</sup> (flexible)	50mm <sup>2</sup> (solid) 25mm <sup>2</sup> (flexible)	
Protection Type		IP 20		
Mounting on		DIN rail 35 mm		
Housing material		SLOVAMID 6FRC2		
Colour		blue		
Weight	m	140 g	210 g	231 g