

**External Lightning Protection
Internal Lightning Protection
(Surge Arrester)
Grounding & Bonding Materials**

ZEUS®



TECHNICAL SPECIFICATION

Authorized Dealer :





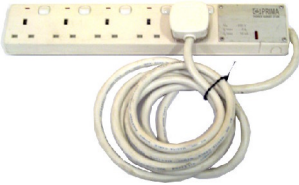

PT SURINDO ELEKTRA SENTOSA





The specification is proposed based on the existing standards / codes:

* IEC 61024-1 (1993) : *Standard for Protection of Structures Against Lightning*

* IEC 61312-1 (1996) : *Standard for Protection against Lightning Electromagnetic Pulse*

The arrester and lightning protection equipments are made based on the characteristic of tropical lightning.

NO.	ITEM	SPECIFICATION
1	POWER ARRESTER LEVEL-1 ; 3 PHASE, ARRESTER 0 – 1/ 4 N	
	<ul style="list-style-type: none"> - Mode of protection - Rated working voltage - Max. continuous operating voltage - Max. discharge current capacity (8/80 μs) - Protective voltage (8/80 μs) - Mounting - Respond Time 	3LN (L-G,N-G), 3 Phase 230 V / 50 – 60 Hz 350 V ≥ 100 kA < 2 kV 35 mm DIN rail < 25 ns 
2	POWER ARRESTER LEVEL-2 ; 3 PHASE, ARRESTER 0 – 2/ 4	
	<ul style="list-style-type: none"> - Mode of protection - Rated working voltage - Max. continuous operating voltage - Max. discharge current capacity (8/20 μs) - Mounting - Respond Time 	3LN (L-G,N-G), 3 Phase 230 V / 50 – 60 Hz 350 V 40 kA 35 mm DIN rail < 25 ns 
3	POWER ARRESTER LEVEL-3 ; 1 PHASE (outlet), E3D	
	<ul style="list-style-type: none"> - Mode of protection - Rated working voltage - Max. Continuous operating voltage - Rated load current capacity - Max. Discharge current capacity (8/20 μs) - Mounting - Terminal - Number of outlet - Respond time 	1LN (L-G,N-G), 1 Phase 230 V / 50 Hz 275 V 16 A 6.5 kA Direct plug on outlet DIN Germany-type outlet 1 < 25 ns 
4	POWER ARRESTER LEVEL-3 ; 1 PHASE, ARRESTER 2 – 3 /C3D	
	<ul style="list-style-type: none"> - Mode of protection - Rated working voltage - Max. continuous operating voltage - Rated Load current capacity - Max. discharge current capacity (8/20 μs) - Mounting - Terminal - Number of Outlet - Respond Time 	1LN (L-G,N-G), 1 Phase 230 V / 50 Hz 250 V 16 A 7 kA plug, cable and outlet DIN Germany 3 < 25 ns 

5	TELCO ARRESTER - RJ11, DRJ11	
	<ul style="list-style-type: none"> - Mode of protection - Rated working voltage - Max. continuous operating voltage - Rated Load current capacity - Max. discharge current capacity (8/20 μs) - Protective voltage (5 kA, 8/20 μs) - Digital data transfer speed - Bandwidth - Series Resistance - Mounting - Terminal - Number of lines per unit protection - Basic component 	<p>Differential, common mode 110 V 175 V ≤ 370 mA ≥ 20 kA ≤ 270 V ≥ 64 kBits/s ≥ 150 KHz 2.2 Ω loose box RJ11 1 pair Gas Arrester, suppressor diode, resistor</p> 
6	UTP DATA ARRESTER, DRJ 45	
	<ul style="list-style-type: none"> - Mode of protection - Rated working voltage - Max. continuous operating voltage - Max. discharge current capacity (8/20 μs) - Protective voltage (5 kA, 8/20 μs) - Protective voltage at 1 kV/μs - Digital data transfer speed - Bandwidth - Mounting - Terminal - Number of lines per unit protection - Basic component 	<p>Differential 5 V 6 V 400 A (L/L), 400 (Line/PG) ≤ 35 V (L/L), ≤ 35 V(L/PG) ≤ 13 V (L/L), ≤ 13 V(L/PG) ≥ 100 Mbits/s ≥ 155 MHz loose body RJ 45 24 ports Suppressor Diode, Gas Arrester</p> 
7	SERIAL DATA ARRESTER, DB 25	
	<ul style="list-style-type: none"> - Mode of protection - Rated working voltage - Max. continuous operating voltage - Max. discharge current capacity (8/20 μs) - Protective voltage (5 kA, 8/20 μs) - Protective voltage at 1 kV/μs - Digital data transfer speed - Bandwidth - Mounting - Terminal - Number of lines per unit protection - Basic component 	<p>Differential 5 V 6 V 400 A (L/L), 400 (Line/PG) ≤ 35 V (L/L), ≤ 35 V(L/PG) ≤ 13 V (L/L), ≤ 13 V(L/PG) ≥ 100 Mbits/s ≥ 165 MHz loose body DB25 female – DB25 male connector RS 2321 1 line Suppressor Diode, Gas Arrester</p> 
8	RADIO ARRESTER N-Conn.	
	<ul style="list-style-type: none"> - Rated DC voltage - Rated load current - Rated discharge current capacity (8/20 μs) - Max. discharge current capacity (8/20 μs) - Protective voltage at 1kV/μs - Bandwidth - Impedance - Mounting - Connector type - Basic component 	<p>90 V 3.5 A ≥ 10 kA ≥ 20 kA ≤ 700 V ≥ 2 GHz 50 Ω Bulkhead/ loose body N female - N male Gas Arrester</p> 

9	RADIO ARRESTER UHF-Conn.	
	<ul style="list-style-type: none"> - Rated DC voltage - Rated load current - Rated discharge current capacity (8/20 μs) - Max. discharge current capacity (8/20 μs) - Protective voltage at 1kV/μs - Bandwidth - Impedance - Mounting - Connector type - Basic component 	90 V 3.5 A ≥ 10 kA ≥ 20 kA ≤ 700 V ≥ 2 GHz 50 Ω Bulkhead/ loose body U female - U male Gas Arrester



10	RADIO ARRESTER BNC-Conn.	
	<ul style="list-style-type: none"> - Rated DC voltage - Rated load current - Rated discharge current capacity (8/20 μs) - Max. discharge current capacity (8/20 μs) - Protective voltage at 1kV/μs - Bandwidth - Impedance - Mounting - Connector type - Basic component 	230 V 3.5 A ≥ 10 kA ≥ 20 kA ≤ 700 V ≥ 2 GHz 50 Ω Bulkhead/ loose body BNC female - BNC male Gas Arrester








11	COMBI ARRESTER (TV, LAN, FAX)	
	<ul style="list-style-type: none"> - Nominal voltage - Max. Continuous Operating Voltage - Nominal Load Current - Nominal discharge current capacity (8/20 μs) I_{sn} - Max. discharge current capacity (8/20 μs) I_{max} - Voltage Protection Level at I_{sn} Up 	220 V 275 V 6 A 5 kA 10 kA 1 kV



12	CONTROL ARRESTER C24	
	<ul style="list-style-type: none"> - Mode of Protection - Nominal Voltage - Max. Continuous Operating Voltage - Nominal Load Current - Max. discharge current capacity (8/20 μs) - Voltage Protection Level at I_{sn} - Bandwidth (balanced) - Series resistance/line - Mounting - Basic component: gas 	Differential, common mode 24 V 26.8 V 100 mA 20 kA ≤ 65 V (L-L) 0.85Mhz 25 Ohm 35mm DIN Rail Terminal Screw Gas arrester, inductor/resistor, Suppressor diode



<p>13</p>	<p>PRIMA AIR TERMINAL.</p>	<p>Copper, Stainless Steel 1.25 Inch 30 cm</p> 
<p>14</p>	<p>ZEUS ESE AIR TERMINAL.</p>	<p>Copper, Stainless Steel 3 kg 30 cm</p> 
<p>15</p>	<p>DOWN CONDUCTOR SHIELDED CABLE</p>	<p>≤ 5 μH 50 mm²/20 kV 1,5 – 50 mm</p> 
<p>16</p>	<p>DOWN CONDUCTOR WITH INDUCTANCE ≤ 5 μH</p>	<p>≤ 5 μH 50 mm² 180 A 273 A 27 mm</p> 
<p>17</p>	<p>POTENTIAL BAR (PEB).</p>	<p>Steel/brass 7 conductors 2.5 – 70 mm² 190 mm length</p> 
<p>18</p>	<p>ISOLATING SPARK GAP.</p>	<p>5 kA ≤ 2.5 kV Connecting cable (NYY 1x25mm²) 1.5 m long at bond ends 64mm diameter & 157 mm long</p> 