



1. GENERAL APPLICATIONS

- 1.1 The protector is for protecting your valued equipment from surges, TOVs, transients, lightning impulses coupled into AC power system via direct or indirect strikes, an on/off or a short circuit in the transmission lines, induced or coupled into TN-C-S low voltage system, single phase 230 Volt 50 Hz or three phase four wire 400/230 Volt 50 Hz, which providing the safety of your personnel, communication equipment, computers and any other electronic equipment.
- 1.2 The protector is able to protect **two types of surge** as follows :
 - 1.2.1 Transient (also called " Surge ") such as a discharge current of 8/20 μ Sec. waveform according to IEC 61643-11-2011 and ANSI / IEEE C62.41.1-2002.
 - 1.2.2 **Temporary Over Voltage** or **TOVs** (again also referred to as " Surge ") caused by power frequency electrical system such as switching of the capacitor banks in the electrical system according to ANSI / IEEE C62.41.1-2002.
- 1.3 Surge Protecting component is using Metal Oxide Varistor (MOV) manufactured by TDK-EPCOS (formerly named SIEMENS) with the approval of UL1449.
- 1.4 The protector housing is made of nonflammable material (according to UL94V-0 standard) and DIN rail 35 mm. mountable.
- 1.5 The protector is plug-in module unit with base element type for easy installation and replacement.
- 1.6 The protector is designed, manufactured and tested according to the standard of IEC 61643-11-2011, ANSI / IEEE C62.41.1-2002.

TL2D50NZ

LIGHTNING SURGE ARRESTER COMBINATION

SPECIAL FEATURES

- TOVs / Transient / Lightning Impulses / Surge Protections
- Designed for TN-C-S system
- For Class I / Class I+II / Cat. C / Cat. C+B application
- Easy installation & maintenance
- Designed according to the standard of ANSI / IEEE C62.41.1-2002, IEC 61643-11-2011,
- **STOV**® Technology

2. GENERAL DATA

2.1 Protection Mode	All modes (L-N, L-G, L-L, N-G)
2.2 Operating Temperature	- 20 °C + 70 °C
2.3 Humidity Range	12% - 90%
2.3 Isolation Resistance	> 100 M Ω at test 100 Volt (DC)
2.4 Response Time	< 25 nSec
2.5 Status Display	Normal or Fault indicator
2.6 Degree of Protection	IP 20
2.7 AC Load Current	Independent (Un-limited)

3. ELECTRICAL DATA

3.1 IEC / IEEE	Class I / Class I+II / Cat. C / Cat. C+B
3.2 Line Voltage	230 Volt or 400/230 Volt 50 Hz
3.3 Leakage Current	< 5 mA at 230 Volt 50 Hz
3.4 Max. Continuous Operating Voltage	Uc 264 Volt 50 Hz
3.5 Max. Lightning Impulse Current	Iimp 10 kA / Phase (10/350 μ Sec) MOV
3.6 Max. Discharge Current	I _{max} 50 kA / Phase (8/20 μ Sec)
3.7 Nominal Discharge Current	I _n 15 kA / Phase (8/20 μ Sec)
3.8 Residual Voltage	U _{res} < 1.2 kV at cat. B3/C1
3.9 Clamping Voltage	310 Volt \pm 10 % at current > 100 mA 50 Hz
3.10 TOVs Surge Current	> 5 A in 300 mSec 50 Hz
3.11 Let Through Voltage (TOVs)	< 270 Volt at TOVs Surge Current

4. OPTIONS

4.1 IC1 = Indoor Cabinet	for single phase 230 Volt 50 Hz with accessories
4.2 OC1 = Outdoor Cabinet	
4.3 IC3 = Indoor Cabinet	for three phase four wire 400/230 Volt 50 Hz with accessories
4.4 OC3 = Outdoor Cabinet	
4.5 NG2 = Neutral Ground Model : T2P5NG	Iimp 5 kA at 10/350 μ Sec, Up < 1.5 kV (1.2/50 μ Sec at 6 kV) and Response time < 100 nSec.
4.6 RA = Remote Alarm	free changeover contact 250 Volt 5 A
4.7 TOVC = TOVs Counter	3 Digital display / counts from 5 A + 20 % at one cycle of 50 Hz up



Type of Lightning Surge Arrester Combination		
Model	Max. Lightning Impulse Current (10/350 μ Sec)	Max. Discharge Current (8/20 μ Sec)
TL2D50NZ	10 kA	50 kA

Odering format :
Model : **TL2D50NZ** (with option : ___)

Odering example :
Model : **3TL2D50NZ** (with option : IC3)
means Max. Lightning Impulse Current 10 kA (10/350 μ Sec) and Max. Discharge Current 50 kA (8/20 μ Sec)
for three phase four wire 400/230 Volt 50 Hz with indoor cabinet.

