TAS PowerTek

Product Data Sheet

Detuned Reactor

SAVE ENERGY

RoHS

Det Reactors – Detuned Inductors is a type of inductor used in conjunction with capacitors to mitigate harmonic distortion and improve power factor correction. These devices are specifically designed to prevent resonance, which can cause harmonic amplification and damage to electrical equipment. TAS "**Detuned Inductors** "give effective solution to all these above and allows safe usage of capacitors to problems improve the power factor.

FEATURES

- **Protection to Capacitors Against Harmonics**

  Detuned reactors protect capacitors against harmonics by creating a high impedance to harmonics frequencies, thereby preventing these currents from reaching the capacitors and potentially causing Damage.

- **Reduce Power Losses**

  Reduce power losses by minimizing the amplification of harmonic currents and voltages, improving power factor, and preventing resonance between capacitors and other inductive loads. It leads to reduced energy consumption, lower utility bills, and improved equipment lifespan.

- **High harmonic load handling capacity**

  Improves a system ability to handle high harmonic loads by preventing resonance and limiting harmonic current flow through capacitor.

- **Convenient mechanical design for mounting**

  Refers to the physical structure and arrangement of a detuned reactor, designed to built with mounting features that make it easy to connect to other parts of an electrical system, like a capacitor bank.

- **High Linearity**

  When dealing with waveforms with high crest factors, the device must be able to accurately reproduce the peaks without distortion.

- **Longer Lifespan**

  A longer lifespan for associated capacitors and overall system components by mitigating harmonic overloading and preventing resonance. The reactors can protect against excessive current and voltage stresses, leading to increased capacitor life and reduced system wear.

- **Temperature Protection in all 3 Phases**

  It helps prevent overheating and potential damage to the reactor and connected equipment, Especially when dealing with harmonic currents.

- **Design Designed according to the basic system odd-harmonic currents**

  I5 = 50% MAX

  I7 = 25% MAX

  I11 = 12.5% MAX

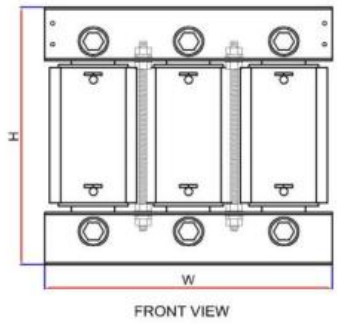
  I13 = 5% MAX

TECHNICAL SPECIFICATIONS

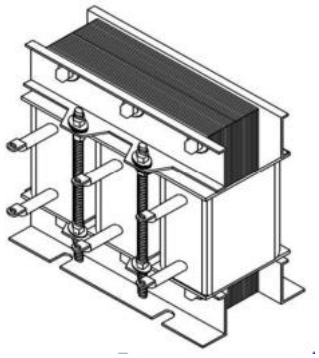
Parameter	Specifications
Voltage	380..440V AC 3 Phase Line to Line Value
Frequency	50Hz (60Hz on specific made to order)
Rating	5 to 100 KVAr Capacitors
Insulation Strength	3kV 50 Hz for 1min 5mA tripping P-P,P-E
Linearity	≤3% error of normal inductance value up to 130% of rated current
Detuning /Filtering % voltage drop	6%, 7% & 14%
Ambient Temperature	50°C Max
Core	Multi Gap Silicon Steel Iron
Insulation class	F (155°C)
Cooling	Natural Cooling
Enclosure	IP-00
Phase	3 Phase
Temperature Protection	Thermal Switch, 130°C NC type in all three phase windings

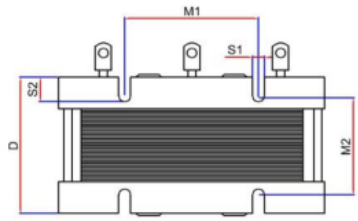
All specifications are typical and subject to change without notice due to ongoing product development and improvement.

MECHNICAL DIMENSIONS

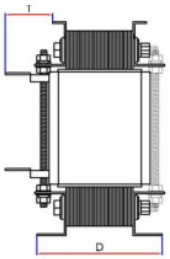


FRONT VIEW





BOTTOM VIEW



SIDE VIEW

Copper Inductors Dimension:

FRAME SIZE	W	H	D	M1	M2	T	S1	S2	Weight (kg)
A	180	160	80	91	62	50	8	14	9.5
B	180	160	110	91	92	50	8	14	12.5
C	228	204	119	120	91	50	12	20	18.5
D	285	246	139	111	113	70	12	25	29.8
E	300	260	154	150	118	90	12	25	47.5

Thermistor Connection Diagram in Inductor: