

SHAKTI DU/DT FILTER

Leading a New Start



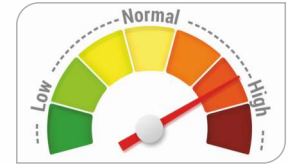
**PLUG & PLAY
SHOCK-PROOF
CONNECTORS**



**DUST-PROOF &
RAIN-PROOF
IP 54 DESIGN**



**SUPPORTS WIDE
VARIETIES
OF DRIVES**

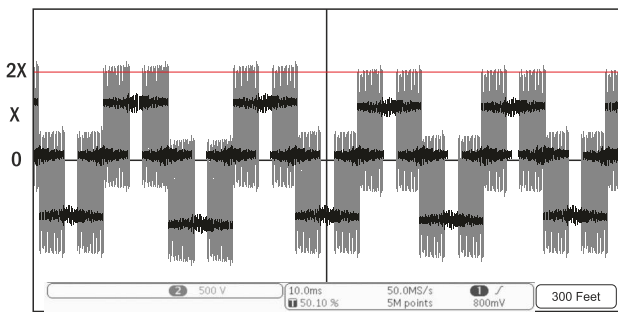


**WIDE
TEMPERATURE
RANGE**

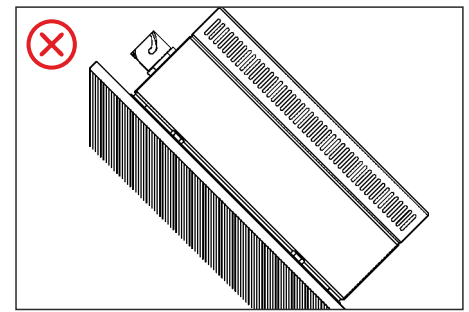
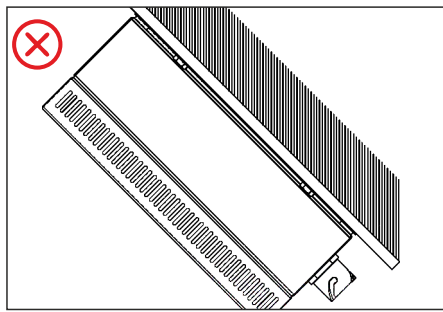


Features

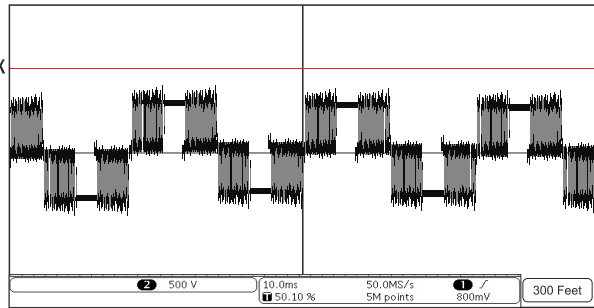
- Extends the life of the motor & its associated cable
- Better filtering with amorphous core inductor
- Reduces common mode current upto 30%
- Applicable upto 500m



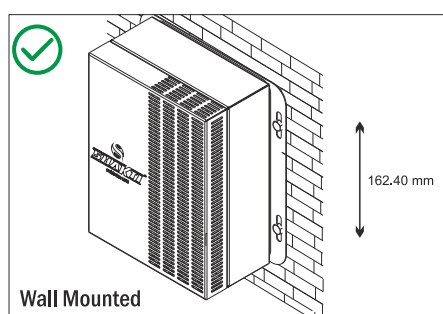
VOLTAGE SPIKES AT FILTER INPUT



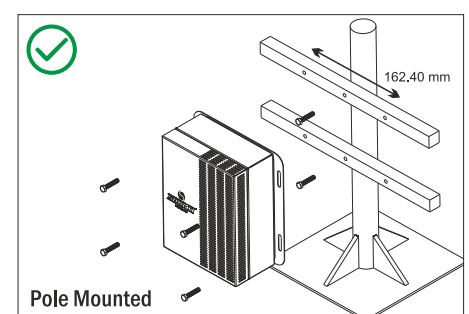
INCORRECT MOUNTING



DU / DT FILTER OUTPUT



Wall Mounted



Pole Mounted

CORRECT MOUNTING

COMMON PROBLEM ONE SOLUTION

The applications involving long connecting cables (typically 15 m and above) between the VFD (Variable Frequency Drive) output and motor terminal, high voltage spikes are observed at receiving/motor end. The magnitude of these voltage spikes may go up to double the DC bus voltage of VFD depending on length of the cable. The high du/dt at the drive output is the primary reason for these voltage spikes. These high voltage spikes may lead to insulation failure in the connected motor or cable. This problem can be resolved using an appropriate du/dt filter at the output of the drive.

Conventionally used first order filter reduces this problem however; the second order Shakti du/dt filter mitigates this problem to a greater extent. It is a unique product which is designed, developed and manufactured by Shakti Pumps (India) Ltd. The IP54 design eliminates the requirement of outer casing and provides a fair protection against dust and water. This product comes with a wide variety of distinguished features such as: compact size, shock-proof plug and play connectors, capability to operate in wide temperature range and harsh environments.

APPLICATION

Reduces voltage spikes, common mode & bearing current.

TECHNICAL SPECIFICATION

Motor Voltage	: 48 - 415 V
Drive switching frequency	: 1 - 3.5 kHz
Drive DC Bus voltage	: upto 700 V
Motor frequency	: 0 - 400 Hz
Rated/ motor current	: 14 A
Motor Power	: 0.5 - 5 hp
Operating Temp. Range	: -10 ⁰ to 60 ⁰ C
Ingress Protection	: IP54
Connection Type	: 3 - Phase

WHY SHAKTI DU / DT FILTER !

CONVENTIONAL FILTER	SHAKTI DU/DT FILTER
First order: reduces voltage spikes	Second order: mitigates voltage spikes
Confusing connection with possibility of shock	Plug & play shock-proof connectors
Non IP/IP 20	IP 54
Supports limited range of cable	Compatible with long cable length



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