

NSFTxx Line of AC Induction Motor Soft starters

NSFTxx soft starters accelerate and decelerate AC induction motor loads smoothly, save energy and reduce system wear and tear.



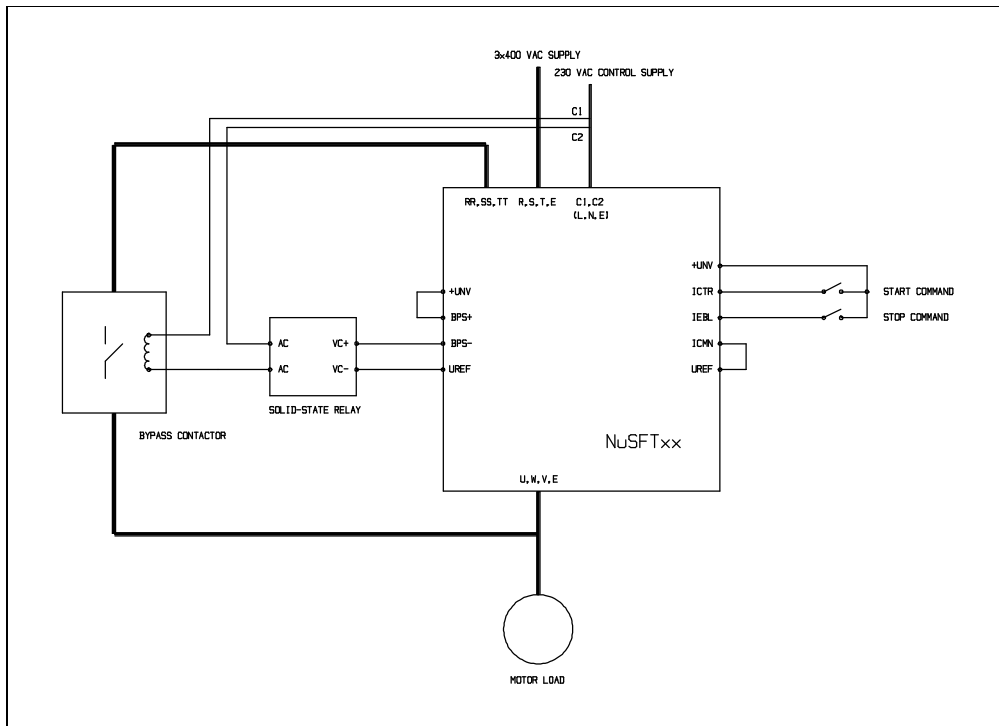
NSFT25 25HP (37A/phase) soft-starter.

They interface with most (if not all) automation equipment in the market and are an effective mechanical interface in many applications.

They are all fully protected, digitally-controlled and programmable units. They are simple to install and are effectively employed in applications driving:

- Transport systems (conveyors, escalators, roller tables etc.) for low inertia loads,
- Pumps and compressors,
- Inelastic transmissions (gear trains, high-ratio belt systems etc.), and
- Fans and ventilators.

NSFTxx Features	
Power circuit	Generous x4 starting current and cooling circuit design provides for 60-555 A (starting, per phase), 10-90 HP/7.5-66 kW (at 3x400 VAC) loads. The employed 1600 VDC power circuit allows use in up to 3x480 VAC systems.
Torque control	User selectable cycle-by-cycle starting current limitation.
Complete, electronic protection	Overcurrent, undercurrent, overvoltage, undervoltage, against noise, faults and disturbances in the supply, phase sequence and integrity, internal temperature.
Control interface	Galvanically isolated, versatile two input user/control interface.
Analog interface	One load current output and one overcurrent limit input.
DIP switch selectable parameters	Operation timer, fault handling, trigger/control type, profile, starting control, protection type, deceleration, starting value and duration options.
Isolated control outputs	Galvanically isolated "Idle", "Run", "By-pass", "Fault" outputs.
Power supply	Small 24 VDC power supply available to power a local sensor or other automation device.
"Bookcase" enclosure	Installation-friendly, space-saving "bookcase", robust enclosure.
Seperate control circuit supply	Enables seperate/isolated power circuit functions and prevents any power disruptions from affecting the unit's control and monitoring functions.



Typical NSFTxx connection.

NSFT/ICCD Panel Controller

The NSFT/ICCD Panel Controller accessory gives local and distributed control capabilities to the NSFTxx soft starters.



NSFT/ICCD Panel Controller

The NSFT/ICCD controller features:

- Standard panel mounting enclosure (DIN 43700) with an IP54 polyester membrane face,
- Two user tactile switches on the front panel,
- Three status indicating LEDs,
- A solid state switch to drive a bypass contactor,
- Comprehensive signal and power connections with the NSFTxx hardware, and
- Quamatic or Modbus network connectivity.

Ready to Install Soft Starting System

The line is also available in ready-to-install, completely assembled systems. Units over 10 HP include a bypass contactor to minimize heat dissipation.



Ready-to-install soft-starter system.

Ready-to-Install System Features	
Wall-mounted cabinet	The IP54 electrical wall-mounted cabinet for use in an environment of <math>< 50^{\circ}\text{C}</math>.
NSFT/ICCD Panel Controller	The front NSFT/ICCD Panel Controller integrates all the required automation and is a practical and robust user interface. Quamatic or Modbus connectivity is offered as an option.
Bypass contactor	The bypass contactor is driven by the Panel Controller solid-state switch.
400/230 V transformer	A 400/230 V transformer sources the required 230 V control voltage thus eliminating the need to connect to the line neutral.
DIN rail terminal blocks	Line and load connections are made to DIN rail terminal blocks.

Specifications Overview

Characterizing Features of the NSFTxx Line at 3x400 VAC					
Model	Motor power, Delta connected, HP/kW	Motor power, Inside Delta connected, HP/kW	Maximum starting current, A	Motoring phase current, A	Worst case motoring heat dissipation (no bypass), W
NSFT10	10/7.5	17/12.5	60	15	61
NSFT15	15/11	26/19	100	23	95
NSFT20	20/15	35/25	135	30	109
NSFT25	25/18.5	43/32	165	37	138
NSFT30	30/22	52/38	190	45	150
NSFT35	35/26	60/44	210	52	174
NSFT40	40/30	69/51	235	60	202
NSFT45	45/33	78/57	300	67	218
NSFT50	50/37	86/63	330	75	252
NSFT55	55/40	95/70	360	82	275
NSFT60	60/44	103/76	377	91	306
NSFT75	75/55	129/95	470	114	345
NSFT90	90/66	155/114	555	137	414

Units above 90 HP and for non-standard/medium voltage applications are produced on a per order, custom base.

Ordering Information	
Model	Description
NSFTxx	xx HP Standard Soft Starter
NSFTxx-SL	xx HP Ready Soft Starter System, local control only
NSFTxx-SN	xx HP Ready Soft Starter System, local and network control
NSFTQ-L	NSFT/ICCD Panel Controller, local control only
NSFTQ-N	NSFT/ICCD Panel Controller, local and network control
XFR400230	Control Voltage Supply Transformer, 90VA, 400/230 VAC

Supplied by