1. Intended Use

- This device is designed for installation in an enclosure and is intended for the general professional use such as in industrial control, office, communication, and instrumentation equipment.
- Do not use this power supply in equipment where malfunction may cause severe personal injury or threaten human life.
- This device is designed for use in non-hazardous, ordinary or unclassified locations.

2. Installation Requirements

- This device may only be installed and put into operation by qualified personnel.
- This device does not contain serviceable parts. The tripping of an internal fuse is caused by an internal defect.
- If damage or malfunction should occur during installation or operation, immediately turn power off and send unit to the factory for inspection.
- Mount the unit on a DIN rail so that the output and input terminals are located on the bottom of the unit. For other mounting orientations, see derating requirements in this document. Refer to section 25.13.
- This device is designed for convection cooling and does not require an external fan. Do not obstruct airflow and do not cover ventilation grid (e.g. cable conduits) by more than 30%!
- Keep the following installation clearances: 40mm on top, 20mm on the bottom, 5mm on the left and right sides are recommended when the device is loaded permanently with more than 50% of the rated power. Increase this clearance to 15mm in case the adjacent device is a heat source (e.g. another power supply).

SHOCK HAZARD: Do not use the power supply without proper grounding (Protective Earth). Use the terminal on the input block for earth connection and not one of the screws on the housing.

- Turn power off before working on the device. Protect against inadvertent re-powering
- Make sure that the wiring is correct by following all local and national codes
- Do not modify or repair the unit
- Do not open the unit as high voltages are present inside
- Use caution to prevent any foreign objects from entering the housing
- Do not use in wet locations or in areas where moisture or condensation can be expected
- Do not touch during power-on, and immediately after power-off. Hot surfaces may cause burns.

WARNING: EXPLOSION HAZARDS!

Substitution of components may impair suitability for this environment. Do not disconnect the unit or operate the voltage adjustment or S/P jumper unless power has been switched off or the area is known to be non-hazardous.

All parameters are specified at 24V, 40A, 3x400Vac, 25°C ambient and after a 5 minutes run-in time, unless noted otherwise.

3. AC-Input

AC input	nom.	3AC 380-480V	suitable for TN, TT and IT mains networks, grounding of one phase is allowed except in UL 508 applications
AC input range	min.	3x 323-576Vac	continuous operation
Allowed voltage L to earth	max.	576Vac	continuous, IEC 60664-1
Input frequency	nom.	50–60Hz	±6%
Turn-on voltage	typ.	3x 305Vac	steady-state value, load independent, see Fig. 3-1
Shut-down voltage	typ.	3x 275Vac	steady-state value, load independent, see Fig. 3-1

		3AC 400V	3AC 480V	
Input current	typ.	1.65A	1.35A	at 24V, 40A, symmetrical phase voltages, see Fig. 3-3
Power factor*)	typ.	0.88	0.90	at 24V, 40A, see Fig. 3-4
Start-up delay	typ.	500ms	600ms	see Fig. 3-2
Rise time	typ.	35ms	35ms	at 24V, 40A, resistive load, 0mF see Fig. 3-2
	typ.	40ms	40ms	at 24V, 40A, resistive load, 40mF see Fig. 3-2
Turn-on overshoot	max.	500mV	500mV	see Fig. 3-2

*) The power factor is the ratio of the true (or real) power to the apparent power in an AC circuit.

Fig. 3-1 **Input voltage range**

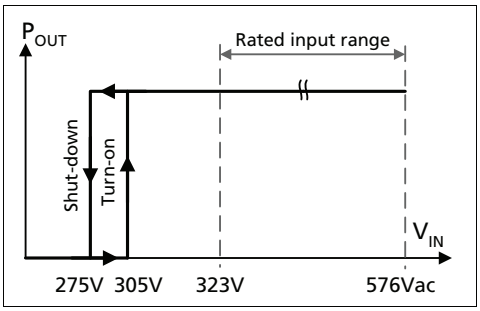


Fig. 3-2 **Turn-on behavior, definitions**

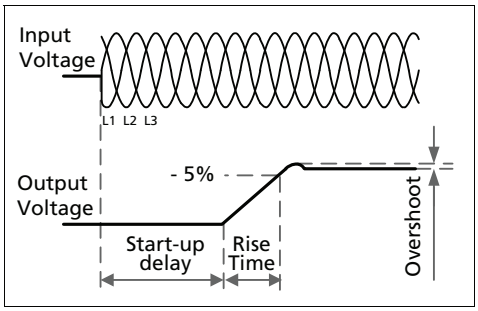


Fig. 3-3 **Input current vs. output load at 24V**

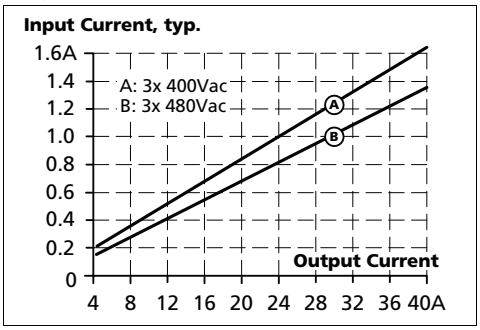
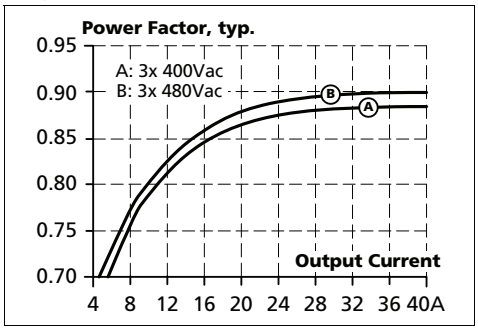


Fig. 3-4 **Power factor vs. output load at 24V**



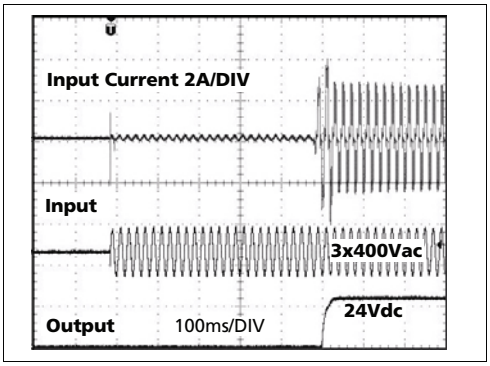
4. Input Inrush Current

The power supply is equipped with an active inrush current limitation circuit, which limits the input inrush current after turn-on to a negligible low value. The input current is usually smaller than the steady state input current.

		3AC 400V	3AC 480V	
Inrush current*)	max.	$6A_{peak}$	$6A_{peak}$	over entire temperature range
	typ.	$4.5A_{peak}$	$4.5A_{peak}$	over entire temperature range
Inrush energy	max.	$1.5A^2s$	$1.5A^2s$	over entire temperature range
Inrush delay	typ.	500ms	600ms	

*) The charging current into EMI suppression capacitors is disregarded in the first microseconds after switch-on.

Fig. 4-1 **Typical turn-on behaviour at nominal load and 25°C ambient temperature**



5. DC-Input

Do not operate this power supply with DC input voltage.