POWER SUPPLY 3-PHASE, 48 V DC DIMENSION X SERIES 20A

XT40.481
PSU 3PH 400V ac I/P 48V dc 20A 960W O/P



- Output current of 20 A
- Up to 96% efficiency
- Semi Regulated
- Replaces linear transformers
- Very high short-circuit current

PRODUCT DESCRIPTION

Dimension X series is a series of semi-regulated power supplies. A so-called semi-controlled unit means that the output voltage is regulated within the specified input voltage range. Outside this range decreases / increases the output voltage compared to the input voltage.
The unit has a bonus effect of 25% (25 A) to cope with high starting currents, as well as a very high short-circuit current enables safe trips for eg MCB. The unit leaves up to 90 A at 100 ms. Lasts short circuit longer than 100 ms, the unit shuts off automatically. See chart below for details. Recovery occurs in the front, or by disconnecting the primary voltage.
A yellow LED indicates the status and warns of the following errors; phase failure, over-temperature and high load current.
The unit has a low weight (1.4 kg), no inrush current and active transient filter that protects the secondary side from transients on the primary side.
Typical applications include motors, solenoids or other "power hungry" loads that do not have requirements for accurate voltage regulation. X series are a great alternative to traditional transformers. With lower energy costs and easier installation, along with an attractive price concept means a low total cost.

We recommend free space of 40 mm above and 20 mm under the power supply, and 5 mm at the sides. (if neighbouring products are counted as a heat source spacing of 15 mm is recommended).

Input voltage range/regulation
Output characteristics

SPECIFICATIONS

Active Transient	Yes
Approvals	CB, CE, CSA, UL
Depth	159
Effect	960
Efficiency At 400 V AC, full load. Typical	96
Height	124

Hold-up time at 400 V AC, full load. Typical.	3
Input voltage AC	400 V
Input voltage ac max	440
Input voltage ac min	360
Inrush current at 400 V ac typical	4
IP Class	IP20
Lifetime at 400 V ac, full load and +40 ° C	77000
MTBF (IEC 61709) 400 V ac, max loan, +40 °C	541000
Number of phases	3
Output Current	20
Output voltage	48
Output voltage max	48
Output voltage min	48
Power consumption at 400 V ac	1.65
Power Factor at 400 V AC, full load. Typical	0.93
Power Reduction Of 60 To 70 ° C	24
Ripple. max	300
Series	Dimension X
Supply Frequency	50-60 ±6 %
Temperature Range Without Derating From	-25
Temperature Range Without Derating To	60
Weight	1.4
Width	96

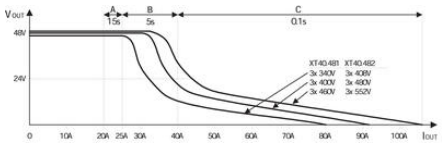


Fig. 5-1 **Output voltage vs. input voltage and input current**

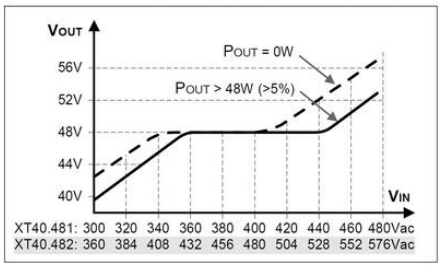


Fig. 15-1 **Output current vs. ambient temp.,**

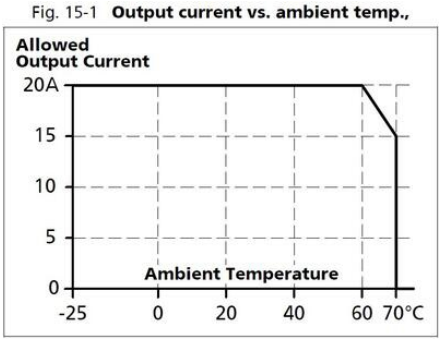


Fig. 9-1 **Efficiency vs. output current**

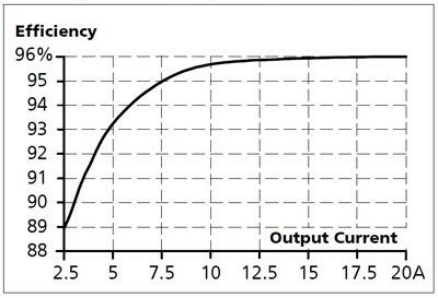
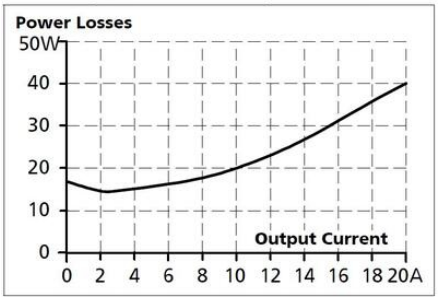


Fig. 9-2 **Losses vs. output current**



25. COMPARISON BETWEEN THE XT40, A TRANSFORMER AND A TRADITIONAL SWITCHED-MODE POWER SUPPLY

	XT40 Semi-regulated power supply	Traditional switched-mode power supply	Transformer power supply
Input voltage range	+	++	-
Inrush current surge	++	+	-
Hold-up time	-	+	-
Phase-loss operation	-	+	-
Efficiency	+++	++	-
Output voltage regulation	+	++	-
Output adjustment range	-	++	-
Ripple & noise voltage	-	++	-
Error diagnostics	++	++	-
Harmonic distortion (PFC)	+	+	-
EMC	++	++	+
Ease of installation	++	++	-
Size	+++	++	-
Weight	+++	+	-

+++...very, very good ++...very good +...good -...poor

Fig. 11-1 Front side of XT40.481



Fig. 22-1 **Front view**

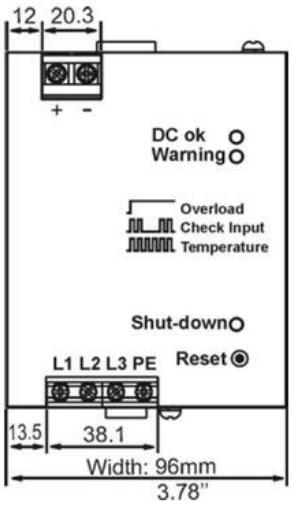
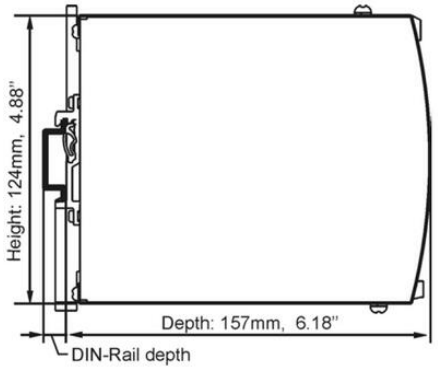
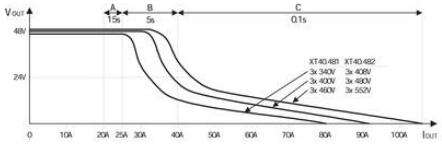


Fig. 22-2 **Side view**





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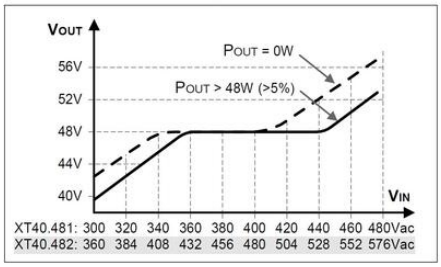


Fig. 15-1 **Output current vs. ambient temp.,**

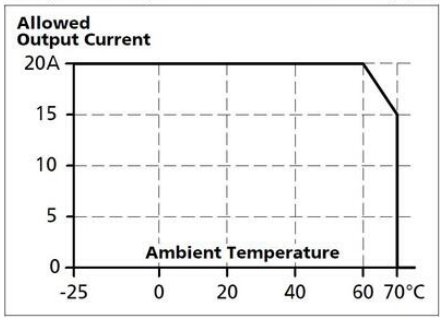
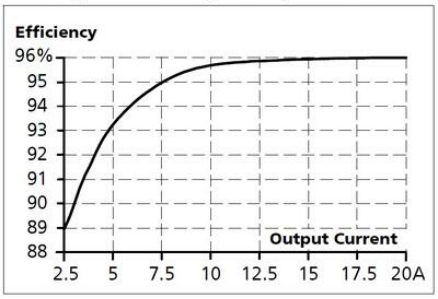


Fig. 9-1 **Efficiency vs. output current**



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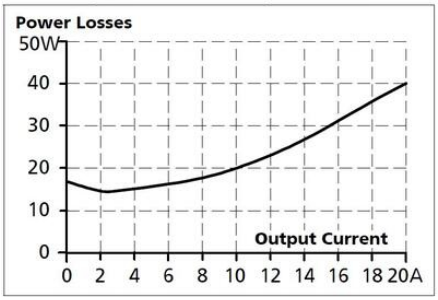

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Inrush current surge	++	+	-
Hold-up time	-	+	-
Phase-loss operation	-	+	-
Efficiency	+++	++	-
Output voltage regulation	+	++	-
Output adjustment range	-	++	-
Ripple & noise voltage	-	++	-
Error diagnostics	++	++	-
Harmonic distortion (PFC)	+	+	-
EMC	++	++	+
Ease of installation	++	++	-
Size	+++	++	-
Weight	+++	+	-

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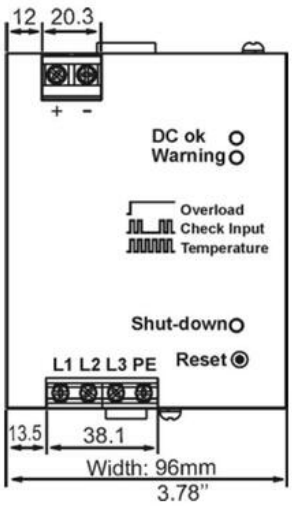

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