POWER SUPPLY 3-PHASE, 72 V DC DIMENSION X SERIES

XT40.721
PSU 3PH 400V ac I/P 72V dc 13.3A 960W O/P

- Output current of 13 A
- 95.5% efficiency
- 96 mm wide
- 25% power boost
- Very high short-circuit current

Product description

The power supplies in the Dimension X-Series include a new and innovative concept for generating an isolated dc voltage from a three-phase mains system. A semi-regulated resonant converter enables a very compact design, maximum efficiency and extremely competitive pricing with only a small compromise in the output voltage regulation, output ripple and hold-up time.
Weighing just 1.4 kg, the device provides 960 watts of continuous output power and an additional 25% power reserve for dynamic loads. The light-weight design along with compact dimensions facilitate straightforward mounting on DIN-rail.
Primary use are applications involving supplies to motors, valves and other load circuits with a high power consumption, where an accurate output voltage regulation which is standard on traditional switched-mode power supplies is not required.
Furthermore, these switched-mode power supplies can often replace mains transformers with rectifiers.

We recommend free space of 40 mm above and 20 mm under the unit, and 5 mm at the sides. (If adjacent components are considered as heat sources, a distance of 15 mm is recommended.)

Input voltage range	Output characteristics

Specifications

Active Transient	Yes
Approvals	CB, CE, CSA, UL
Depth	159
Effect	960

Efficiency At 400 V AC, full load. Typical	95.5
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
MTBF (IEC 61709) 400 V ac, max loan, +40 °C	539000
Number of phases	3
Output Current	13.3
Output voltage	72
Output voltage max	72
Output voltage min	72
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	200
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

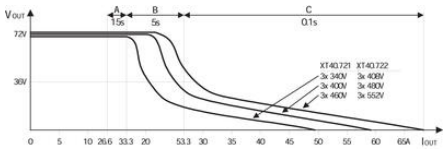


Fig. 5-1 **Output voltage vs. input voltage and input current**

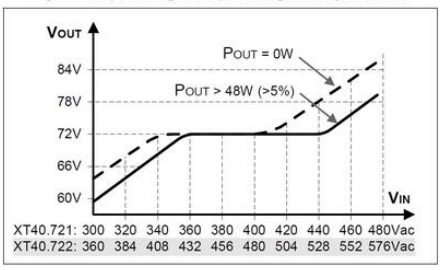


Fig. 15-1 **Output current vs. ambient temp.,**

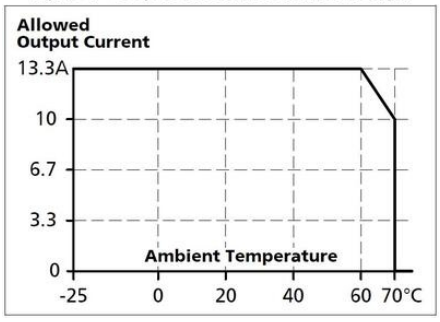


Fig. 9-1 **Efficiency vs. output current**

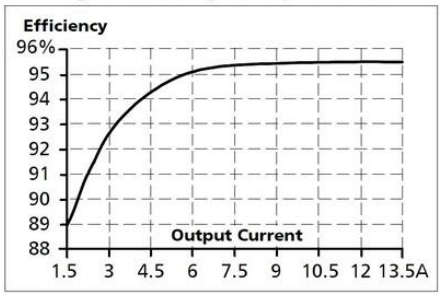
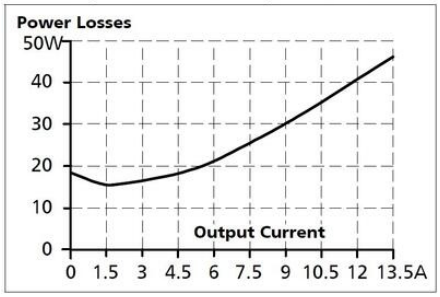


Fig. 9-2 **Losses vs. output current**



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 XT40.721

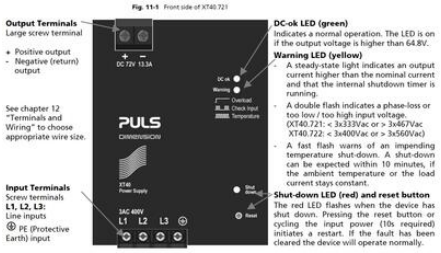


Fig. 22-1 **Front view**

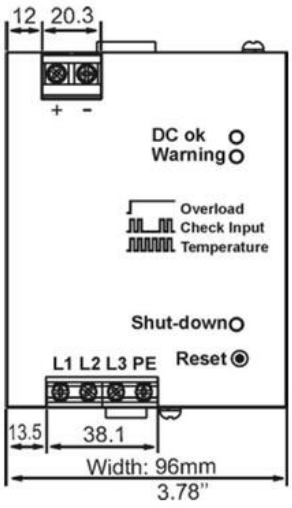
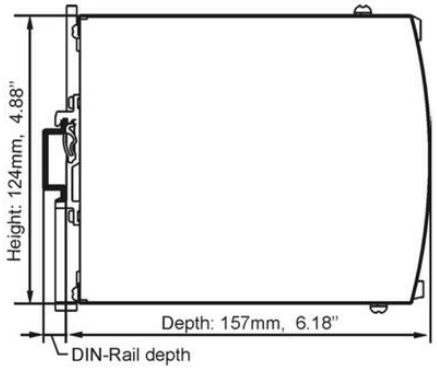
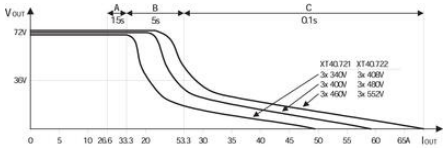


Fig. 22-2 **Side view**





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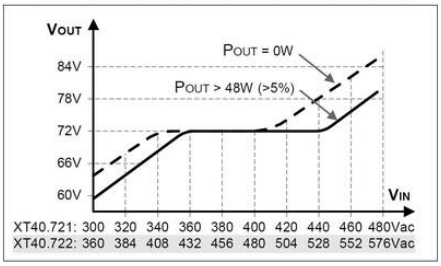


Fig. 15-1 **Output current vs. ambient temp.,**

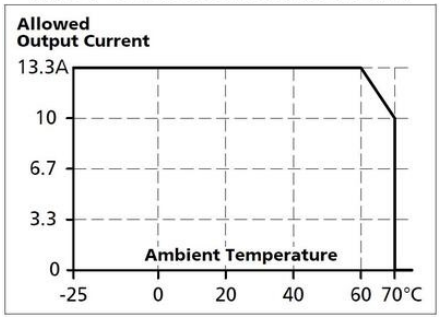


Fig. 9-1 **Efficiency vs. output current**

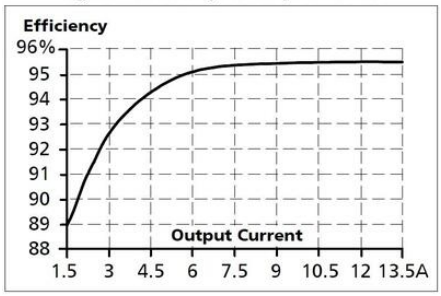
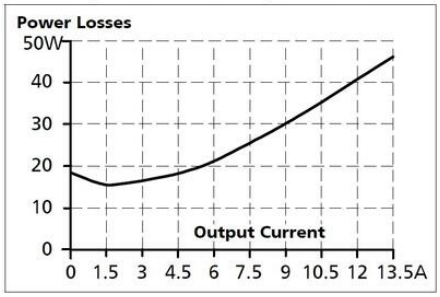


Fig. 9-2 **Losses vs. output current**



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Error diagnostics	++	++	-
Harmonic distortion (PFC)	+	+	-
EMC	++	++	+
Ease of installation	++	++	-
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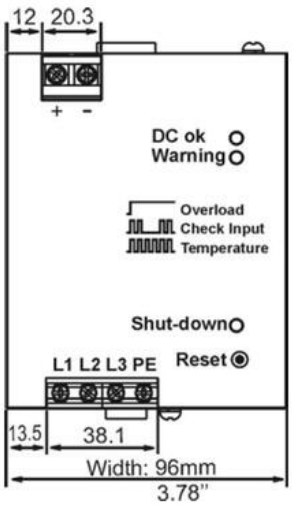

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