

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

XT40.722

POWER SUPPLY 480V 72VDC 960W

- 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.

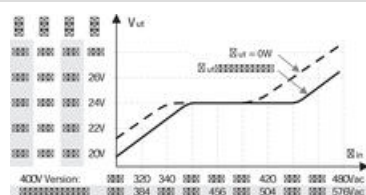
Weighing just 1.4 kg, the device provides 960 watts of continuous output power and an additional 25% power reserve for dynamic loads. The light-weight design along with compact dimensions facilitate straightforward mounting on DIN-rail.

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.

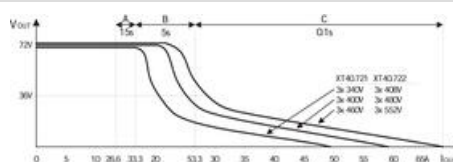
Furthermore, these switched-mode power supplies can often replace mains transformers with rectifiers.

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

Number of phases	3
Input voltage AC	480 V
Input voltage ac min	432 V AC
Input voltage ac max	528 V AC

Inrush current at 400 V ac typical	4 A
Power Factor at 400 V AC, full load. Typical	0.93
Supply Frequency	50-60 $\pm$ 6 %
Power consumption at 400 V ac	1.4 A
Type Power Supply	AC-DC
Output voltage	72 V DC
Output voltage min	72 V DC
Output voltage max	72 V DC
Output Current	13.3 A
Effect	960 W
Power Reduction Of 60 To 70 ° C	24 W/°C
Ripple. max	200 mV pp
Temperature Range Without Derating From	-25 °C
Temperature Range Without Derating To	60 °C
Efficiency At 400 V AC, full load. Typical	95.5 %
MTBF (IEC 61709) 400 V ac, max loan, +40 °C	539000 h
Width	96 mm
Height	124 mm
Depth	159 mm
Weight	1.4 kg
Series	Dimension X
Approvals	CB, CE, CSA, UL
Material Protection	Aluminium
Hold-up time at 400 V AC, full load. Typical.	3 ms
IP Class	IP20
Active Transient	Yes

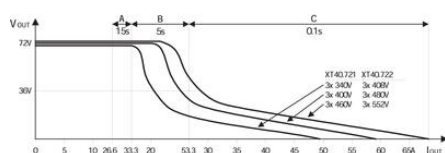


Fig. 5-1 Output voltage vs. input voltage and input current

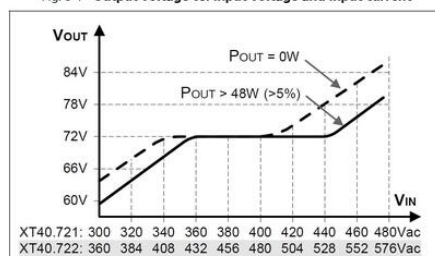


Fig. 9-1 Efficiency vs. output current

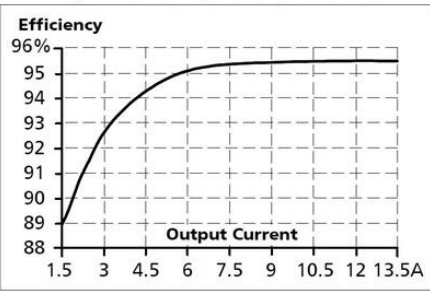


Fig. 9-2 Losses vs. output current

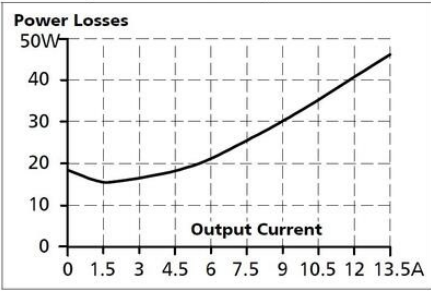
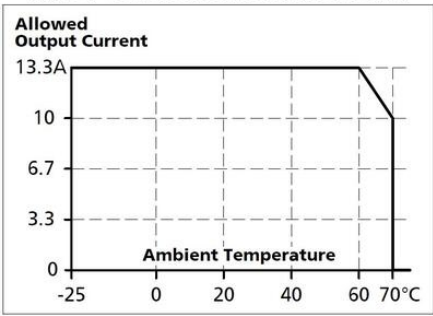


Fig. 15-1 Output current vs. ambient temp.,



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	-	++	-
Stipple & noise voltage	-	++	-
Error diagnostics	++	++	-
Harmonic distortion (THD)	+	+	-
EMC	++	++	+
Size of installation	++	++	-
Size	+++	++	-
Weight	+++	+	-

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



Fig. 22-1 Front view

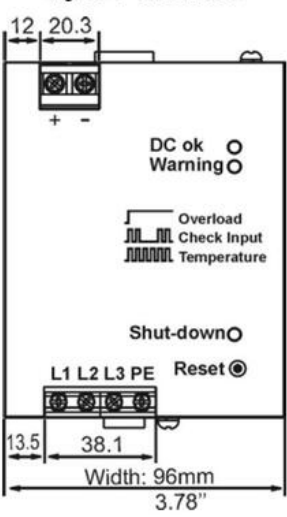


Fig. 22-2 Side view

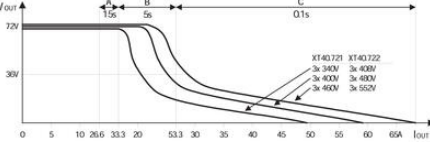
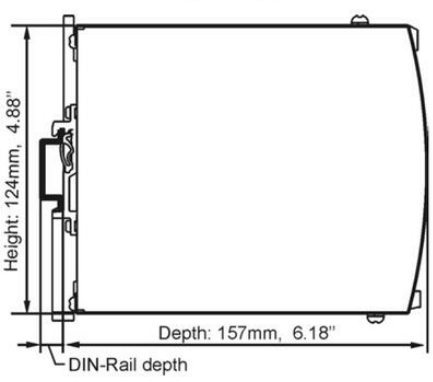


Fig. 5-1 Output voltage vs. input voltage and input current

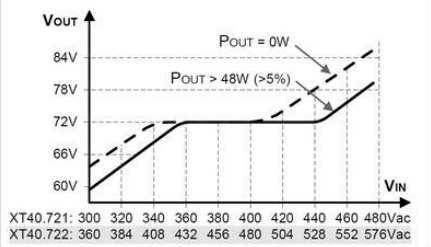


Fig. 15-1 Output current vs. ambient temp.,

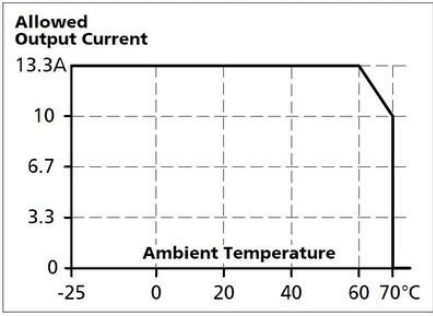


Fig. 9-1 Efficiency vs. output current

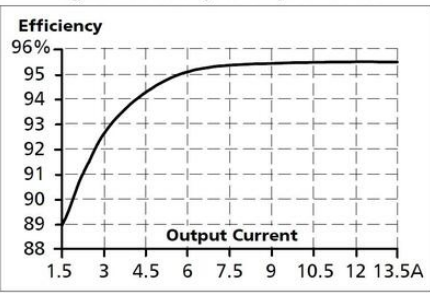
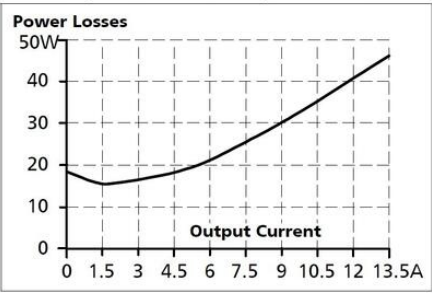


Fig. 9-2 Losses vs. output current



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 (THD)	+	+	-
EMC	++	++	+
Ease of installation	++	++	-
Size	+++	++	-
Weight	+++	+	-
+++ : very, very good    ++ : very good    + : good    - : poor			



Fig. 22-1 Front view

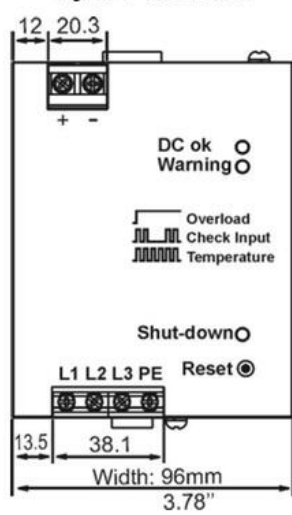


Fig. 22-2 Side view

