POWER SUPPLY 3-PHASE, 36 V DC DIMENSION X SERIES

36 V DC, 26,6 A, semi-regulated

XT40.361
Powersupply. 400V AC. 36VDC/ 26A

- Width 96mm
- Up to 95,5% efficiency
- 125 % power boost
- Suitable for eg. supply for motors

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.

SPECIFICATIONS

Input voltage AC	400 V
Input voltage ac min	360 V AC
Input voltage ac max	440 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 ±6 %
Power consumption at 400 V ac	1.65 A

Output voltage	36 V DC
Output voltage min	36 V DC
Output voltage max	36 V DC

Output Current	26.6 A
Effect	960 W
Power Reduction Of 60 To 70 ° C	24 W/°C
Ripple. max	250 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	529000 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**

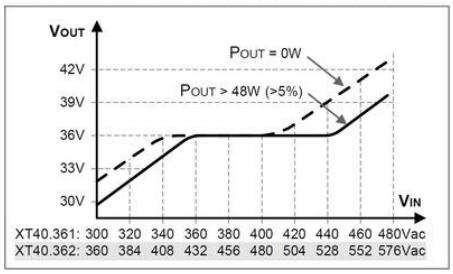


Fig. 7-1 **Output voltage vs. output current, typ.**

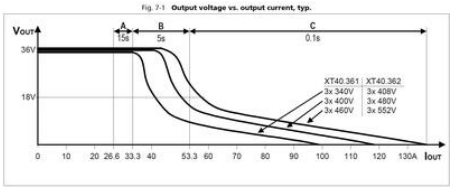


Fig. 15-1 **Output current vs. ambient temp.,**

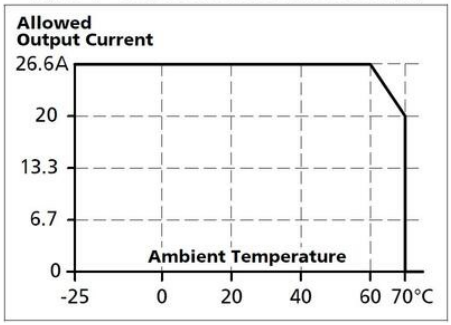


Fig. 9-1 **Efficiency vs. output current**

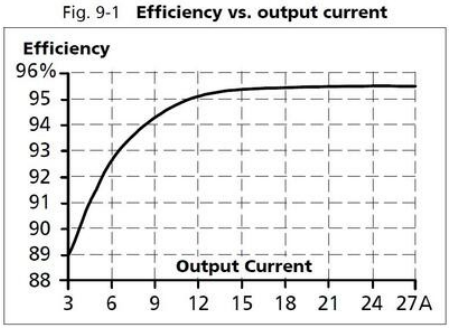
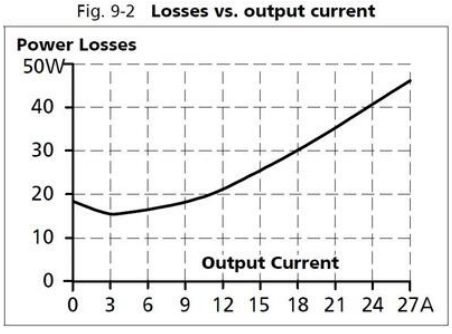


Fig. 9-2 **Losses vs. output current**



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 XT40.361

Fig. 22-1 **Front view**

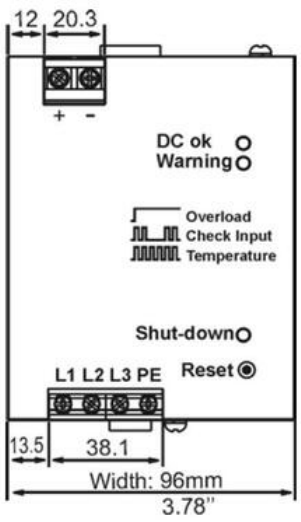


Fig. 22-2 **Side view**

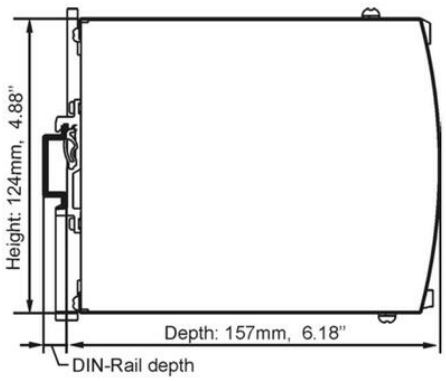


Fig. 5-1 **Output voltage vs. input voltage and input current**

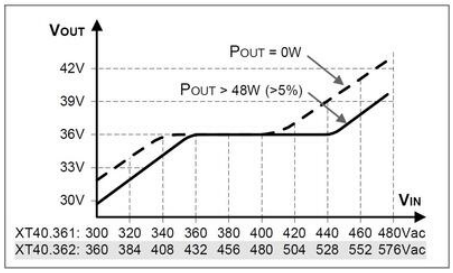


Fig. 7-1 **Output voltage vs. output current, typ.**

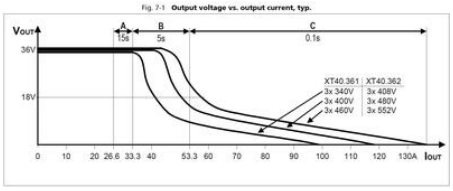


Fig. 15-1 **Output current vs. ambient temp.,**

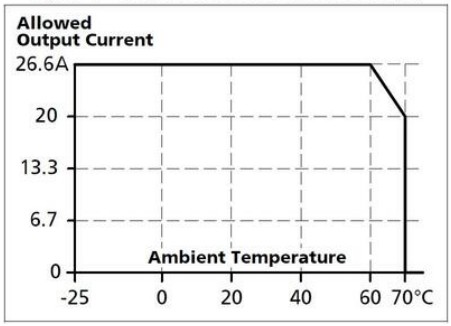


Fig. 9-1 **Efficiency vs. output current**

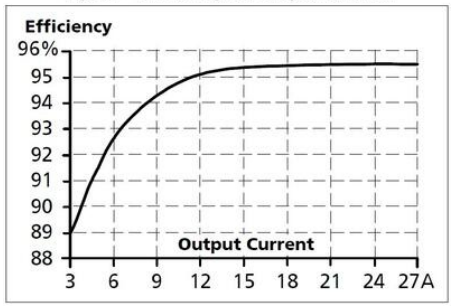
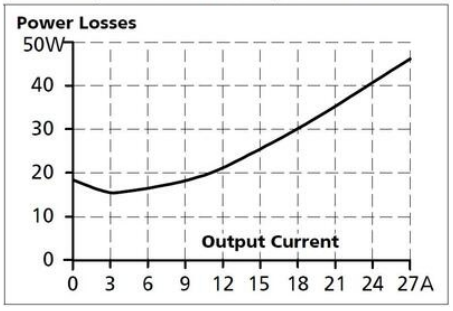


Fig. 9-2 **Losses vs. output current**



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 XT40.361

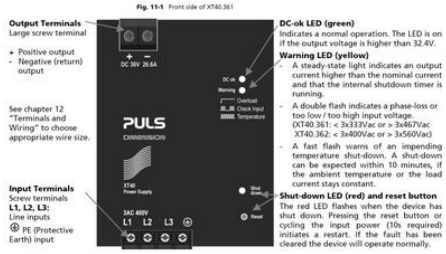


Fig. 22-1 **Front view**

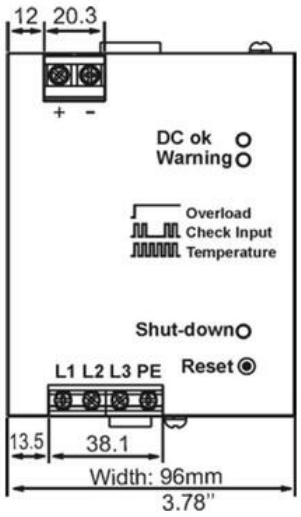


Fig. 22-2 **Side view**