

OEM Automatic Ltd

Address: Whiteacres, Whetstone Leicester, LE8 6ZG 0116 284 9900 | Orders@oem.co.uk | www.oem.co.uk

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

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

XT40.361 PSU 3PH 400V ac I/P 36V dc 26.6A 960W O/P

- 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.

TECHNICAL DATA

INPUT DATA

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

OUTPUT DATA

Output voltage	36 V DC
Output voltage min	36 V DC

Output voltage max	36 V DC
Output current	26.6 A
Power	960 W

EFFICIENCY / LIFETIME / MTBF

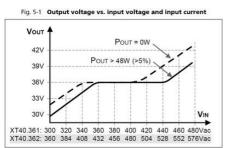
Efficiency at 400 V ac, full load, typical	95.5 %
MTBF (IEC 61709) 400 V ac, max loan, +40 °C	529000 h

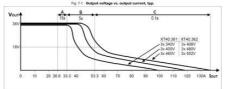
DIMENSIONS

Width	96 mm
Height	124 mm
Depth	159 mm
Weight	1.4 kg

OTHER

Approvals	CB, CE, CSA, UL
Hold time at 400 V ac, typical full load	3 ms
IP class	IP20
Material protection	Aluminium
Supply frequency	50-60 ±6 %
Ripple max	250 mV pp
Series	Dimension X
Power consumption at 400 V ac	1.65 A
Power drop from +60 °C to + 70 °C	24 W/°C
Temperature min without derating	-25 °C
Temperature max without derating	60 °C
Active Transient	Yes





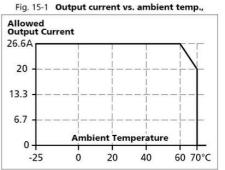


Fig. 9-1 Efficiency vs. output current

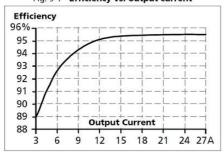
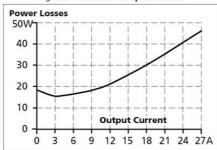


Fig. 9-2 Losses vs. output current



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

	regulated power supply	Traditional switched-mode power supply	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	***		5 60
	+++very, very good	++very good	+goodpor

Output Terminals
Large screw terminal

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See chapter 12

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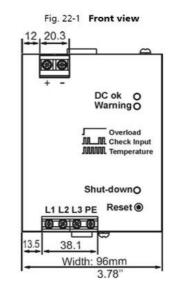
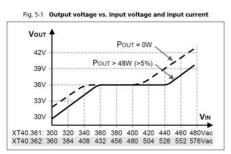
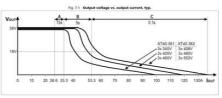


Fig. 22-2 Side view

Depth: 157mm, 6.18"





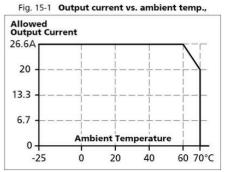


Fig. 9-1 Efficiency vs. output current

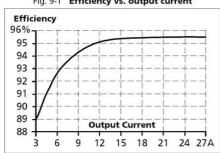
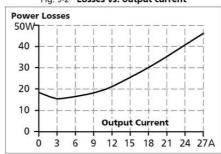
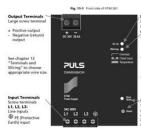


Fig. 9-2 Losses vs. output current



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	+goodpo



DC-ok LED (green)
Indicates a normal operation. The LED is
if the output voltage is higher than 32.4V

Warning LED (yellow)

A steady-state light indicates an output current higher than the nominal current and that the internal shutdown timer is running.

A double flash indicates a phase-loss or

XT40.361: 333940c to > 38560Vac)
A fast flash warns of an impending temperature shut-down. A shut-down can be expected within 10 minutes, if the ambient temperature or the load current stays constant.

Shut-down LED (red) and reset button. The red LED flashes when the device has shut down. Pressing the reset button or cycling the input power (10s required) initiates a restart. If the fault has been cleared the device will operate normally.

