# 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 |

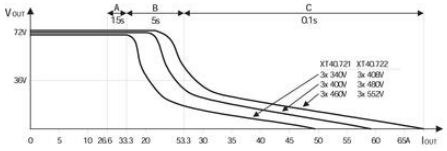



Fig. 5-1 **Output voltage vs. input voltage and input current**

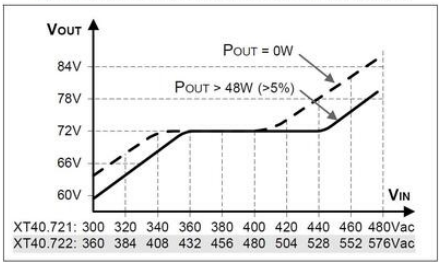



Fig. 15-1 **Output current vs. ambient temp.,**

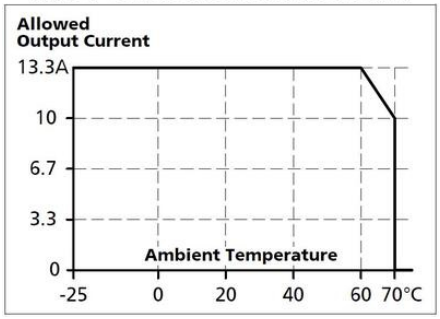



Fig. 9-1 **Efficiency vs. output current**

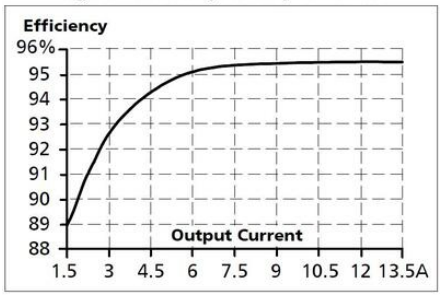
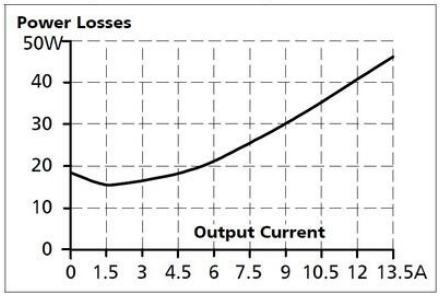



Fig. 9-2 **Losses vs. output current**




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. 22-1 **Front view**

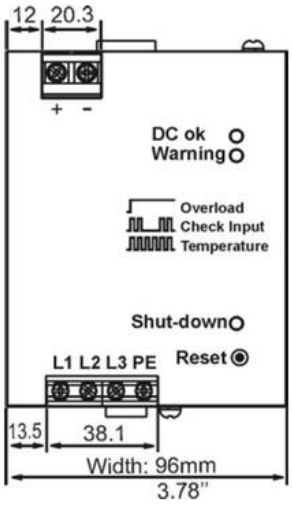
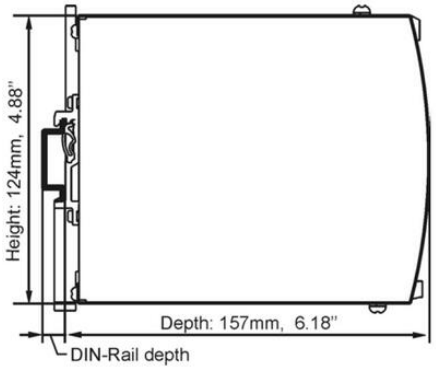
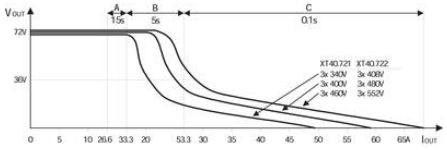



Fig. 22-2 **Side view**

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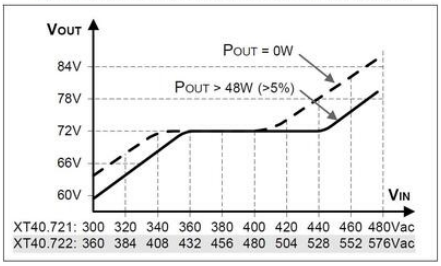


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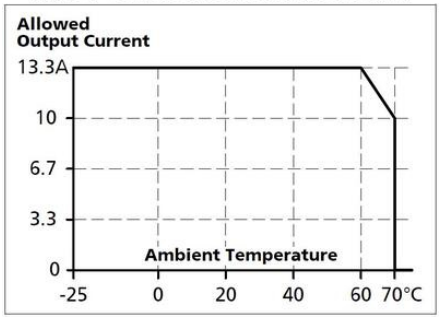


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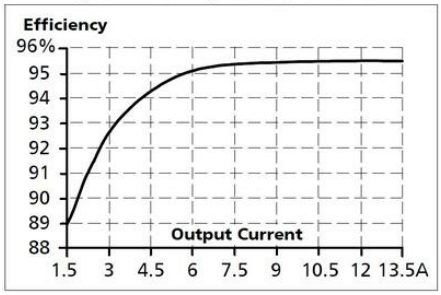


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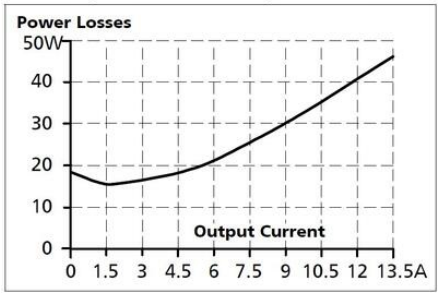


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| Size | +++ | ++ | - |
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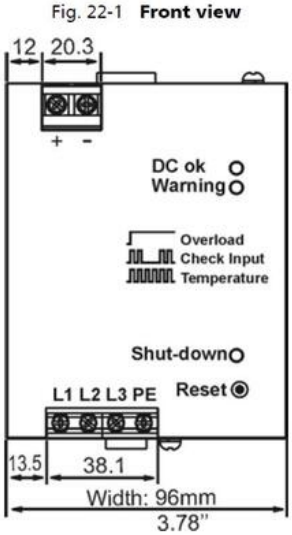


Fig. 22-2 **Side view**

