

## POWER SUPPLY 1-PHASE, 24 V DC DIMENSION C SERIES, MEDICAL APPLICATION

CP10.241-M1  
 PSU 100-240V ac I/P 24V dc 10A 240W O/P Medical  
 Use

- 2MOPP Safety approved IEC 60601-1, 3rd edition
- EMC tested, IEC 60601-1-2, 4th edition
- Output current of 10 A
- Efficiency up to 95.2%



### PRODUCT DESCRIPTION

The CP10.241-M1 is a DIN-rail mountable single-phase input power supply for industrial use and for use in medical equipment. It provides a stabilized and galvanically separated SELV/PELV output voltage.

The specialty of this power supply is the 2MOPP (two means of patient protection) safety approval for medical use and the fulfillment of the required EMC tests for professional healthcare facility and home healthcare environments.

The CP-Series is part of the DIMENSION power supply family. The most outstanding features of CP10.241-M1 are the high efficiency, advanced inrush current limitation, active PFC and the wide operational temperature range.

High immunity to transients and power surges as well as low electromagnetic emission, a DC-OK relay contact and a large international approval package for a variety of applications makes this unit suitable for nearly every situation.

## TECHNICAL DATA

### INPUT DATA

|  |            |
|--|------------|
| Input voltage ac                             | 100-240 V  |
| Input voltage ac min                         | 85 V AC    |
| Input voltage ac max                         | 264 V AC   |
| Input voltage dc                             | 110-150 V  |
| Input voltage dc min                         | 88 V DC    |
| Input voltage dc max                         | 180 V DC   |
| Inrush current at 120 V ac typical           | 6 A        |
| Inrush current at 230 V ac typical           | 9 A        |
| Input voltage range                          | Wide-range |
| Power factor at 120 V ac, full load. Typical | 0.99       |

|  |      |
|--|------|
| Power factor at 230 V ac, full load. Typical | 0.97 |
| Number of phases                             | 1    |

## OUTPUT DATA

|                    |         |
|--------------------|---------|
| Output voltage     | 24 V DC |
| Output voltage min | 24 V DC |
| Output voltage max | 28 V DC |
| Output current     | 10 A    |
| Power              | 240 W   |

## EFFICIENCY / LIFETIME / MTBF

|   |          |
|---|----------|
| Efficiency at 120 V ac, full load, typical  | 93.6 %   |
| Efficiency at 230 V ac, typical             | 94.3 %   |
| Efficiency at 230 V ac, full load, typical  | 95.2 %   |
| Lifetime at 120 V ac, full load and +40 ° C | 75000 h  |
| Lifetime at 230 V ac, full load and +40 ° C | 120000 h |
| MTBF (IEC 61709) 230 V ac, max load, 40 ° C | 661000 h |

## DIMENSIONS

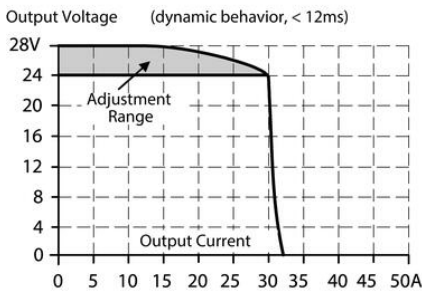
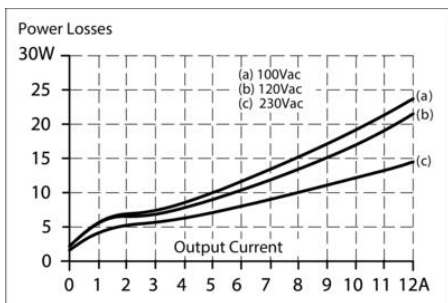
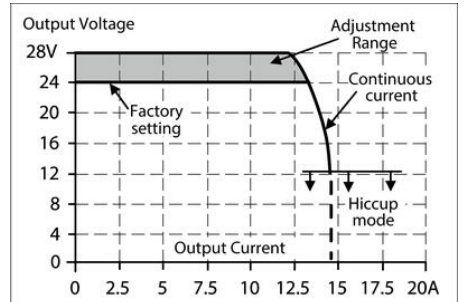
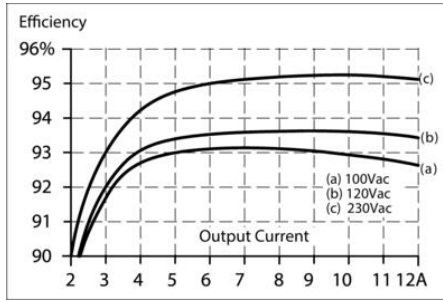
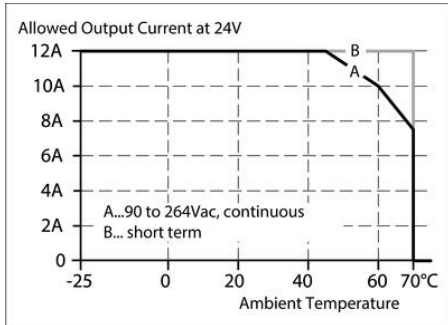
|        |         |
|--------|---------|
| Width  | 39 mm   |
| Height | 124 mm  |
| Depth  | 117 mm  |
| Weight | 0.62 kg |

## OTHER

|  |              |
|--|--------------|
| Approvals                                | CE, cULus    |
| Hold time at 120 V ac, typical full load | 37 ms        |
| Hold time at 230 V ac, typical full load | 37 ms        |
| IP class                                 | IP20         |
| Clamp type                               | Spring-clamp |
| Material protection                      | Aluminium    |
| Supply frequency                         | 50-60 ±6 %   |
| Ripple max                               | 50 mV pp     |
| Series                                   | Dimension C  |
| Power consumption 120 V ac               | 2.15 A       |
| Power consumption 230 V ac               | 1.13 A       |
| Power drop from +60 °C to + 70 °C        | 6 W/°C       |

|                                  |        |
|----------------------------------|--------|
| Temperature min without derating | -25 °C |
| Temperature max without derating | 60 °C  |

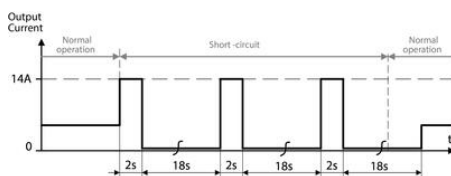
|                   |       |
|-------------------|-------|
| Type Power Supply | AC-DC |
| Active Transient  | Yes   |
| DC relay output   | Yes   |



Maximal wire length<sup>\*)</sup> for a fast (magnetic) tripping:

|       | 0.75mm <sup>2</sup> | 1.0mm <sup>2</sup> | 1.5mm <sup>2</sup> | 2.5mm <sup>2</sup> |
|-------|---------------------|--------------------|--------------------|--------------------|
| C-2A  | 30 m                | 37 m               | 54 m               | 84 m               |
| C-3A  | 25 m                | 30 m               | 46 m               | 69 m               |
| C-4A  | 9 m                 | 15 m               | 25 m               | 34 m               |
| C-6A  | 3 m                 | 3 m                | 4 m                | 7 m                |
| C-8A  |                     |                    |                    |                    |
| B-6A  | 12 m                | 15 m               | 21 m               | 34 m               |
| B-10A | 3 m                 | 3 m                | 4 m                | 9 m                |
| B-13A | 2 m                 | 2 m                | 3 m                | 6 m                |

<sup>\*)</sup> Don't forget to consider twice the distance to the load (or cable length) when calculating the total wire length (+ and - wire).



All dimensions in mm

