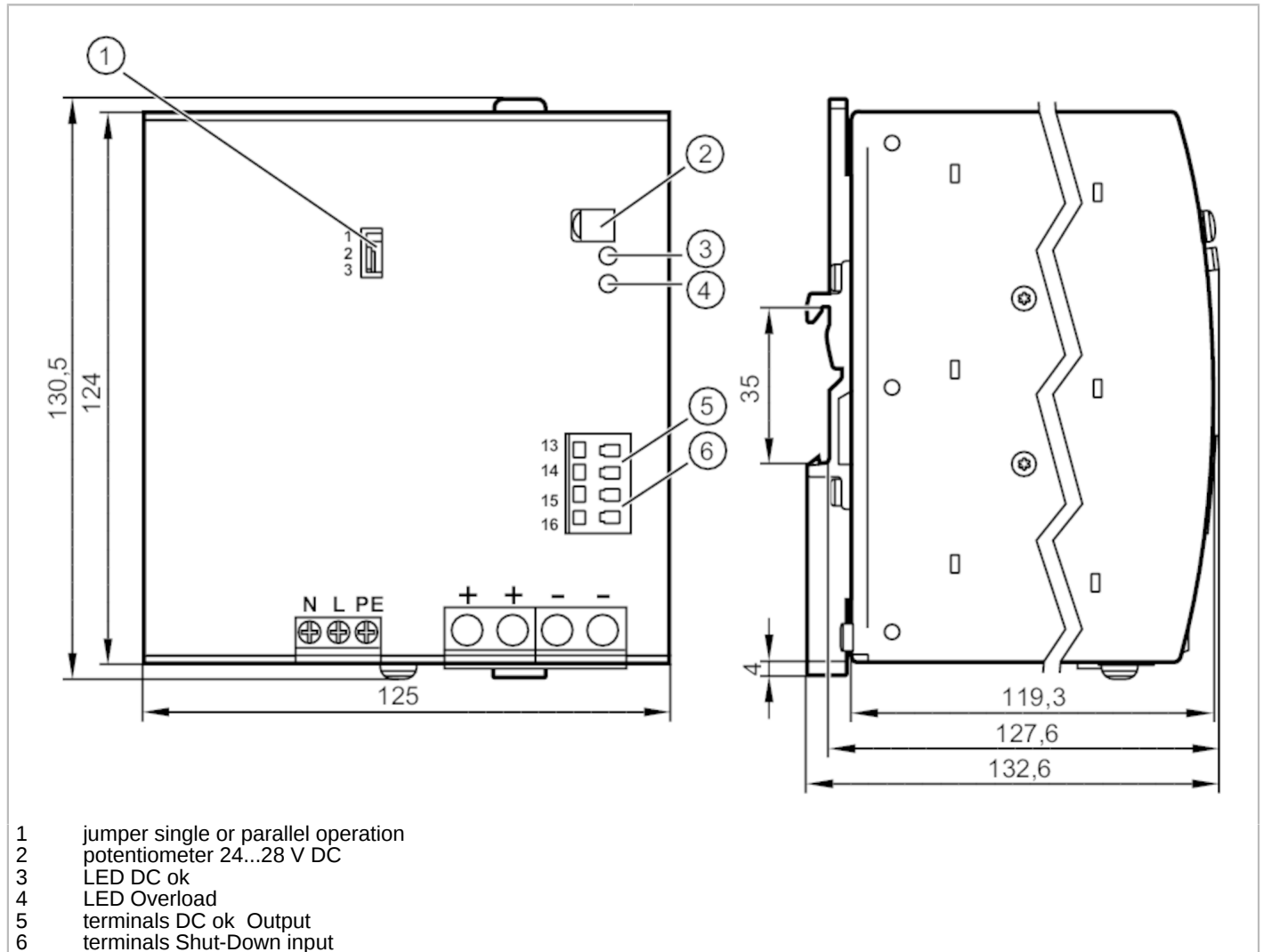


# E84016



## Switched-mode power supply 24 V DC

PSU-1AC/24VDC-40A



### Electrical data

|                                                 |      |                                          |
|-------------------------------------------------|------|------------------------------------------|
| Frequency AC                                    | [Hz] | 47...64                                  |
| Operating voltage tolerance                     | [%]  | 15...10                                  |
| Nominal voltage AC                              | [V]  | < 230                                    |
| Input voltage range AC                          | [V]  | 100...240                                |
| Output voltage DC                               | [V]  | 24...28                                  |
| Protection class                                |      | I; (IEC 61140)                           |
| Oversvoltage protection                         |      | yes; (< 32 DC)                           |
| Output voltage                                  | [V]  | adjustable; output voltage to SELV, PELV |
| Max. output current at min. output voltage      | [A]  | 40                                       |
| Max. output current at max. output voltage      | [A]  | 34.3                                     |
| Max. output current peak at min. output voltage | [A]  | 60                                       |
| Max. output current peak at max. output voltage | [A]  | 51.5                                     |



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|                                                           |       |                                                                             |
|-----------------------------------------------------------|-------|-----------------------------------------------------------------------------|
| Output power (permanent)                                  | [W]   | 960                                                                         |
| Output power (peak)                                       | [W]   | 1440                                                                        |
| Note on output power (peak)                               | [W]   | if consumption > 4 s the power is automatically reduced to the output power |
| Power factor (nominal voltage 120 V AC / 60 Hz)           |       | 0.99                                                                        |
| Power factor (nominal voltage 230 V AC / 50 Hz)           |       | 0.99                                                                        |
| Power reserve                                             | [%]   | 50                                                                          |
| Number of output circuits                                 |       | 1                                                                           |
| Max. residual ripple                                      | [mV]  | 100                                                                         |
| Switch-on peak current (nominal voltage 120 V AC / 60 Hz) | [A]   | 17                                                                          |
| Switch-on peak current (nominal voltage 230 V AC / 50 Hz) | [A]   | 11                                                                          |
| Inrush current limitation                                 |       | yes                                                                         |
| Efficiency (nominal voltage 120 V AC / 60 Hz)             | [%]   | 93.6                                                                        |
| Efficiency (nominal voltage 230 V AC / 50 Hz)             | [%]   | 94.6                                                                        |
| External input protection                                 |       | ≥ B-16 A / ≥ C-16 A                                                         |
| Derating                                                  | [W/K] | 24 (60...70 °C)                                                             |
| Mains buffering time (nominal voltage 120 V AC / 60 Hz)   | [ms]  | 27                                                                          |
| Mains buffering time (nominal voltage 230 V AC / 50 Hz)   | [ms]  | 27                                                                          |
| Input current (nominal voltage 120 V AC / 60 Hz)          | [A]   | 8.6                                                                         |
| Input current (nominal voltage 230 V AC / 50 Hz)          | [A]   | 4.5                                                                         |
| Power loss (nominal voltage 120 V AC / 60 Hz)             | [W]   | 65.6                                                                        |
| Power loss (nominal voltage 230 V AC / 50 Hz)             | [W]   | 54.8                                                                        |
| Back feeding protection                                   | [V]   | 35                                                                          |

## Outputs

|                                 |                                                                                                                                                 |
|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| Short-circuit proof             | yes                                                                                                                                             |
| Overload protection             | yes                                                                                                                                             |
| Overload performance            | Hiccup Mode; In the event of overload / short circuit, the output alternately supplies continuous power for 2 s and then switches off for 17 s. |
| Type DC-OK signal               | relay output                                                                                                                                    |
| Reliability of the DC OK signal | 60 V DC (0.3 A) / 30 V DC (1 A) / 30 V AC (0.5 A)                                                                                               |

## Operating conditions

|                             |      |                                                                    |
|-----------------------------|------|--------------------------------------------------------------------|
| Ambient temperature         | [°C] | -25...70                                                           |
| Note on ambient temperature |      | observe the free space for convection (see operating instructions) |
| Storage temperature         | [°C] | -40...85                                                           |
| Max. relative air humidity  | [%]  | 95; (IEC 60068-2-30)                                               |
| Protection                  |      | IP 20; (EN 60529)                                                  |



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Pollution degree 2; (IEC 62103: conductive soiling not permitted)

## Tests / approvals

|                               |                |                                         |
|-------------------------------|----------------|-----------------------------------------|
| EMC                           | EN 61000-6-1   |                                         |
|                               | EN 61000-6-2   |                                         |
|                               | EN 61000-6-3   |                                         |
|                               | EN 61000-6-4   |                                         |
|                               | EN 61000-3-2   | Class A                                 |
| Vibration resistance          | IEC 60068-2-6  | ±1,6 mm 2...17,8 Hz / 1 g 17,8...500 Hz |
| Shock resistance              | IEC 60068-2-27 | 15 g 6 ms / 10 g 11 ms                  |
| Power Factor Correction (PFC) |                | met                                     |

## Mechanical data

|                  |                         |
|------------------|-------------------------|
| Weight [g]       | 2044.5                  |
| Type of mounting | rail; (TH35 (EN 60715)) |
| Dimensions [mm]  | 124 x 126 x 132.6       |
| Materials        | steel sheet             |

## Displays / operating elements

|         |          |         |
|---------|----------|---------|
| Display | DC ok    | 1 x LED |
|         | overload | 1 x LED |

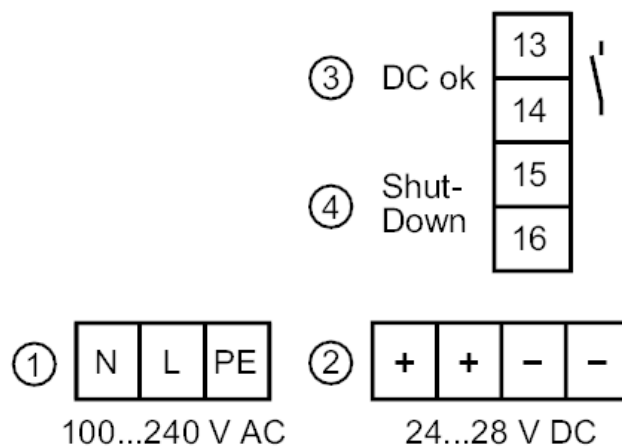
## Remarks

|               |                                                                                                  |
|---------------|--------------------------------------------------------------------------------------------------|
| Remarks       | Series connection of outputs only applies to identical units up to max. 150 V DC overall voltage |
| Pack quantity | 1 pcs.                                                                                           |

## Electrical connection

screw terminals:

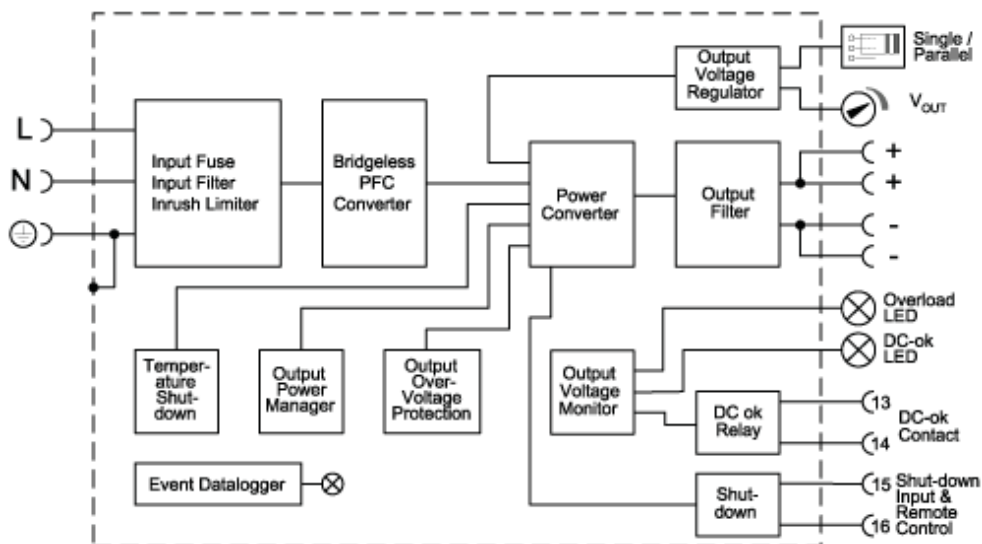
## Connection



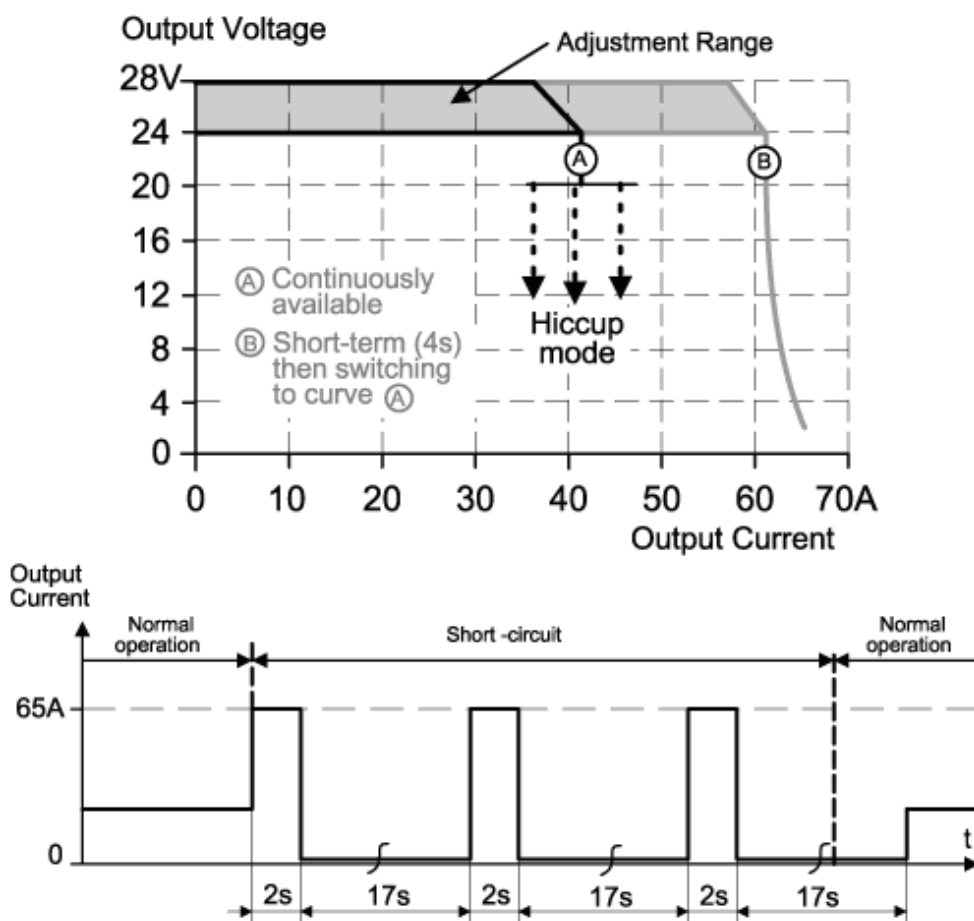
- 1: primary  
 2: secondary  
 3: DC ok relay output  
 4: Shut-Down input < 2 V / < 0.5 W

### Diagrams and graphs

block diagram



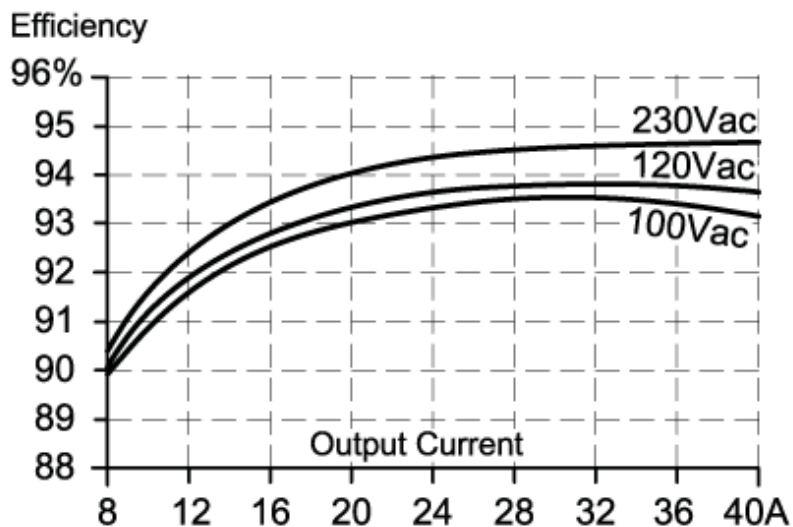
output characteristics



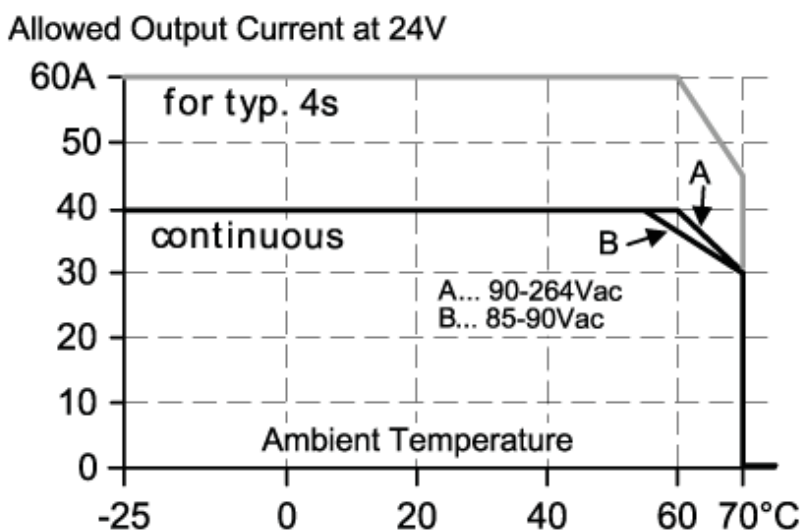
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characteristic curve for degree of efficiency / power loss



characteristic line for derating



characteristic line for mains buffering time

