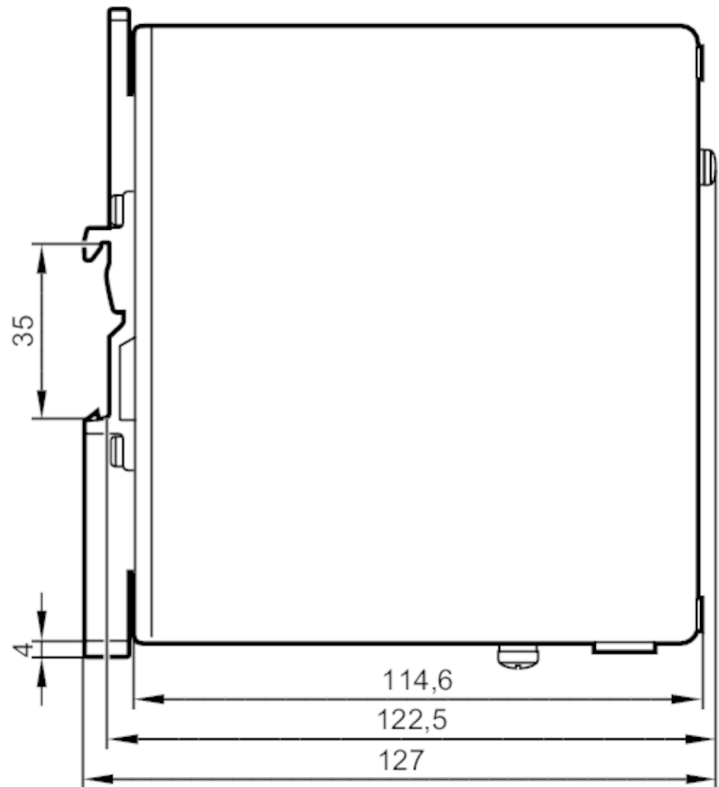
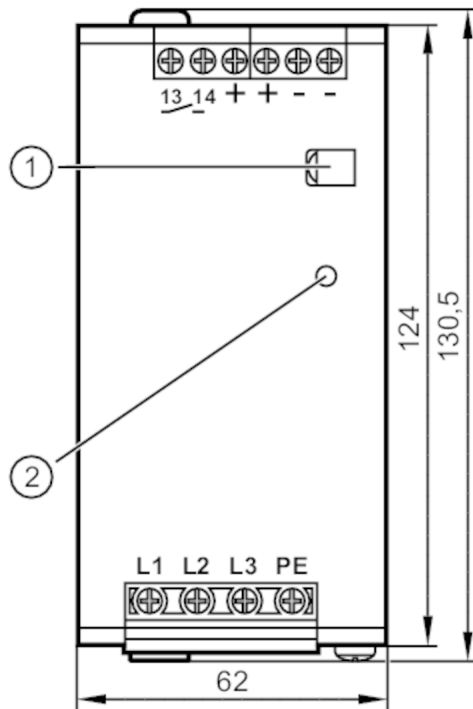


# DN4033



## Switched-mode power supply 24 V DC

PSU-3AC/24VDC-10A



- 1 potentiometer 24...28 V DC  
2 LED DC ok



### Application

Design housing for DIN rail mounting

### Electrical data

|                                                 |      |                                          |
|-------------------------------------------------|------|------------------------------------------|
| Frequency AC                                    | [Hz] | 47...64                                  |
| Operating voltage tolerance                     | [%]  | 15...20                                  |
| Nominal voltage AC                              | [V]  | < 400                                    |
| Input voltage range AC                          | [V]  | 380...480                                |
| Output voltage DC                               | [V]  | 24...28                                  |
| Protection class                                |      | I; (IEC 61140)                           |
| Overvoltage protection                          |      | yes; (< 32 DC)                           |
| Output voltage                                  | [V]  | adjustable; output voltage to SELV, PELV |
| Max. output current at min. output voltage      | [A]  | 10                                       |
| Max. output current at max. output voltage      | [A]  | 8.6                                      |
| Max. output current peak at min. output voltage | [A]  | 12                                       |
| Max. output current peak at max. output voltage | [A]  | 10.3                                     |
| Output power (permanent)                        | [W]  | 240                                      |
| Output power (peak)                             | [W]  | 288                                      |



## Switched-mode power supply 24 V DC

PSU-3AC/24VDC-10A

|                                                               |                                                                     |
|---------------------------------------------------------------|---------------------------------------------------------------------|
| Note on output power (peak) [W]                               | ≤ 45 °C permitted continuously; > 45 °C < 1 minute every 10 minutes |
| Power factor (nominal voltage 400 V AC / 50 Hz)               | 0.53                                                                |
| Note on power factor (nominal voltage 400 V AC / 50 Hz)       | with symmetrical phase voltage                                      |
| Power factor (nominal voltage 480 V AC / 50 Hz)               | 0.52                                                                |
| Note on power factor (nominal voltage 480 V AC / 50 Hz)       | with symmetrical phase voltage                                      |
| Power reserve [%]                                             | 20                                                                  |
| Number of output circuits                                     | 1                                                                   |
| Max. residual ripple [mV]                                     | 50                                                                  |
| Switch-on peak current (nominal voltage 400 V AC / 60 Hz) [A] | 4                                                                   |
| Switch-on peak current (nominal voltage 480 V AC / 50 Hz) [A] | 4                                                                   |
| Inrush current limitation                                     | yes                                                                 |
| Efficiency (nominal voltage 400 V AC / 60 Hz) [%]             | 92.8                                                                |
| Efficiency (nominal voltage 480 V AC / 50 Hz) [%]             | 92.9                                                                |
| External input protection                                     | ≤ B-6 A / ≤ C-3 A                                                   |
| Derating [W/K]                                                | 6 (60...70 °C)                                                      |
| Mains buffering time (nominal voltage 400 V AC / 60 Hz) [ms]  | 34                                                                  |
| Mains buffering time (nominal voltage 480 V AC / 50 Hz) [ms]  | 54                                                                  |
| Input current (nominal voltage 400 V AC / 60 Hz) [A]          | 0.7                                                                 |
| Input current (nominal voltage 480 V AC / 50 Hz) [A]          | 0.6                                                                 |
| Power loss (nominal voltage 400 V AC / 60 Hz) [W]             | 18.6                                                                |
| Power loss (nominal voltage 480 V AC / 50 Hz) [W]             | 18.3                                                                |
| Back feeding protection [V]                                   | 35                                                                  |

| Outputs                         |                                                   |
|---------------------------------|---------------------------------------------------|
| Short-circuit proof             | yes                                               |
| Overload protection             | yes                                               |
| Overload performance            | output current constant                           |
| 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                                                           |



## Switched-mode power supply 24 V DC

PSU-3AC/24VDC-10A

|                                |                                                  |
|--------------------------------|--------------------------------------------------|
| Max. relative air humidity [%] | 95; (IEC 60068-2-30)                             |
| Protection                     | IP 20; (EN 60529)                                |
| 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 / 2 g 17,8...500 Hz |
| Shock resistance              | IEC 60068-2-27 | 30 g 6 ms / 20 g 11 ms                  |
| MTTF [years]                  |                | 111                                     |
| Power Factor Correction (PFC) |                | met                                     |

### Mechanical data

|                  |                                         |
|------------------|-----------------------------------------|
| Weight [g]       | 891.6                                   |
| Housing          | rectangular                             |
| Type of mounting | mounting on DIN rail; (TH35 (EN 60715)) |
| Dimensions [mm]  | 124 x 62 x 122.5                        |
| Materials        | housing: steel sheet                    |

### Displays / operating elements

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

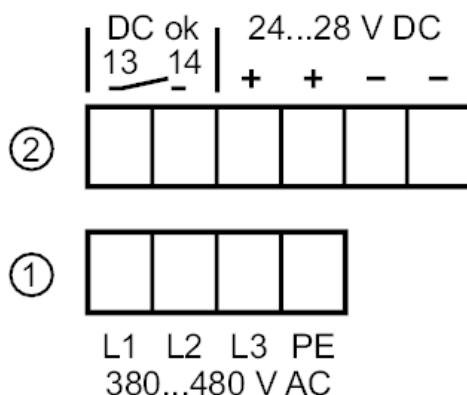
### Remarks

|               |                                                                                                  |
|---------------|--------------------------------------------------------------------------------------------------|
| 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

# DN4033

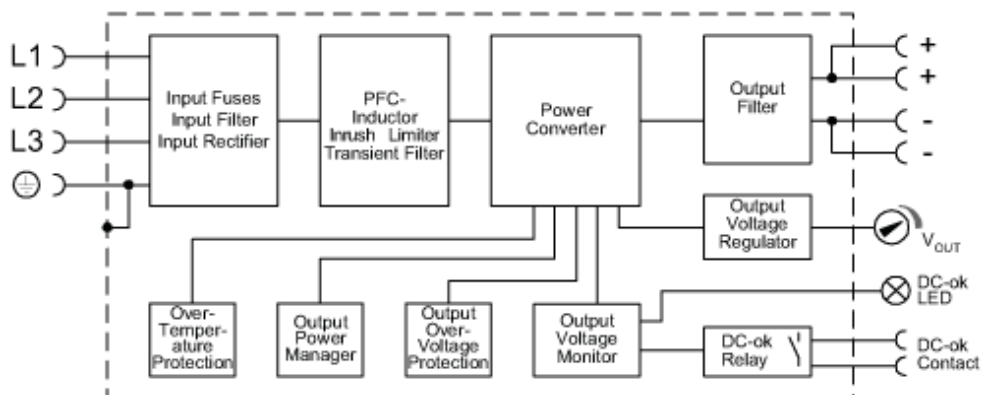


## Switched-mode power supply 24 V DC

PSU-3AC/24VDC-10A

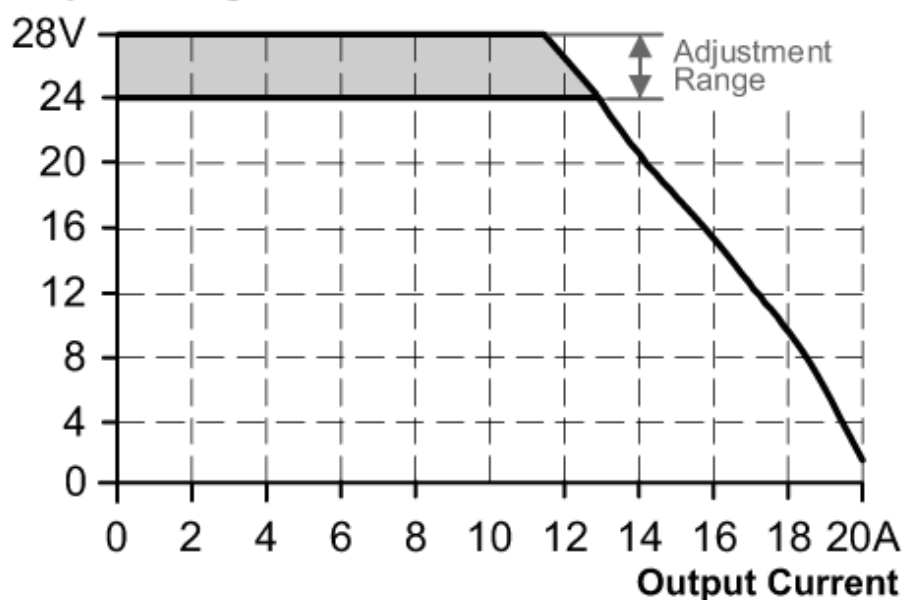
### Diagrams and graphs

block diagram



output characteristics

### Output Voltage



# DN4033

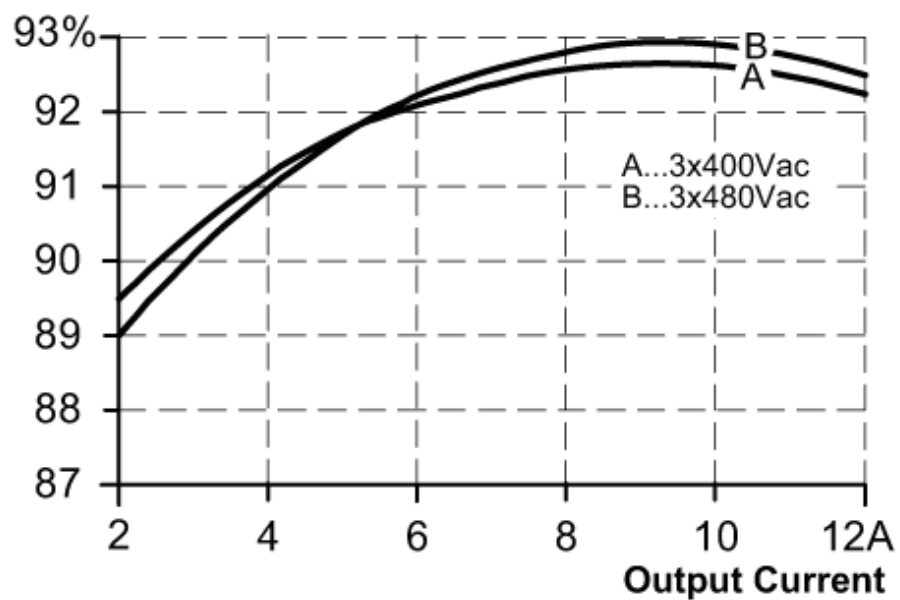


## Switched-mode power supply 24 V DC

PSU-3AC/24VDC-10A

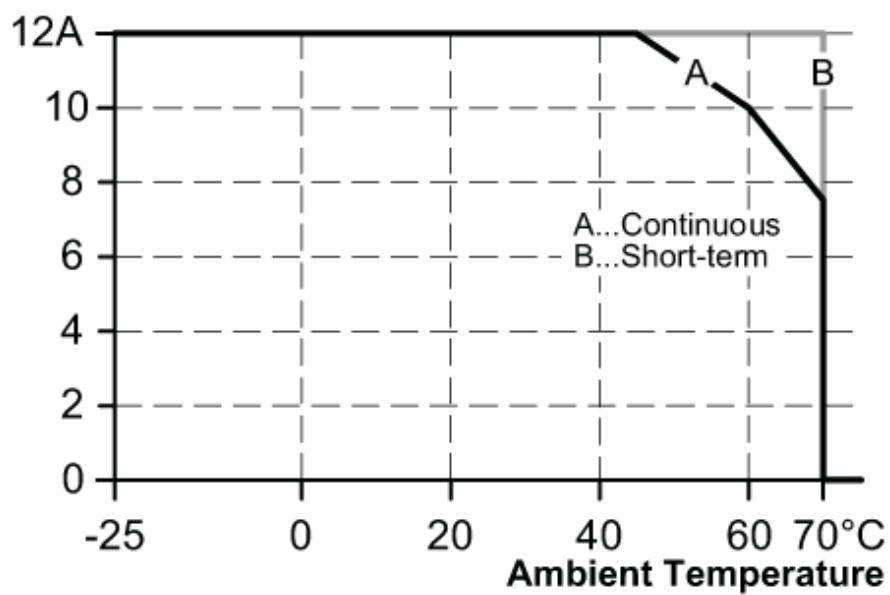
characteristic curve for degree of  
efficiency / power loss

### Efficiency



characteristic line for derating

### Allowed Output Current at 24V



# DN4033



## Switched-mode power supply 24 V DC

PSU-3AC/24VDC-10A

characteristic line for mains buffering  
time

### Hold-up Time at 24Vdc

