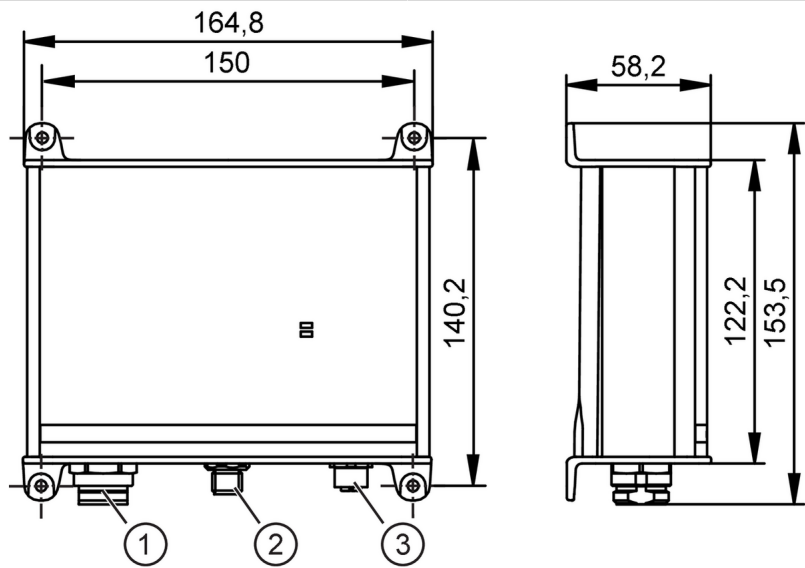


# DN4217



## Switched-mode power supply 24 V DC

PSU-1AC/24VDC-8A/IOL/IP67



- 1: voltage supply  
2: IO-Link  
3: Output voltage



### Electrical data

|                                                         |      |                            |
|---------------------------------------------------------|------|----------------------------|
| Nominal voltage AC                                      | [V]  | 230                        |
| Nominal frequency AC                                    | [Hz] | 50...60                    |
| Input voltage range AC                                  | [V]  | 100...240; (-15 % / +10 %) |
| Output voltage DC                                       | [V]  | 24...28                    |
| Protection class                                        |      | I                          |
| Max. power-on delay time                                | [ms] | 2000                       |
| Max. output current at min. output voltage              | [A]  | 7.9                        |
| Max. output current at max. output voltage              | [A]  | 6.7                        |
| Output power (permanent)                                | [W]  | 190                        |
| Output power (peak)                                     | [W]  | 300                        |
| Power factor (nominal voltage 230 V AC / 50 Hz)         |      | 0.95                       |
| Number of output circuits                               |      | 2                          |
| Efficiency (nominal voltage 120 V AC / 60 Hz)           | [%]  | 93.9                       |
| Efficiency (nominal voltage 230 V AC / 50 Hz)           | [%]  | 95.1                       |
| Mains buffering time (nominal voltage 120 V AC / 60 Hz) | [ms] | 38                         |
| Mains buffering time (nominal voltage 230 V AC / 50 Hz) | [ms] | 38                         |
| Input current (nominal voltage 120 V AC / 60 Hz)        | [A]  | 1.75                       |
| Input current (nominal voltage 230 V AC / 50 Hz)        | [A]  | 0.92                       |



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| Interfaces                      |                                                                                                                                                    |                                                 |
|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|
| Communication interface         | IO-Link                                                                                                                                            |                                                 |
| Transmission type               | COM3 (230,4 kBaud)                                                                                                                                 |                                                 |
| IO-Link revision                | 1.1                                                                                                                                                |                                                 |
| Profiles                        | Common - I&D                                                                                                                                       | Identification and Diagnosis                    |
| SIO mode                        | yes                                                                                                                                                |                                                 |
| Min. process cycle time [ms]    | 2                                                                                                                                                  |                                                 |
| Supported DeviceIDs             | Type of operation                                                                                                                                  | DeviceID                                        |
|                                 | default                                                                                                                                            | 1269                                            |
| Operating conditions            |                                                                                                                                                    |                                                 |
| Ambient temperature [°C]        | -30...70                                                                                                                                           |                                                 |
| Note on ambient temperature     | the derating of the current load indicated in the operating instructions is to be taken into account at the following ambient temperature: > 45 °C |                                                 |
| Storage temperature [°C]        | -40...85                                                                                                                                           |                                                 |
| Max. relative air humidity [%]  | 95                                                                                                                                                 |                                                 |
| Max. height above sea level [m] | 5000                                                                                                                                               |                                                 |
| Protection                      | IP 65; IP 67                                                                                                                                       |                                                 |
| Pollution degree                | 3                                                                                                                                                  |                                                 |
| Tests / approvals               |                                                                                                                                                    |                                                 |
| EMC                             | EN 61000-4-2 CD                                                                                                                                    | 8 kV / Failure criterion A                      |
|                                 | EN 61000-4-2 AD                                                                                                                                    | 15 kV / Failure criterion A                     |
|                                 | EN 61000-4-3                                                                                                                                       | 80 Mhz...2.7 GHz / 20 V/m Failure criterion A   |
|                                 | EN 61000-4-3                                                                                                                                       | 2.7 GHz...6 GHz kV / 10 V/m Failure criterion A |
|                                 | EN 61000-4-8                                                                                                                                       | 50 / 60 Hz / 30 A/m Failure criterion A         |
|                                 | EN 61000-4-4 Burst                                                                                                                                 | 4 kV / Failure criterion A                      |
|                                 | EN 61000-4-5 Surge                                                                                                                                 | 2 kV Lx / Ly / Failure criterion A              |
|                                 | EN 61000-4-5 Surge                                                                                                                                 | 4 kV L / PE / Failure criterion A               |
|                                 | EN 61000-4-5 Surge                                                                                                                                 | 1 kV + / - / Failure criterion A                |
|                                 | EN 61000-4-5 Surge                                                                                                                                 | 1 kV + - / PE / Failure criterion A             |
|                                 | EN 61000-4-5 Surge                                                                                                                                 | 1 kV DC-OK / PE / Failure criterion A           |
|                                 | EN 61000-4-6                                                                                                                                       | 0.15...80 MHz / 20 V Failure criterion A        |
|                                 | EN 61000-4-11                                                                                                                                      | 0 V up to 1 cycle / Failure criterion A         |
|                                 | EN 61000-4-11                                                                                                                                      | 40 % of V / 200 ms Failure criterion A          |
|                                 | EN 61000-4-11                                                                                                                                      | 70 % of V / 500 ms Failure criterion A          |
|                                 | EN 61000-4-11                                                                                                                                      | 0 V / 5000 ms Failure criterion C               |
|                                 | VDE 0160                                                                                                                                           | 1550 V / 1.3 ms Failure criterion A             |
|                                 | EN 55032                                                                                                                                           | Class B                                         |
|                                 | EN 55011                                                                                                                                           | Class B                                         |
|                                 | EN 61000-3-2                                                                                                                                       |                                                 |
|                                 | EN 61000-3-3                                                                                                                                       |                                                 |
| Continuous shock resistance     | IEC 60068-2-27                                                                                                                                     | 30 g 6 ms / 20 g 11 ms                          |
| Vibration resistance            | IEC 60068-2-6                                                                                                                                      | 2...17.8 Hz ± 1.6mm / 17.8...500 Hz 2 g         |
| MTTF [years]                    | 49                                                                                                                                                 |                                                 |
| Mechanical data                 |                                                                                                                                                    |                                                 |
| Weight [g]                      | 1149.05                                                                                                                                            |                                                 |
| Housing                         | rectangular                                                                                                                                        |                                                 |

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## Switched-mode power supply 24 V DC

PSU-1AC/24VDC-8A/IOL/IP67

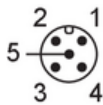
|                  |                      |
|------------------|----------------------|
| Type of mounting | Backplane mounting   |
| Dimensions [mm]  | 164.8 x 153.5 x 58.2 |
| Material         | housing: PC          |

### Remarks

|               |        |
|---------------|--------|
| Pack quantity | 1 pcs. |
|---------------|--------|

### Electrical connection - IO-Link

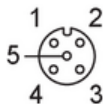
Connector: 1 x M12; coding: A; Contacts: 5; Locking: brass



|   |      |         |
|---|------|---------|
| 1 | L+   | (US)    |
| 2 | n.c. |         |
| 3 | L-   | (US)    |
| 4 | DATA | IO-Link |
| 5 | n.c. |         |

### Electrical connection - Output voltage

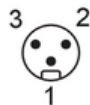
Connector: 1 x M12; coding: A; Contacts: 5; Locking: brass



|   |    |      |
|---|----|------|
| 1 | L+ | (UA) |
| 2 | L- | (UA) |
| 3 | L- | (UA) |
| 4 | L+ | (UA) |
| 5 | FE |      |

### Electrical connection - voltage supply

Connector: 1 x 7/8"; Locking: brass



|   |    |
|---|----|
| 1 | PE |
| 2 | L1 |
| 3 | N  |

DATA: Communication interface; FE: functional earth; L1: voltage supply (AC); N: voltage supply (AC); PE: protective earth

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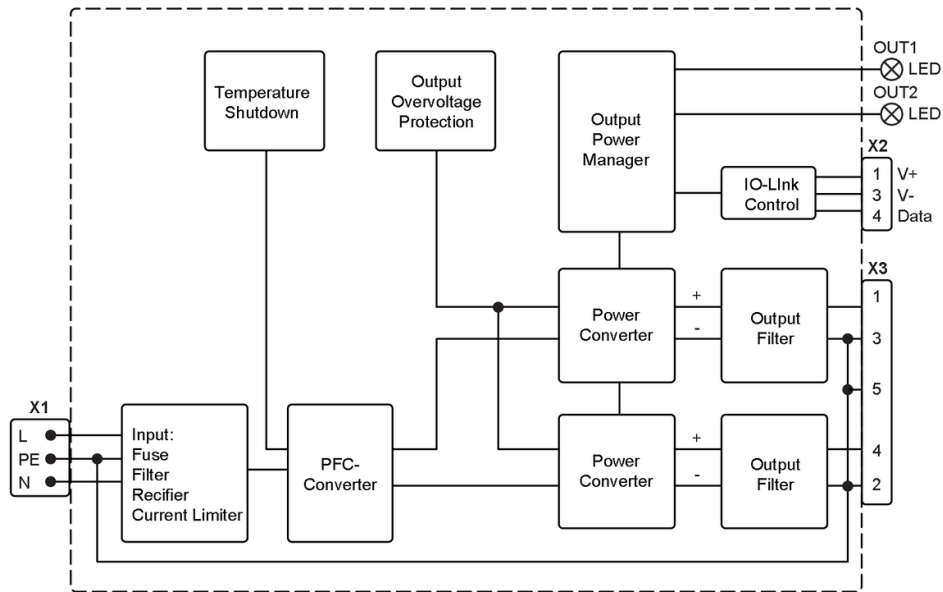


## Switched-mode power supply 24 V DC

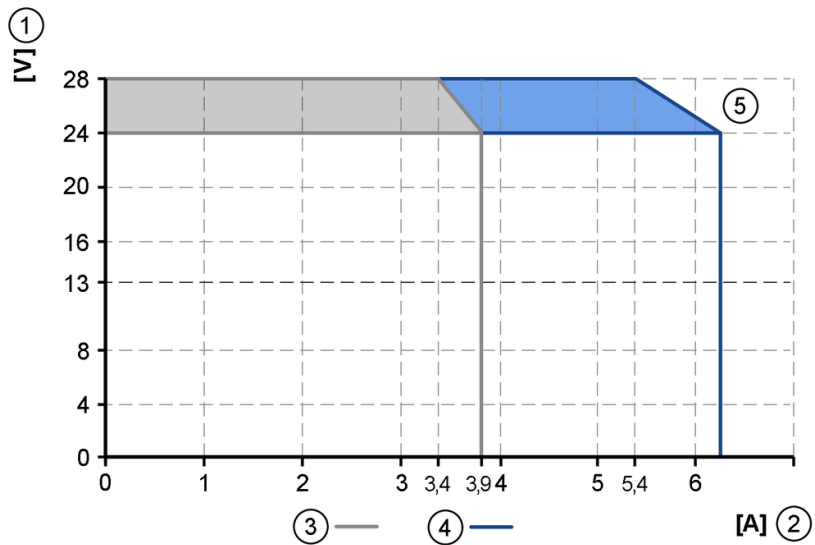
PSU-1AC/24VDC-8A/IOL/IP67

### Diagrams and graphs

#### Block diagram



#### Output curve



- 1: Output voltage [V]
- 2: output current [A]
- 3: continuously available
- 4: short-term power reserve (4 s)
- 5: Setting range

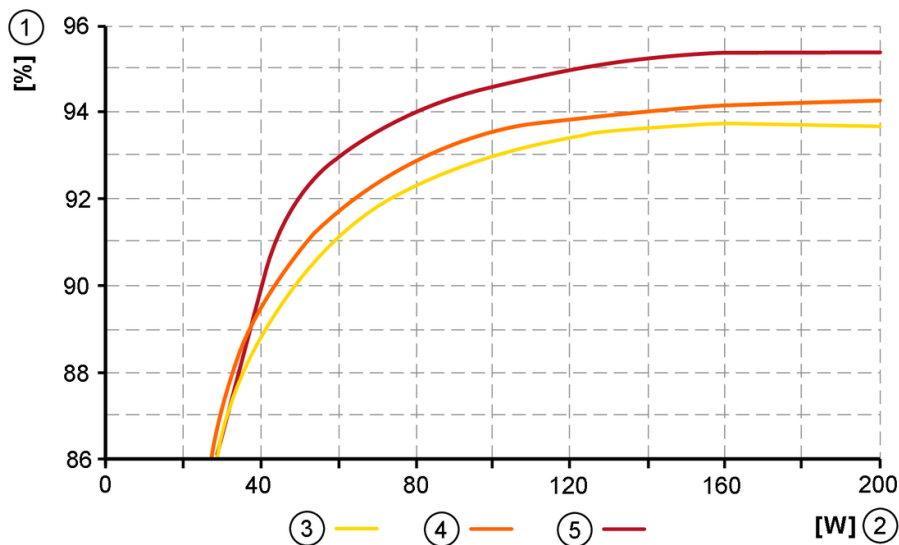
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## Switched-mode power supply 24 V DC

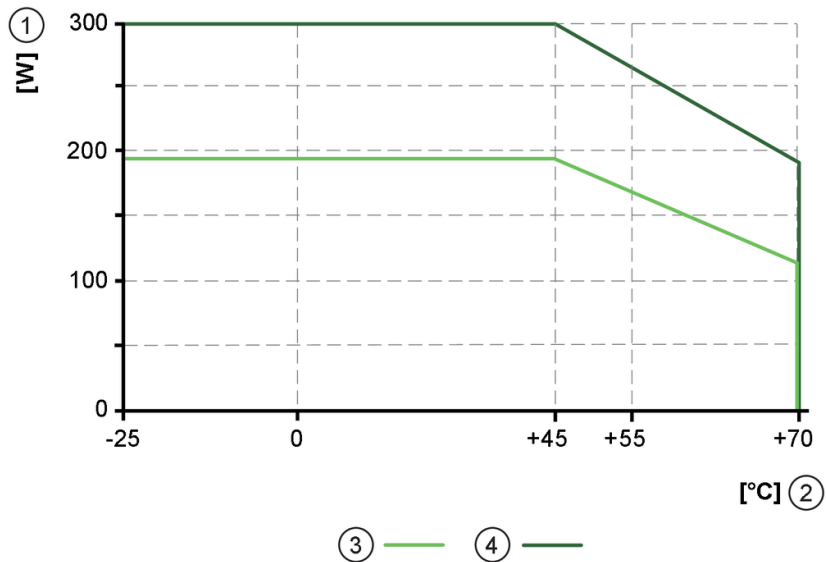
PSU-1AC/24VDC-8A/IOL/IP67

Characteristic curve for degree of efficiency / power loss



- 1: efficiency [%]
- 2: output power [W]
- 3: 100 V AC
- 4: 120 V AC
- 5: 230 V AC

Characteristic curve for derating



- 1: permissible output power
- 2: Ambient temperature
- 3: continuous
- 4: briefly

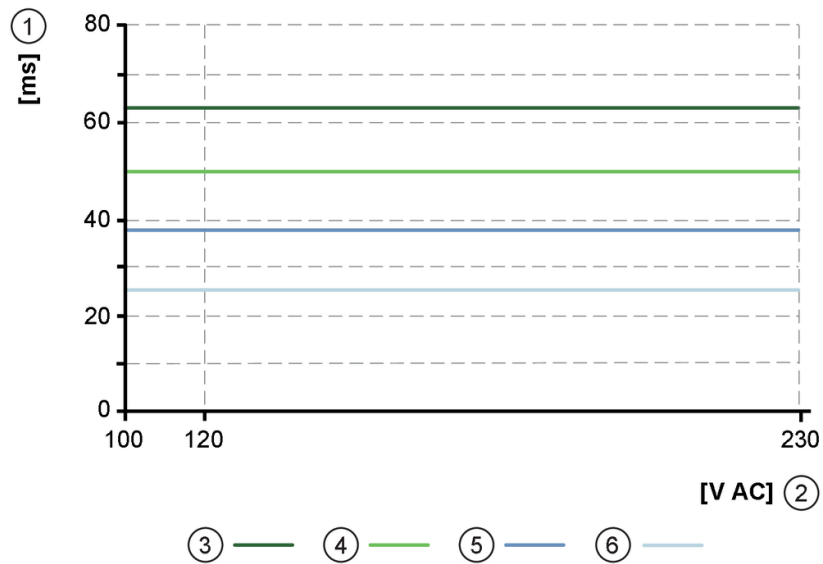
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## Switched-mode power supply 24 V DC

PSU-1AC/24VDC-8A/IOL/IP67

Characteristic curve for mains  
buffering time



- 1: buffering time [ms]
- 2: Input voltage AC [V]
- 3: 24 V, 2 x 50 W, typical
- 4: 24 V, 2 x 50 W, min.
- 5: 24 V, 2 x 95 W, typical
- 6: 24 V, 2 x 95 W, min.