

dimensions **78 x 93 x 67mm** to **227.0 x 125.2 x 100mm**

switching power supply unit output voltage **24V DC**

- ✓ large AC input voltage range
- ✓ protected against short circuit, overcurrent, overvoltage and overheating
- ✓ mountable on 35mm DIN-rail
- ✓ LED indicator for power on



**compact and lightweight
UL approved**

description

A switching power supply unit is an electronic module which converts an unstabilized input voltage (DC or AC voltage) into a DC voltage of a different level.

Unlike with conventional power supply units with a 50 or 60 Hz transformer, with switching power supply units the mains voltages is first rectified, then converted into an AC voltage of a considerably higher frequency for transformation and, after transformation, is finally rectified again.

Owing to the lower copper losses, switching power supply units are much more efficient than mains transformers in the lower power range. Moreover, they are more compact and lighter than conventional, linear power supply units that contain a heavy transformer with iron core and cause additional losses

in the linear regulator.

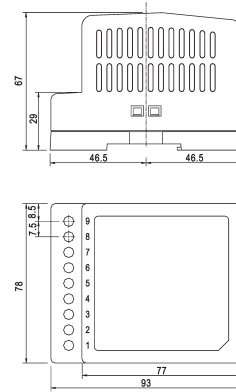
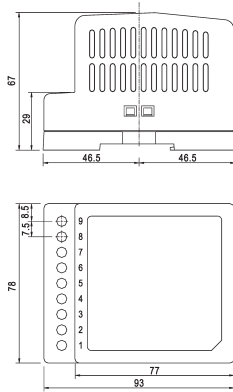
Another advantage is the high tolerance range for input voltage and mains frequency.

Using the „+V Adj“ potentiometer, the output voltage can be regulated in the specified ranges without impairing stability.

application examples

- ▶ DC voltage supplies from power grid
- ▶ power supply units for diode lasers
- ▶ arc welders
- ▶ chargers for large accumulators
- ▶ power supply devices for pump light sources of solid-state lasers (flash and arc lamps)

| | | |
|------------------------|------------------|------------------|
| article-no. | NG780201 | NG780307 |
| output voltage | 24V DC $\pm 1\%$ | 12V DC $\pm 1\%$ |
| output current (I nom) | 2A | 3.5A |
| power consumption | 48W | 42W |

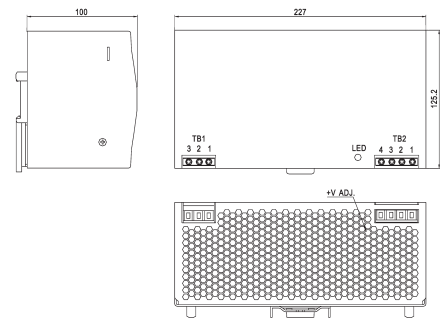
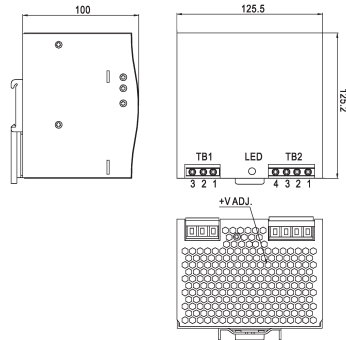


TECHNICAL DATA

| | | |
|------------------------------------|---|---|
| output voltage | 24V DC $\pm 1\%$ | 12V DC $\pm 1\%$ |
| adjustment range | 21.6 ... 26.4V DC | 10.8 ... 13.2V DC |
| output current (I nom) | 2A | 3.5A |
| power consumption | 48W | 42W |
| input voltage | 85 ... 264V AC / 120 ... 370V DC | 85 ... 264V AC / 120 ... 370V DC |
| frequency | 47 ... 63Hz | 47 ... 63Hz |
| nominal input current (I nom) | 0.96A/230V AC | 0.75A/230V AC |
| display (operation) | 1x green LED | 1x green LED |
| overload protection | 105 ... 150% of power consumption 115 ... 135% of output voltage temperature protection: switch-off at $> 135^{\circ}\text{C}$ | 105 ... 150% of power consumption 115 ... 135% of output voltage temperature protection: switch-off at $> 135^{\circ}\text{C}$ |
| dimensions | 78x93x67mm | 78x93x67mm |
| housing material | plastic | plastic |
| weight | 0.4kg | 0.4kg |
| temperature (operation / storage) | -10 ... $+50^{\circ}\text{C}$ / -20 ... $+85^{\circ}\text{C}$ | -10 ... $+50^{\circ}\text{C}$ / -20 ... $+85^{\circ}\text{C}$ |
| temperature coefficient | $\pm 0.03\%$ / $^{\circ}\text{C}$ (0 ... $+50^{\circ}\text{C}$) | $\pm 0.03\%$ / $^{\circ}\text{C}$ (0 ... $+50^{\circ}\text{C}$) |
| air humidity (operation / storage) | 20 ... 90% / 10 ... 95% | 20 ... 90% / 10 ... 95% |
| vibration resistance | 10 ... 50Hz, 2g | 10 ... 50Hz, 2g |
| degree of protection (EN 60529) | IP 20 | IP 20 |
| standards (reference) | UL 508, EN60950-1 | UL 508, EN60950-1 |
| connection | terminals | terminals |
| mounting | 35mm DIN-rail | 35mm DIN-rail |

| article-no. | NG550301 | NG650501 |
|------------------------------------|--|--|
| output voltage | 24V DC ±1% | 24V DC ±1% |
| output current (I nom) | 3.2A | 5A |
| power consumption | 77W | 120W |
| | | <p>change-over switch 115V AC / 230V AC</p> |
| TECHNICAL DATA | | |
| output voltage | 24V DC ±1% | 24V DC ±1% |
| adjustment range | 24 ... 28V DC | 24 ... 28V DC |
| output current (I nom) | 3.2A | 5A |
| power consumption | 77W | 120W |
| input voltage | 85 ... 264V AC / 120 ... 370V DC | 88 ... 132V AC / 176 ... 264V AC 248 ... 370V DC |
| frequency | 47 ... 63Hz | 47 ... 63Hz |
| nominal input current (I nom) | 0.96A/230V AC | 1.6A/230V AC |
| display (operation) | green LED | green LED |
| overload protection | 105 ... 150% of power consumption 29 ... 34V DC temperature protection: switch-off at > +85°C | 105 ... 150% of power consumption 29 ... 33V DC temperature protection: switch-off at > +90°C |
| dimensions | 55.5x125.2x100mm | 65.5x125.2x100mm |
| housing material | aluminum | aluminum |
| weight | 0.55kg | 0.8kg |
| temperature (operation / storage) | -10 ... +60°C / -20 ... +85°C | -10 ... +60°C / -20 ... +85°C |
| temperature coefficient | ± 0.03% / °C (0 ... +50°C) | ± 0.03% / °C (0 ... +50°C) |
| air humidity (operation / storage) | 20 ... 90% / 10 ... 95% | 20 ... 90% / 10 ... 95% |
| vibration resistance | 10 ... 500Hz, 2g | 10 ... 500Hz, 2g |
| degree of protection (EN 60529) | IP 20 | IP 20 |
| standards (reference) | UL 508, EN60950-1 | UL 508, EN60950-1 |
| connection | terminals | terminals |
| mounting | 35mm DIN-rail | 35mm DIN-rail |

| | | |
|------------------------|-------------------|-------------------|
| article-no. | NGKB1001 | NGLB2001 |
| output voltage | 24V DC ±1% | 24V DC ±1% |
| output current (I nom) | 10A | 20A |
| power consumption | 240W | 480W |

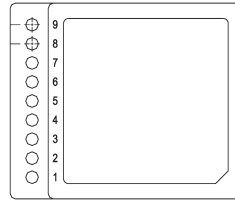


TECHNICAL DATA

| | | |
|------------------------------------|---|---|
| output voltage | 24V DC ±1% | 24V DC ±1% |
| adjustment range | 24 ... 28V DC | 24 ... 28V DC |
| output current (I nom) | 10A | 20A |
| power consumption | 240W | 480W |
| input voltage | 85 ... 264V AC / 120 ... 370V DC | 180 ... 264V AC / 250 ... 370V DC |
| frequency | 47 ... 63Hz | 47 ... 63Hz |
| nominal input current (I nom) | 1.4A/230V AC | 4.0A/230V AC |
| display (operation) | green LED | green LED |
| overload protection | 105 ... 150% of power consumption 30 ... 36V DC temperature protection: switch-off at > +100°C | 105 ... 150% of power consumption 30 ... 36V DC temperature protection: switch-off at > +100°C |
| dimensions | 125.5x125.2x100mm | 227x125.2x100mm |
| housing material | aluminum | aluminum |
| weight | 1.2kg | 2.4kg |
| temperature (operation / storage) | -10 ... +70°C / -20 ... +85°C | -20 ... +70°C / -20 ... +85°C |
| temperature coefficient | ± 0.03% / °C (0 ... +50°C) | ± 0.03% / °C (0 ... +50°C) |
| air humidity (operation / storage) | 20 ... 90% / 10 ... 95% | 20 ... 90% / 10 ... 95% |
| vibration resistance | 10 ... 500Hz, 2g | 10 ... 500Hz, 2g |
| degree of protection (EN 60529) | IP 20 | IP 20 |
| standards (reference) | UL 508, EN60950-1 | UL 508, EN60950-1 |
| connection | terminals | terminals |
| mounting | 35mm DIN-rail | 35mm DIN-rail |

connection NG780201

- terminal 1: input AC
- terminal 2: input AC
- terminal 3: PE
- terminal 4: output DC (0V)
- terminal 5: output DC (0V)
- terminal 6: output DC (+24V)
- terminal 7: output DC (+24V)
- terminal 8: operating mode LED
- terminal 9: potentiometer adjustment range



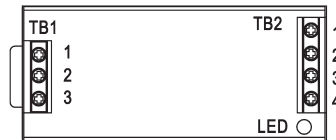
connection NG550301, NG650501

terminals TB1

- terminal 1: PE
- terminal 2: input AC
- terminal 3: input AC

terminals TB2

- terminal 1: output DC (+24V)
- terminal 2: output DC (+24V)
- terminal 3: output DC (0V)
- terminal 4: output DC (0V)



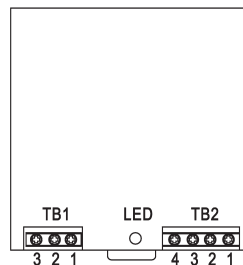
connection NGKB1001, NGLB2001

terminals TB1

- terminal 1: PE
- terminal 2: input AC
- terminal 3: input AC

terminals TB2

- terminal 1: output DC (+24V)
- terminal 2: output DC (+24V)
- terminal 3: output DC (0V)
- terminal 4: output DC (0V)



This data sheet only contains the available standard variants. For other output / connection variants, we kindly ask that you contact us.

We are happy to supply the right cable socket for the plug equipment. You will find a list in the "accessories" section of the catalog under **ipf-SENSORFLEX** "cable sockets" or in the search window on our homepage www.ipf-electronic.com (using the search term "VK").

Warning: Never use these devices in applications where the safety of a person depends on their functionality.

NOTES

A large grid area for taking notes, consisting of a 30x30 grid of small squares. The grid is empty and occupies the majority of the page below the 'NOTES' header.