

Overview



Thanks to its stepped profile design, the LOGO!Power product family is ideally suited for installation in miniature distribution boards. The stabilized power supplies with a wide range input of 100 ... 240 V AC (85 ... 264 V) and 110 ... 300 V DC are available with an output voltage of 24 V in four performance classes. The 24 V versions are ideal for supplying LOGO! controllers with the corresponding voltage input. The high level of efficiency across the entire load range as well as the low no-load losses result in lower overall energy consumption. Greater convenience when

commissioning and servicing thanks to integrated current monitor (for devices at least 36 mm wide) The extended temperature range from -25 °C to +70 °C enables a host of additional applications.

To further increase the 24 V availability, the LOGO!Power power supplies can be combined with **DC UPS, redundancy** and **selectivity modules**.

Main product highlights

- 24 V DC / 0.6 A, 1.3 A, 2.5 A and 4.0 A
- Narrow unit with width of 18 mm, 36 mm, 54 mm or 72 mm and overall depth of 53 mm in LOGO! design
- Flexible mounting: standard rail or wall mounting in a range of installation positions
- Higher energy efficiency: high efficiency levels over the entire load range as well as no-load power losses of < 0.3 W
- Integrated current monitor: actual output current measurement directly at the power supply unit (for devices at least 36 mm wide)
- Global use: operating temperature range from -25 °C to +70 °C as well as international certifications such as UL, CSA, FM or ATEX

Technical specifications

| Article number | 6EP3330-6SB00-0AY0 | 6EP3331-6SB00-0AY0 | 6EP3332-6SB00-0AY0 | 6EP3333-6SB00-0AY0 |
|---|----------------------------|----------------------------|----------------------------|----------------------------|
| Product | LOGO!Power | LOGO!Power | LOGO!Power | LOGO!Power |
| Power supply, type | 24 V/0.6 A | 24 V/1.3 A | 24 V/2.5 A | 24 V/4 A |
| Input | | | | |
| Input | 1-phase AC or DC | 1-phase AC or DC | 1-phase AC or DC | 1-phase AC or DC |
| Rated voltage value $V_{in, rated}$ | 100 ... 240 V | 100 ... 240 V | 100 ... 240 V | 100 ... 240 V |
| Voltage range AC | 85 ... 264 V | 85 ... 264 V | 85 ... 264 V | 85 ... 264 V |
| Input voltage | | | | |
| • at DC | 110 ... 300 V | 110 ... 300 V | 110 ... 300 V | 110 ... 300 V |
| Wide-range input | Yes | Yes | Yes | Yes |
| Mains buffering at $I_{out, rated, min.}$ | 40 ms; at $V_{in} = 187$ V | 40 ms; at $V_{in} = 187$ V | 40 ms; at $V_{in} = 187$ V | 40 ms; at $V_{in} = 187$ V |
| Rated line frequency 1 | 50 Hz | 50 Hz | 50 Hz | 50 Hz |
| Rated line frequency 2 | 60 Hz | 60 Hz | 60 Hz | 60 Hz |
| Rated line range | 47 ... 63 Hz | 47 ... 63 Hz | 47 ... 63 Hz | 47 ... 63 Hz |
| Input current | | | | |
| • at rated input voltage 120 V | 0.3 A | 0.7 A | 1.22 A | 1.95 A |
| • at rated input voltage 230 V | 0.2 A | 0.35 A | 0.66 A | 0.97 A |
| Switch-on current limiting (+25 °C), max. | 20 A | 25 A | 52 A | 31 A |
| $I^2t, max.$ | 0.8 A ² ·s | 0.8 A ² ·s | 3 A ² ·s | 2.5 A ² ·s |
| Built-in incoming fuse | internal | internal | internal | internal |

LOGO! logic modules

LOGO!Power

1-phase, 24 V DC

Technical specifications (continued)

| Article number | 6EP3330-6SB00-0AY0 | 6EP3331-6SB00-0AY0 | 6EP3332-6SB00-0AY0 | 6EP3333-6SB00-0AY0 |
|--|--|--|--|--|
| Product | LOGO!Power | LOGO!Power | LOGO!Power | LOGO!Power |
| Power supply, type | 24 V/0.6 A | 24 V/1.3 A | 24 V/2.5 A | 24 V/4 A |
| Output | | | | |
| Output | Controlled, isolated DC voltage | Controlled, isolated DC voltage | Controlled, isolated DC voltage | Controlled, isolated DC voltage |
| Rated voltage V_{out} DC | 24 V | 24 V | 24 V | 24 V |
| Total tolerance, static \pm | 3 % | 3 % | 3 % | 3 % |
| Static mains compensation, approx. | 0.1 % | 0.1 % | 0.1 % | 0.1 % |
| Static load balancing, approx. | 0.1 % | 0.1 % | 0.1 % | 0.1 % |
| Residual ripple peak-peak, max. | 200 mV | 200 mV | 200 mV | 200 mV |
| Residual ripple peak-peak, typ. | 30 mV | 30 mV | 30 mV | 30 mV |
| Spikes peak-peak, max. (bandwidth: 20 MHz) | 300 mV | 300 mV | 300 mV | 300 mV |
| Spikes peak-peak, typ. (bandwidth: 20 MHz) | 50 mV | 50 mV | 50 mV | 50 mV |
| Adjustment range | | 22.2 ... 26.4 V | 22.2 ... 26.4 V | 22.2 ... 26.4 V |
| Product function | No | Yes | Yes | Yes |
| Output voltage adjustable | | via potentiometer | via potentiometer | via potentiometer |
| Output voltage setting | | | | |
| Status display | Green LED for output voltage OK | Green LED for output voltage OK | Green LED for output voltage OK | Green LED for output voltage OK |
| On/off behavior | No overshoot of V_{out} (soft start) | No overshoot of V_{out} (soft start) | No overshoot of V_{out} (soft start) | No overshoot of V_{out} (soft start) |
| Startup delay, max. | 0.5 s | 0.5 s | 0.5 s | 0.5 s |
| Voltage rise, typ. | 100 ms | 100 ms | 100 ms | 100 ms |
| Rated current value $I_{out rated}$ | 0.6 A | 1.3 A | 2.5 A | 4 A |
| Current range | 0 ... 0.6 A | 0 ... 1.3 A | 0 ... 2.5 A | 0 ... 4 A |
| • Note | +55 ... +70 °C: Derating 2%/K | +55 ... +70 °C: Derating 2%/K | +55 ... +70 °C: Derating 2%/K | +55 ... +70 °C: Derating 2%/K |
| Supplied active power typical | 14.4 W | 31.2 W | 60 W | 96 W |
| Parallel switching for enhanced performance | No | Yes | Yes | Yes |
| Numbers of parallel switchable units for enhanced performance | 2 | 2 | 2 | 2 |
| Efficiency | | | | |
| Efficiency at $V_{out rated}$, $I_{out rated}$, approx. | 81 % | 86 % | 90 % | 89 % |
| Power loss at $V_{out rated}$, $I_{out rated}$, approx. | 3 W | 5 W | 7 W | 12 W |
| Power loss [W] during no-load operation maximum | 0.3 W | 0.3 W | 0.3 W | 0.3 W |
| Closed-loop control | | | | |
| Dynamic mains compensation ($V_{in rated} \pm 15 \%$), max. | 0.2 % | 0.2 % | 0.2 % | 0.2 % |
| Dynamic load smoothing (I_{out} : 10/90/10 %), $U_{out} \pm$ typ. | 2 % | 1 % | 2 % | 2 % |
| Load step setting time 10 to 90%, typ. | 1 ms | 1 ms | 1 ms | 1 ms |
| Load step setting time 90 to 10%, typ. | 1 ms | 1 ms | 1 ms | 1 ms |
| Protection and monitoring | | | | |
| Output overvoltage protection | Yes, according to EN 60950-1 | Yes, according to EN 60950-1 | Yes, according to EN 60950-1 | Yes, according to EN 60950-1 |
| Current limitation, typ. | 0.8 A | 1.7 A | 3.2 A | 5 A |
| Property of the output Short-circuit proof | Yes | Yes | Yes | Yes |
| Short-circuit protection | Constant current characteristic | Constant current characteristic | Constant current characteristic | Constant current characteristic |
| Enduring short circuit current RMS value | | | | |
| • maximum | 0.8 A | 1.7 A | 3.2 A | 5 A |
| Overload/short-circuit indicator | - | - | - | - |

Technical specifications (continued)

| Article number | 6EP3330-6SB00-0AY0 | 6EP3331-6SB00-0AY0 | 6EP3332-6SB00-0AY0 | 6EP3333-6SB00-0AY0 |
|--|---|---|---|--|
| Product | LOGO!Power | LOGO!Power | LOGO!Power | LOGO!Power |
| Power supply, type | 24 V/0.6 A | 24 V/1.3 A | 24 V/2.5 A | 24 V/4 A |
| Safety | | | | |
| Primary/secondary isolation | Yes | Yes | Yes | Yes |
| Galvanic isolation | Safety extra-low output voltage U_{out} acc. to EN 60950-1 and EN 50178 | Safety extra-low output voltage U_{out} acc. to EN 60950-1 and EN 50178 | Safety extra-low output voltage U_{out} acc. to EN 60950-1 and EN 50178 | Safety extra-low output voltage U_{out} acc. to EN 60950-1 and EN 50178 |
| Protection class | Class II (without protective conductor) | Class II (without protective conductor) | Class II (without protective conductor) | Class II (without protective conductor) |
| CE mark | Yes | Yes | Yes | Yes |
| UL/cUL (CSA) approval | cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cURus-Recognized (UL 60950, CSA C22.2 No. 60950), File E151273, NEC class 2 (acc. to UL 1310) | cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cURus-Recognized (UL 60950, CSA C22.2 No. 60950), File E151273, NEC class 2 (acc. to UL 1310) | cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cURus-Recognized (UL 60950, CSA C22.2 No. 60950), File E151273, NEC class 2 (acc. to UL 1310) | cULus-listed (UL 508, CSA C22.2 No. 107.1), File E197259; cURus-recognized (UL 60950, CSA C22.2 No. 60950), File E151273 |
| Explosion protection | ATEX (EX) II 3G Ex nA IIC T3; cCSAus (CSA C22.2 No. 213-M1987, ANSI/ISA-12.12.01-2007) Class I, Div. 2, Group ABCD, T4 | ATEX (EX) II 3G Ex nA IIC T3; cCSAus (CSA C22.2 No. 213-M1987, ANSI/ISA-12.12.01-2007) Class I, Div. 2, Group ABCD, T4 | ATEX (EX) II 3G Ex nA IIC T3; cCSAus (CSA C22.2 No. 213-M1987, ANSI/ISA-12.12.01-2007) Class I, Div. 2, Group ABCD, T4 | ATEX (EX) II 3G Ex nA IIC T3; cCSAus (CSA C22.2 No. 213-M1987, ANSI/ISA-12.12.01-2007) Class I, Div. 2, Group ABCD, T4 |
| FM approval | Class I, Div. 2, Group ABCD, T4 | Class I, Div. 2, Group ABCD, T4 | Class I, Div. 2, Group ABCD, T4 | Class I, Div. 2, Group ABCD, T4 |
| CB approval | Yes | Yes | Yes | Yes |
| Marine approval | available soon | available soon | available soon | available soon |
| Degree of protection (EN 60529) | IP20 | IP20 | IP20 | IP20 |
| EMC | | | | |
| Emitted interference | EN 55022 Class B | EN 55022 Class B | EN 55022 Class B | EN 55022 Class B |
| Supply harmonics limitation | not applicable | not applicable | not applicable | EN 61000-3-2 |
| Noise immunity | EN 61000-6-2 | EN 61000-6-2 | EN 61000-6-2 | EN 61000-6-2 |
| Operating data | | | | |
| Ambient temperature | | | | |
| • during operation | -25 ... +70 °C | -25 ... +70 °C | -25 ... +70 °C | -25 ... +70 °C |
| - Note | with natural convection | with natural convection | with natural convection | with natural convection |
| • during transport | -40 ... +85 °C | -40 ... +85 °C | -40 ... +85 °C | -40 ... +85 °C |
| • during storage | -40 ... +85 °C | -40 ... +85 °C | -40 ... +85 °C | -40 ... +85 °C |
| Humidity class according to EN 60721 | Climate class 3K3, no condensation | Climate class 3K3, no condensation | Climate class 3K3, no condensation | Climate class 3K3, no condensation |
| Mechanics | | | | |
| Connection technology | screw-type terminals | screw-type terminals | screw-type terminals | screw-type terminals |
| Connections | | | | |
| • Supply input | L, N: 1 screw terminal each for 0.5 ... 2.5 mm ² single-core/finely stranded | L, N: 1 screw terminal each for 0.5 ... 2.5 mm ² single-core/finely stranded | L, N: 1 screw terminal each for 0.5 ... 2.5 mm ² single-core/finely stranded | L, N: 1 screw terminal each for 0.5 ... 2.5 mm ² single-core/finely stranded |
| • Output | +, -: 2 screw terminals each for 0.5 ... 2.5 mm ² | +, -: 2 screw terminals each for 0.5 ... 2.5 mm ² | +, -: 2 screw terminals each for 0.5 ... 2.5 mm ² | +, -: 2 screw terminals each for 0.5 ... 2.5 mm ² |
| • Auxiliary | - | - | - | - |
| Width of the enclosure | 18 mm | 36 mm | 54 mm | 72 mm |
| Height of the enclosure | 90 mm | 90 mm | 90 mm | 90 mm |
| Depth of the enclosure | 53 mm | 53 mm | 53 mm | 53 mm |
| Required spacing | | | | |
| • top | 20 mm | 20 mm | 20 mm | 20 mm |
| • bottom | 20 mm | 20 mm | 20 mm | 20 mm |
| • left | 0 mm | 0 mm | 0 mm | 0 mm |
| • right | 0 mm | 0 mm | 0 mm | 0 mm |
| Weight, approx. | 0.07 kg | 0.12 kg | 0.2 kg | 0.29 kg |
| Product feature of the enclosure housing for side-by-side mounting | Yes | Yes | Yes | Yes |
| Installation | Snaps onto DIN rail EN 60715 35x15, various direct mounting positions | Snaps onto DIN rail EN 60715 35x15, various direct mounting positions | Snaps onto DIN rail EN 60715 35x15, various direct mounting positions | Snaps onto DIN rail EN 60715 35x15, various direct mounting positions |
| MTBF at 40 °C | 4 415 040 h | 3 094 996 h | 2 864 520 h | 2 391 480 h |
| Other information | Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified) | Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified) | Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified) | Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified) |

LOGO! logic modules

LOGO!Power

1-phase, 24 V DC

2

Ordering data**Article No.****Article No.****LOGO!Power 1-phase,
24 V DC/0.6 A**

Stabilized power supply
 Input: 100 ... 240 V AC
 (110 ... 300 V DC)
 Output: 24 V DC/0.6 A

6EP3330-6SB00-0AY0**LOGO!Power 1-phase,
24 V DC/2.5 A**

Stabilized power supply
 Input: 100 ... 240 V AC
 (110 ... 300 V DC)
 Output: 24 V DC/2.5 A

6EP3332-6SB00-0AY0**LOGO!Power 1-phase,
24 V DC/1.3 A**

Stabilized power supply
 Input: 100 ... 240 V AC
 (110 ... 300 V DC)
 Output: 24 V DC/1.3 A

6EP3331-6SB00-0AY0**LOGO!Power 1-phase,
24 V DC/4 A**

Stabilized power supply
 Input: 100 ... 240 V AC
 (110 ... 300 V DC)
 Output: 24 V DC/4 A

6EP3333-6SB00-0AY0