



LOGO!POWER/1AC/DC24V/4A/EX

LOGO!POWER EX 24 V / 4 A Stabilized power supply input: 100-240 V AC
output: 24 V DC / 4 A

Input

type of the power supply network	1-phase AC or DC
supply voltage at AC	
<ul style="list-style-type: none"> • minimum rated value • maximum rated value • initial value • full-scale value 	<p>100 V</p> <p>240 V</p> <p>85 V</p> <p>264 V</p>
input voltage	
<ul style="list-style-type: none"> • at DC 	110 ... 300 V
design of input wide range input	Yes
overvoltage overload capability	300 V AC for 1 s
operating condition of the mains buffering	at $V_{in} = 187$ V
buffering time for rated value of the output current in the event of power failure minimum	40 ms
operating condition of the mains buffering	at $V_{in} = 187$ V
line frequency	
<ul style="list-style-type: none"> • 1 rated value • 2 rated value 	<p>50 Hz</p> <p>60 Hz</p>
line frequency	47 ... 63 Hz
input current	
<ul style="list-style-type: none"> • at rated input voltage 120 V • at rated input voltage 230 V 	<p>1.95 A</p> <p>0.97 A</p>
current limitation of inrush current at 25 °C maximum	31 A
I ² t value maximum	2.5 A ² ·s
fuse protection type	internal
<ul style="list-style-type: none"> • in the feeder 	Recommended miniature circuit breaker: from 10 A characteristic B or from 6 A characteristic C

Output

voltage curve at output	Controlled, isolated DC voltage
output voltage at DC rated value	24 V
output voltage	
<ul style="list-style-type: none"> • at output 1 at DC rated value 	24 V
relative overall tolerance of the voltage	3 %
relative control precision of the output voltage	
<ul style="list-style-type: none"> • on slow fluctuation of input voltage • on slow fluctuation of ohm loading 	<p>0.1 %</p> <p>0.1 %</p>
residual ripple	
<ul style="list-style-type: none"> • maximum • typical 	<p>200 mV</p> <p>30 mV</p>
voltage peak	
<ul style="list-style-type: none"> • maximum • typical 	<p>300 mV</p> <p>50 mV</p>

adjustable output voltage	22.2 ... 26.4 V
product function output voltage adjustable	Yes
type of output voltage setting	via potentiometer
display version for normal operation	Green LED for output voltage OK
behavior of the output voltage when switching on	No overshoot of Vout (soft start)
response delay maximum	0.5 s
voltage increase time of the output voltage	
• typical	100 ms
output current	
• rated value	4 A
• rated range	0 ... 4 A; +55 ... +70 °C: Derating 2%/K
supplied active power typical	96 W

Efficiency

efficiency in percent	89.1 %
power loss [W]	
• at rated output voltage for rated value of the output current typical	11.7 W
• during no-load operation maximum	0.3 W

Closed-loop control

relative control precision of the output voltage with rapid fluctuation of the input voltage by +/- 15% typical	0.2 %
relative control precision of the output voltage at load step of resistive load 10/90/10 % typical	2 %
setting time	
• load step 10 to 90% typical	1 ms
• load step 90 to 10% typical	1 ms

Protection and monitoring

design of the overvoltage protection	Yes, according to EN 60950-1
• typical	5 A
property of the output short-circuit proof	Yes
design of short-circuit protection	Constant current characteristic
enduring short circuit current RMS value	
• maximum	5 A
overcurrent overload capability in normal operation	overload capability 150% Iout rated typ. 200 ms
display version for overload and short circuit	-
measuring point for output current	50 mV =^ 4 A
overcurrent overload capability when switching on	150% Iout rated typ. 200 ms

Safety

galvanic isolation between input and output	Yes
galvanic isolation	Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178
operating resource protection class	Class II (without protective conductor)
protection class IP	IP20

Approvals

certificate of suitability	
• CE marking	Yes
• UL approval	No
• CSA approval	No
• cCSAus, Class 1, Division 2	No
• ATEX	Yes
certificate of suitability	
• IECEX	Yes
• NEC Class 2	No
• ULhazloc approval	No
• FM registration	Yes; Class I, Div. 2, Group ABCD, T4
certificate of suitability shipbuilding approval	No
shipbuilding approval	available soon
Marine classification association	
• American Bureau of Shipping Europe Ltd. (ABS)	No
• French marine classification society (BV)	No
• DNV GL	No
• Lloyds Register of Shipping (LRS)	No
• Nippon Kaiji Kyokai (NK)	No

EMC

standard	<ul style="list-style-type: none"> • for emitted interference • for mains harmonics limitation • for interference immunity 	<p>EN 55022 Class B EN 61000-3-2 EN 61000-6-2</p>
environmental conditions		
ambient temperature	<ul style="list-style-type: none"> • during operation • during transport • during storage 	<p>-25 ... +70 °C; with natural convection -40 ... +85 °C -40 ... +85 °C</p>
environmental category according to IEC 60721		Climate class 3K3, 5 ... 95% no condensation
Mechanics		
type of electrical connection	<ul style="list-style-type: none"> • at input • at output • for auxiliary contacts 	<p>screw-type terminals L, N: 1 screw terminal each for 0.5 ... 2.5 mm² single-core/finely stranded +, -: 1 screw terminal each for 0.5 ... 2.5 mm² -</p>
width of the enclosure		72 mm
height of the enclosure		90 mm
depth of the enclosure		53 mm
required spacing	<ul style="list-style-type: none"> • top • bottom • left • right 	<p>20 mm 20 mm 0 mm 0 mm</p>
net weight		0.29 kg
product feature of the enclosure housing can be lined up		Yes
fastening method		Snaps onto DIN rail EN 60715 35x7.5/15, direct mounting in different mounting positions
MTBF at 40 °C		2 391 480 h
other information		Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)

