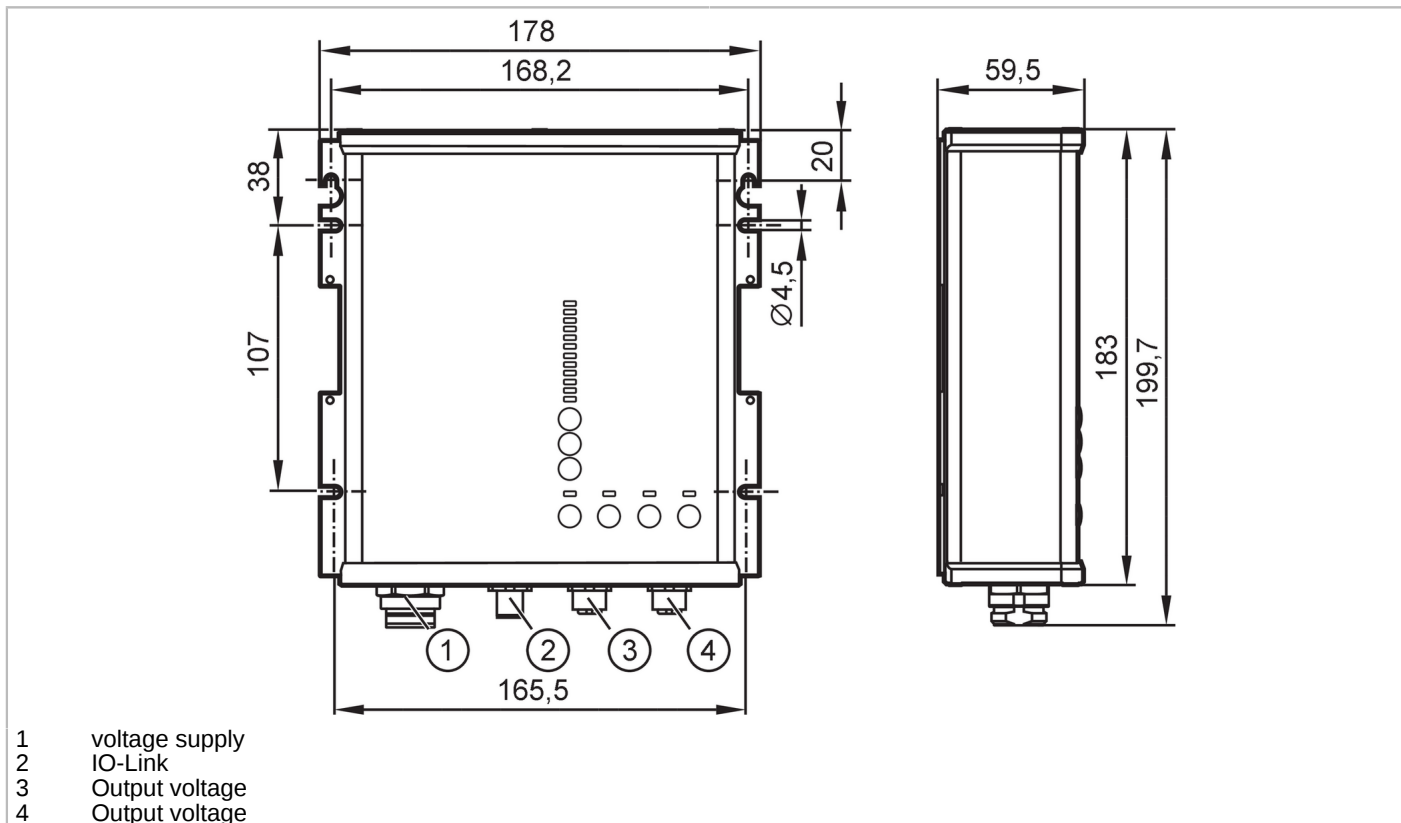


DN4237



Switched-mode power supply 24 V DC

PSU-3AC/24VDC-20A/IOL/IP67



Electrical data	
Nominal voltage AC	[V] 400 / 480
Nominal frequency AC	[Hz] 50...60
Input voltage range AC	[V] 323...552
Output voltage DC	[V] 24...28
Protection class	I
Max. power-on delay time	[ms] 2000
Output voltage tolerance	[%] 0.2
Max. output current at min. output voltage	[A] 20.8
Max. output current at max. output voltage	[A] 17.8
Output power (permanent)	[W] 500
Output power (peak)	[W] 1000
Power factor (nominal voltage 400 V AC / 50 Hz)	0.94
Power factor (nominal voltage 480 V AC / 50 Hz)	0.95
Number of output circuits	4
Switch-on peak current (nominal voltage 400 V AC / 60 Hz)	[A] 2.1
Switch-on peak current (nominal voltage 480 V AC / 50 Hz)	[A] 2

DN4237



Switched-mode power supply 24 V DC

PSU-3AC/24VDC-20A/IO-L/IP67

Efficiency (nominal voltage 400 V AC / 60 Hz)	[%]	94.2
Efficiency (nominal voltage 480 V AC / 50 Hz)	[%]	94
Mains buffering time (nominal voltage 400 V AC / 60 Hz)	[ms]	24
Mains buffering time (nominal voltage 480 V AC / 50 Hz)	[ms]	24
Input current (nominal voltage 400 V AC / 60 Hz)	[A]	1.1
Input current (nominal voltage 480 V AC / 50 Hz)	[A]	0.9

Outputs

Load capacitance, total	[mF]	12.5
-------------------------	------	------

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	
Required master port class	A	
Min. process cycle time	[ms]	2
Supported DeviceIDs	Type of operation	DeviceID
	default	1270

Operating conditions

Ambient temperature	[°C]	-25...70
Storage temperature	[°C]	-40...85
Max. relative air humidity	[%]	95; (relative humidity)
Max. height above sea level	[m]	5000
Protection	IP 65; IP 67	
Degree of soiling	3	

DN4237



Switched-mode power supply 24 V DC

PSU-3AC/24VDC-20A/IO-L/IP67

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 + - / 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 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]		27

Mechanical data		
Weight [g]		1616.05
Housing		rectangular
Type of mounting		Backplane mounting
Dimensions [mm]		199.7 x 178 x 59.5
Material		housing: Aluminum Alloy; housing cap: PC; screws: steel bronzed

Remarks	
Pack quantity	1 pcs.

Electrical connection - IO-Link

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



- 1: voltage supply L+
- 2: n.c.
- 3: voltage supply L-
- 4: IO-Link

DN4237



Switched-mode power supply 24 V DC

PSU-3AC/24VDC-20A/IO/L/IP67

Electrical connection - Output voltage

Connector: 2 x M12; coding: L; Locking: brass



- 1: US
- 2: GND UA
- 3: GND US
- 4: UA
- 5: FE

Electrical connection - voltage supply

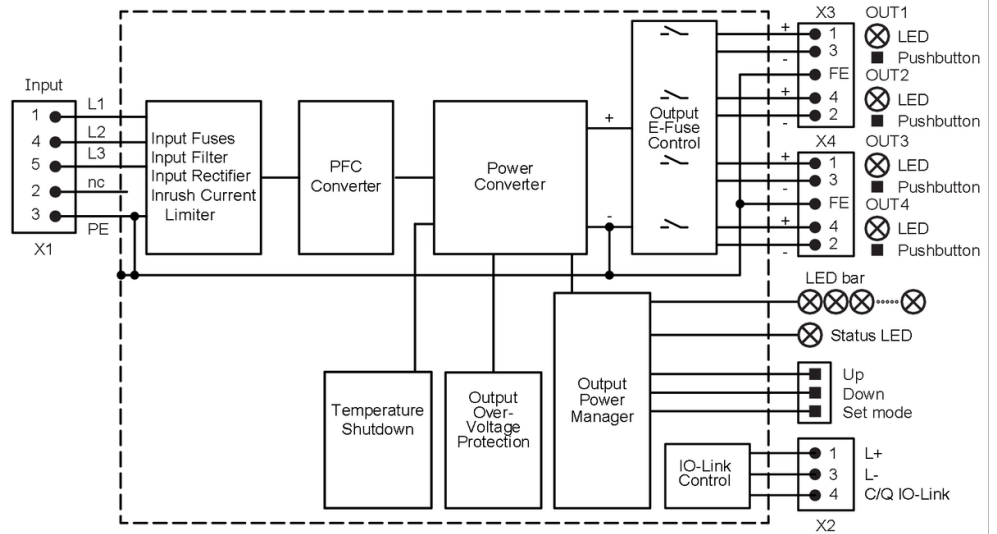
Connector: 1 x 7/8"; Locking: brass



- 1: L1
- 2: N
- 3: PE
- 4: L2
- 5: L3

Diagrams and graphs

Block diagram



DN4237

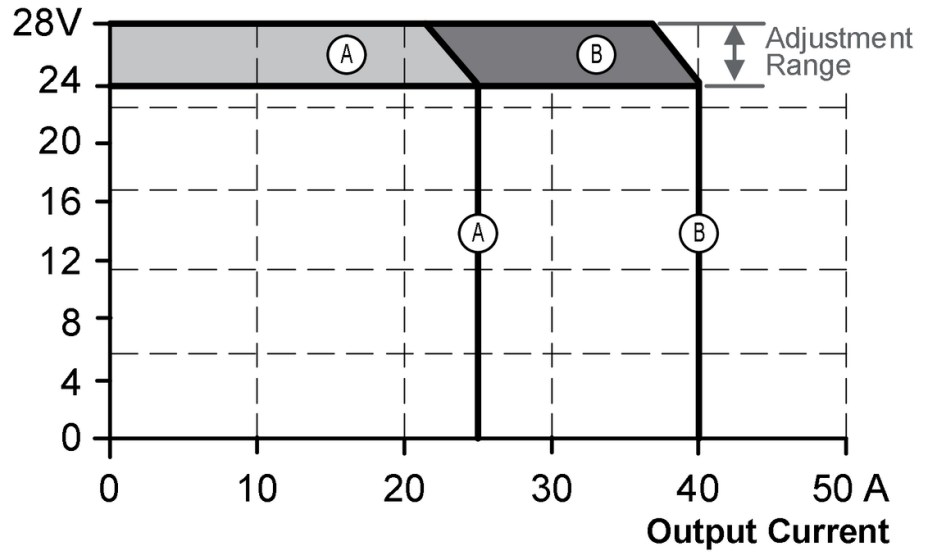


Switched-mode power supply 24 V DC

PSU-3AC/24VDC-20A/IOL/IP67

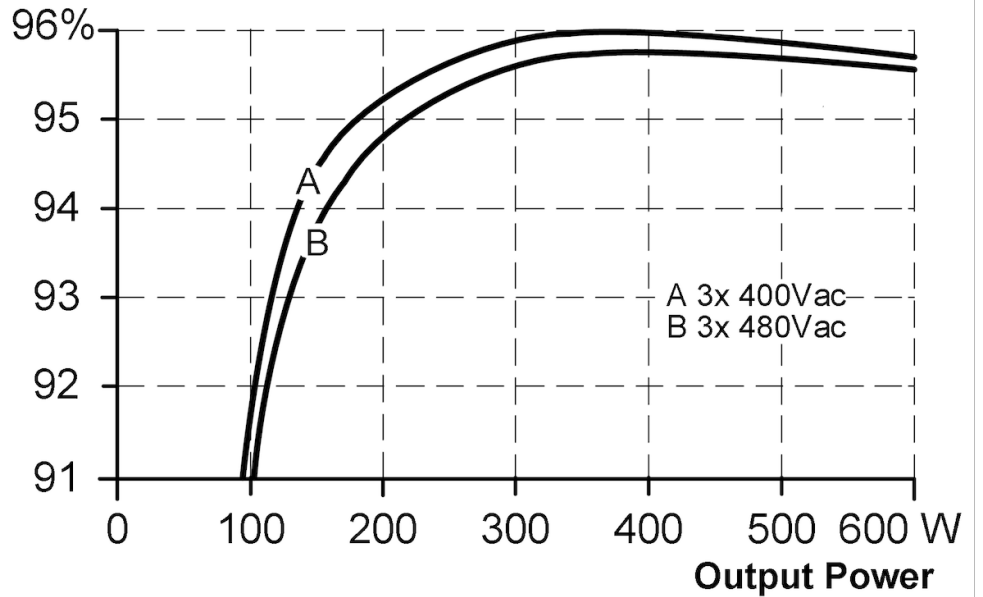
Output curve

Output Voltage



Characteristic curve for degree of efficiency / power loss

Efficiency



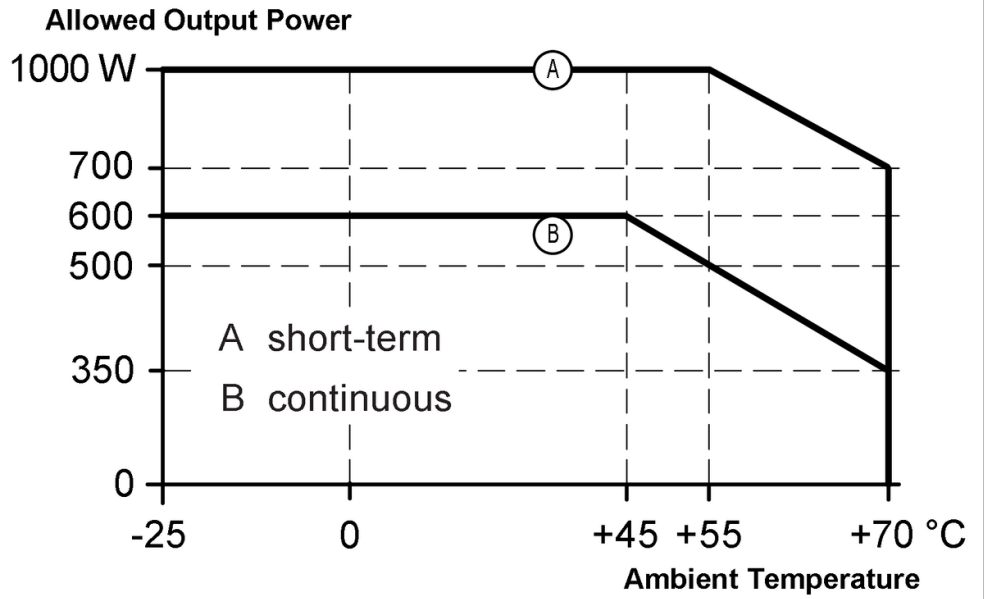
DN4237



Switched-mode power supply 24 V DC

PSU-3AC/24VDC-20A/IOL/IP67

Characteristic curve for derating



Characteristic curve for mains buffering time

