

34ODPS Rev. B/1SCC390112M0202

Dual Power Source, ODPSE230C

Installation and operating instructions



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Introduction

ODPSE230C is used to provide power supply for motorized switches and breakers by using two lines, Line I and Line II.

Features:

The device does not allow the motor operator to be fed over or under voltage.

- ▶ The motor is always fed with the correct voltage.

The device is self supplied from the available lines.

- ▶ There is no need for an external power supply.

Isolation is provided between lines I and II.

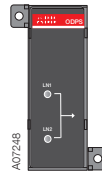
- ▶ The two asynchronous sources are always isolated from each other.

Status indication

A green LED light for Line I and Line II indicates that voltage is within the specified range. In case of anomaly the LEDs are switched OFF. Specified voltage range is 80% - 120% x rated AC voltage.

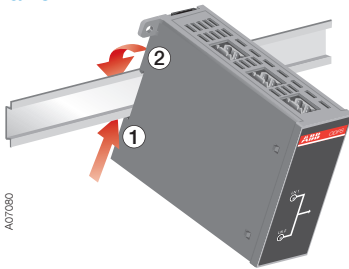
LINE I	LINE II	Output	LEDs
OK	NOT OK	LINE I	LINE I
NOT OK	OK	LINE II	LINE II
NOT OK	NOT OK	None	None
OK	OK	LINE I	LINE I + II

Table 1 Status indication of ODPS

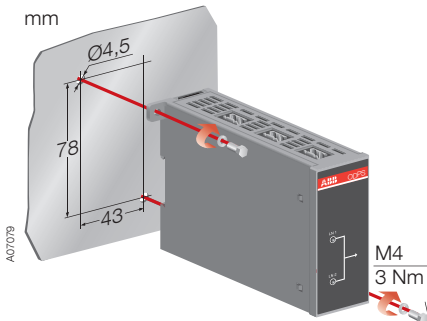
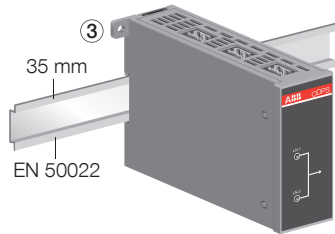


Picture 1 Front panel

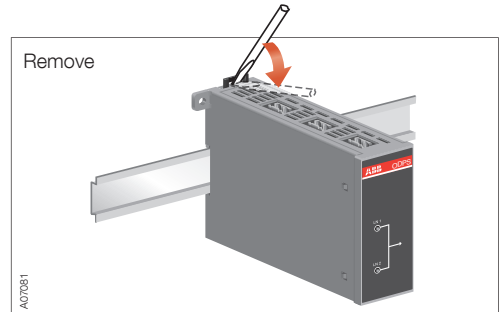
Installation



Picture 2 DIN-rail mounting of ODPS



Picture 3 Drilling hole distances/screw mounting



Technical data

Voltage and current limits

Rated operational voltage U [V]	220 ... 240 V AC +/-20%, 50/60 Hz +/-10%
F1, F2	Max. MCB 4 A
Nominal output current I _n [A]	4 A
Startup time	Max. 1.0 s (with 230 V AC)
Operating transfer time LN1- LN2 or LN2 - LN1	Max. 0.5 s (with 230 V AC)

Main circuit connections

X11:1	Line I Phase
X11:2	Line I Neutral
X13:1	Line II Phase
X13:2	Line II Neutral
X12:1	Motor operator Phase
X12:2	Motor operator Neutral

Connection cables

Supply side cables of the main circuit	0.2 ... 2.5 mm ² / 0.6 Nm
Load side cables of the main circuit	0.2 ... 2.5 mm ² / 0.6 Nm
Stripping length	7 mm

External transformer

When ODPS230 is used in a network where N is not connected, an external transformer must be used to drop the voltage level. The transformer has to be a Main to Phase transformer and isolative. The effective value depends on the size of the motor operator. See Connection diagram.

Dielectric properties

Overvoltage category	III
IEC 60947- 1 Rated impulse withstand voltage (U _{imp}), basic insulation	4,0 kV
IEC 60947-1 Dielectric test	1.89 kV, 50 Hz, 5 s
IEC 60092-504 Insulation resistance measurement	> 100 MΩ, 500 V DC

Mechanical characteristics

Material of enclosure	Self-extinguishing thermoplastic, UL 94 V-0
Degree of protection	IP 20

Environmental conditions

Ambient air temperature	-25 ... +60 °C
Altitude of the site of installation	< 2000 m
IEC 60068-2-30 Humidity, relative	< 93%, T = -25 ... +60 °C
IEC 60947-1 Pollution degree	3

Mechanical tests

IEC 60068-2-6 Vibration test	5 Hz to 13.2 Hz: +/-1 mm
	13.2 Hz to 100 Hz: +/- 0.7 g
	Q does not exceed 5
Duration 90 min at 30 Hz or at each resonance frequency	
IEC 60068-2-27 Shock test	Acceleration 100 m/s ² peak (10 gn) and 150 m/s ² peak (15 gn)
	Pulse duration: 11 ms

Transport and storage

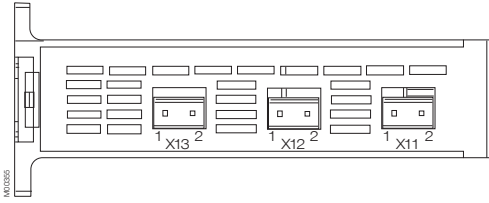
Ambient air temperature	-40 ... +70 °C
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EMC characteristics

IEC 61000-4-2 Electrostatic discharge immunity test	8 kV (Level 3) Air discharge
	4 kV (Level 2) Contact discharge
IEC 61000-4-3 Radiated, radio-frequency, electromagnetic field immunity test	Level 3
IEC 61000-4-4 Electrical fast transient/burst immunity test	Level 3
IEC 61000-4-5 Surge immunity test	2 kV Phase to Neutral
IEC 61000-4-6 Immunity to conducted disturbances, induced by radio-frequency fields	Level 3
IEC 61000-4-8 Power frequency magnetic field immunity test	Level 4
CISPR 11 Electromagnetic disturbance characteristics (emission)	Group 1 Class B

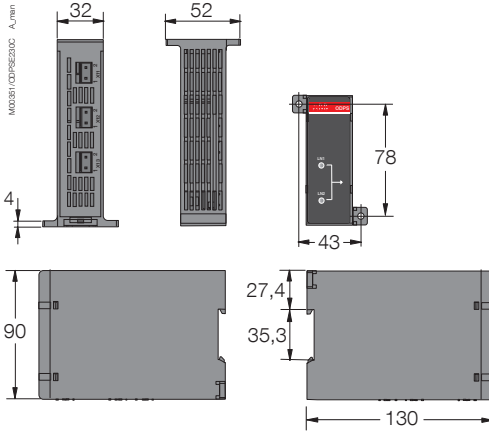
Table 2 Technical data

Connectors

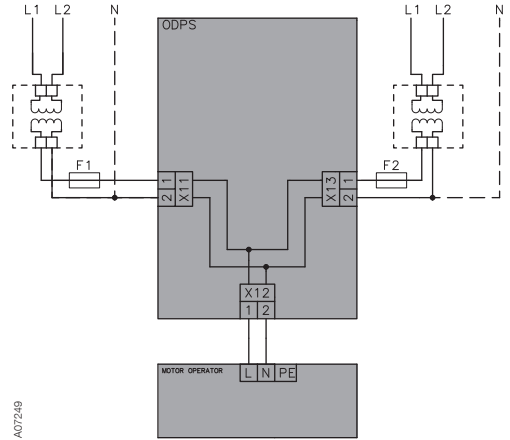


Picture 4 Connectors

Dimensions and connection diagram



Picture 5 Dimensions of the device



Picture 6 Connection diagram

ABB Oy

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