

Shelly ^{PRO} 2



USE SHELLY PRO 2 FOR

Shelly Pro 2 is enhanced with scripting functionalities, allowing users to set custom automation scenes based on various occurrences such as weather forecast, wind force forecast, etc.



LAN, Wi-Fi and Bluetooth

Simultaneous Wi-Fi and LAN usage, add device fast and easy via Bluetooth connection



2 channels switch

2 outputs, 16 A each. Total device maximum capacity 25 A.



Dry Contacts

Supports a wide range of voltages, with dry contacts.



Wide range of voltage support

Shelly Pro 2 can be powered by 110-240 VAC



Extremely fast processor

For immediate command execution and notification.



Wide variety of appliances control

Suitable for automating the lights on 2 phases, appliances, pool and heating system, and many more.



Enhanced safety

Flame retardant shell (V-0) with internal overtemperature protection.



Enhanced security

MQTT and WSS support, TLS and custom certificates support for a broad range of use cases.



No hub required

Control directly and without a hub through your smartphone with Shelly Smart Control App.



Highly compatible

Use with your preferred home automation platforms and voice assistants.

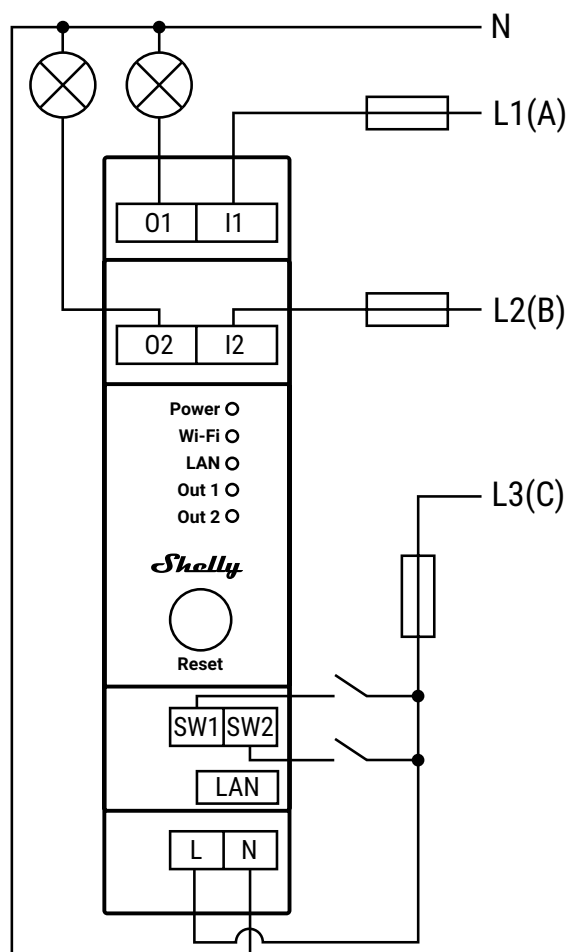
APPLIANCES AUTOMATION AND LIGHTS CONTROL ON 2 PHASES!

Shelly Pro 2 is two-phases and 2 channels switch, supporting up to 25 A. Equipped with potential-free outputs (dry contacts), Shelly Pro 2 offers high flexibility in voltage support and applications. Power it with 110-240 VAC, use scripting functionalities to set custom automation scenes based on various occurrences.

TECHNICAL SPECIFICATIONS

Power supply	110-240 VAC, 50/60 Hz
Max load per channel	16 A / 12.5 A UL Version
Total max. current of all outputs	25 A
Complies with EU standards:	• RED 2014/53/EU • LVD 2014/35/EU • EMC 2014/30/EU • RoHS2 2011/65/EU
Working temperature	-20°C to 40°C / -5°F to 105°F
Max RF power	13.35 dBm
Wireless/Wi-Fi Protocol	802.11 b/g/n (2.4 GHz)
Frequency	2400 - 2495 MHz
Operational range Wi-Fi (depending on local conditions)	• Up to 30 m / 100 ft indoors • Up to 50 m / 160 ft outdoors
Dimensions (HxWxD)	94x19x69 mm / 3.70x0.75x2.71 in
Electrical consumption	< 3 W
Wire cross section range	0.5 to 1.5 mm ² (blue) 0.5 to 2.5 mm ² (green)

HOW TO CONNECT



Legend

Device terminals:

01, 02: Load output terminals

I1, I2: Load input terminals

SW1, SW2: Switch input terminals controlling 01 and 02

L: Live (110-240 VAC) terminal

N: Neutral terminal

LAN: Local Area Network RJ 45 connector

Cables:

N: Neutral cable

L1(A): Load circuit 1 live (110-240 VAC) cable

L2(B): Load circuit 2 live (110-240 VAC) cable

L3(C): Device power supply live (110-240 VAC) cable

Sensor Unit SU100 with current transformer

Data sheet



SU100



Current transformer

TECHNICAL DATA FOR THE SU100

MEASUREMENT

	Readings per channel	Total per SU103 *1
Current	✓	✗
Power factor	✓	✓
Voltage	✓	✗
Frequency	✗	✓
Active, reactive, apparent power	✓	✓
Active, reactive, apparent energy	✓	✓
Measuring interval 100, 200 (Default), 500, 1000 ms	✓	✓

POWER SUPPLY

Supply off	Voltage input L1/N
Power consumption P_{max}	2 W

VOLTAGE INPUTS

Quantity	4 (L1, L2, L3, N)
Overvoltage category	CAT III
Power protection	16 A type B
Measurement range	85 ... 250 V AC
Frequency	50/60 Hz $\pm$ 5 %
Connection type	Plug with push-in connector supplied
Connecting capacity	0,20 ... 2,50 mm ²

CURRENT INPUTS

Quantity	SU103: 3 SU106: 6
Connection type	Plug with push-in connector supplied
Supported current transformers	TQ current transformer SCT1/SCT2/SCT3/SCT4 (63 ... 600 A)

RS485 INTERFACE (-R)

Quantity	1
Connection type	2x push-in cable connector for daisy-chaining
Connecting capacit	0.14 mm ² ... 0.50 mm ² solid 0.20 mm ² ... 0.50 mm ² stranded 0.25 mm ² ... 0.50 mm ² wire end ferrule without plastic sleeve
Type	Half-duplex
Bit rate	9.600 ... 115.200 Baud (115.200 Baud default)
Termination	External possible with terminating connector
Fail-safe wiring	Yes
Max. cable lengt	100 m (twisted pair) with external termination
Data protocol	Modbus RTU
Firmware update	Yes

ETHERNET INTERFACE (-L)

Quantity	1
Connection type	RJ45 shielded
Type	10/100 Mbit
Features	Autonegotiation, Auto MDI-X
Max. cable length	100 m (CAT5)
Data protocol	Modbus TCP
Firmware update	Yes

MEASUREMENT ACCURACY *2

Measured variable	Standard accuracy full scale value	High accuracy full scale value
Phase current	1.5 %	0.75 %
Voltage	0.5 %	0.5 %
Total active power	2.0 %	1.0 %
Total reactive power	2.0 %	2.0 %
Total active energy	2.0 %	1.0 %
Power factor	2.0 %	2.0 %
Frequency	0.1 %	0.1 %

MECHANICAL DATA

Housing material	Glass fibre-reinforced polyamide
Fire-resistance	UL94-V0
Protection class	II
Degree of protection	IP2X
Weight	<0.1 kg
Dimensions without plug	88 x 35 x 65 mm
Width/installation	2 modules/DIN rail

AMBIENT CONDITIONS

Ambient temperature in operation	-25 °C ... +55 °C
Ambient temperature during transportation / storage	-25 °C ... +70 °C
Relative humidity (non-condensing)	Up to 75 % as an annual average, up to 95 % on up to 30 days/year
Max. altitude	2000 m above sea level

PRODUCT SAFETY

Product standards	EN 61010-1
	EN 61010-2-030
	EN 61010-2-201

ELECTROMAGNETIC COMPATIBILITY

Product standards	EN 61326-1, table 2 (industry)
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Interference immunity

ESD (IEC 61000-4-2)	4 kV contact discharge
	8 kV air discharge

RF radiation (IEC 61000-4-3)	3 V/m
	10 V/m for increased deviation in measuring accuracy

Burst (IEC 61000-4-4)	Grid: 4 kV
	Ethernet: 2 kV

Surge (IEC 61000-4-5)	L-L: 1 kV
	L-N: 2 kV
	Ethernet: 1 kV

Conducted disturbances (IEC 61000-4-6)	150 kHz ... 80 MHz, 10 V (RMS value)
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Magnetic field (IEC 61000-4-8)	30 A/m
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Voltage dips (IEC 61000-4-11)	100 %, 20 ms (remains active)
	60 %, 200 ms (active/restart)
	30 %, 500 ms (active/restart)
	100 %, 5 s (restart))

Radiated interference

Disturbance voltage (EN 55011)	Grid, class B
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Disturbance current (EN 55011)	Ethernet, class B
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Electromagnetic interference (EN 55011)	30 MHz ... 1 GHz, class B
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Harmonics (EN 61000-3-2)	Grid, class A
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Voltage fluctuations (EN 61000-3-3)	Grid
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*1 SU106, two virtual SU103s with common voltage input

*2 For standard measuring interval of 200 ms

TECHNICAL DATA FOR CURRENT TRANSFORMER

ELECTRICAL SPECIFICATION

	SCT1	SCT2	SCT3	SCT4
Max. nominal voltage	0.66 kV			
Insulation voltage	2 kV			
Nominal frequency	50/60 Hz			
Current rating	63 A	100 A	200 A	600 A
Accuracy class	Standard			

AMBIENT CONDITIONS

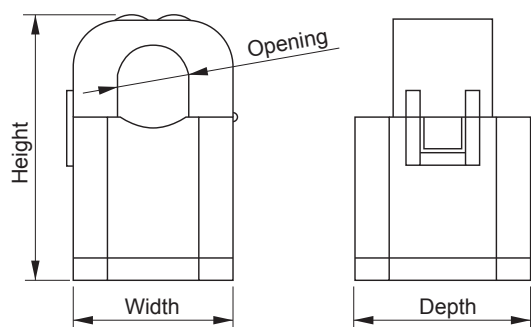
	SCT1	SCT2	SCT3	SCT4
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CONNECTING CABLE

	SCT1	SCT2	SCT3	SCT4
Cable colour	Black			
Cable diameter	3.8 mm			
Cable length	1 m	1 m	1 m/2 m	2 m
Cable cross-section	AWG 24			

MECHANICAL SPECIFICATION

	SCT1	SCT2	SCT3	SCT4
Split-core CT	Yes			
Fire-resistance CT	UL94-V0			
Width	23 mm	32 mm	46 mm	57.5 mm
Depth	26 mm	31 mm	35 mm	41.4 mm
Height	40 mm	46 mm	65.4 mm	85.2 mm
Opening	10 mm	16 mm	24 mm	36 mm
Weight with packaging	65 g	80 g	250 g	400 g



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