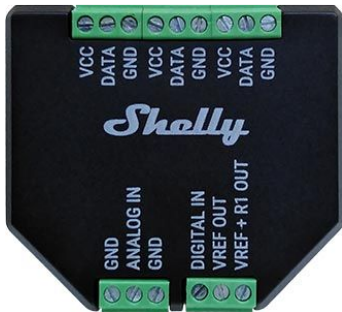


Shelly Plus Add-on



Device identification [🔗](#)

- Device name: **Shelly Plus Add-on**

Short description [🔗](#)

Shelly Plus Add-on (the Device) is a galvanically isolated sensor interface to the Shelly Plus and Gen3 devices.

Main applications [🔗](#)

- Residential
- MDU (Multi Dwelling Units - apartments, condominiums, hotels, etc.)
- Light commercial (small office buildings, small retail/restaurant/gas station, etc.)
- Agricultural (greenhouses, hotbed, nurseries, ranches, etc.)
- Government/municipal
- University/college

Future integrations [🔗](#)

- Google
- Amazon
- Samsung SmartThings

Device electrical interfaces [↗](#)

Inputs [↗](#)

- 1 analog input: **ANALOG IN**
- 1 digital input: **DIGITAL IN**

Output [↗](#)

- 1 reference voltage output: **VREF OUT**
- 1 reference voltage through a pull-up resistor output: **VREF + R1 OUT**
- 2 ground terminals: **GND***

1-Wire interface [↗](#)

- 3 sensor power supply outputs (connected to the same PCB track): **VCC**
- 3 sensor data terminals (connected to the same PCB track): **DATA**
- 3 ground terminals: **GND***
- Connected to the same PCB ground layer.

Add-on interface [↗](#)

- Shelly proprietary serial interface to connect to a Shelly Plus device

Supported sensors [↗](#)

- Up to 5 DS18B20
- Single DHT22
- NTC resistors with 10 k Ω nominal resistance and $\beta=4000$ K
- Photoresistors
- PIR sensors
- Soil moisture sensors
- Ultrasonic proximity sensors
- Capacitive liquid level sensors
- Sound detectors
- Other analog sensors with 0 to 10 V output voltage

Specifications [↗](#)

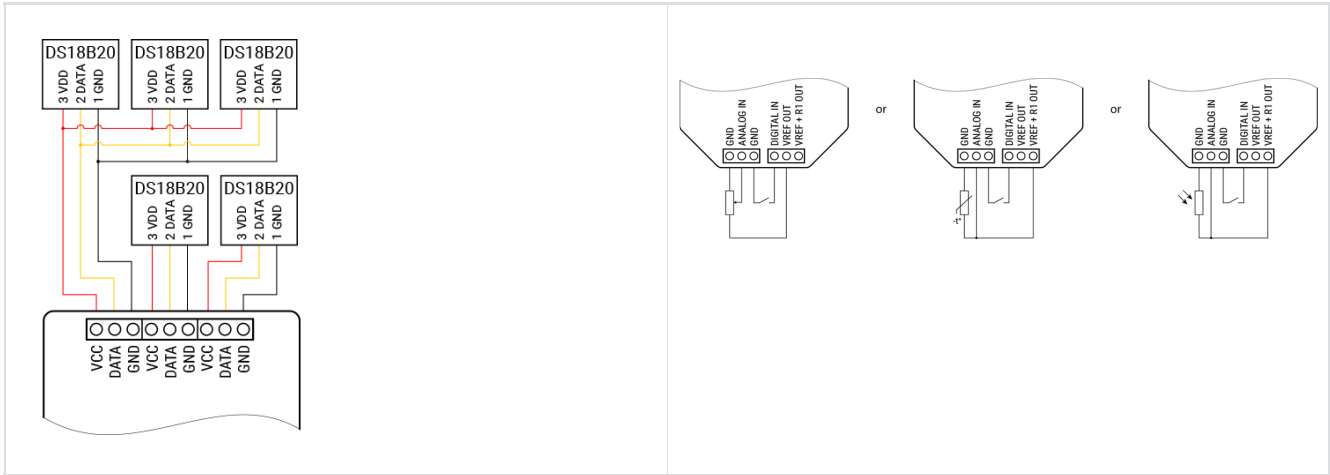
Type	Value
Physical	
Size (HxWxD):	37x42x15 ±0.5 mm / 1.46 x 1.65 x 0.59 ±0.02 in
Weigh:	105 g / 3.70 oz
Shell material:	Plastic
Screw terminals max torque:	0.1 Nm / 0.89 lbIn
Conductor cross section:	max. 1 mm ² / 17 AWG
Conductor stripped length:	4.5 mm / 0.18 in
Color:	Black
Environmental	
Ambient temperature:	-20 °C to 40 °C / -5 °F to 105 °F
Humidity	30 % to 70 % RH
Max. altitude	2000 m / 6562 ft
Electrical	
Power supply voltage AC:	N/A
Power supply voltage DC:	3.3 V (from Shelly plus device)
Power consumption:	< 0.5 W (without sensors)
Output circuits ratings	
VCC max. current:	10 mA
VREF OUT max. current:	1 mA
VREF+R1 OUT resistor	10 kΩ
Shelly Plus device firmware capabilities	
Shelly Plus Addon supporting devices:	Shelly Plus devices: • Shelly Plus 1 • Shelly Plus 1PM • Shelly Plus 1 UL • Shelly Plus 1PM UL • Shelly Plus 2PM • Shelly Plus 2PM UL • Shelly Plus i4 • Shelly Plus i4DC • Shelly Plus 0-10V Dimmer PM • Shelly Plus RGBW PM Shelly Gen3 devices:

	• Shelly 1 Gen3 • Shelly 1PM Gen3 • Shelly 2PM Gen3 • Shelly Shutter • Shelly i4 Gen3 • Shelly DALI Dimmer Gen3 • Shelly Dimmer 0/1-10V PM Gen3 • Shelly EM Gen3
	Shelly Gen4 devices: • Shelly 1 Gen4 • Shelly 1PM Gen4
Temperature reading:	Depends on the DS18B20 or DHT22 sensors
Humidity reading:	Depends on the DHT22 sensor
Digital input:	-15 V to 0.5 V (True) / 2.5 V to 15 V (False)*
Analog input range:	0 to 100%
Analog input report threshold:	1%**
Voltmeter range:	0 to 10 V
Voltmeter report threshold:	0.1 V**
Analog input / Voltmeter accuracy	Better than $\pm 5\%$

* Logic can be inverted in the digital input settings

** Can be configured in the analog input / voltmeter settings

Basic wiring diagrams [↗](#)



Legend [↗](#)

Terminals		External sensor pins	
VCC	Sensor power supply terminals	VCC/VDD	Sensor power supply pins
DATA	1-wire data terminals	DATA/DQ	Sensor data pins
GND	Ground terminals	GND	Ground pins
ANALOG IN	Analog input		
DIGITAL IN	Digital input		
VREF OUT	Reference voltage output		
VREF+R1 OUT	Reference voltage through a pull-up resistor* output		
*For passive devices that need it to form a voltage divider.			