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The fine art of building automation

DOMIQ/Base

Integration with Shelly

Shelly

In DOMIQ we advocate for cable building automation installations, which ensures high reliability of data transmission.

However, there are use cases, when making a cable installation is not (longer) possible. To face such situations we decided to add integration with Shelly devices.

1.1. Communication

Shelly devices allows integration over HTTP API or using the MQTT standard. Considering the fact, that HTTP API requires constant data polling, we decided to use the MQTT which is bi-directional by default.

For the purposes of integration with Shelly, we made our own implementation of the MQTT broker. In its current form, the broker is partially compatible (not yet fully compatible) with the MQTT 3.1.1 standard. At this stage, it handles communication with QoS equal to 0 and requires the Clean Session option enabled for each connection. More information on the MQTT standard is available on the Internet.

1.2. Configuration

The very first step is the correct configuration of Shelly modules.

Network Settings

Shelly modules work in Access Point mode by default - so each module creates its own local WiFi. The first step is to disable Access Point mode and connect Shelly module to your local WiFi.

1. Connect to a network created by a Shelly module.
2. Open the web UI in the web browser (see Shelly user manual for the default IP address).
3. In the **Internet & Security** (gen. 1 devices) or in the **Networks** section (gen. 2 devices) enter network settings that allow the module to connect to your local WiFi. We recommend setting a static IP address or creating IP binding based on module's MAC address (this has to be done in the router settings).
4. Save settings and reopen web UI using the IP in your network.

MQTT Settings

The next step is configuration of a MQTT server, to which the Shelly module will connect. The configuration is slightly different for Shelly 1st and 2nd generation devices, so we will describe configuration separately.

Gen. 1 Devices

1. Navigate to the **Internet & Security** -> **Advanced - Developer Settings**
2. Check the **Enable MQTT** option.
3. Fill the following fields of the form:

- **Server** - Enter the IP address of your Base module and the default MQTT port - 1883 separated with colon. Example: *192.168.1.100:1883*
- Enable the **Use custom MQTT prefix** option and in the field below enter a name of your Shelly module. **The entered name must be unique in the entire installation.**
- Enable the **Clean Session** option.
- Set the **Max QoS** to 0.

4. Click the **Save** button to save changes. To apply changes a reboot is required (you'll be notified about that by the Shelly intefrace).
5. Shelly module is now ready to use.

Gen. 2 devices

1. Navigate to the **Networks** -> **Mqtt**
2. Enable the **Enable** option.
3. Fill the following fields of the form:
   - **Connection type**: *MQTT*
   - In the next field enter a name of your Shelly module. **The entered name must be unique in the entire installation.**
   - Enable the **RPC status notifications over MQTT** option.
   - In the textfield below, enter the IP address of your Base module and the default MQTT port - 1883 separated with colon. Example: *192.168.1.100:1883*
4. Click on the **Apply** button to confirm the changes.
5. Shelly module is now ready to use.

Additional Settings

At this stage, the Shelly module is ready to be controlled by the DOMIQ/Base. Other settings such as input type, schedules, etc. should be configured as needed.

1.3. DOMIQ/Base configuration

In DOMIQ/Base's configurator navigate to the **Settings** tab and then enable **MQTT** and **Shelly** options. Next save the **Settings** tab and reboot the module.

After rebooting, Base is ready to control Shelly devices. Shelly modules will automatically connect to Base - no additional actions are required. Parameters read from Shelly modules will automatically appear in the **State** tab.

1.4. Commands and State

As mentioned before, there are two generations of Shelly devices. Apart from the hardware differences, they also use different integration protocol. The integration protocol used by the gen. 2 devices is unified for all modules, while the first generation of devices vary a lot in terms of parameters that can be read as well as commands that can be sent to modules.

General Guidelines

- All the described commands and state identifiers represent a generalized syntax and contains fragments that have to be replaced with data specific for a particular Shelly module. Those fragments are enclosed in angle brackets: `<some_value>`.
  Example: `SHELLY.<name>.relay.<0-1>=<command_value>`
- Relays numbering in Shelly starts at 0. So when a module has only one relay then its index is 0.
- The same rule applies to binary inputs. Binary inputs can be used to connect wall switches, motion sensors and other devices that are capable to control the input contacts.

In the Base module we implemented support for the following Shelly devices:

Generation 1:

1. 1/1PM/1L
2. 2/2.5
3. Plug/PlugS
4. Dimmer 1/2
5. RGBW2 (only the White mode)
6. Uni
7. TRV
8. Vintage
9. H&T
10. Smoke
11. Flood
12. Door/Window 1/2
13. Motion
14. Sense
15. Button1
16. I3
17. Gas
18. EM
19. 3EM

Generation 2:

1. Plus 1/1 PM
2. Plus 2 PM
3. Plus I4
4. Pro 1/1 PM
5. Pro 2/2 PM
6. Pro 4 PM

Generation 1

1/1PM/1L

Actor module with one relay and one binary input. Shelly1PM also includes energy metering.

	Identifier	Value	Description
Command	`C.SHELLY.<name>.relay.0`	`0/off`	Off.
		`1/on`	On
		`toggle`	Toggle.
State	`SHELLY.<name>.relay.0`	`0-1`	Relay state.
	`SHELLY.<name>.input.0`	`0-1`	Binary input state.
	`SHELLY.<name>.longpush.0`	`0-1`	Information about long push.
	`SHELLY.<name>.relay.0.power` (only PM version)	`any number`	Measured power [W]
	`SHELLY.<name>.relay.0.energy` (only PM version)	`any number`	Consumed energy [W/m]
	`SHELLY.<name>.temperature` (only PM version)	`any number`	Internal device temperature.
	`SHELLY.<name>.overtemperature` (only PM version)	`0-1`	Reports 1 when device has overheated, normally 0.
	`SHELLY.<name>.temperature_status` (only PM version)	`normal/ high/ veryhigh`	Temperature status.
	`SHELLY.<name>.overpower_value` (only PM version)	`any number`	Reports the value in Watts, on which an overpower condition is detected.
Event	**E.**`SHELLY.<name>.<rest_of_identifier>`	See **State**	Base module emits events for changes of state of all parameters described in the **State** section.
	E.`SHELLY.<name>.input_event.0`	`S/L`	The event is emitted when the input state changes and only when the input is set to the `Momentary` mode. S - short L - long

2.5

Module conains two relays with energy metering and two binary inputs. Shelly 2.5 can operate in two distinct modes: Relay and Roller Shutter.

Roller Shutter Mode

	Identifier	Value	Description
Command	C.SHELLY.<name>.roller.0	up	Upward movement.
		down	Downward movement.
		stop	Stop.
		rc	Roller calibraion.
		0-100	Moves roller to a given position. 100 - fully opened 0 - fully closed
State	SHELLY.<name>.roller.0	up/down/stop	Current motor state.
	SHELLY.<name>.roller.0.pos	0-100	Current position. Available only after motor callibration. -1 means invalid position or no calibration.
	SHELLY.<name>.input.<0-1>	0-1	State of binary input.
	SHELLY.<name>.roller.0.power	any number	Current power [W].
	SHELLY.<name>.roller.0.energy	any number	Energy consumption [W/m].
	SHELLY.<name>.temperature	any number	Internal device temperature.
	SHELLY.<name>.overtemperature	0-1	Reports 1 when device has overheated, normally 0.
	SHELLY.<name>.temperature_status	normal/high/veryhigh	Temperature status.
	SHELLY.<name>.voltage	any number	Device voltage.
Event	**E.**SHELLY.<name>.<rest_of_identifier>	See State	Base module emits events for changes of state of all parameters described in the State section.
	E.SHELLY.<name>.input_event.0	S/L	The event is emitted when the input state changes and only when the input is set to the Momentary mode. S - short L - long

Relay Mode

	Identifier	Value	Description
Command	C.SHELLY.<name>.relay.<0-1>	0/off	Off.
		1/on	On
		toggle	Toggle
State	SHELLY.<name>.relay.<0-1>	0-1	Relay state.
	SHELLY.<name>.input.<0-1>	0-1	Binary input state.
	SHELLY.<name>.longpush.<0-1>	0-1	Information about long push.
	SHELLY.<name>.relay.<0-1>.power	any number	Measured power [W]
	SHELLY.<name>.relay.<0-1>.energy	any number	Consumed energy [W/m]
	SHELLY.<name>.relay.<0-1>.overpower_value	any number	Reports the value in Watts, on which an overpower condition is detected.
	SHELLY.<name>.temperature	any number	Internal device temperature.
	SHELLY.<name>.overtemperature	0-1	Reports 1 when device has overheated, normally 0.
	SHELLY.<name>.temperature_status	normal/ high/ veryhigh	Temperature status.
	SHELLY.<name>.voltage	any number	Voltage
Event	**E.**SHELLY.<name>.<rest_of_identifier>	See **State**	Base module emits events for changes of state of all parameters described in the State section.
	E.SHELLY.<name>.input_event.<0-1>	S/L	The event is emitted when the input state changes and only when the input is set to the Momentary mode. S - short L - long

Plug/PlugS

Controlled outlet with energy metering.

	Identifier	Value	Description
Command	C.SHELLY.<name>.relay.0	0/off	Off.
		1/on	On.
		toggle	Toggle.
State	SHELLY.<name>.relay.0	0-1	Relay state.
	SHELLY.<name>.relay.0.power	any number	Measured power [W].
	SHELLY.<name>.relay.0.energy	any number	Consumed energy [W/m]
	SHELLY.<name>.temperature	any number	Internal device temperature.
	SHELLY.<name>.overtemperature	0-1	Reports 1 when device has overheated, normally 0.
	SHELLY.<name>.overpower_value	any number	Reports the value in Watts, on which an overpower condition is detected.
Event	**E.**SHELLY.<name>.<rest_of_identifier>	See **State**	Base module emits events for changes of state of all parameters described in the State section.

Dimmer 1/2

Module with dimmable output for lighting control with a single binary input.

	Identifier	Value	Description
Command	C.SHELLY.<name>.light.0	0-100	Set brigthness level.
		on	On.
		off	Off.
		toggle	Toggle.
		<command>;ramp:<ramp>	All the above commands accept also the ramp parameter. Ramp determines time of passing from current brightness to target brightness. Maximum ramp is 5 seconds.
State	SHELLY.<name>.light.0	0-100	Current brightness.
	SHELLY.<name>.input.0	0-1	Binary input state.
	SHELLY.<name>.longpush.0	0-1	Information about long push.
	SHELLY.<name>.light.0.power	any number	Measured power [W].
	SHELLY.<name>.light.0.energy	any number	Consumed energy [W/m]
	SHELLY.<name>.temperature	any number	Internal device temperature.
	SHELLY.<name>.overtemperature	0-1	Reports 1 when device has overheated, normally 0.
	SHELLY.<name>.overload	0-1	Reports 1 when device has overloaded output, normally 0.
	SHELLY.<name>.loaderror	0-1	Reports 1 when device detects output fault, normally 0.
	SHELLY.<name>.light.0.overpower_value	any number	Reports the value in Watts, on which an overpower condition is detected.
Event	**E**.SHELLY.<name>.<rest_of_identifier>	See **State**	Base module emits events for changes of state of all parameters described in the State section.
	E.SHELLY.<name>.input_event.0	S/L	The event is emitted when the input state changes and only when the input is set to the Momentary mode. S - short L - long

- C.SHELLY.bedroom.light.0=100;ramp:3
  Turn on light to 100% and use a 3 seconds ramp.

RGBW2 (only White mode)

Four-channel LED driver (12/24V). Each channel can be controlled independently. Module is also equiped with a single binary input.

	Identifier	Value	Description
Command	C.SHELLY.<name>.white.<0-3>	0-100	Set given brightness.
		on	On.
		off	Off.
		toggle	Toggle.
		<command>;ramp:<ramp>	All the above commands accept also the ramp parameter. Ramp determines time of passing from current brightness to target brightness. Maximum ramp is 5 seconds.
State	SHELLY.<name>.white.<0-3>	0-100	Current brightness.
	SHELLY.<name>.input.0	0-1	Binary input state.
	SHELLY.<name>.longpush.0	0-1	Information about long push.
	SHELLY.<name>.white.<0-3>.power	any number	Measured power [W].
	SHELLY.<name>.white.<0-3>.energy	any number	Consumed energy [W/m]
	SHELLY.<name>.temperature	any number	Internal device temperature.
	SHELLY.<name>.overtemperature	0-1	Reports 1 when device has overheated, normally 0.
	SHELLY.<name>.white.<0-3>.overpower	0-1	Reports 1 when device has overloaded output, normally 0.
	SHELLY.<name>.loaderror	0-1	Reports 1 when device detects output fault, normally 0.
Event	E.SHELLY.<name>.<rest_of_identifier>	See **State**	Reports the value in Watts, on which an overpower condition is detected.
	E.SHELLY.<name>.input_event.0	S/L	Base module emits events for changes of state of all parameters described in the State section.

Uni

Module with two binary inputs and two potential-free outputs.

	Identifier	Value	Description
Command	C.SHELLY.<name>.relay.<0-1>	0/off	Off.
		1/on	On.
		toggle	Toggle.
State	SHELLY.<name>.relay.<0-1>	0-1	Relay state
	SHELLY.<name>.input.<0-1>	0-1	Binary input state
	SHELLY.<name>.longpush.<0-1>	0-1	Information about long push.
	SHELLY.<name>.adc.0	according to the transmitter range	Voltage measured by the built-in analog-digital converter.
Event	**E.**SHELLY.<name>.<rest_of_identifier>	See **State**	Base module emits events for changes of state of all parameters described in the State section.
	E.SHELLY.<name>.input_event.<0-1>	S/L	The event is emitted when the input state changes and only when the input is set to the Momentary mode. S - short L - long

TRV

Smart thermostatic radiator valve.

	Identifier	Value	Description
Command	C.SHELLY.<name>.thermostat.0.schedule	0-1	Enable/disable schedule.
	C.SHELLY.<name>.thermostat.0.accelerated_heating	0-1	Enable/disable accelerated heating mode.
	C.SHELLY.<name>.thermostat.0.schedule_profile	1-5	Enables given heating schedule profile.
	C.SHELLY.<name>.thermostat.0.target	4-31	Sets target temperature.
	C.SHELLY.<name>.thermostat.0.ext_t	any number	Command used to send room temperature value from external sensor to Shelly TRV.
	C.SHELLY.<name>.thermostat.0.value_min_percent	0-100	Minimal valve value.
	C.SHELLY.<name>.thermostat.0.boost_minutes	0-1440	Time of operation in accelerated heating mode. At the end of this period, the heating will return to normal mode.
State	SHELLY.<name>.thermostat.battery	0-100	Battery state.
	SHELLY.<name>.thermostat.target	4-31	Target temperature.
	SHELLY.<name>.thermostat.enabled	0-1	1 - If the automatic valve control is enabled.
	SHELLY.<name>.thermostat.sensor	according to the sensor range	Room temperature.
	SHELLY.<name>.thermostat.sensor.isvalid	0-1	Whether the temperature sensor is operating properly.
	SHELLY.<name>.thermostat.pos	0-100	Position of the valve, -1 if not calibrated.
	SHELLY.<name>.thermostat.schedule	0-1	If schedule is enabled/disabled.
	SHELLY.<name>.thermostat.profile	1-5	Active heating schedule.
Event	**E**.SHELLY.<name>.<rest_of_identifier>	See **State**	Base module emits events for changes of state of all parameters described in the State section.

Vintage

Dimmable LED bulb

	Identifier	Value	Description
Command	C.SHELLY.<name>.light.0	0-100	Set brightness.
		on	On.
		off	Off.
		toggle	Toggle.
		<command>;ramp:<rampa>	All the above commands accept also the ramp parameter. Ramp determines time of passing from current brightness to target brightness. Maximum ramp is 5 seconds.
State	SHELLY.<name>.light.0	0-100	Actual brightness.
	SHELLY.<name>.light.0.power	any number	Measured power [W].
	SHELLY.<name>.light.0.energy	any number	Consumed energy [W/m]
Event	**E**.SHELLY.<name>.<rest_of_identifier>	See **State**	Base module emits events for changes of state of all parameters described in the State section.

H&T

Wireless temperature and humidity sensor.

	Identifier	Value	Description
State	SHELLY.<name>.sensor.temperature	according to the sensor range	Measured temperature.
	SHELLY.<name>.sensor.humidity	0-100	Relative humidity.
	SHELLY.<name>.sensor.battery	0-100	Battery state.
	SHELLY.<name>.sensor.act_reasons	battery/button/periodic/poweron/sensor/alarm	Reason which woke up the device.
	SHELLY.<name>.sensor.ext_power	0-1	1 - if the device is usb powered
Event	**E**.SHELLY.<name>.<rest_of_identifier>	See **State**	Base module emits events for changes of state of all parameters described in the State section.

Smoke

Wireless smoke detector.

	Identifier	Value	Description
State	SHELLY.<name>.sensor.temperature	according to the transmitter range	Measured temperature.
	SHELLY.<name>.sensor.smoke	0-1	1 - if smoke is detected.
	SHELLY.<name>.sensor.battery	0-100	Battery state.
Event	**E**.SHELLY.<name>.<rest_of_identifier>	See State	Base module emits events for changes of state of all parameters described in the State section.

Flood

Wireless flood detector.

	Identifier	Value	Description
State	SHELLY.<name>.sensor.temperature	according to the transmitter range	Measured temperature.
	SHELLY.<name>.sensor.flood	0-1	1 - if flood is detected.
	SHELLY.<name>.sensor.battery	0-100	Battery state.
	SHELLY.<name>.sensor.act_reasons	battery/button/periodic/poweron/sensor/alarm	Reason which woke up the device.
Event	**E**.SHELLY.<name>.<rest_of_identifier>	See **State**	Base module emits events for changes of state of all parameters described in the State section.

Door/Window 1/2

WiFi-connected door and window sensor with luminance measurement.

	Identifier	Value	Description
State	SHELLY.<name>.sensor.state	0-1	Door/window state.
	SHELLY.<name>.sensor.tilt	0-180	Tilt angle.
	SHELLY.<name>.sensor.vibration	0-1	1 - if vibration is detected.
	SHELLY.<name>.sensor.act_reasons	battery/button/periodic/poweron/sensor/movement/temperature/light	Reason which woke up the device.
	SHELLY.<name>.sensor.lux	according to the transmitter range	Luminance value [lux].
	SHELLY.<name>.sensor.battery	0-100	Battery state.
	SHELLY.<name>.sensor.temperature	according to the transmitter range	Measured temperature.
Event	**E**.SHELLY.<name>.<rest_of_identifier>	See **State**	Base module emits events for changes of state of all parameters described in the State section.

Motion

Wireless motion detector with luminance measurement.

	Identifier	Value	Description
State	SHELLY.<name>.motion	0-1	1 - if motion is detected.
	SHELLY.<name>.active	0-1	1 - if motion detection is enabled.
	SHELLY.<name>.vibration	0-1	1 - if vibration is detected.
	SHELLY.<name>.lux	according to the transmitter range	Luminance value [lux].
	SHELLY.<name>.battery	0-100	Battery state.
Event	**E**.SHELLY.<name>.<rest_of_identifier>	See State	Base module emits events for changes of state of all parameters described in the State section.

Sense

Universal room sensor with IR transmitter to control air conditioners, TV sets, audio devices etc. Sending IR codes is not available over MQTT, so this function is not available in Base module. However it's available using Shelly app, HTTP API or using Shelly web UI.

	Identifier	Value	Description
State	SHELLY.<name>.sensor.motion	0-1	1 - if motion is detected.
	SHELLY.<name>.sensor.charger	0-1	1 - if the device is powered from external source.
	SHELLY.<name>.sensor.temperature	according to the transmitter range	Room temperature.
	SHELLY.<name>.sensor.lux	according to the transmitter range	Luminance value [lux].
	SHELLY.<name>.sensor.battery	0-100	Battery state.
	SHELLY.<name>.sensor.humidity	0-100	Relative humidity [%].
Event	**E**.SHELLY.<name>.<rest_of_identifier>	See **State**	Base module emits events for changes of state of all parameters described in the State section.

Button1

A WiFi button which can detect and announce 4 types of button presses - short, 2x short, 3x short, long. As an option it can be connectted via USB for constant power supply and Wi-Fi connection. Response time of less than 2sec. on battery and 100 ms on USB power.

	Identifier	Value	Description
State	`SHELLY.<name>.sensor.battery`	`0-100`	Battery state.
	`SHELLY.<name>.sensor.charger`	`0-1`	1 - if the device is powered from USB.
Event	**`E`**`.SHELLY.<name>.<rest_of_identifier>`	`See` **`State`**	Base module emits events for changes of state of all parameters described in the State section.
	`E``.SHELLY.<name>.input_event.0`	`S/SS/SSS/L`	The event is emitted when the button is pressed: S - shor SS- 2x short SSS - 3x short L - long

i3

Module with three binary inputs. Each input can detect six different types of actions.

	Identifier	Value	Description
State	`SHELLY.<name>.input.<0-2>`	`0-1`	State input.
	`SHELLY.<name>.temperature_status`	`normal/ high/ veryhigh`	Temperature status.
Event	**`E`**`.SHELLY.<name>.<rest_of_identifier>`	`See` **`State`**	Base module emits events for changes of state of all parameters described in the State section.
	`E``.SHELLY.<name>.input_event.<0-2>`	`S/L/SS/SSS/ SL/LS`	The event is emitted when the input state changes and only when the input is set to the `Momentary` mode. S - shor SS- 2x short SSS - 3x short L - long SL - short-long sequence LS - long-short sequence

Gas

LPG or CNG gas detector.

	Identifier	Value	Description
Command	C.SHELLY.<name>.valve.0	open	Open valve.
		close	Close valve
	C.SHELLY.<name>.sensor.0	mute	Mute alalrm.
		unmute	Unmute alarm.
		test	Start the self-test procedure.
State	SHELLY.<name>.sensor.operation	unknown/warmup/normal/fault	Detector state: unknown - Unknown state. warmup - Detector is warming up. normal - Detector in normal state.. fault - Detector has a fault.
	SHELLY.<name>.sensor.gas	unknown/none/mild/heavy/test	Alarm state:: unknown - Alarm state is unknown. none - No alarm. mild - Mild gas leak. heavy - Heavy gas leak. test - Issued after a successful self-test.
	SHELLY.<name>.sensor.self_test	not_completed/completed/running/pending	State of the self-test procedure: not_completed - Self-test not completed. completed - Self-test completed. running - Self-test is running. pending - Self-test scheduled to run.
	SHELLY.<name>.sensor.concentration	0-65535	Gas concentration in parts per million. -1 when fault.
	SHELLY.<name>.sensor.state	unknown/closed/opened/not_connected/failure/closing/opening/checking	Valve state: unknown - State unknown. closed - Valve is closed. opened - Valve is opened. not_connected - Valve is not connected. failure - Valve failure detected. closing - Valve is in the process of closing. opening - Valve is in the process of opening. checking - Valve state is being checked.
Event	E.SHELLY.<name>.<rest_of_identifier>	See **State**	Base module emits events for changes of state of all parameters described in the State section.

EM

Shelly EM measures electrical consumption on two channels (shared phase) and allows for controlling one low-power external appliance.

	Identifier	Value	Description
Command	C.SHELLY.<name>.relay.0	on	Turn on output.
		off	Turn off output.
		toggle	Toggle output.
	C.SHELLY.<name>.emeter.0	reset	Reset all data.
		clear_t	Reset consumed energy meter.
		clear_r	Reset returned energy meter
State	SHELLY.<name>.emeter.0.energy	any number	Consumed energy [W/min].
	SHELLY.<name>.emeter.0.returned_energy	any number	Returned energy [W/min].
	SHELLY.<name>.emeter.0.total	any number	Total consumed energy counter [Wh].
	SHELLY.<name>.emeter.0.total_returned	any number	Total returned energy counter [Wh].
	SHELLY.<name>.emeter.0.power	any number	Active power [W].
	SHELLY.<name>.emeter.0.reactive_power	any number	Reactive power [W].
	SHELLY.<name>.emeter.0.voltage	any number	Voltage [V].
	SHELLY.<name>.relay.0	0-1	Output state.
Event	E.SHELLY.<name>.<rest_of_identifier>	See **State**	Base module emits events for changes of state of all parameters described in the State section.

3EM

Shelly 3EM is a professional 3-phase energy meter.

	Identifier	Value	Description
Command	C.SHELLY.<name>.relay.0	on	Turn on output.
		off	Turn off output.
		toggle	Toggle output.
	C.SHELLY.<name>.emeter.<0-2>	reset	Reset all data.
		clear_t	Reset consumed energy meter.
		clear_r	Reset returned energy meter
State	SHELLY.<name>.emeter.<0-2>.energy	any number	Consumed energy [W/min].
	SHELLY.<name>.emeter.<0-2>.returned_energy	any number	Returned energy [W/min].
	SHELLY.<name>.emeter.<0-2>.total	any number	Total consumed energy counter [Wh].
	SHELLY.<name>.emeter.<0-2>.total_returned	any number	Total returned energy counter [Wh].
	SHELLY.<name>.emeter.<0-2>.power	any number	Active power [W].
	SHELLY.<name>.emeter.<0-2>.reactive_power	any number	Reactive power [W].
	SHELLY.<name>.emeter.<0-2>.voltage	any number	Voltage [V].
	SHELLY.<name>.emeter.<0-2>.pf	0-1	Power factor.
	SHELLY.<name>.relay.0	0-1	Output state.
Event	E.SHELLY.<name>.<rest_of_identifier>	See State	Base module emits events for changes of state of all parameters described in the State section.

Generation 2

The "Plus" Series

The **Plus** series consists of 2nd generation modules intended for installations in electrical boxes.

Plus 1/1 PM

Actor module with one relay and one binary input. Shelly Plus 1PM also includes energy metering.

	Identifier	Value	Description
Command	`C.SHELLY.<name>.relay.0`	`0/off`	Off.
		`1/on`	On.
		`toggle`	Toggle.
		`on/off/ 1/0;flip:xx`	Toggles relay for a specified amount of time. xx - command duration, it can be a fraction value. Command examples below the table.
State	`SHELLY.<name>.relay.0`	`0-1`	Relay state.
	`SHELLY.<name>.input.0`	`0-1`	Binary input state.
	`SHELLY.<name>.relay.0.errors`	`overtemp/ overpower/ overvoltage`	Information about error conditions occurred.
	`SHELLY.<name>.relay.0.power` (only PM version)	`any number`	Measured power [W].
	`SHELLY.<name>.relay.0.energy` (only PM version)	`any number`	Consumed energy [W/h]
	`SHELLY.<name>.relay.0.temperature` (only PM version)	`any number`	Internal device temperature.
	`SHELLY.<name>.relay.0.voltage` (only PM version)	`any number`	Voltage [V].
	`SHELLY.<name>.relay.0.current` (only PM version)	`any number`	Current [A].
	`SHELLY.<name>.relay.0.pf` (only PM version)	`0-1`	Power factor.
Event	**E.**`SHELLY.<name>.<rest_of_identifier>`	See **State**	Base module emits events for changes of state of all parameters described in the State section.
	E.`SHELLY.<name>.input_event.0`	`S/SS/L`	The event is emitted when the input state changes and only when the input is set to the `Button` mode. S - short SS - 2x short L - long
	E.`SHELLY.<name>.longpush.0`	`0-1`	Event emitted for long pushes, only when the input is set to the `Button` mode.

- `C.SHELLY.test.relay.0=on;flip:0.1`
  Relay will be turned on for 100ms.
- `C.SHELLY.test.relay.0=0;flip:2`
  Relay will be turned on for 2 seconds.

Plus 2 PM

Module contains two relays with energy metering and two binary inputs. Shelly Plus 2PM can operate in two distinct modes: Relay and Roller Shutter.

Roller Shutter Mode

	Identifier	Value	Description
Command	`C.SHELLY.<name>.roller.0`	`up`	Upward movement.
		`down`	Downward movement.
		`stop`	Stop.
		`rc`	Roller calibraion.
		`0-100`	Moves roller to a given position. 100 - fully opened 0 - fully closed
		`rel:x`	Change target position relatively to the current pozition. x - Relative position change in % in range: -100..100 Command uses the following formula: `target_pos = current_pos + x` If the target position is beyond the range, then the min or max value is set.
		`up;duration:x`	Upward movement for a given period `x`
		`down;duration:x`	Downward movement for a given period `x`

State	SHELLY.<name>.roller.0	up/down/stop	Current motor state.
	SHELLY.<name>.roller.0.pos	0-100	Current position. Available only after motor callibration. -1 means invalid position or no calibration.
	SHELLY.<name>.roller.0.target	0-100	Target position.
	SHELLY.<name>.roller.0.state	open/closed/opening/closing/stopped/calibrating	State information: open - fully opened; closed - fully closed; opening - actively opening; closing - actively closing; stopped - motor stopped in between fully opened and fully closed; calibrating - calibration in process;
	SHELLY.<name>.roller.0.power	any number	Measured power [W].
	SHELLY.<name>.roller.0.energy	any number	Consumed energy [W/h]
	SHELLY.<name>.roller.0.temperature	any number	Internal device temperature.
	SHELLY.<name>.roller.0.voltage	any number	Voltage [V].
	SHELLY.<name>.roller.0.pf	0-1	Power factor.
	SHELLY.<name>.roller.0.current	any number	Current [A].
	SHELLY.<name>.roller.0.positioning	0-1	0 - motor not calibrated; 1 - motor calibrated and positioning is possible.
	SHELLY.<name>.roller.0.errors	wg dokumentacji urządzenia	Information about error conditions occurred.
	SHELLY.<name>.input.<0-1>	0-1	Binary input state.
Event	**E**.SHELLY.<name>.<rest_of_identifier>	See State	Base module emits events for changes of state of all parameters described in the State section.
	E.SHELLY.<name>.longpush.0	0-1	Event emitted for long pushes, only when the input is set to the Button mode.
	E.SHELLY.<name>.input_event.0	S/SS/L	The event is emitted when the input state changes and only when the input is set to the Button mode. S - short SS - 2x short L - long

- C.SHELLY.test.roller.0=rel:30
  Move motor by 30% to the fully opened direction.
- C.SHELLY.test.roller.0=rel:-50
  Move motor by 50% to the fully closed direction.

Relay Mode

	Identifier	Value	Description
Command	C.SHELLY.<name>.relay.<0-1>	0/off	Off.
		1/on	On.
		toggle	Toggle.
		on/off/ 1/0;flip:xx	Toggles relay for a specified amount of time. xx - command duration, it can be a fraction value. Command examples below the table.
State	SHELLY.<name>.relay.<0-1>	0-1	Relay state
	SHELLY.<name>.input.<0-1>	0-1	Blnary input state.
	SHELLY.<name>.relay.<0-1>.errors	overtemp/ overpower/ overvoltage	Information about error conditions occurred.
	SHELLY.<name>.relay.<0-1>.power	any number	Measured power [W].
	SHELLY.<name>.relay.<0-1>.energy	any number	Consumed energy [W/h]
	SHELLY.<name>.relay.<0-1>.temperature	any number	Internal device temperature.
	SHELLY.<name>.relay.<0-1>.voltage	any number	Voltage [V].
	SHELLY.<name>.relay.<0-1>.current	any number	Current [A].
	SHELLY.<name>.relay.<0-1>.pf	0-1	Power factor.
Event	**E**.SHELLY.<name>.<rest_of_identifier>	See **State**	Base module emits events for changes of state of all parameters described in the State section.
	E.SHELLY.<name>.input_event.<0-1>	S/SS/L	The event is emitted when the input state changes and only when the input is set to the Button mode. S - short SS - 2x short L - long
	E.SHELLY.<name>.longpush.0	0-1	Event emitted for long pushes, only when the input is set to the Button mode.

- C.SHELLY.test.relay.0=on;flip:0.1
  Relay will be turned on for 100ms.
- C.SHELLY.test.relay.0=0;flip:2
  Relay will be turned on for 2 seconds.

I4

Module with four binary inputs.

	Identifier	Value	Description
State	`SHELLY.<name>.input.<0-3>`	`0-1`	Binary input state.
Event	**E.**`SHELLY.<name>.<rest_of_identifier>`	`See State`	Base module emits events for changes of state of all parameters described in the State section.
	E.`SHELLY.<name>.input_event.<0-3>`	`S/SS/L`	The event is emitted when the input state changes and only when the input is set to the `Button` mode. S - short SS - 2x short L - long
	E.`SHELLY.<name>.longpush.<0-3>`	`0-1`	Event emitted for long pushes, only when the input is set to the `Button` mode.

The "Pro" Series

The **Pro** series modules are designed for installation on DIN-rail in electrical cabinets. Modules are equiped with LAN, WiFi and Bluetooth connectivity.

Pro 1/ Pro 1PM

Actor module with one relay and two binary inputs. Shelly Plus 1PM also includes energy metering.

	Identifier	Value	Description
Command	`C.SHELLY.<name>.relay.0`	`0/off`	Off.
		`1/on`	On.
		`toggle`	Toggle.
		`on/off/ 1/0;flip:xx`	Toggles relay for a specified amount of time. xx - command duration, it can be a fraction value. Command examples below the table.
State	`SHELLY.<name>.relay.0`	`0-1`	Relay state.
	`SHELLY.<name>.input.<0-1>`	`0-1`	Binary input state.
	`SHELLY.<name>.relay.0.errors`	`overtemp/ overpower/ overvoltage`	Information about error conditions occurred.
	`SHELLY.<name>.relay.0.power` (only PM version)	`any number`	Measured power [W].
	`SHELLY.<name>.relay.0.energy` (only PM version)	`any number`	Consumed energy [W/h]
	`SHELLY.<name>.relay.0.temperature` (only PM version)	`any number`	Internal device temperature.
	`SHELLY.<name>.relay.0.voltage` (only PM version)	`any number`	Voltage [V].
	`SHELLY.<name>.relay.0.current` (only PM version)	`any number`	Current [A].
	`SHELLY.<name>.relay.0.pf` (only PM version)	`0-1`	Power factor.
Event	**E**.`SHELLY.<name>.<rest_of_identifier>`	`See State`	Base module emits events for changes of state of all parameters described in the State section.
	E.`SHELLY.<name>.input_event.<0-1>`	`S/SS/L`	The event is emitted when the input state changes and only when the input is set to the `Button` mode. S - short SS - 2x short L - long
	E.`SHELLY.<name>.longpush.<0-1>`	`0-1`	Event emitted for long pushes, only when the input is set to the `Button` mode.

- `C.SHELLY.test.relay.0=on;flip:0.1`
  Relay will be turned on for 100ms.
- `C.SHELLY.test.relay.0=0;flip:2`
  Relay will be turned on for 2 seconds.

Pro 2

Actor module with two relays and two binary inputs. Shelly Plus 1PM also includes energy metering.

	Identifier	Value	Description
Command	`C.SHELLY.<name>.relay.<0-1>`	`0/off`	Off.
		`1/on`	On.
		`toggle`	Toggle.
		`on/off/ 1/0;flip:xx`	Toggles relay for a specified amount of time. xx - command duration, it can be a fraction value.
State	`SHELLY.<name>.relay.<0-1>`	`0-1`	Relay state.
	`SHELLY.<name>.input.<0-1>`	`0-1`	Binary input state.
	`SHELLY.<name>.relay.<0-1>.errors`	`overtemp/ overpower/ overvoltage`	Information about error conditions occurred.
	`SHELLY.<name>.relay.<0-1>.power` (only PM version)	`any number`	Measured power [W].
	`SHELLY.<name>.relay.<0-1>.energy` (only PM version)	`any number`	Consumed energy [W/h]
	`SHELLY.<name>.relay.<0-1>.tempera-ture` (only PM version)	`any number`	Internal device temperature.
	`SHELLY.<name>.relay.<0-1>.voltage` (only PM version)	`any number`	Voltage [V].
	`SHELLY.<name>.relay.<0-1>.current` (only PM version)	`any number`	Current [A].
	`SHELLY.<name>.relay.<0-1>.pf` (only PM version)	`0-1`	Power factor.
Event	**E**.`SHELLY.<name>.<rest_of_identi-fier>`	`See State`	Base module emits events for changes of state of all parameters described in the State section.
	E.`SHELLY.<name>.input_event.<0-1>`	`S/SS/L`	The event is emitted when the input state changes and only when the input is set to the `Button` mode. S - short SS - 2x short L - long
	E.`SHELLY.<name>.longpush.<0-1>`	`0-1`	Event emitted for long pushes, only when the input is set to the `Button` mode.

Pro 2 PM

Din-mounted module with two relays with energy metering and two binary inputs. Module can operate in two distinct modes: Relay and Roller Shutter.

Commands, state parameters and events are identical as for Plus 2 PM module.

Pro 4 PM

Din-mounted module with four relays with energy metering and four binary inputs.

Commands, state parameters and events are identical as for Plus 1/1 PM module, with the difference that the numbering range of relays and inputs is from 0-3.