SPA-0140 SynLink Smart IO Hub

Digital IO and Output Relay Hub with 12V Power output

The SPA-0140 SyLink Smart IO Hub complements the SynLink Smart PDU, offering advanced control and automation capabilities through a common RJ45 cable. The front panel features a user switch to allow immediate shut off of all output relays. Interacting with the SynLink PDU, the IO Hub enables process automation via power measurements, scheduling, digital IO changes, and triggers. Its integrated API supports seamless control through custom scripts and programs. This hub is valuable in diverse settings like labs, datacenters, mission-critical installations, and AV environments, enhancing equipment management, reducing costs, and enabling environmental monitoring.

Digital Input Example Sensors

- Contact Sensors
- Water Sensors
- Motion Sensors
- Photoelectric sensors
- Smoke detectors
- Occupancy sensors
- Air flow

Output Relay Example Devices

- Buttons
- Actuators
- Displays and lights
- Sirens and horns
- Sprinklers
- Solenoid valves and pumps

Key Features

- Rugged small enclosure (9" x 1.75" x 5.8")
- 6 individual relay outputs with NC-NO and common connections
- 6 digital inputs
- 12 VDC power input with controllable VDC Output
- User switch for batch control of relay outputs
- Control with any SynLink PDU via Rj45 Ethernet Cable
- Automation and web interface capabilities with SynLink PDU
- Supports 3rd party sensors and actuators
- 1U Rack mount option (brackets sold separately)

Included in Package

- 12V/5A Power Supply
- Multi-purpose mounting bracket set
- 8 foot RJ45 Ethernet Cable (For sensor ports)

Front View

Back View

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System Specifications

System Power

Input Voltage	12 VDC

Digital Inputs

Number of Ports	6 x digital inputs 1 x VDC High 1 x Common
Input Type	Terminal block with screws
Digital Input 'HI/COM' Voltage Range	5-32 VDC

Relay Outputs

Number of Ports	6 x relay outputs
Relay Output Type	Terminal block with screws (per output - NC, NO, and Common)
Relay Output Max Switching Voltage	125VAC/24VDC
Relay Output Max Current	3A (AC/DC)

Controllable 12VDC Output

VDC Output Connector Type	Terminal block with screws (+VDC and -GND)
Number of Ports	1 x VDC output
Output Voltage	12 VDC
Output Current	4 Amps
Output Voltage Control	ON/OFF control via SynLink PDU

Physical

Dimensions	9" x 1.75" x 5.8"
Form Factor	Compact, 1U Rackmountable with optional brackets
Operating Ambient Air Temp	-5°C to 60°C
Storage Temperature Range	-25°C to 65°C
Relative Humidity	5% to 95% non-condensing
Maximum Operating Elevation	10,000 ft (3000 m)

Smart PDU Communications & Control

Communications	RJ45 Ethernet cable to SynLink Sensor Port
Control	Web Interface, API, SSH, Telnet, SNMP, DHCP, event-action automation, and more through SynLink PDU connection

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Front View

Panel Description

Power LED

- Solid ON (red): 12V input power supply is on
- OFF

VDC Output LED

- Solid ON (red): 'VDC Output' port is supplying 12V
- OFF: 'VDC Output' port is disabled

Status LED

- Blinking ON (red): normal operation and good connection to the SynLInk PDU Controller
- OFF: No connection to SynLink PDU Controller

Reset Button

- Push to reset

Digital Input LEDs (1-6)

- Solid ON (green): port detects logic HIGH
- OFF: port detects logic LOW

Relay Output LEDs (1-6)

- Solid ON (green): The relay is in the Normally Closed (NC) position, with the Common (COM) terminal making contact with the Normally Closed terminal
- OFF: The relay is in the Normally Open (NO) position, with the Common (COM) terminal making contact with the Normally Open terminal

User Switch

- ON: All relays are switched to the Normally Closed (NC) position, with the Common (COM) terminal making contact with the Normally Closed terminal
- OFF: All relays are switched to the Normally Open (NO) position, with the Common (COM) terminal making contact with the the Normally Open terminal. Any attempts to turn ON the relays using the web interface is ignored by the HUB while the User Switch is OFF.

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Back View

Port Description

Power

12V power supply input. Use the power supply included.

VDC Output

Current limited 12V power supply output. Output current limited to 4A.

Digital Input

6x optically isolated digital input ports with pull-up option to 'HI' (VDC). See example wiring diagram on Page 5. If the port is pulled up to 'HI', the HUB detects logic high. If the port is pulled down to COM/ground, the HUB detects logic low.

Relay Output

6x dry contact SPDT relay outputs. Each port can be individually controlled (open/closed) and programmed for automation on the SynLink controller interface. 'O' = Normally Open Relay Contact. 'M' = Common. 'C' = Normally Cosed Relay Contact.

Sensor Port

Interface between HUB and SynLink PDU Controller. Connect this port to a SynLink PDU's sensor port using a standard network cable (straight-through). An 8 foot network cable is included in the package.

Setup

Step 1

Reference the wiring examples for connecting sensors and actuators.

Step 2

Plug the HUB into the wall using the provided power brick.

Step 3

Using a standard network cable (straight-through), establish a connection from the Sensor Port of the HUB to any of the Sensor Ports on the SynLink PDU.

Step 4

Once connected, the SynLink PDU will promptly detect the HUB, making it instantly accessible for use.

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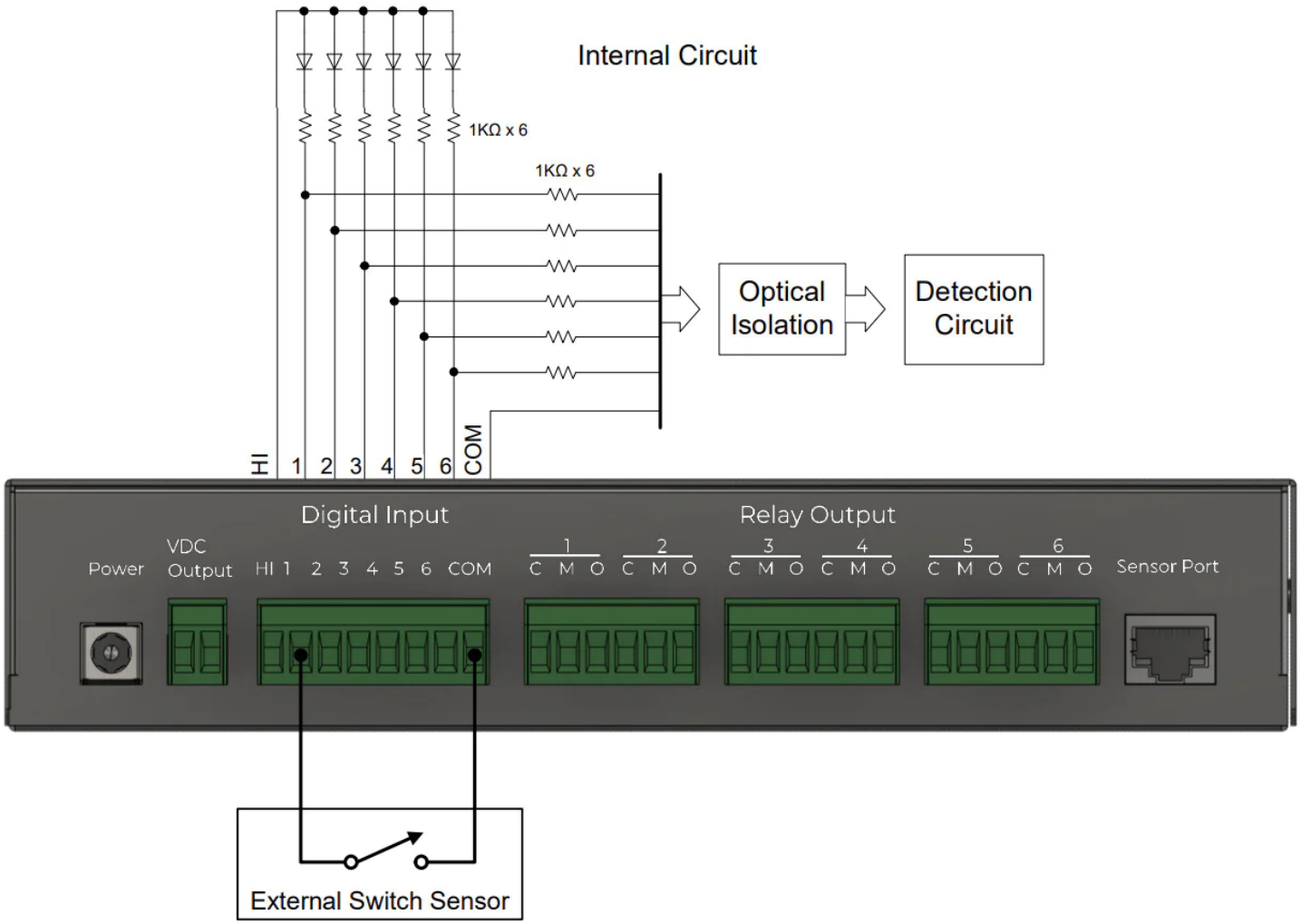
Wiring Examples

Digital Input Wiring Example

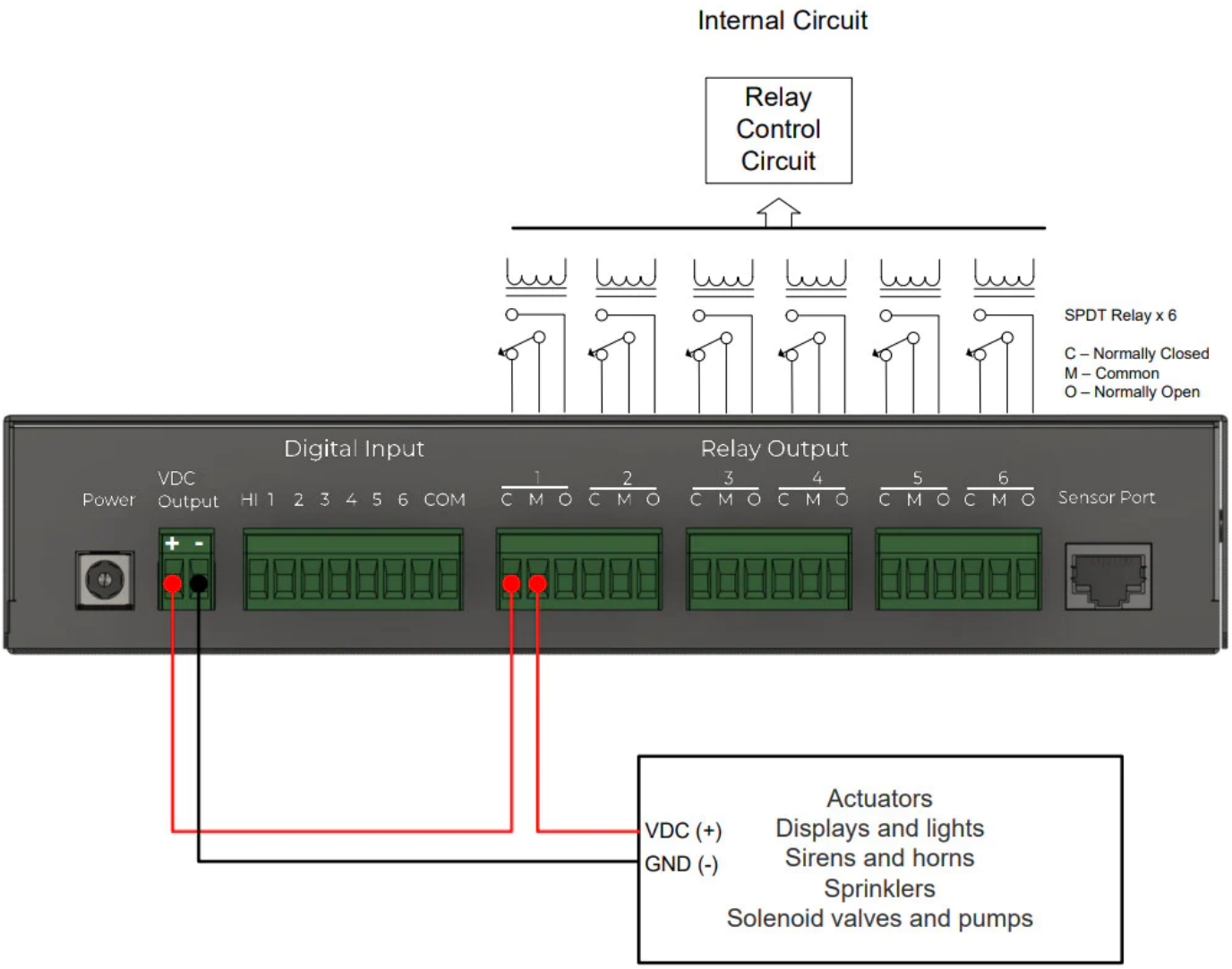
Wiring Example: A switch type sensor can be used to toggle the state of the Digital Input ports logic HIGH or logic LOW. The change in state can be used to trigger an alarm event. The sensor



Wiring Examples

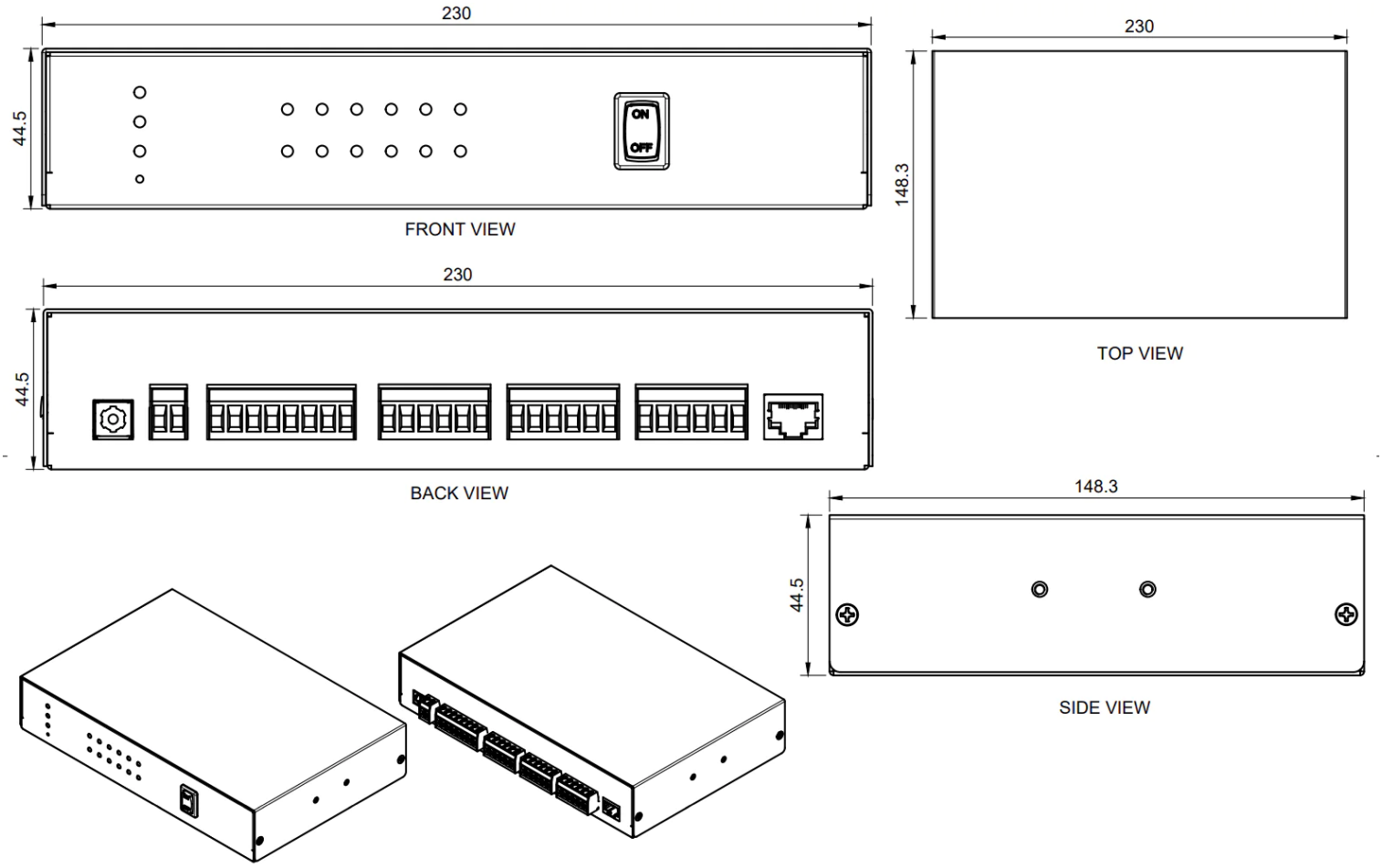
Relay Output Wiring Example

The relay output ports can be used to switch ON/OFF DC signals. Switch the VDC Output (12V/4A) or feed in external signals that need automated control. Scheduling and event-based automation can be configured on the SynLink management interface.



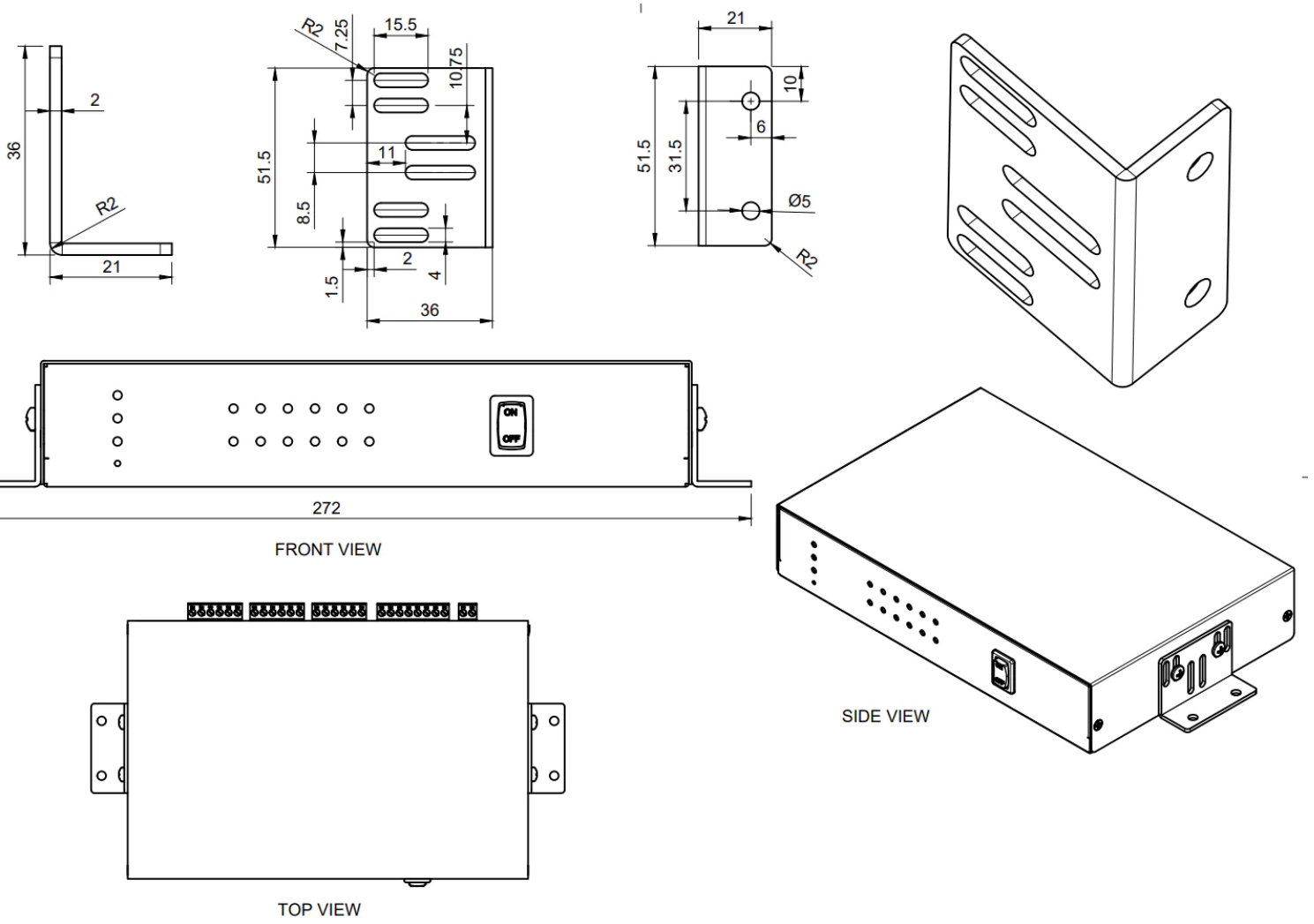
Mechanical Specification

SPA-0140 SynLink Smart IO Hub Dimensions



Mechanical Specification

SPT-0901-000 Optional accessory for mounting the SPA-0140



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