

DIN-Rail 16-Channel Relay Module

Multi-function relay module for lighting, curtain motor, fan-coil and valve control applications. Designed for cabinet installations, high channel density, local binding and integration-ready Ethernet / CAN-BUS workflows.



APX-1616-RL

G3 Series

SDDP Ready

16

Relay channels

16 A

Recommended channel load

20 A

Internal contact capability

750 A / 10 ms

Impulse withstand

INSTALLATION-READY HIGHLIGHTS

Binding / Direct Control

Local CAN device-to-channel binding for keypad and automation workflows.

API for Integrators

Ethernet command, status, configuration and diagnostics for approved integrations.

SDDP Discovery

Fast discovery and easier commissioning in compatible automation systems.

Manual Override

Per-channel local push buttons and status indicators for service and testing.

Web Configuration

Built-in web setup for IP settings, channels, diagnostics and firmware workflows.

SmartAPEX CAN-BUS

Connect wall devices, keypads, thermostats, inputs and other DIN-rail modules.

APPLICATIONS

Lighting control

Curtain motors

Fan-coil speeds

Valve control

PRODUCT POSITION

Not only a relay module - an integration-ready automation node.

The APX-1616-RL combines 16 relay outputs, manual override, per-channel feedback, Ethernet, CAN-BUS, SDDP and built-in web configuration into one DIN-rail platform.

16-channel density

Centralized control for lighting and load panels with per-channel status indicators and manual push-button override.

High in-rush withstand

Relay contacts are specified to withstand up to 750 A / 10 ms short-circuit impulse current. This is not a continuous load rating.

Binding engine

Local SmartAPEX CAN device-to-channel binding supports keypad-to-relay and automation scenarios where supported by firmware.

Integrator API

Ethernet communication, local status feedback and command control for approved integration workflows. Final endpoints depend on firmware

SDDP discovery

Simplifies discovery and commissioning for compatible automation systems and installer tools.

CAN-BUS expansion

Connect SmartAPEX wall devices, keypads, thermostats, sensors and other DIN-rail modules.

APPLICATION MAP

One module, multiple cabinet roles.

Lighting

Incandescent, halogen, ELV/MLV, fluorescent, CFL and LED loads within derating limits.

Curtain motors

Motorized curtains and blinds using relay-pair logic where required. Motor ratings require project validation.

Fan coil

Three-speed fan coil and valve control configurations.

Valve / DC loads

Electrical valves and selected DC load control subject to voltage/current derating.

SPECIFICATIONS

Technical product specifications.

Electrical ratings are separated between product-level module limits and internal contact capability.

Parameter	Specification
Model number	APX-1616-RL
Product category	DIN-Rail 16-channel relay module
Series	G3 Series, SDDP support, AC power supply
Supply voltage	100-240 VAC, 50/60 Hz
Power consumption	< 3 W
Control communication	Ethernet, CAN-BUS
Output channels	16 relay outputs
Output load rating	Recommended module output rating: 16 A resistive per channel @ 250 VAC. Internal relay contact capability: up to 20 A resistive @ 250 VAC. Total simultaneous load is limited by wiring, terminal rating, PCB thermal
High in-rush / impulse withstand	Relay contact short-circuit impulse withstand: up to 750 A for 10 ms. This value does not represent continuous current or guaranteed switching of a 750 A load.
Supported applications	Lighting loads, curtain motor control, fan-coil speed control and valve control within rated voltage/current limits.
Supported load types	Resistive loads and selected lighting drivers within rating. LED drivers, transformers, motors and DC loads require derating and project validation according to real load profile.
Operating temperature	-10 to 60 °C
Humidity	5% to 95% non-condensing
Weight	1 kg
Mechanical dimensions	Refer to final mechanical drawing / enclosure version.

Important rating note

Do not interpret 750 A / 10 ms as operating current or guaranteed switching current. It is an impulse withstand value.

The recommended published module output rating remains 16 A resistive per channel unless a higher product-level rating is validated by thermal and safety testing.

Total simultaneous load must be limited by installation wiring, terminal rating, PCB thermal design, enclosure temperature and upstream protection.

LED STATUS

Commissioning indicators.

LED	State	Meaning
LK	 Red	Ethernet not connected.
LK	 Green	Ethernet connected, acquiring DHCP IP.
LK	 Yellow	Ethernet connected, acquired DHCP IP, and connected to the host.
LK	 Blue	Ethernet connected, using STATIC IP.
LK	 Purple	Ethernet connected, using STATIC IP, and connected to the host.
D	 Activity	Indicates transmission and reception of messages over Ethernet or CAN-BUS.
PW	 Fast blinking red	Not connected to network.
PW	 Slow blinking red	Ethernet cable connected, obtaining IP address.
PW	 Very slow blinking red	Valid IP address and network connected.

PRG AND LOCAL FUNCTIONS

Push-button functions for commissioning and recovery.

SDDP Identify	Press and hold the PRG button for 4 seconds to initiate SDDP identification.
Factory Reset	Press and hold the PRG button for 12 seconds until the PW LED starts blinking fast. Release the button to reset the module to factory settings.
Manual Static IP	Press and hold Channel 16 push button for approximately 15 seconds. When PW blinks rapidly, release. The module restarts with IP address 192.168.1.150.

BINDING AND INTEGRATION

Designed for panels, integrators and real projects.

Use the module as an Ethernet-connected cabinet controller, a SmartAPEX CAN-BUS node, or a bridge between wall devices and relay outputs.

Binding / Direct Connection

Local SmartAPEX device-to-device control can bind compatible CAN devices to relay targets.

Typical use: keypad/input action -> relay channel or relay group with state feedback where supported.

Binding capacity and supported object types depend on firmware version.

API for integrators

Local API available for approved integrators.

Capabilities include channel control, status monitoring, configuration access, diagnostics and binding workflows where supported.

Final endpoint list and object coverage depend on firmware version.

IP configuration using the built-in web page

Browse to the module current IP address and open the configuration page.

Network settings can be configured for DHCP or static IP with the required IP, gateway and subnet parameters.

Web configuration may also expose channel configuration, scenes/schedules, firmware update and diagnostics depending on firmware version.

Supported protocols and interfaces

Ethernet / TCP-IP for web configuration, controller integration and API workflows.

CAN-BUS for SmartAPEX local devices and DIN-rail module networking.

SDDP for device discovery in compatible automation ecosystems.

TECHNICAL RATING NOTES

Recommended product-facing wording.

The datasheet avoids internal component part numbers and focuses on complete product ratings and validated installation limits.

Use this wording	Recommended module output rating: 16 A resistive per channel @ 250 VAC.
Use this wording	Internal relay contact capability: up to 20 A resistive @ 250 VAC.
Use this wording	Relay contact short-circuit impulse withstand: up to 750 A for 10 ms. This value does not represent continuous current or guaranteed switching of a 750 A load.
Avoid this wording	Do not advertise 750 A as operating load current or guaranteed C-load switching current.
Avoid this wording	Do not publish horsepower ratings unless the complete module has been validated for that motor load rating.

Publication note

Internal component part numbers are intentionally omitted from this product datasheet.

Engineering, certification and manufacturing documentation can keep the internal part details separately.

For customer-facing material, keep the distinction between internal contact capability, module output rating and impulse withstand capability.

SmartAPEX Systems
www.smartapex.es