

19 SERIES



NEW

Override & Status indicating modules 1-5-16 A

FINDER 19 SERIES has been extended with new modules ideally suited for use in conjunction with Building Management Systems (BMS), Direct Digital Controllers (DDC), or in combination with PLC's.

These modules are used as an interface between the BMS, DDC, PLC and the connected equipment.

Override control modules can override the BMS, DDC or PLC controller and permit the equipment to be forced into the desired operational status. In the "Automatic" position, signals from the BMS, DDC or PLC-system will be transferred, unchanged, to the equipment. But, in the "Hand" position it is possible to force the equipment to the desired status, which is indicated by an LED (or LEDs for type 19.50) on the module's fascia.

Status Indicating modules are LED indicating modules which can show the status of a BMS/DDC/PLC input or output, but where the colour of the LED has been pre-set to match the importance or urgency of the signal. Presetting the colour to Red, Green or Blue is by a dip-switch on the rear face of the module, before mounting. An output CO or NC contact, following the input to the module, is provided for further control or status feedback.

There are 7 different types of module available:

Status indicating modules

- Type 19.31, 1-channel status indicating module
- Type 19.32, 2-channel status indicating module

Override control modules

- Type 19.21, Auto/Off/On output module
- Type 19.41, Override module - Auto/Off/Hand
- Type 19.42, Override module - Auto/Off/Low/High

Analogue Override control module

- Type 19.50, Analogue output module (0...10) V

Power relay module

- Type 19.91, Power module for high current inrush loads

Benefits of the Override & Status indicating modules product line:

- Very flexible due to the various possibilities of combination
- Clear indication of the signal or equipment status
- Easy to operate selection switches and potentiometers
- Feedback contact; signals when switch is not in "Auto" position.
- Compact housing: 11.2 mm, 17.5 or 35 mm
- Uniform unit depth
- Space saving, compact design
- 35 mm rail mounting
- Full width marker tags available for easy text labeling

Features

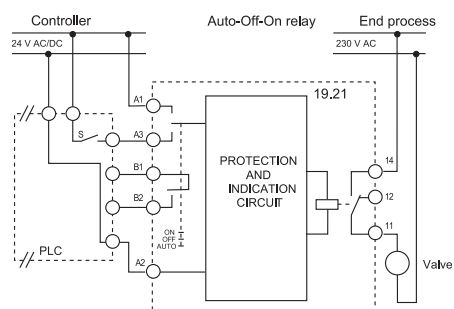
Auto/Off/On output module 10 A

- Auto/Off/On output module intended to permit the automatic control of pumps, blowers or motor groups. Or, in the case of installation, maintenance or failure, to permit the load equipment to be turned "Off" or controlled under "On" control
- Ideal interface for PLC and electronic systems
- Only 11.2 mm wide
- 3 function selector switch:
 - Auto: works as a monostable relay (following A3 input)
 - Off: relay permanently OFF
 - On: relay permanently ON
- 24V AC/DC supply and module input
- 35 mm rail (EN 60715) mounting

Application examples:

- control of pumps, blowers or motor groups
- primarily suited to Industrial control systems

Wiring diagram

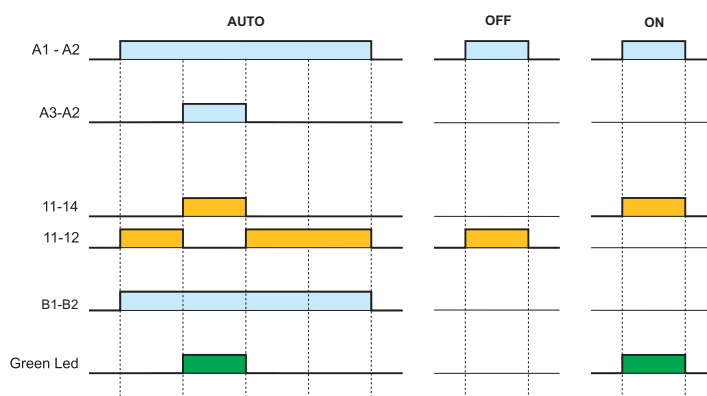


For outline drawing see page 11

19.21.0.024.0000



- 1 CO output contact
- 11.2 mm wide
- Feedback contact



Contact specification		
Contact configuration		1 CO (SPDT)
Rated current/Maximum peak current I_N/I_{max}		10/15 A
Rated voltage/Maximum switching voltage U_N/U_{max}		250/400 V
Rated load AC1		2,500 VA
Rated load AC15		500 VA
Single phase motor rating (230 V AC)		0.44 kW
Breaking capacity DC1 (24/110/220 V)		10/0.3/0.12 A
Minimum switching load		300 mW (5 V/5 mA)
Standard contact material		AgSnO ₂
Feedback contact specification (terminals B1-B2)		
Contact configuration		1 NO (SPST-NO)
Maximum current		0.3 A
Rated voltage	AC/DC	24 V
Supply & Input specification		
Nominal voltage	U_N AC (50/60 Hz)	24 V
	U_N DC	24 V
Rated power	P_N	0.6 VA (50 Hz)/0.4 W
Operating range	V AC	(0.8...1.1) U_N
	V DC	(0.8...1.1) U_N
Ambient temperature range		-20...+50 °C
Protection category		IP 20

Features

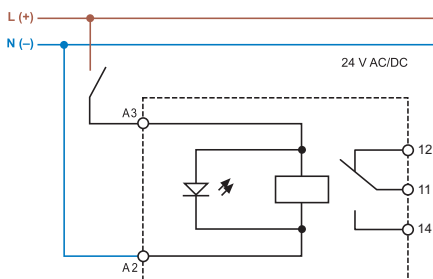
1-channel status indicating module

- 1-channel indicating module to provide visual indication of BMS/DDC/PLC input or output status with immediate indication of its importance or urgency according to the colour of the LED. A change-over output contact, following the input to the module, provides for further control or status feedback. Commonly used in building management systems
- 24V AC/DC input
- 35 mm rail (EN 60715) mounting

Application examples:

- status reports of heating installations, pumps, blowers or motor groups
- error reports such as danger of frost or blocked filter
- fire alarm

Wiring diagram



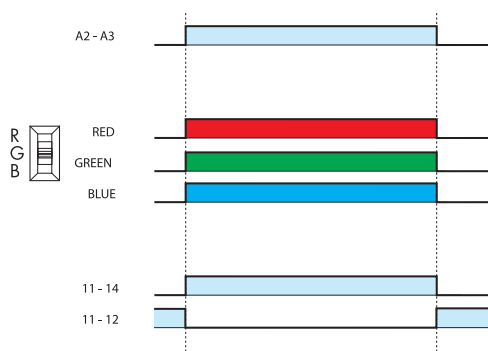
For outline drawing see page 11

Output specification		
Contact configuration		1 CO (SPDT)
Rated current/Maximum peak current I_N/I_{max}		1/3 A
Rated voltage/Maximum switching voltage U_N/U_{max}		250/250 V AC
Rated load AC1		125 VA
Rated load AC15		25 VA
Single phase motor rating (230 V AC)		—
Breaking capacity DC1 (24/110/220 V)		1/0.3/— A
Minimum switching load		10 mW (0.1 V/1 mA)
Standard contact material		AgNi + Au
Input specification		
Nominal voltage	U_N AC (50/60 Hz)	24 V
	U_N DC	24 V
Rated power	P_N	0.4 VA (50 Hz)/0.25 W
Operating range	V AC	(0.8...1.1) U_N
	V DC	(0.8...1.1) U_N
Ambient temperature range		–20...+50 °C
Protection category		IP 20

NEW 19.31.0.024.0000



- LED indicator, 3 colours: Red, Green, Blue
- 1 CO control
- 17.5 mm wide



The LED colour is selected by the dip-switch on the rear face of the module, prior to mounting on the 35 mm rail.

The colour is determined by the system designer according to the urgency or importance of the signal.

Commonly, the following levels of importance or urgency are assigned to the Red, Green and Blue colours according to EN 60073:

- Red LED: Error
- Green LED: In operation
- Blue LED: Alarm (fire or similar)

Features

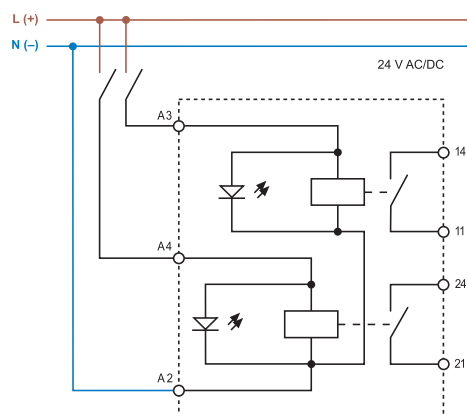
2-channel status indicating module

- 2-channel indicating module to provide visual indication of BMS/DDC/PLC input or output status with immediate indication of its importance or urgency according to the colour of the LED. Two NO output contacts, following the inputs to the module, provide for further control or status feedback. Commonly used in building management systems
- 24V AC/DC inputs
- 35 mm rail (EN 60715) mounting

Application examples:

- status reports of heating installations, pumps, blowers or motor groups
- error reports such as danger of frost or blocked filter
- fire alarm

Wiring diagram



For outline drawing see page 11

Output specification

Contact configuration	2 NO (SPST-NO) separate output	
Rated current/Maximum peak current I_N/I_{max}	1/3 A	
Rated voltage/Maximum switching voltage U_N/U_{max}	125/250 V AC	
Rated load AC1	125 VA	
Rated load AC15	25 VA	
Single phase motor rating (230 V AC)	—	
Breaking capacity DC1 (24/110/220 V)	1/0.3/— A	
Minimum switching load	10 mW (0.1 V/1 mA)	
Standard contact material	AgNi + Au	

Input specification

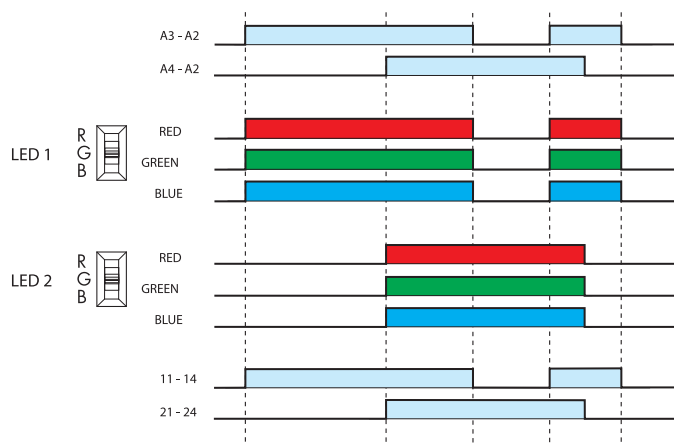
Nominal voltage	U_N AC (50/60 Hz)	24 V
	U_N DC	24 V
Rated power	P_N	0.8 VA (50 Hz)/0.5 W
Operating range	V AC	(0.8...1.1) U_N
	V DC	(0.8...1.1) U_N

Ambient temperature range	−20...+50 °C
Protection category	IP 20

NEW 19.32.0.024.0000



- LED indicator, 3 colours: Red, Green, Blue
- 2 NO control
- 17.5 mm wide



The LED colour is selected by the dip-switch on the rear face of the module, prior to mounting on the 35 mm rail.

The colour is determined by the system designer according to the urgency or importance of the signal.

Commonly, the following levels of importance or urgency are assigned to the Red, Green and Blue colours according to EN 60073:

- Red LED: Error
- Green LED: In operation
- Blue LED: Alarm (fire or similar)

Features

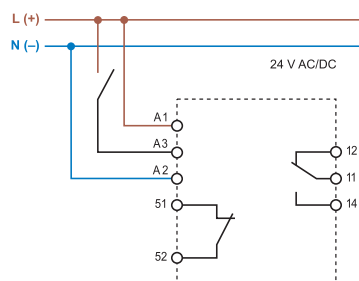
Override module - Auto/Off/Hand

- Auto/Off/Hand override module intended to permit the automatic control of pumps, blowers or motor groups. Or, in the case of installation, maintenance or failure, to permit the load equipment to be turned "Off" or controlled under "Hand" control
- 3 function selector switch:
 - Auto: work as a monostable relay relay (following A3 input)
 - Off: relay output permanently Off
 - Hand: relay output permanently On
- 24V AC/DC supply & input
- 35 mm rail (EN 60715) mounting

Application examples:

- control of pumps, blowers or motor groups commonly associated with building management systems

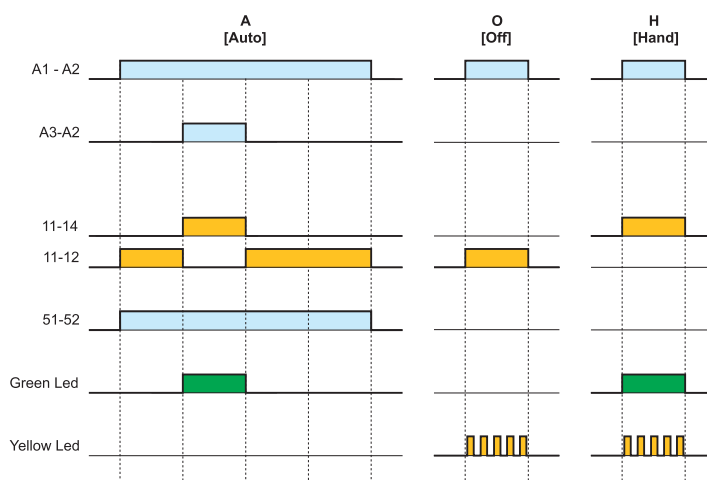
Wiring diagram



NEW 19.41.0.024.0000



- 1 CO output contact
- 1 feedback output contact
- 17.5 mm wide
- LED indicator



In position "H" (Hand) or "O" (Off), a yellow LED will flash and the feedback output (51-52) will open, to indicate that the module is not in "A" (Automatic) position.

For outline drawing see page 11

Output specification (terminals 12-11-14)

Contact configuration	1 CO (SPDT)
Rated current/Maximum peak current I_N/I_{max}	5/15 A
Rated voltage/Maximum switching voltage U_N/U_{max}	250/400 V AC
Rated load AC1	1,250 VA
Rated load AC15	250 VA
Single phase motor rating (230 V AC)	0.185 kW
Breaking capacity DC1 (24/110/220 V)	3/0.35/0.2 A
Minimum switching load	500 mW (10 V/5 mA)
Standard contact material	AgCdO

Feedback output specification (terminals 51-52)

Contact configuration	1 NO (SPST-NO)
Maximum / Minimum current	100 mA/10 mA
Rated voltage AC/DC	24 V

Supply & Input specification

Nominal voltage U_N AC (50/60 Hz)	24 V
U_N DC	24 V
Rated power P_N	1 VA (50 Hz)/0.6 W
Operating range V AC	(0.8...1.1) U_N
V DC	(0.8...1.1) U_N

Ambient temperature range	-20...+50 °C
Protection category	IP20

Features

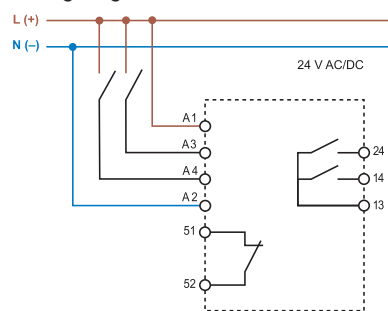
Override module - Auto/Off/Low/High

- Override output module intended to permit the automatic control of two-speed pumps, blowers or motor groups. Or, in the case of installation, maintenance or failure, to permit the load equipment to be turned "Off" or to run in "Low speed" or "High speed" under "Hand" control
- 4 function selector switch:
 - Auto: directly controlled by the BMS or PLC
 - Off: relays permanently Off
 - Hand Low: Low speed relay output permanently On
 - Hand High: High speed relay output permanently On
- 24V AC/DC supply and module inputs
- 35 mm rail (EN 60715) mounting

Application examples:

- control of two-speed pumps, blowers or motor groups commonly associated with building management systems

Wiring diagram

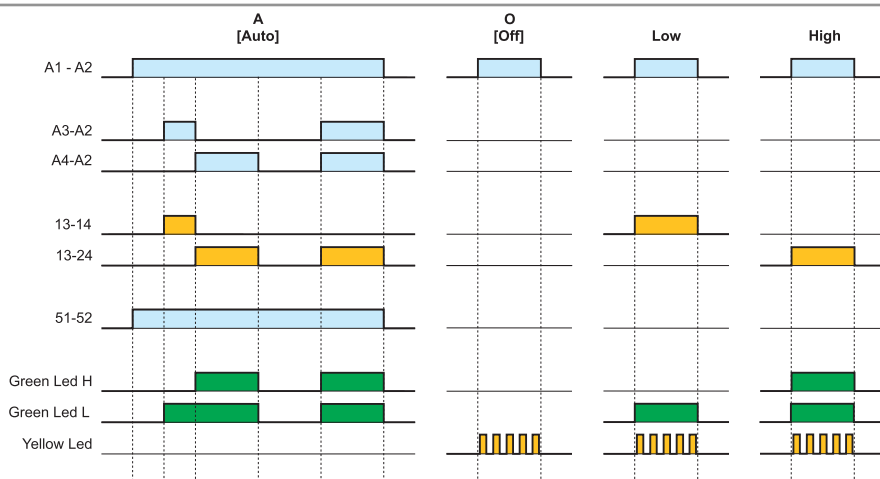


For outline drawing see page 11

NEW 19.42.0.024.0000



- Low and High output contacts
- 1 feedback output contact
- 35 mm wide
- LED indicator



In position "Low", "High" or "O" (Off) a Yellow LED will flash and the feedback output (51-52) will open to indicate that the module is not in the "A" (Automatic) position.

Note: If inputs A3 and A4 are on together, A4 takes precedence, and only High output (13-24) is closed.

Output specification (terminals 13-14-24)

Contact configuration	2 NO (DPST-NO)
Rated current/Maximum peak current I_N/I_{max}	5/15 A
Rated voltage/Maximum switching voltage U_N/U_{max}	250/400 V AC
Rated load AC1	1,250 VA
Rated load AC15	250 VA
Single phase motor rating (230 V AC)	0.185 kW
Breaking capacity DC1 (24/110/220 V)	3/0.35/0.2 A
Minimum switching load	500 mW (10 V/5 mA)
Standard contact material	AgCdO

Feedback output specification (terminals 51-52)

Contact configuration	1 NO (SPST-NO)
Maximum / Minimum current	100 mA/10 mA
Rated voltage AC/DC	24 V

Supply & Input specification

Nominal voltage U_N AC (50/60 Hz)	24 V
U_N DC	24 V
Rated power P_N	1.6 VA (50 Hz)/0.8 W
Operating range V AC	(0.8...1.1) U_N
V DC	(0.8...1.1) U_N

Ambient temperature range	-20...+50 °C
Protection category	IP20

Note 1: the operating delay time from opening of contact 13-14 and closing of contact 13-24 is about 80 ms, both in Auto position (when the in-put is switched from A3 to A4) and when the selector is switched from Low to High position.

Note 2: as a consequence, the maximum switching frequency of the output is 3 Hz.

Note 3: In the case of high inertia loads it may be necessary to add a Timer relay to delay the energisation of the Low speed motor contactor (following High speed running), to allow the motor time to decelerate.

Features

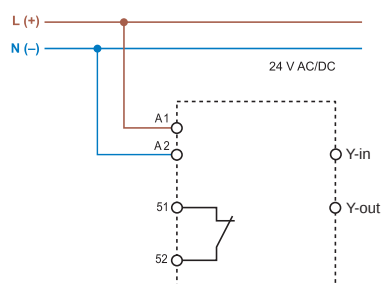
Analogue override module - Auto/Hand (0...10)V

- Analogue output module intended to provide, by the selection switch on the front panel, a (0...10) V output, automatically or by hand. With the selector switch in position "A" (Automatic) the (0...10) V signal is derived from the controller.
- In position "H" (Hand) the controller signal is ignored and the (0...10) V signal is derived directly from the potentiometer setting on the fascia of the module
- The level of the (0...10) V output signal is displayed by 3 green LEDs, set at >25%, >50% and >75%.
- 24V AC/DC supply
- 35 mm rail (EN 60715) mounting

Application examples:

- permits the direct control of proportional valves under exceptional circumstances or where the automatic controller has failed

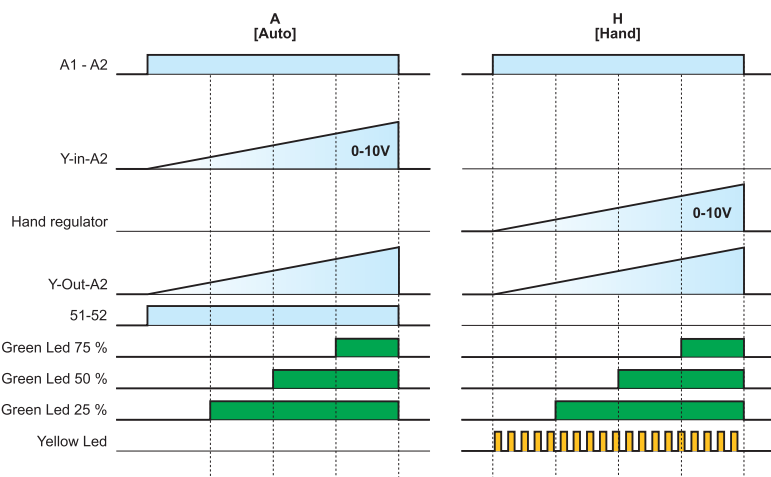
Wiring diagram



NEW 19.50.0.024.0000



- Analogue output (0...10)V, plus 1 feedback output contact
- 17.5 mm wide
- LED indicator



In position "H" (Hand) a Yellow LED will flash and the feedback contact will open to indicate that the module is not in the "A" (Automatic) position.

For outline drawing see page 11

(0...10)V Signal specification (terminal Y-in)

Input control signal	0...10 V (I _{max} 20mA - short-circuit protected)
Green LED 25%	>2.5 V
Green LED 50%	> 5 V
Green LED 75%	>7.5 V

Feedback output specification (terminals 51-52)

Output configuration	1 NO (SPST-NO)
Maximum / Minimum current	100 mA/10 mA
Rated voltage	AC/DC 24 V

Supply & Input specification

Nominal voltage	U _N AC (50/60 Hz)	24 V
	U _N DC	24 V
Rated power	P _N	0.9 VA (50 Hz)/0.7 W
Operating range	V AC	(0.8...1.1) U _N
	V DC	(0.8...1.1) U _N

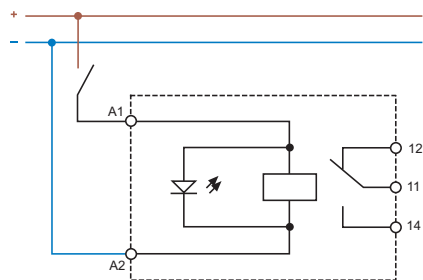
Ambient temperature range	-20...+50 °C
Protection category	IP20

Features

Power relay module 16 A

- Suitable for Lamps load
- AgSnO₂ contacts for heavy duty, high inrush current loads
- DC supply (12 or 24 V)
- LED indicator
- Reinforced insulation between supply and contacts
- Cadmium Free contacts
- 35 mm rail (EN 60715) mounting

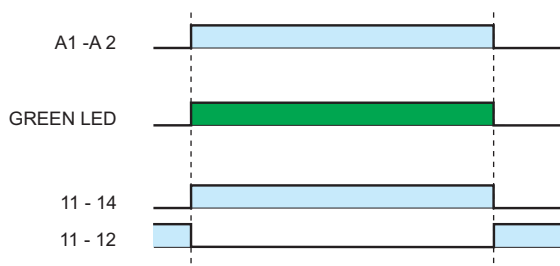
Wiring diagram



NEW 19.91.9.0xx.4000



- 1 Pole changeover contact
- 17.5 mm



For outline drawing see page 11

Contact specification

Contact configuration	1 CO (SPDT)
Rated current/Maximum peak current I_N/I_{max}	16/30 A (120 A – 5 ms)
Rated voltage/Maximum switching voltage U_N/U_{max}	250/440 V AC
Rated load AC1	4,000 VA
Rated load AC15 (230 V AC)	750 VA
Nominal lamp rating (230 V): incandescent	2,000 W
compensated fluorescent	750 W
Minimum switching load	300 mW (5 V/ 5 mA)
Standard contact material	AgSnO ₂

Coil specification

Nominal voltage U_N DC	12 - 24 V
Rated power P_N	1.2 VA (50 Hz) /0.5 W
Operating range	(0.8 ... 1.1) U_N

Technical data

Mechanical life AC /DC	10 · 10 ⁶ cycles
Electrical life at rated load AC1	80 · 10 ³ cycles
Operate/release time	12/8 ms
Ambient temperature range	-20...+50 °C
Protection category	IP 20

Ordering information

Example: 19 series Auto/Off/Hand override module, 1 CO (SPDT) 5 A contact, 24 V AC/DC supply.

1 9 . 4 1 . 0 . 0 2 4 . 0 0 0 0

Series

Type

21= Auto/Off/On output module, 11.2mm
31= 1-channel status indicating module
32= 2-channel status indicating module
41= Override module - Auto/Off/Hand
42= Override module - Auto/Off/Low/High
50= Analogue override module (0...10) V
91= Power relay module

Supply version

0 = AC (50/60 Hz) / DC
9 = DC

Supply voltage

012 = 12 V
024 = 24 V

Contact material

0= Standard for 19.21/31/32/41/42/50
4= Standard for 19.91

Codes / Module width

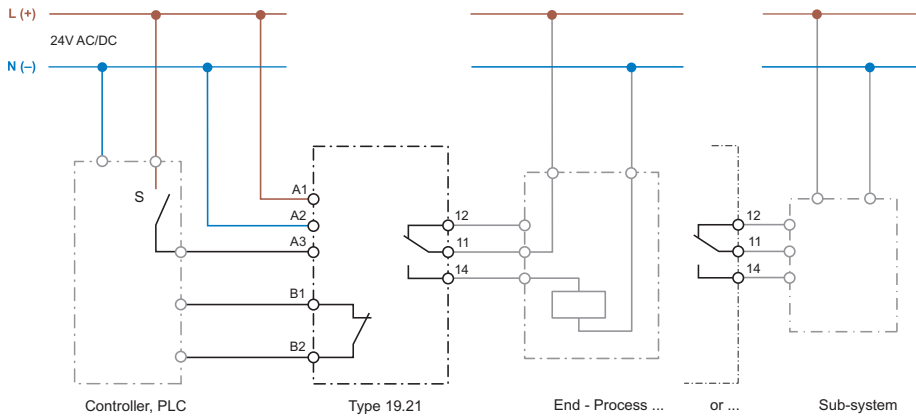
19.21.0.024.0000 / 11.2 mm
19.31.0.024.0000 / 17.5 mm
19.32.0.024.0000 / 17.5 mm
19.41.0.024.0000 / 17.5 mm
19.42.0.024.0000 / 35.0 mm
19.50.0.024.0000 / 17.5 mm
19.91.9.012.4000 / 17.5 mm
19.91.9.024.4000 / 17.5 mm

Technical data

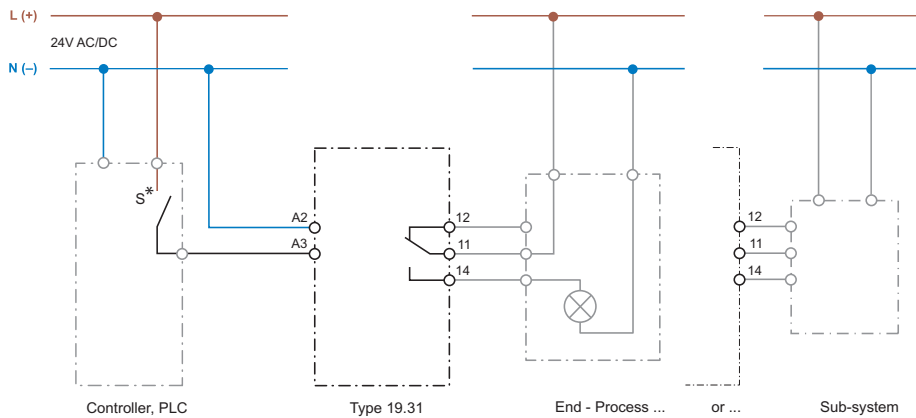
Insulation		19.21	19.31/32	19.41/42	19.50	19.91
Dielectric strength (V AC)	between supply and contacts	3,000	1,000	2,000	—	4,000
	between open contacts	1,000	750	1,000	—	1,000
	between supply and feedback output	2,000	—	1,500	1,500	—
EMC specifications						
Type of test		Reference standard	19.21/31/32/42/91		19.41/50	
Electrostatic discharge	contact discharge	EN 61000-4-2	4 kV			
	air discharge	EN 61000-4-2	8 kV			
Radiated electromagnetic field (80 ... 1,000 MHz)		EN 61000-4-3	30 V/m			
Fast transients (burst) (5-50 ns, 5 kHz)		EN 61000-4-4	4 kV			
Voltage pulses (1.2/50 µs) on supply terminals	common mode	EN 61000-4-5	2 kV		1 kV	
	differential mode	EN 61000-4-5	1 kV		0.5 kV	
Terminals		19.21		19.31/32/41/42/91		
Screw torque		0.5 Nm		0.8 Nm		
Max. wire size	solid cable	1x6/2x2.5 mm ²	1x10/2x14 AWG	1x6/2 x 4 mm ²	1x10/2x12 AWG	
	stranded cable	1x4/2x1.5 mm ²	1x12/2x16 AWG	1x4/2x2.5 mm ²	1x12/2x14 AWG	
Wire strip length		7 mm		9 mm		

Wiring diagrams - Application examples

Type 19.21

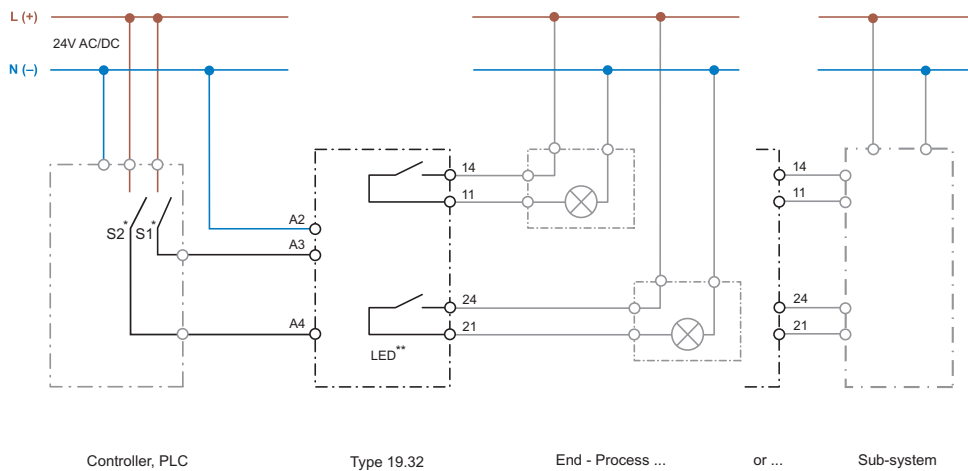


Type 19.31



* S can be, for example, a NO-contact with the purpose of indicating "in operation" (selecting green as LED color) or a NC-contact with the purpose of indicating "error" or "alarm" (selecting red or blue as LED color). The LED color has to be chosen through the back side selector.

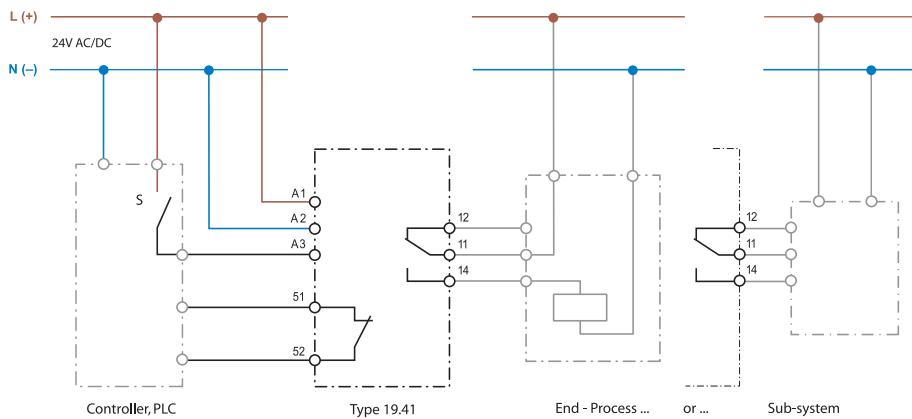
Type 19.32



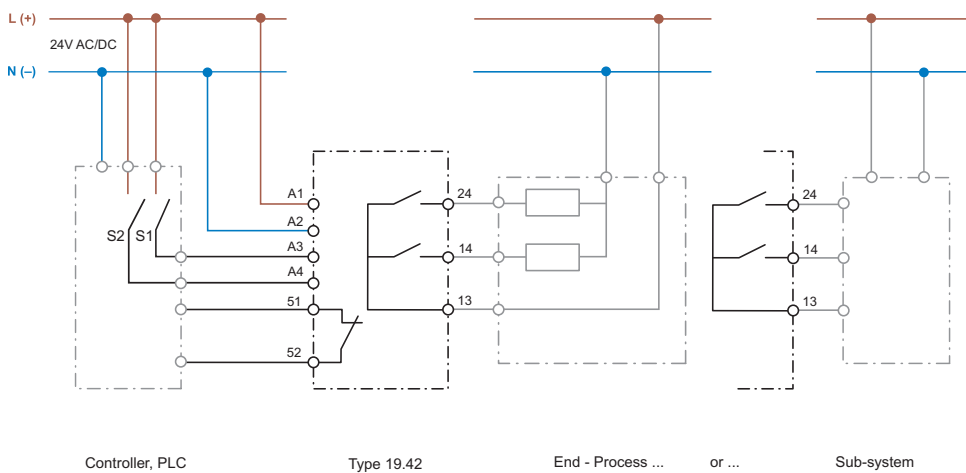
* S1 (related to LED 1 and NO 11-14) and S2 (related to LED 2 and NO 21-24) can be, for example, NO-contacts with the purpose of indicating "in operation" (selecting green as LED color) or NC-contacts with the purpose of indicating "error" or "alarm" (selecting red or blue as LED color). The LED colors have to be chosen, independently, through the back side selectors.

Wiring diagrams - Application examples

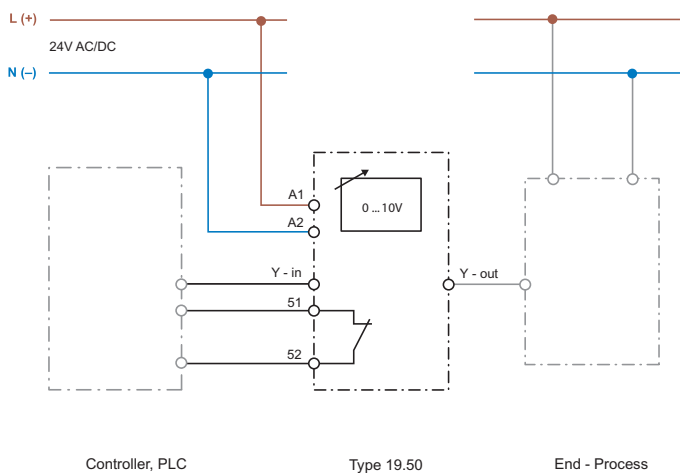
Type 19.41



Type 19.42



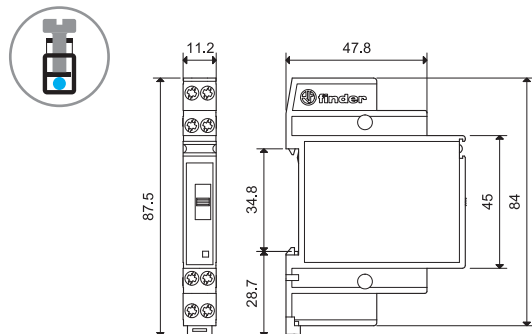
Type 19.50



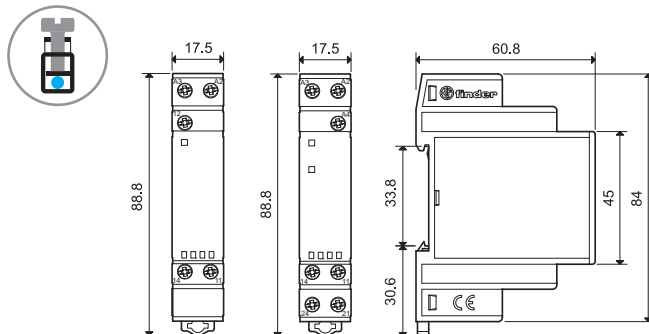
In the selector position A (Automatic) the 0...10 V set point of Yin - A2 is leaded, through Yout, to the end process; in the selector position H (Hand) the 0...10 V value set with the regulator is leaded, through Yout, to the end process.

Outline drawings

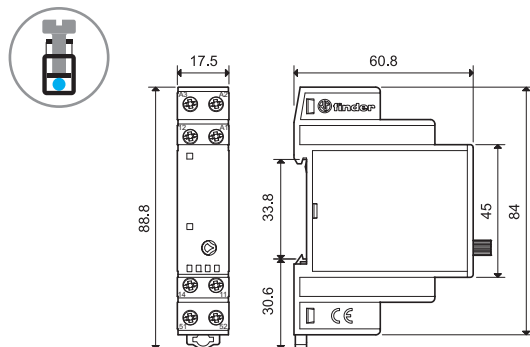
Type 19.21
Screw terminal



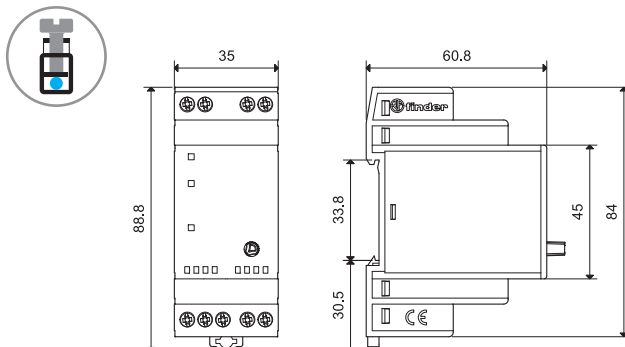
Type 19.31-19.32
Screw terminal



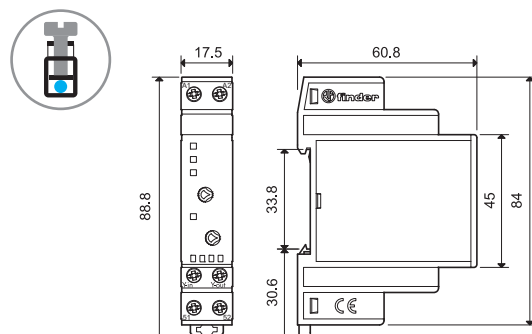
Type 19.41
Screw terminal



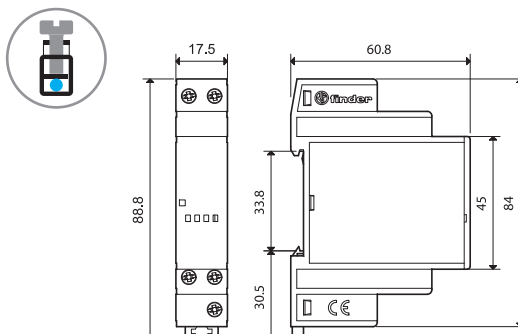
Type 19.42
Screw terminal



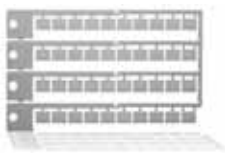
Type 19.50
Screw terminal



Type 19.91
Screw terminal



Accessories



019.40

Sheet of marker tags, for 19.21 type, plastic, 40 tags, 8x10 mm

019.40



060.72

Sheet of marker tags, for 19.31/32/41/42/50/91 types, plastic, 72 tags, 6x12 mm

060.72



019.01

Identification tag, for 19.31/32/41/42/50 types, plastic, 1 tag, 17x25.5 mm

019.01



020.01

Adaptor for panel mounting, for 19.31/32/41/50/91 types, plastic, 17.5 mm wide

020.01



011.01

Adaptor for panel mounting, for 19.42 type, plastic, 35 mm wide

011.01