



SOLUTIONS FOR ELECTRICAL PANELS AND INDUSTRIAL AUTOMATION

The widest range of relays and accessories for the industry



ABOUT US



Founded in Italy in 1954, **Finder** has been designing and manufacturing a wide range of electromechanical and electronic components for the residential and industrial sectors. Today, thanks to a global vision, **Finder** distributes these products around the world through a network of 29 company-owned subsidiaries and more than 80 trade partnerships.

Finder is an international family made up of more than 2000 individuals, all united by the same values and passion for our products.



14,500 different products to satisfy a myriad of applications. From products at the heart of automation to the control of machines, power, time, temperature, liquid level and light.

OUR PRODUCTS CARRY MORE CERTIFICATIONS THAN ANY OTHER RELAY MANUFACTURER



FINDER IS AN ITALIAN BRAND WITH A WORLDWIDE PRESENCE

- 4** PRODUCTION PLANTS IN EUROPE
- 29** SUBSIDIARIES
- +80** OFFICIAL DISTRIBUTORS



ENVIRONMENTAL, SOCIAL, AND GOVERNANCE (ESG)

Finder considers social and environmental sustainability as fundamental principles of doing business, just as it believes that business growth must develop in synergy with a conscious vision of the future. That is why **Finder** is committed to reducing and eliminating CO2 emissions, focusing on circularity, caring for its employees to foster a safe, fair and inclusive work environment, spreading a culture of integrity and transparency, and collaborating with stakeholders who share its values.

This focus is demonstrated by the company's commitment to the following internationally recognized projects and certifications:

| | | | | | | | |
|--|---|---|---|--|--|---|--|
|  ISO 9001:2015 Quality management system |  ISO 14001:2015 Environmental management system |  ISO 45001:2018 Health and safety management system |  ISO 14064-1 2018 Carbon Footprint verification |  ISO 50001:2018 Energy management system |  FSC Forest Stewardship Council |  AEOF Simplified customs and enhanced supply chain security |  Crisis Prime Company Recognition of highest reliability of commercial relations |
|--|---|---|---|--|--|---|--|

AUTONOMY AND INDEPENDENCE

Finder's managerial, financial, and technological autonomy allows optimal control over all its business processes, the results of which include simplified customs procedures and a high reliability of commercial relations.

| | | |
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OPTA

PROGRAMMABLE LOGIC RELAYS

8A Series



Programming with Codesys - using traditional IEC 61131-3 (LADDER, FBD, etc.) languages.



POWERFUL



CONNECTED



SECURE



EASY



VERSATILE



CODESYS

PROCESSORS ST dual-core Cortex M7+M4

Super fast real-time processing to manage calculations for predictive maintenance and OTA (Over-The-Air) updates.

CRYPTO CHIP

Enhanced IoT security thanks to the onboard secure element chip.

ADVANCED
+ Wi-Fi and BLE



Type 8A.04.9.024.832C

- Supply 12...24 V DC
- 8 Digital/Analog (0-10V) inputs
- 4 NO relay output contacts, rated 10 A
- USB (type C) High Speed port for:
 - Programming
 - Powering during configuration
 - Data logging (via memory stick)
- RJ45 for Ethernet connections or MODBUS TCP/IP
- RS485 Port for MODBUS RTU connection
- Wi-Fi/BLE integrated module

opta.findernet.com



OPTA

PROGRAMMABLE LOGIC RELAYS

8A Series



Programming with Arduino IDE - open-source software



POWERFUL



CONNECTED



SECURE



OPEN SOURCE



EASY



VERSATILE

PROCESSORS ST dual-core Cortex M7+M4

Super fast real-time processing to manage calculations for predictive maintenance and OTA (Over-The-Air) updates.

CRYPTO CHIP

Enhanced IoT security thanks to the onboard secure element chip.

LITE



Type 8A.04.9.024.8300

- Supply 12...24 V DC
- 8 Digital/Analog (0-10V) inputs
- 4 NO relay output contacts, rated 10 A
- USB (type C) High Speed port for:
 - Programming
 - Powering during configuration
 - Data logging (via memory stick)
- RJ45 for Ethernet connections or MODBUS TCP/IP

PLUS + RS485



Type 8A.04.9.024.8310

- Supply 12...24 V DC
- 8 Digital/Analog (0-10V) inputs
- 4 NO relay output contacts, rated 10 A
- USB (type C) High Speed port for:
 - Programming
 - Powering during configuration
 - Data logging (via memory stick)
- RJ45 for Ethernet connections or MODBUS TCP/IP
- RS485 Port for MODBUS RTU connection

ADVANCED + Wi-Fi and BLE



Type 8A.04.9.024.8320

- Supply 12...24 V DC
- 8 Digital/Analog (0-10V) inputs
- 4 NO relay output contacts, rated 10 A
- USB (type C) High Speed port for:
 - Programming
 - Powering during configuration
 - Data logging (via memory stick)
- RJ45 for Ethernet connections or MODBUS TCP/IP
- RS485 Port for MODBUS RTU connection
- Wi-Fi/BLE integrated module

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OPTA

EXPANSION MODULES

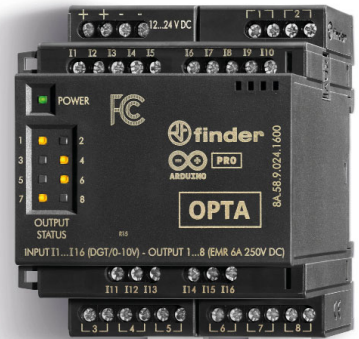
EASILY EXPAND THE PLR'S POTENTIAL



EMR

- 16 digital/analog (0...10 V) inputs
- 8 EMR 6 A outputs
- Nominal voltage 12...24 V DC

Type 8A.58.9.024.160C



Type 8A.58.9.024.1600



SSR

- 16 digital/analog (0...10 V) inputs
- 8 SSR 3 A outputs
- Nominal voltage 12...24 V DC

Type 8A.88.9.024.160C



Type 8A.88.9.024.1600



ANALOG

- 6 analog (0...10 V, 4...20 mA, PT 100) inputs
- 2 analog (0...10 V, 4...20 mA) outputs
- 4 PWM outputs
- Nominal voltage 12...24 V DC

Type 8A.26.9.024.060C



Type 8A.26.9.024.0600



Connection via the auxiliary port



OEM PROJECTS



BUILDING AUTOMATION



INDUSTRIAL APPLICATIONS



OPTA

PROGRAMMABLE LOGIC RELAYS

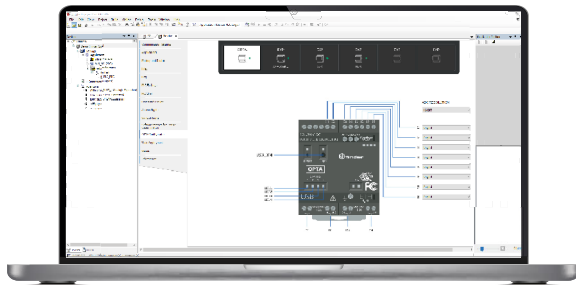
8A Series

PROGRAMMING



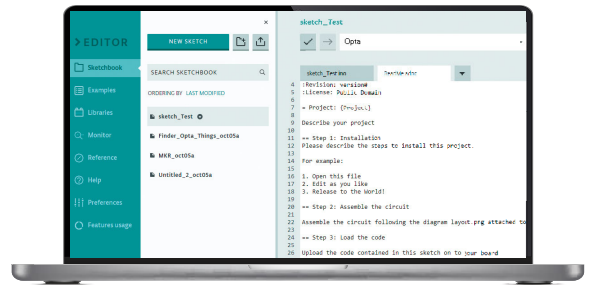
LICENSED - TRADITIONAL

Using Codesys for IEC 61131-3 (LADDER, FBD, etc.) languages. License included with Codesys OPTA.



FREE - WITHOUT LICENCES

Using ARDUINO IDE, the Open-Source Software



Download software here: opta.findernet.com



SWITCHING POWER SUPPLIES FOR OPTA

The power supply allows OPTA to function correctly even with the activation loads. Avoiding problems of operational interruption from what occurs in the electrical system.

Both Versions

- 24 V DC power supplies
- Short circuit protection
- Thermal protection
- Built-in surge protection
- SELV



Type 78.12.1.230.2482

- Peak current: 2 A
- 12 W DIN module (17.5 mm)



78 Series
See the technical data sheet



Type 78.25.1.230.2482*

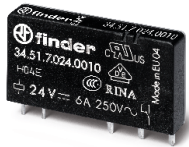
- Peak current: 3 A
- 25 W DIN module (35 mm)



*78.25 UL Pending

34 SERIES

Ultra-Slim PCB Relays (EMR or SSR) 0.1 - 0.2 - 2 - 6 A



→ Ultra slim (5 mm) package

- SPDT or SPST-NO
- Very low coil consumption - 170 mW
- UL Listing (certain relay/socket combinations)
- PCB or 93 Series socket mount (according to type - page 14)



34 Series
See the technical data sheet



Approvals (according to type)



Used mainly for circuit boards within equipment such as vending machines, programmable controllers.

40 SERIES

Miniature PCB Relays or Socket Mount 8 - 10 - 12 - 16 A



→ AC coils and DC coils (low coil consumption)

- SPDT or DPDT
- Pin length 3.5 mm for PCB mount
- Pin length 5.3 mm for 95 Series sockets plug-in mount
- Meets EN 60335-1 glow wire requirements
- Bi-stable versions available
- PCB or 95 Series socket mount
(according to type - page 14)



40 Series
See the technical data sheet

41 SERIES

Low Profile PCB Relays (EMR or SSR) 3 - 5 - 8 - 12 - 16 A



→ Low profile (15.7 mm high)

- SPDT or DPDT
- AC coils and DC coils
- Low coil consumption
- SSR versions available - silent, high speed switching with long electrical life
- PCB or 93 Series socket mount



41 Series
See the technical data sheet

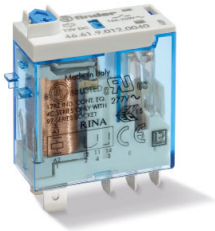
Approvals (according to type)



Multi-function, suitable for a wide range of applications.
Due to their versatility they are widely used in electronic circuit boards for household appliances (refrigerators, washing machines), electric gates, boiler control boards and similar.

46 SERIES

Miniature Industrial Relays 8 - 16 A



→ **Available with: lockable test button, mechanical indicator & LED indicator**

- Power relays, SPDT - DPDT
- AC coils and DC coils
- Optional alternative mounting adaptors
- PCB mount sockets or 35 mm rail (EN 60715) mount sockets, (according to type - page 14)



46 Series
See the technical data sheet

55 SERIES

General Purpose Relays 7 - 10 A



→ **DPDT, 3PDT, or 4PDT**

- Compact dimensions
- AC coils and DC coils
- Lockable test button and mechanical indicator
- Optional alternative mounting adaptors
- PCB or 94 Series socket mount (according to type - page 14)



55 Series
See the technical data sheet

Approvals (according to type)

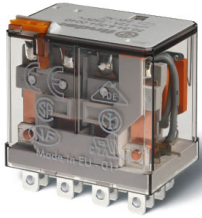


General switchboard installations, industrial automation panels, auxiliary relays, interfacing.

Special versions for railway applications.

56 SERIES

Miniature Power Relays 12 A



→ DPDT or 4PDT

- AC coils and DC coils
- Lockable test button and mechanical indicator
- Optional alternative mounting adaptors
- PCB or 96 Series socket mount (according to type - page 15)



56 Series
See the technical data sheet

60 SERIES

Industrial Relays 6 - 10 A



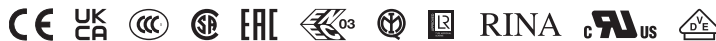
→ 8 Pin plug-in and 11 pin plug-in versions

- DPDT or 3PDT
- Bi-furcated contacts for low level switching
- AC coils and DC coils
- Lockable test button with mechanical flag indicator
- PCB or 90 Series socket mount (according to type - page 15)



60 Series
See the technical data sheet

Approvals (according to type)



General switchboard installations, industrial automation panels, auxiliary relays, interfacing.

Special versions for railway applications.

62 SERIES Power Relays 16 A



- **DPDT, 3PDT, or DPST-NO, 3PST-NO (≥ 3 mm contact gap)**
- **Magnetic blow-out power relay (SPST-NO double break or DPST-NO)**
 - AC coils and DC coils
 - SELV coil-contact separator option
 - LED, test button and mechanical indicator standard (according to type)
 - Flange mount options
 - PCB or 92 Series socket mount (according to type - page 15)



62 Series
See the technical data sheet

65 SERIES Power Relays 20 - 30 A



- **PCB mount or Faston 250 (6.3 x 0.8 mm) connection**
 - SPST-NO+SPST-NO or SPST-NO
 - AC coils and DC coils
 - Bi-furcated terminals
 - Optional alternative mounting adaptors



65 Series
See the technical data sheet

Approvals (according to type)



General switchboard installations, industrial automation panels, auxiliary relays, interfacing, versions for applications with special loads (e.g. magnetic blow out for control of power distribution switches and circuit breakers).

66 SERIES Power Relays 30 A



- Versions that comply with HazLoc Class I Div. 2, Groups A, B, C, D - T4 - T5 - T6
- Versions with certification by ATEX accredited body to (EX ec nC) EN IEC 60079-15: 2019
 - DPDT or DPST-NO
 - AC coils and DC coils
 - PCB mount - bi-furcated terminals, flange mount, Faston 250 connections



66 Series
See the technical data sheet

67 SERIES High Power Relays 50 A



- DPST-NO or 3PST-NO
 - DC coils, with only 170 mW holding power
 - Suitable for use at ambient temperatures up to 85 °C (with energy-saving coil energization) or 70 °C (with standard coil energization)
 - Meets the EN 60335-1 requirements of resistance to heat and fire (GWIT 775 °C and GWFI 850 °C)
 - Printed circuit mount



67 Series
See the technical data sheet

Approvals (according to type)



Installations where the disconnection of electrical power is critically important (electronic power boards, inverters, photovoltaic (PV) systems) or ATEX applications, where the environment is at risk of explosion (LPG storage, underground garage, fuel stations).

68 SERIES High Power Relays 32 - 40 - 100 A

- **DPST-NO 100 A**
or **DPST-NO 100 A + SPST-NC 3 A (feedback contact)**
- **4PST-NO 40 A**
or **4PST-NO + SPST-NC 3 A (feedback contact)**
- **4PST-NO 32 A**
or **4PST-NO + SPST-NC 3 A (feedback contact)***
 - Meets EN 60335-1 requirements for resistance to heat and fire (GWIT 775°C and GWFI 850°C)
 - DC coils, with only 700 mW holding power
 - Suitable for use at ambient temperatures up to 85 °C
 - Mirror contact (type 68.23) according to EN 60947-4-1 Annex F
 - Printed circuit mount



68 Series
See the technical data sheet



68.22



68.55



Approvals (according to type)



* Complies with IEC 62955 for electric vehicle charging stations.

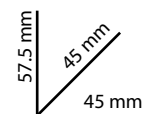
Inverters, photovoltaic inverters, battery chargers and high power switching applications.

6K SERIES Industrial Contactors



6K Series
See the technical data sheet

- From 4 to 37 kW
- From 9 to 74 A, AC3 – 400 V AC
- AgSnO₂ contact material
 - Nominal voltage: 24 - 110 - 230 V AC
24 V DC (according to type)
 - Small size
 - Various contact configurations available
 - Complies with EN 60947 / IEC 947
 - Working temperature: -40°C...+ 90°C (with coil voltage derating @ 90°C)
 - Auxiliary block contacts available, 2 A (AC15 – 400 V)
 - 35 mm Din rail mounting
 - Overloads available



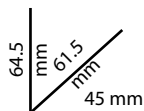
6K.04.x.xxx.4x09
6K.04.x.xxx.4x12



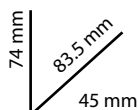
Auxiliary block contacts for 6K.04

Type 06K.03 1 NO + 1 NC 2 A

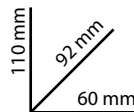
Type 06K.06 2 NO + 2 NC 2 A



6K.14.x.xxx.4x10
6K.14.x.xxx.4x18



6K.13.8.xxx.4324
6K.13.8.xxx.4332



6K.13.8.xxx.4350
6K.13.8.xxx.4374



Type 06K.11
1 NO 2 A
(AC15 – 400 V)



Type 06K.12
1 NC 2 A
(AC15 – 400 V)

Auxiliary block contacts
for 6K.13/6K.14

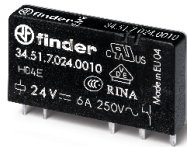
Approvals (according to type)



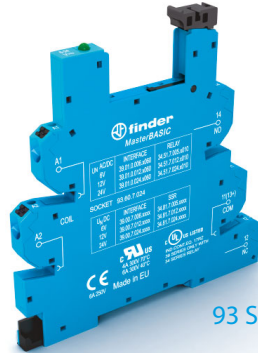
Space saving size with maximum performance. Complies with EN 60947 / IEC 947.
Possible connection of front auxiliary modules from 1 to 4 poles in various configurations.

Socket-Relay Compatibility

For all these sockets there are a number of accessories available, such as jumper links for faster connection, clips and marker tag holders.



34 Series



93 Series



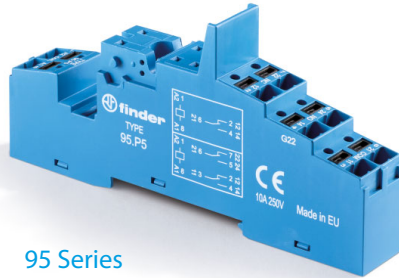
Screw terminals



Push-in terminals



40 Series



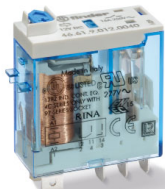
95 Series



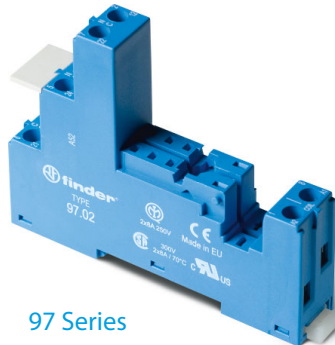
Screw terminals



Push-in terminals



46 Series



97 Series



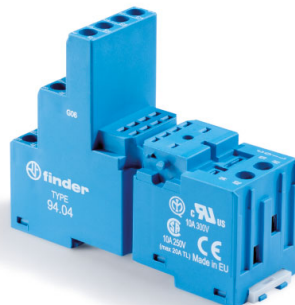
Screw terminals



Push-in terminals



55 Series



94 Series



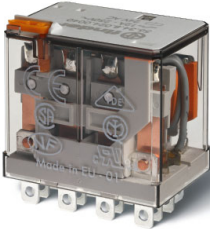
Screw terminals



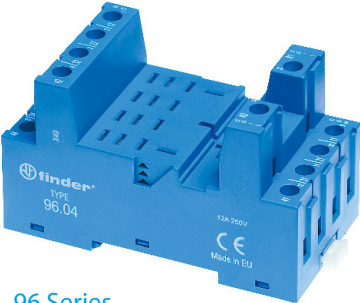
Push-in terminals

Socket-Relay compatibility

For all these sockets there are a number of accessories available, such as jumper links for faster connection clips and marker tag holders.



56 Series



96 Series



Screw terminals



60 Series



90 Series



Screw terminals



62 Series



92 Series



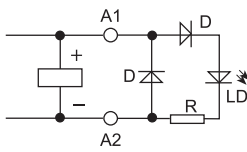
Screw terminals

99 SERIES

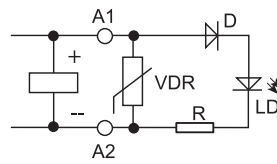
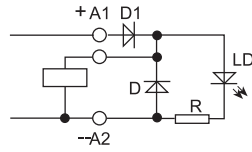
Coil Indication and EMC Suppression Modules for Sockets



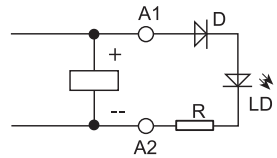
These modules when plugged into the appropriate socket can suppress coil generated back-emf (diode or varistor), provide visual signaling (coil energized LED) or can filter out possible mains disturbances (RC filters).



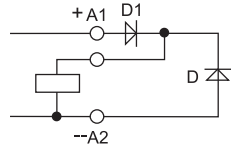
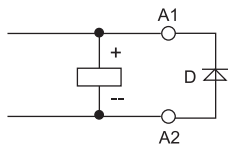
Green LED indicator + diode (standard polarity)



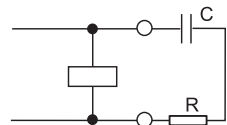
Green LED indicator + Varistor



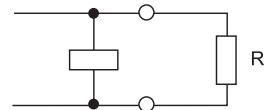
Green LED indicator



Diode (standard polarity)



RC Circuit



Residual current bypass

38 SERIES

Relay Interface Modules (EMR or SSR) 0.1 - 2 - 3 - 5 - 6 - 8 - 16 A



→ **"Ultra-slim" interface modules, just 6.2 mm wide only**

- SPDT, DPDT, or SPST-NO
- Sensitive DC coils or AC/DC coils versions
- Quick and easy ejection of relay using plastic retaining clip
- Timed multifunction version with electromechanical or solid state relay output
- UL Listed (certain relay/socket combinations)
- Sockets with screw and screwless terminals



38 Series
See the technical data sheet

39 SERIES

MasterINTERFACE Relay Interface Modules (EMR or SSR) 0.1 - 2 - 6 A



→ **"Ultra-slim" interface modules, just 6.2 mm wide only**

→ **Atex and HazLoc compliant versions available**

→ **The most complete range of accessories**

- SPDT or SPST-NO
- AC coils and DC coils
- Quick and easy ejection of relay using plastic retaining clip
- Versions taking fuse holder module for protection of the output circuit
- Timed multifunction version with electromechanical or solid state relay output
- Common connection possible with optional 16-way jumper links (terminals A1, A2 and 11)
- UL Listed (certain relay/socket combinations)
- Sockets with screw terminals or push-in terminals



39 Series
See the technical data sheet



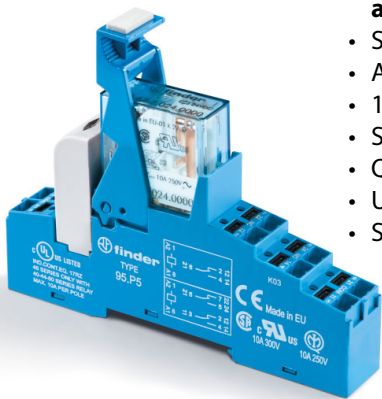
Approvals (according to type)



Interfacing in general, widely used in automation with PLC and in applications where space saving is important.
ATEX and HAZLOC applications: LPG storage areas, underground garages, gas stations.

48 SERIES Relay Interface Modules

8 - 10 - 16 A



→ **Versions for safety: relay with forcibly guided contacts according to EN 61810-3 Type B (previously EN 50205)**

- SPDT or DPDT
- AC coils or DC coils
- 15.8 mm wide
- Supply status indication and EMC coil suppression module as standard
- Quick and easy ejection of relay using plastic retaining clip
- UL Listed (certain relay/socket combinations)
- Sockets with screw terminals or push-in terminals



48 Series
See the technical data sheet

4C SERIES Relay Interface Modules

8 - 10 - 16 A



→ **Relay with: lockable test button, mechanical indicator & LED indicator**

- SPDT or DPDT
- AC coils or DC coils
- 15.8 mm wide
- Supply status indication and EMC coil suppression module as standard
- Quick and easy ejection of relay using plastic retaining clip
- UL Listed (certain relay/socket combinations)
- Sockets with screw terminals or push-in terminals



4C Series
See the technical data sheet

Approvals (according to type)

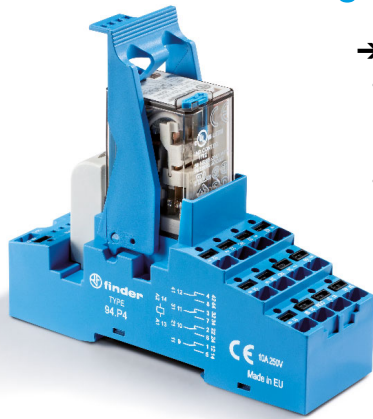


Interfacing in general, widely used in panel building in general applications where 1 or 2 high rated contacts are required.

Industrial automation control panels, power plants, home automation, etc...

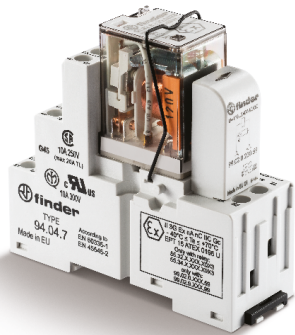
58 SERIES

Relay Interface Modules 6 - 7 - 10 A



→ **Ideal interface for PLC and electronic systems**

- Socket with Screw terminals: 58.32 - DPDT 10 A
58.33 - 3PDT 10 A
58.34 - 4PDT 7 A
- Socket with Push-in terminals: 58.P2 - DPDT 10 A
58.P3 - 3PDT 10 A
58.P4 - 4PDT 7 A



→ **Special versions for hazardous locations (ATEX, HazLoc, IECEx)**

IECEx - ATEX certification: II 3G Ex ec nC IIC Gc

HazLoc certification: Class I Div. 2 Groups A, B, C, D - T5

→ **Complies with: EN 60079-0:2012+A11:2013; EN 60079-15:2010;
EN 60079-7:2015 e 2014/34/UE**

- Socket with Screw terminals: 58.32 - DPDT 10 A (UL 9 A)
58.34 - 4PDT 6A (UL 5 A)
- Socket with Push-in terminals: 58.P3 - 3PDT 8.5 A (UL 7 A)
58.P4 - 4PDT 6 A (UL 5 A)



- AC coil or DC coil
- 27 mm wide
- Supply status indication and EMC coil suppression module as standard
- UL Listed (certain relay/socket combinations)



58 Series
See the technical data sheet

Approvals (according to type)



Interfacing in general, widely used in panel building, and in applications where 3 or 4 contacts are required.
Industrial automation control panels, power plants, home automation, etc...
ATEX and HAZLOC applications: LPG deposits, underground garages, gas stations.

50 SERIES

PCB Relay with Forcibly Guided Contacts 8 A



50 Series

See the technical data sheet

→ Relay with forcibly guided contacts according to EN 61810-3 (previously EN 50205) for safety applications

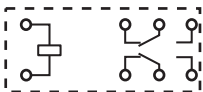
→ Low-power DC coil

- Contact configuration (according to type):
DPDT
4 pole: 2 NO + 2 NC, 3 NO + 1 NC
6 pole: 4 NO + 2 NC, 5 NO + 1 NC, 3 NO + 3 NC
- High physical separation between adjacent contacts
- PCB mount

50.12



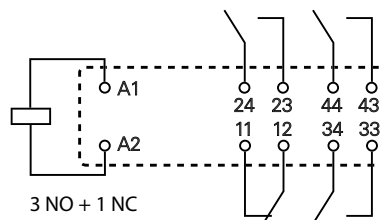
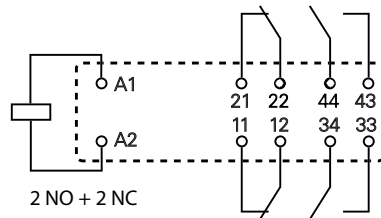
A1 12 11 14



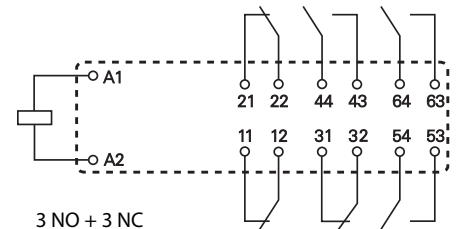
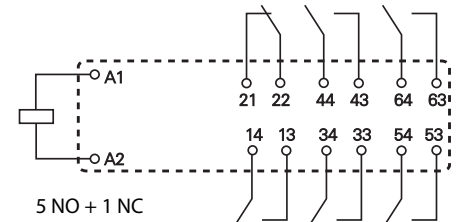
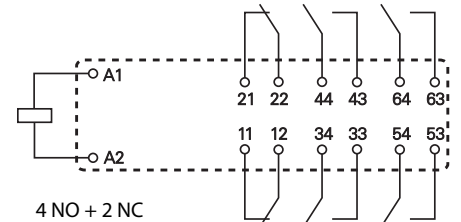
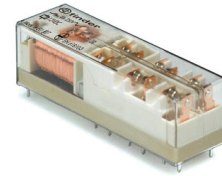
A2 22 21 24

2 changeover contacts

50.14



50.16



Approvals (according to type)



Machine tools, elevators, safety barriers.

7S SERIES

Modular Relays with Forcibly Guided Contacts 6 - 10 A



7S Series
See the technical data sheet

→ **Relay with forcibly guided contacts according to EN 61810-3 (previously EN 50205) for safety applications**

- Modular electromechanical relays with 2 - 3 - 4 or 6 forcibly guided contacts
- AC coils or DC coils
- Coil status visual indication with LED
- 17.5 mm or 22.5 mm wide
- Screw terminals or screwless terminals
- 35 mm rail (EN 60715) mount

SIL2

Assessed to EN 61508 for functional safety in applications up to SIL2 according to EN 62061, and for functional safety in applications up to PL d according to EN 13849-1.

SIL3

Assessed to EN 61508 for functional safety in applications up to SIL3 according to EN 62061, and for applications up to PL e according to EN 13849-1. System with dual channel architecture (1oo2) with two NO contacts, 1 feedback contact and 1 auxiliary contact.



7S.12

7S.14

7S.34

7S.23

7S.43

| 7S.12/ 7S.32 | 7S.14/34...4220 | 7S.14...4310 | 7S.16/36...5420 | 7S.16/36...5510 | 7S.23 | 7S.43/63 |
|--------------|-----------------|--------------|-----------------|-----------------|-------|----------|
| | | | | | | |
| | | | | | | |
| | | | | | | |

Approvals (according to type)



For safety applications up to SIL 2 or SIL 3 according to IEC 61508 (according to type).
Machine tools, elevators, safety barriers and expansion modules.

Special versions for railway applications.

70 SERIES Current Relays

→ **Electronic phase loss and rotation monitoring relay for three-phase applications**

→ **Positive safety logic**

- Phase loss monitoring, even under phase regeneration
- Positive safety logic - contact opens if the relay detects an error
- Universal voltage monitoring from 208V-480V 50/60 Hz
- 1 CO relay output, 6 A
- 17.5 mm wide
- 35 mm rail (EN60715) mount



70 Series
See the technical data sheet



70.61

Approvals (according to type)



This product is ideal for phase applications where sensitivity and fast reaction times are required.

→ **Multifunction versions**→ **Type 72.01 and 72.11: electrode type liquid level controllers**

- LED indicator
- Control about a single level or between Min./Max. limits
- Emptying or filling functions
- Reinforced insulation (6 kV - 1.2/50 μ s) between: supply and contacts, electrodes and supply, contacts and electrodes
- Modular, 35 mm wide
- 35 mm rail (EN 60715) mount



72 Series
See the technical data sheet



72.01

Approvals (according to type)



This product is ideal for level control of conductive liquids using electrodes.

A wide range of sensors make the Type 72.01 and 72.11 Level Control Relays ideal for different applications.

Normally, 2 sensors are used to control to a single level, or 3 sensors are used to control between "Minimum" and "Maximum" levels.

If the tank is made of conductive material, it can be used directly as the "common" connection to B3.

If you have to control to two different levels in the same tank, simply use 2 relays.



Type 072.01

for liquid foodstuff

Type 072.02

for liquids with high chlorine content (swimming pools)

Pre-wired cable-sensor with cable length 6 or 15 m (1.5 mm²), suitable for level monitoring in food applications or where there are high levels of chlorine, in wells and reservoirs not under pressure.



Type 072.51

Bipolar electrode holder, suitable for metal tanks with G3/8" coupling. The tank can be used as ground via the coupling by connecting it directly to the screw terminal (B3) of the relays 72.01/11.

The total length of the probe is obtained by interconnecting multiple 072.500 electrodes.

Maximum liquid temperature 100°C.

High-quality electrode material: stainless steel (AISI 304) for high corrosion resistance.



Type 072.41

One-pole sensor for wells and tanks. Maximum liquid temperature 80°C.

High-quality electrode material: stainless steel (AISI 316L) with high corrosion resistance.

Made of polypropylene for resistance to aqueous solutions of inorganic salts, acids, alkaline solutions, alcohol, some oils and washing solutions.

Physiologically harmless, it is therefore especially suitable for use in the food and pharmaceutical industries.



Type 072.53

Three-pole electrode holder for wells and tanks.

The total length of the sensor is obtained by interconnecting multiple electrodes 072.500.

Maximum liquid temperature 70°C.

High quality electrode material: stainless steel (AISI 303) for high corrosion resistance.



Type 072.11

Flood sensor, ideal for detecting floor surface water and condensation (for example in refrigerator aisles).



Type 072.503

Electrode separator - for use with the 072.53 holder and 072.500 electrodes.

Maintains the safe separation of the electrodes - preventing them inadvertently touching each other.



Type 072.500x

475 mm long electrodes and electrode connector. M4 thread, stainless steel (AISI 316L)

6M SERIES Power Analyzer Products

Type 6M.Tx - Single phase Modbus quality power monitors.



6M Series
See the technical
data sheet

- **"All-in-one": CT, power/energy meter and supply quality monitor + Modbus communications**
- **True-RMS AC and DC measurements**
 - Accuracy class: 0.5% F.S.
 - Up to 300 A - 800 V AC
up to 400 A - 1000 V DC measurement
 - Bi-directional active energy measurement kWh
 - Working frequency: DC or 1...400 Hz
 - Fully configurable via Modbus RS485 interface (free software)
 - DIN rail mounting (with DIN rail adaptor included)



6M.TA.9.024.1200
50 A - 800 V AC/1000 V DC

6M.TB.9.024.1200
100 A - 800 V AC/1000 V
DC



6M.TF.9.024.1200
300 A - 800 V AC,
400 A - 1000 V DC



Type **6M.BU.0.024.2200** - Modbus RS485 RTU
Modbus TCP/IP gateway with on board web server interface

- **Ethernet com port: 10/100 Mb/s (max. 10 clients)**
- **Modbus RTU com port: RS485 up to 115.200 bit/s (max. 200 Modbus devices)**
 - User interface: 6 LED
 - Insulation between power supply, RS485, Ethernet: 1500 V
 - DIN rail mounting

Approvals (according to type)



Charging stations, energy management, inverters, industrial automation, panels for electrical distribution, PV applications.

77 SERIES Solid State Relays (SSR)



77.01

Modular version, 5 - 15 - 25 - 30 A

→ **DC output with short circuit protection**

- 1 normally open contact AC output
- 17.5 mm or 22.5 mm wide, heat-sink + plastic cover
- Zero-crossing and random switch-on versions available
- Silent switching, arc and bounce-free switching
- Low control power



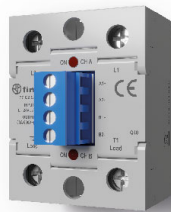
77 Series
See the technical data sheet

Solid State Relay "Hockey Puck" case from 25 to 125 A for single phase application, dual phase with 2 independent channels and for three phase system.



77.x1

- Single phase SSR with SCR power output device
- Nominal switching (load) current: 25, 40, 60, 80, 100, 125 A
- Rated voltage (load): 230 or 600 V AC
- Zero crossing switching mode
- Nominal coil voltage: 24 V DC or 230 V AC
- Dielectric strength: 4000 V AC



77.x2

- Dual phase SSR with 2 independent channels
- Dual SCR power output
- Nominal switching (load) current: 25, 50, 75 A
- Rated voltage (load): 600 V AC
- Random switching mode
- Nominal coil voltage: 24 V DC
- Dielectric strength: 4000 V AC



77.x3

- Three phase SSR with SCR output power device
- Nominal switching (load) current: 25, 40, 60, 80 A
- Rated voltage (load): 600 V AC
- Random switching mode
- Nominal coil voltage: 24 V DC or 230 V AC
- Dielectric strength: 4000 V AC

Approvals (according to type)



Particularly suitable for resistive loads, for industrial applications with high switching rate and loads w/ high inrush currents.
 "Zero crossing": for switching low-energy lamps (in particular for compact low-energy lamps - CFL), resistive loads, solenoids, contactor coils.
 "Random switch-on version": for fast switching applications (in particular motor loads), circuits where the input phase is different from the output phase, and for three-phase loads.

78 SERIES Switch Mode Power Supplies

High-performance switch mode power supplies with adjustable output voltage and overvoltage and short circuit protection.

→ **High efficiency and reliability**

→ **Low stand-by power consumption**

- Compact size
- Front panel access for easy replacement of input fuse (according to type)
- Separate alert for thermal protection
- Compliant with EN 60950-1 and EN 61204-3



78 Series
See the technical data sheet



78.12



78.60



78.2E

Approvals (according to type)



Industrial applications: industrial automation, control and measurement systems.

Building applications: video door entry systems, pumps, DC motors, LED lighting, panels for interfacing BUS systems.

7T SERIES

Panel Thermo-Hygrostat and Thermostats

Type 7T.51 - THERMO-HYGROSTAT

→ **Compact size, 17.5 mm**

→ **Electronic temperature control +50...+140°F and humidity control 50...90%**

- 1 normally open contact (10 A)
- Multi-function

Type 7T.81 - THERMOSTATS

→ **Compact size, 17.5 mm**

→ **Temperature setting -4...+104 °F, -4...+140 °F, +32...+140°F**

- 1 normally open contact (10 A) version for ventilation control
- 1 normally closed contact (10 A) version for heating control



7T Series

See the technical data sheet



7T.51



7T.81.0.000.230x



7T.81.0.000.240x

Approvals (according to type)



Ensuring the performance and longevity of components and instrumentation within control panels and enclosures. Control of ventilation fans or anti-condensation heaters, according to the temperature being above or below the set level.

In the case of the thermo-hygrostat, control is also dependent on the humidity within the panel.

7H SERIES

Panel heaters

25 - 50 - 100 - 150 - 250 - 400 W

→ **SAFE TOUCH plastic protection against accidental contact**

- Heaters: heating power 25 - 50 - 100 and 150 W
- Nominal voltage 110...230 V AC/DC
- Fan assisted heaters: heating power 250 and 400 W
- Nominal voltage 120 or 230 V AC



7H Series
See the technical data sheet



7H.51.0.230.0025



7H.51.0.230.0100



7H.51.8.110.0250

Approvals (according to type)



Used in control panels and enclosures to prevent the formation of condensation by keeping the interior above the dew point.

7F SERIES

Filter Fan (17...412) CFM and Exhaust Filter

- **Air flow from 17 to 412 CFM**
- **Protection category IP54 and UL Type 12 and UL Type 3R (7F.30)**
 - Nominal voltage 120 V AC, 230 V AC or 24 V DC (according to type)
 - Available for indoor (7F.20) or outdoor (7F.30) applications
 - Filter Fan supplied in Reverse flow mode (7F.21 and 7F.31)
 - Very low acoustic noise
 - Easily replaceable filter mat
 - Size 1 up to Size 5
 - Push-in terminals
 - Colors available: Types 7F.20 - Gray RAL 7035 and Black RAL 9004
Types 7F.30 - Gray RAL 700



7F Series
See the technical data sheet



Approvals (according to type)



Filter fans with exhaust filters to help maintain constant temperature in control panels and enclosures to ensure long term performance of components.

7L SERIES LED Panel Lights



7L Series
See the technical
data sheet

- Versions with: direct switching, switching via ON/OFF switch and switching via movement detector
- Brightness levels: 600 or 1200 lumens
- Nominal power consumption: 6 W (600 lm), 9 W (1200 lm)
- Direct magnetic mounting or through a screw-fixed metallic support
 - Power supply: 12...48 V AC/DC and 110...240 V AC/DC
 - Radiation angle: 120°
 - Color temperature: 5,000 K
 - Protection category: IP 20
 - Push-in terminals for the connection to a single unit
 - Plug-in terminals for the connection to a single or multiple units (up to max. 7 lamps)
 - Connector Type 07L.11 included in the packaging
 - Optional fixed bracket accessory 07L.22 available



DIRECT SWITCHING



SWITCHING VIA ON/OFF
SOFT LATCH SWITCH



SWITCHING VIA
MOTION DETECTOR

Approvals (according to type)



Used in electrical cabinets or technical compartments for powerful and versatile lighting.

7U SERIES Power Outlets for Electrical Enclosures



7U Series
See the technical
data sheet

- Available in gray
- Voltage indication LED version available
 - Nominal voltage: 125 V AC
 - Nominal current: up to 15 A
 - 45 mm wide
 - Panel or rail 35 mm (EN 60715) mounting



7U.02.8.120.0010
Gray RAL 7035



Approvals (according to type)



For a secure and approved power outlet for use within electrical enclosures.

9D SERIES High Current Terminal Blocks

- **Nominal current: 80, 125, 175, 250 or 400 A**
- **Daisy chain blocks for further expansion of output terminals**
 - Available with 7, 8 or 12 connections (according to type)
 - Cable connection capacity up to 185 mm² cross section
 - Screw terminals
 - 35 mm rail (EN 60715) mount



9D Series
See the technical data sheet



9D.01.5.080.0304



9D.01.5.125.0206



9D.01.5.175.0210



9D.01.5.250.0111



9D.01.5.400.0111

Approvals (according to type)



For the combining and distribution of high current power cables within electrical panels and cabinets.

12 SERIES

Digital Time Switches

BASIC - Single Channel Versions



Type 12.51



Type 12.81

→ **Digital time switch**

- Easily configurable for daily/weekly programming (Type 12.51)
- Astro: easy calculation of sunrise and sunset times through date, time and location coordinates (Type 12.81)



DIGITAL - Single and Dual Channel Versions



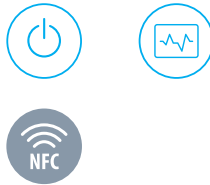
Type 12.61



Type 12.62

→ **Digital time switch**

- Easily configurable for daily/weekly programming
- Minimum switching interval of 1 minute



ASTRO - Single and Dual Channel Versions



Type 12.A1



Type 12.A2

→ **Digital time switch**

- Astro: easy calculation of sunrise and sunset times through date, time and location coordinates
- Easily configurable for daily/weekly programming
- Minimum switching interval of 1 minute



ASTRO - Single Channel Version



Type 12.A4

→ Digital time switch PWM

- Astro: easy calculation of sunrise and sunset times through date, time and location coordinates
- 1 Analog output 0 - 10 V or PWM
- Easily configurable for daily/weekly programming
- Minimum switching interval of 1 minute



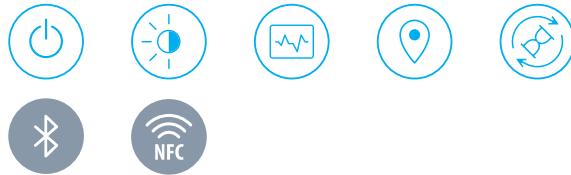
BLUETOOTH ASTRO - Dual Channel Version



Type 12.B2

→ Digital time switch

- Astro: easy calculation of sunrise and sunset times through date, time and location coordinates
- Easily configurable for daily/weekly programming
- Includes cyclic and random options
- Minimum switching interval of 1 minute



FUNCTIONS



ASTRO

Calculates dawn and dusk times based on the date and the geographical coordinates.



ON/OFF

Channel switched to **ON** mode.
Channel switched to **OFF** mode.



NIGHT

Programmable on/off times.



ASTRO ON/OFF

Classic on/off function with **AstroON** and **AstroOFF** based on the date and the geographical coordinates.



OFFSET

To bring forward or delay (up to 90 minutes) the switching on and off of the lights in relation to dawn and dusk times



IMPULSE

1 s ... 59 min



Approvals (according to type)



Street and park lighting, outdoor signs. Display windows, fountains, gardens.

80 SERIES

Modular Timer 1 - 6 - 8 - 10 A



80.01

Modular timers 17.5 mm. Multi-voltage, multi-function and mono-function.

→ **Wide nominal voltage range of 12 to 240 V AC or DC (non-polarised)**

- "PWM clever" technology for automatic recognition of the supply voltage
- Rated current up to 10 A; a version with 1 A SSR output is also available
- Six time scales from 0.1s to 24h
- High input/output isolation
- "Blade +Cross" - both flat blade and cross head screwdrivers can be used to adjust the range and function selectors, the timing trimmer, and to disengage the rail mounting clip



80 Series

See the technical data sheet



Approvals (according to type)



80 Series: automatic door and gate openers, building automation, cranes, pump control panels and pumping units, automated awnings, blinds, shutters, elevators, control systems, timers and lighting controls.

83 SERIES

Modular Timers 8 - 12 A



83 Series
See the technical
data sheet

Modular timers 22.5 mm. Multi-function and Mono-function.



83.91

→ **Wide nominal voltage range of 24 to 240 V AC or DC (non-polarised). Rated current up to 12 A; special versions also available with 2 timed contacts or 1 timed + 1 instantaneous contact plus option to set delay time via an external potentiometer**

- Multi-function and mono-function types available
- "PWM clever" technology for automatic recognition of the supply voltage
- Eight time scales from 0.05 s to 10 days
- High input/output isolation



Type 83.02.0.240.0003
IECEX-Ex modular timer

→ **Multi-function & multi-voltage IECEX, ATEX (Zone 2, Category 3), HazLoc (CI I, Div.2) timer**

- 2 Pole (timed + instantaneous options)
- External time setting potentiometer option
- $U_n = 24 \dots 240$ V AC/DC
- 2 changeover contacts, 277 V AC, 10 A
- ATEX: II 3 G Ex ec nC IIC T4 Gc
- IECEX: Ex ec nC IIC T4 Gc
- HazLoc: CI I, Div2, Gr A, B, C, D, T4, CI I, Zn 2, AEx ec nC IIC T4, Ex ec nC IIC T4 Gc X



Approvals (according to type)



Packaging machines, pump control panels and pumping units, industrial refrigeration, discotheques, swimming pools, and fountains, industrial furnaces and ovens, confectionery machines, control panels and distribution, automatic car-washes.

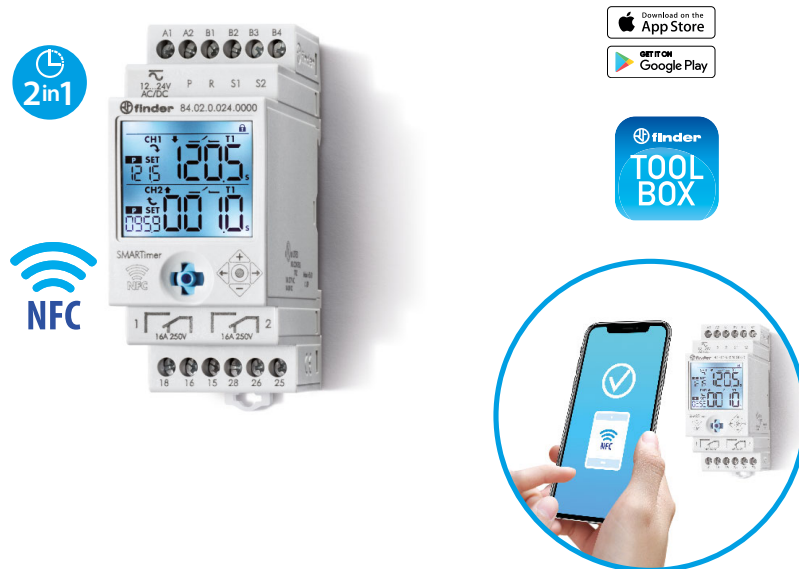
84 SERIES

SMARTimer, Digital Timer 10 A

- **Multi-function; (the two channels, and their respective selected function, can be combined to create a new and more complex function)**
- **Multi-voltage**
 - Two programming modes: "Smart" mode via smartphone with NFC communication or "Classic" mode via the joystick
 - Wide backlit display
 - High precision and flexibility, adjustable in tenths of a second, seconds, minutes, hours
 - 2 - DPDT outputs 10 A contacts



84 Series
See the technical data sheet



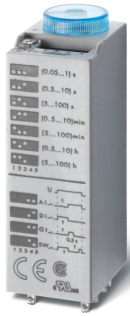
Approvals (according to type)



Industrial washing machines, timers and lighting controls, discotheques, swimming pools, and fountains, industrial furnaces and ovens, confectionery machines, punches, cleaners, planers and sanders, control panels, automatic car-washes.

85 SERIES

Miniature Plug-In Timers 7 - 10 A



- **Seven time scales, from 0.05 s to 100 h**
- **Multi-function**
 - AC/DC supply non polarized
 - DPDT, 3PDT, or 4PDT
 - Wide ambient temperature range: -20...+60°C
 - 94 Series sockets mount



85 Series
See the technical data sheet

86 SERIES

Timer Modules



86.00

- **Option of functions with external start (Type 86.00)**
- **Special versions for hazardous locations (ATEX, HazLoc, IECEx)**
 - Multi-function & multi-voltage
 - Wide supply voltage AC/DC range (non polarized)
 - Seven time scale: from 0.05 s to 100 h
 - LED indicator
 - Timer modules for use in conjunction with relay & socket



86 Series
See the technical data sheet



86.30



Approvals (according to type)



85 Series: Medical and dentistry, drying kilns, timers and lighting controls, elevators for workshops, galvanic treatment machines, panels for electrical distribution, control panels, industrial fans.

86 Series: Machines for paper processing, printing machines, machines for ceramics, packaging machines, wood processing machines, milk-processing machines, textile machines, control panels.

88 SERIES Plug-in timers 8 A

- 8 and 11 pin plug-in versions available for 90 Series socket mount
- Versions available: 2 timed contacts or 1 timed contact + 1 instantaneous contact
 - Multi-voltage and multi-function
 - Time scales from 0.05 s to 100 h
 - Wide supply voltage AC/DC range



88 Series
See the technical data sheet



88.02



88.92



Approvals (according to type)



Medical and dentistry, drying kilns, industrial furnaces and ovens, ultrasonic cleaning machines, industrial washing machines, confectionery machines, wood-processing machines, galvanic treatment plants.

Socket-Timer compatibility



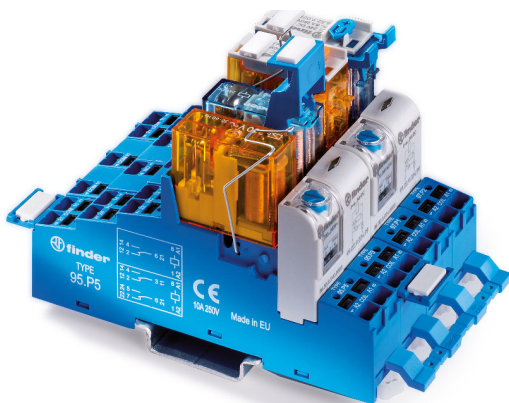
85 SERIES - Miniature plug-in timers

Compatible with 94 Series sockets



88 SERIES - Plug-in timers

Compatible with 90 Series sockets



86 SERIES - Timer modules

Type 86.00

compatible with the following socket type:

- 90.02, 90.03
- 92.03
- 96.04

Type 86.30

compatible with the following socket type:

- 90.02, 90.03
- 92.03
- 96.02, 96.04
- 94.02, 94.03, 94.04, 94.54, 94.P3, 94.P4
- 97.01, 97.02, 97.51, 97.52, 97.P1, 97.P2
- 95.03, 95.05, 95.55, 95.P3, 95.P5



39 SERIES

Slim timed interface module

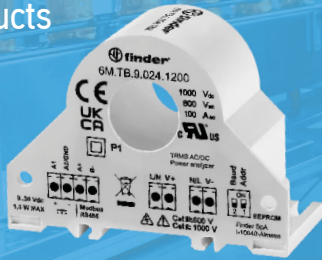
- 39.81 - **EMR**
Timed socket with screw terminals
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