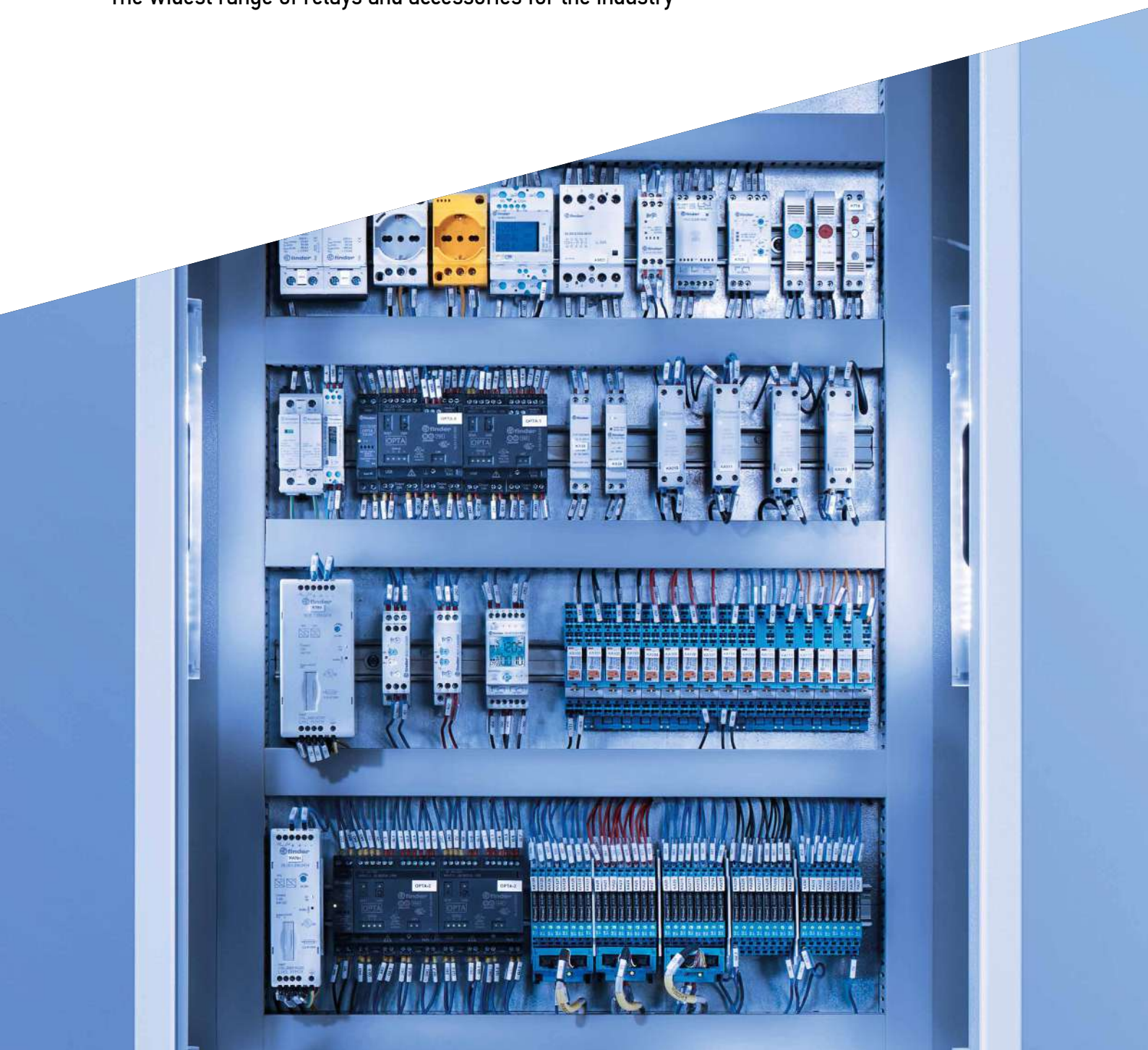
finder
SWITCH TO THE FUTURE

SOLUTIONS FOR ELECTRICAL PANELS AND INDUSTRIAL AUTOMATION

The widest range of relays and accessories for the industry



ABOUT US

Finder was founded in Italy in 1954. Since then it has been designing and manufacturing a wide range of electromechanical and electronic components for both the residential and industrial sectors.

Today, thanks to its global vision, Finder now distributes its 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 1300 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.

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.

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

Cribis Prime Company
Recognition of highest reliability of commercial relations

PROGRAMMABLE LOGIC RELAYS

8A Series – OPTA - PROGRAMMABLE LOGIC RELAYS 2

INDUSTRIAL AND PCB RELAYS (EMR OR SSR)

30 Series – Subminiature DIL relays 2 A 6
32 Series – Subminiature PCB relays 6 A 6
34 Series – Ultra-slim PCB Relays (EMR or SSR) 0.1 - 0.2 - 2 - 6 A 7
36 Series – Miniature PCB relays 10 A 7
40 Series – Miniature PCB/Plug-in relays 8 - 10 - 12 - 16 A 8
41 Series – Low profile PCB relays (EMR or SSR) 3 - 5 - 8 - 12 - 16 A 8
43 Series – Low profile PCB relays 10 - 16 A 9
45 Series – Miniature PCB Relays + Faston 250, 10 - 16 A 9
46 Series – Miniature Industrial relay 8 - 16 A 10
55 Series – General purpose relays 7 - 10 A 10
56 Series – Miniature power relays 12 A 11
60 Series – Industrial relays 6 - 10 A 11
62 Series – Power relays 16 A 12
65 Series – Power relays 20 - 30 A 12
66 Series – Power relays 30 A 13
67 Series – High Power relays for pv applications 50 A 13
68 Series – High Power relays 40 - 100 A 14
RB Series – Bistable relays 8 A 15
RR Series – Fast relay module 8 A 15
Socket-Relay compatibility 16
99 Series – Coil indication and EMC suppression modules for sockets 18

RELAY INTERFACE MODULES (EMR OR SSR)

38 Series – Relay interface modules (EMR or SSR) 0.1 - 2 - 3 - 5 - 6 - 8 - 16 A 19
39 Series – MasterINTERFACE - Relay interface modules (EMR or SSR) 0.1 - 2 - 6 A 19
48 Series – Relay interface modules 8 - 10 - 16 A 20
4C Series – Relay interface modules 8 - 10 - 16 A (relay with: lockable test button, mechanical indicator & LED indicator) 20
58 Series – Relay interface modules 6 - 7 - 10 A 21

RELAYS WITH FORCIBLY GUIDED CONTACTS

50 Series – PCB Relay with forcibly guided contacts 8 A 22
7S Series – Modular relays with forcibly guided contacts 6 - 10 A 23

MONITORING RELAYS

70 Series – Electronic Monitoring voltage/current relays 24
72 Series – Level control relays and float switch for conductive liquids 25

POWER ANALYZER
ENERGY METER
SPD

6M Series – Power analyzer products 28
7M Series – SMART Energy meters with NFC technology 29
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SOLID STATE RELAYS (SSR)

77 Series – Solid State Relays (SSR) 5 - 15 - 30 - 50 A 32

SWITCH MODE POWER SUPPLIES

78 Series – Switch mode power supplies 33

INDUSTRIAL THERMOREGULATION AND ACCESSORIES

7T Series – Panel Thermo-Hygrostat and Thermostats 34
7H Series – Panel Heaters 25 - 50 - 100 - 150 - 250 - 400 W 35
7F Series – Filter Fan (24...700)m^3/h and Exhaust Filter 36
7L Series – LED panel light 37
7U Series – Power outlets for electrical enclosures 38
9D Series – High Current Terminal Blocks 39

TIMERS

80 Series – Multi-function Modular timers, 17.5 mm wide 1 - 6 - 8 - 16 A 40
81 Series – Modular timer with Start and Reset function 16 A 40
83 Series – Multi-function Modular timers, 22.5 mm wide 8 - 12 - 16 A 41
84 Series – SMARTimer, digital timer 16 A 42
85 Series – Miniature plug-in timers 7 - 10 A 43
86 Series – Timer modules 43
88 Series – Plug-in or panel mount timers 44
Socket-Timer compatibility 45

WHAT IS FINDER OPTA?

OPTA

PROGRAMMABLE LOGIC RELAYS

8A Series

A range of simple and self contained **PROGRAMMABLE LOGIC RELAYS** easily create applications for industrial automation, OEMs and building automation.

Programmable both with a traditional language IEC 61131-3 (Ladder) as well as with an innovative and open source language (IDE / ARDUINO).

Made in ITALY by Finder, it combines Finder's industrial experience with ARDUINO's technological innovation, for a truly **unique product**.

OPTA

PROGRAMMABLE LOGIC RELAYS

8A Series

THE UNIQUE NEW PROGRAMMABLE LOGIC RELAY

POWERFUL

The powerful dual-core Cortex® M7+M4 chip allows a large number of computing operations in real time. Ideal for predictive maintenance applications.

CONNECTED

Thanks to the RJ45 port, the USB (type C port), RS485 and WiFi/BLE integrated module.

SECURE

Thanks to an high end integrated secure element chip to manage encryption and data keys in all kinds of applications.

OPEN SOURCE

Programmable with OPEN SOURCE, LICENCE FREE software (IDE ARDUINO) as well as IEC 61131-3 languages (LADDER, FBD).

EASY

Designed to simplify the interaction between electronic devices and the physical world, empowering all your projects.

78 Series
See the technical data sheet

8A Series
See the technical data sheet

OPTA

THE RANGE

LITE

Type 8A.04.9.024.8300

- Supply 12…24 V DC
- 8 Digital/Analog (0-10V) input
- 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) input
- 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 MODUS RTU connection

ADVANCED
+ WIFI and BLE

Type 8A.04.9.024.8320

- Supply 12…24 V DC
- 8 Digital/Analog (0-10V) input
- 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 MODUS RTU connection
- Wi-Fi/BLE integrated module

POWER SUPPLY

Type 78.12.1.230.2482

- 24 V DC power supplies
- Peak current: 2A
- 12 W, only one module wide (17,5mm)
- Short circuit protection
- Thermal protection
- Overvoltage protection
- SELV

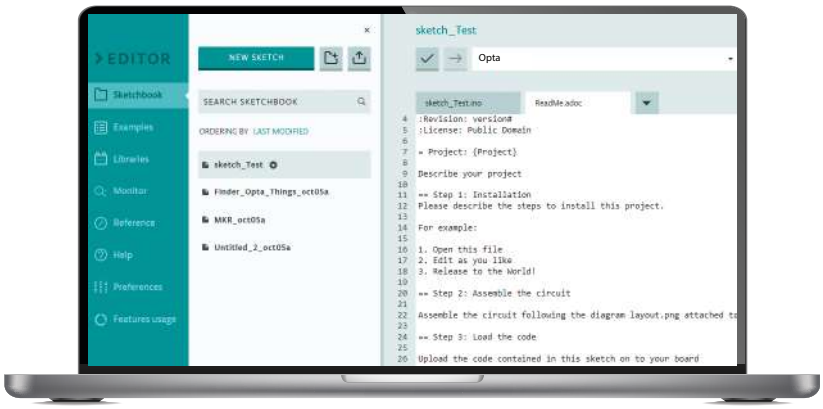
Approvals (according to type)

OPTA

ALL THE PROGRAMMING LANGUAGES YOU NEED

FREE – WITHOUT LICENCES

Using ARDUINO IDE,
the Open-Source Arduino Software



Download the software!

LICENSED - TRADITIONAL

Using ARDUINO PLC-IDE for
traditional language IEC 61131-3

https://opta.findernet.com/en

30 SERIES Subminiature DIL relays 2 A

- Very Small
- 2 contacts 2 A
- **Very low coil consumption - 200 mW**
- For the control of low level loads
- Au clad contacts
- Printed circuit mount

30 Series
See the technical data sheet

32 SERIES Subminiature PCB relays 6 A

- Very Small
- 1 Pole changeover contact or 1 Pole normally open contact 6 A
- Very low coil consumption 200 mW
- **For the control of low level loads**
- Subminiature, low profile package

32 Series
See the technical data sheet

Approvals (according to type)

APPLICATIONS

Used mainly for electronic circuit boards in signal transmission devices, telecoms, and small household appliances.

34 SERIES Ultra-slim PCB Relays (EMR or SSR) 0.1 - 0.2 - 2 - 6 A

- **Ultra slim (5 mm) package**
- 1 Pole changeover contact or 1 Pole normally open contact
- Very low coil consumption - 170 mW
- UL Listing (certain relay/socket combinations)
- PCB or 93 Series socket mount
  (according to type - page 16)

34 Series
See the technical data sheet

36 SERIES Miniature PCB relays 10 A

- **Miniature - "Sugar cube" package**
- 1 Pole changeover contact 10 A
- Very low coil consumption - 360 mW

36 Series
See the technical data sheet

Approvals (according to type)

APPLICATIONS

34 Series: used mainly for circuit boards within equipment such as vending machines, programmable controllers.
36 Series: widely used in household appliances.

40 SERIES Miniature PCB Relays or socket mount 8 - 10 - 12 - 16 A

- 1 or 2 contacts
- Pin length 3.5 mm for PCB mount
- Pin length 5.3 mm for 95 Series sockets Plug-in mount
- **AC coils and DC coils (low coil consumption)**
- Meets EN 60335-1 glow wire requirements
- Bistable versions available
- PCB or 95 Series socket mount
  (according to type - page 16)

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 hight)**
- 1 or 2 contacts
- 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
  (according to type - page 16)

41 Series
See the technical data sheet

Approvals (according to type)

APPLICATIONS

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.

43 SERIES Low profile PCB relays 10 - 16 A

- Low profile (15.4 mm hight)
- 1 Pole changeover contact or 1 Pole normally open contact
- DC coil
- **Low coil consumption**
- PCB or 95 Series sockets mount (according to type - page 16)

43 Series
See the technical data sheet

45 SERIES Miniature PCB Relays + Faston 250, 10 - 16 A

- **Relay for +105 °C or 125°C ambient use**
- 1 normally open contact
- Large contact gap
- DC coil
- Conform to Annex CC EN 61439-7:2018 for EV charging station

45 Series
See the technical data sheet

Approvals (according to type)

APPLICATIONS

Household appliances, food industry, drying kilns.
45 Series: for photovoltaic inverters and charging station.

46 SERIES Miniature industrial relays 8 - 16 A

- Power relays, 1 - 2 contacts
- AC coils and DC coils
- **Available with: lockable test button, mechanical indicator & LED indicator**
- Optional alternative mounting adaptors
- PCB mount sockets or 35 mm rail (EN 60715) mount sockets, (according to type - page 16)

46 Series
See the technical data sheet

European Paten (according to type)

55 SERIES General purpose relays 7 - 10 A

- Compact dimensions
- **2 - 3 - 4 changeover contacts**
- AC coils and DC coils
- Optional alternative mounting adaptors
- PCB or 94 Series socket mount (according to type - page 16)

55 Series
See the technical data sheet

European Paten (according to type)

Approvals (according to type)

APPLICATIONS

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

Special versions for railway applications.

56 SERIES Miniature power relays 12 A

- **2 - 4 Pole changeover contacts or 2 Pole normally open contacts 12 A**
- 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 17)

56 Series
See the technical data sheet

European Paten
(according to type)

60 SERIES Industrial relays 6 - 10 A

- 2 - 3 Pole changeover contacts
- Bifurcated contacts for low level switching
- **8 pin plug-in and 11 pin plug-in versions**
- AC coils and DC coils
- Lockable test button with mechanical flag indicator (preferred version)
- PCB or 90 Series socket mount
  (according to type - page 17)

60 Series
See the technical data sheet

European Paten
(according to type)

Approvals (according to type)

APPLICATIONS

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

Special versions for railway applications.

62 SERIES Power relays 16 A

- **2 & 3 Pole changeover contacts or normally open contacts (≥ 3 mm contact gap)**
- AC coils and DC coils
- SELV coil-contact separator option
- LED, test button and mechanical indicator standard (according to type)
- **Magnetic blow-out power relay**
- PCB or 92 Series socket mount (according to type - page 17)

62 Series
See the technical data sheet

European Paten (according to type)

65 SERIES Power relays 20 - 30 A

- 1 NO + 1 NC (SPST-NO + SPST-NC) or 1 NO (SPST-NO)
- AC coils and DC coils
- Bifurcated terminals
- Optional alternative mounting adaptors
- **PCB mount or Faston 250 (6.3 x 0.8 mm) connection**

65 Series
See the technical data sheet

Approvals (according to type)

APPLICATIONS

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

- 2 Pole changeover contacts or 2 normally open contacts 30 A
- AC coils and DC coils
- **Certification by ATEX accredited body to (EX ec nC) EN IEC 60079-15: 2019**
- **Complies with HazLoc Class I Div. 2, Groups A, B, C, D - T4 - T5 - T6**
- PCB mount - bifurcated terminals, flange mount, Faston 250 connections

66 Series
See the technical data sheet

67 SERIES High Power relays 50 A

- **2 - 3 normally open contacts 50 A**
- 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)

APPLICATIONS

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 40 - 100 A

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

68 Series
See the technical data sheet

Approvals (according to type)

APPLICATIONS

Complies with IEC 62955 for electric vehicle charging stations.
Inverters, photovoltaic inverters, battery chargers
and high power switching applications.

RB SERIES Bistable relays 8 A

- 2 or 4 pole changeover contacts 8 A
- DC coils
- **SET and RESET signal inputs**
- LED command status indication
- 35 mm rail (EN 60715) mount or 90 Series socket mount

RB Series
See the technical data sheet

RR SERIES Fast relay module 8 A

- 4 pole changeover or 3 normally open + 1 changeover contacts 8 A
- DC coils
- **Operate time ≤ 3 ms**
- LED command status indication
- 35 mm rail (EN 60715) mount or 90 Series socket mount

RR Series
See the technical data sheet

Approvals (according to type)

APPLICATIONS

Used within safety and protection systems in areas such as energy distribution, or in applications where the intervention time is crucially important.

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.

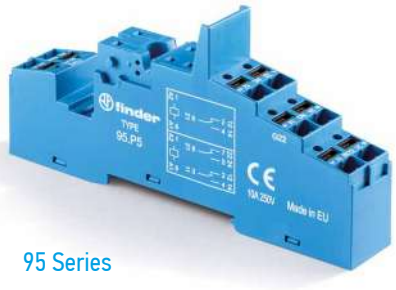
34 Series

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

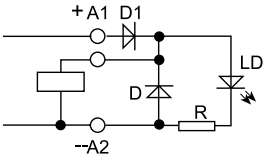
62 Series

92 Series

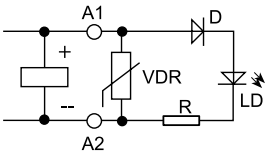
Screw terminals

99 SERIES Coil indication and EMC suppression modules for sockets

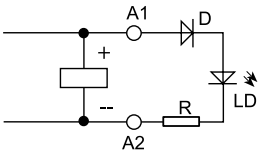
These modules when be plugged into the appropriate socket can suppress coil generated back-emf (diode or varistor), provide visual signaling (coil energized LED) or can filter out possible mains disturbances (RC filters).



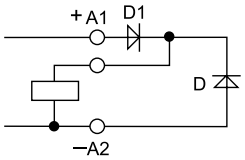
Green LED indicator + diode (standard polarity)



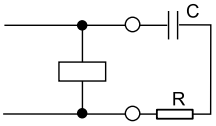
Green LED indicator + Varistor



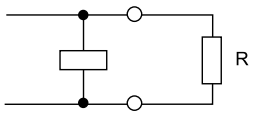
Green LED indicator



Diode (standard polarity)



RC Circuit



Residual current by pass

38 SERIES Relay interface modules (EMR or SSR) 0.1 - 2 - 3 - 5 - 6 - 8 - 16 A

- 1 or 2 changeover contacts or 1 normally open contact
- Sensitive DC coils or AC/DC coils versions
- **"Ultra-slim" interface modules, just 6.2 mm wide only**
- Quick and easy ejection of relay using plastic retaining clip
- Timed multifunction version with electromechanical or solid state relay output
- UL Listing (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

- 1 or 2 changeover contacts or 1 normally open contact
- AC coils and DC coils
- **"Ultra-slim" interface modules, just 6.2 mm wide only**
- Quick and easy ejection of relay using plastic retaining clip
- Versions taking fuse holder module for protection of the output circuit
- **Atex and HazLoc compliant versions available**
- 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 Listing (certain relay/socket combinations)
- **The most complete range of accessories**
- Sockets with screw or screwless terminals or push-in terminals

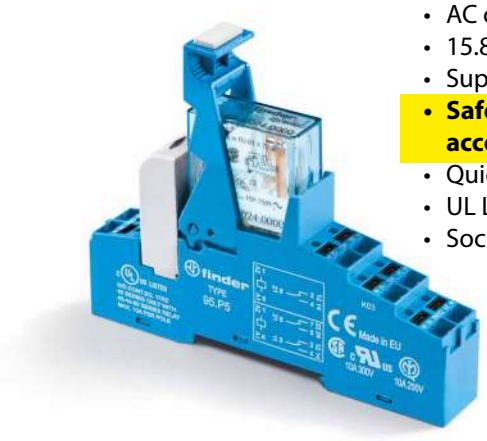
39 Series
See the technical data sheet

Approvals (according to type)

APPLICATIONS

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.

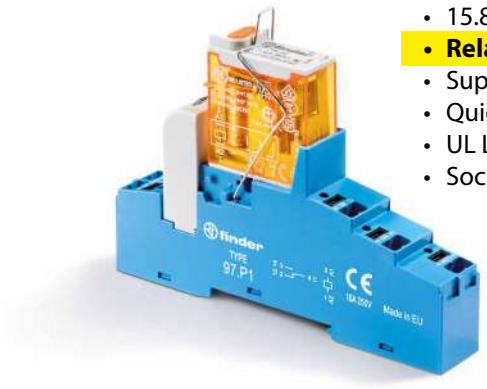
48 SERIES Relay interface modules 8 - 10 - 16 A



- 1 or 2 pole changeover contacts
- AC coils or DC coils
- 15.8 mm wide
- Supply status indication and EMC coil suppression module as standard
- **Safety applications: relay with forcibly guided contacts according to EN 61810-3 Type B (previously EN 50205)**
- Quick and easy ejection of relay using plastic retaining clip
- UL Listing (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



- 1 or 2 pole changeover contacts
- AC coils or DC coilsl
- 15.8 mm wide
- **Relay with: lockable test button, mechanical indicator & LED indicator**
- Supply status indication and EMC coil suppression module as standard
- Quick and easy ejection of relay using plastic retaining clip
- UL Listing (certain relay/socket combinations)
- Sockets with screw terminals or push-in terminals

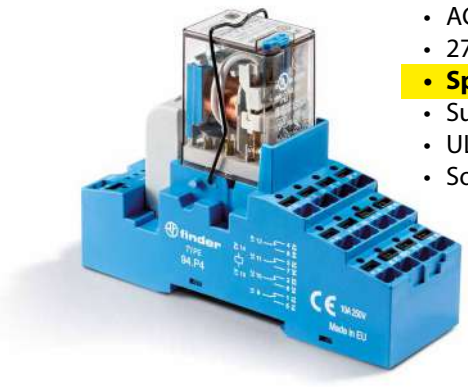
4C Series
See the technical data sheet

Approvals (according to type)

APPLICATIONS

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



- 2 - 3 - 4 pole changeover contacts
- AC coil or DC coil
- 27 mm wide
- **Special versions for hazardous locations (ATEX and HAZLOC)**
- Supply status indication and EMC coil suppression module as standard
- UL Listing (certain relay/socket combinations)
- Sockets with screw terminals or push-in terminals

58 Series
See the technical data sheet

Approvals (according to type)

APPLICATIONS

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.

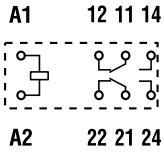
50 SERIES PCB Relay with forcibly guided contacts 8 A

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

50 Series
See the technical data sheet

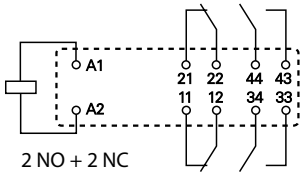
- Contact configuration (according to type):
  - 2 changeover contacts 8 A
  - 4 pole: 2 NO + 2 NC, 3 NO + 1 NC
  - 6 pole: 4 NO + 2 NC, 5 NO + 1 NC, 3 NO + 3 NC
- **Low DC coil consumption**
- High physical separation between adjacent contacts
- PCB mount

Type 50.12

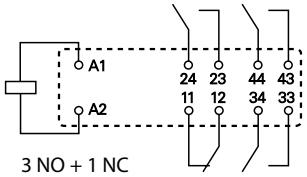


2 changeover contacts

Type 50.14

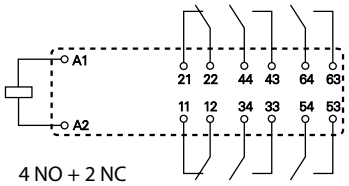


2 NO + 2 NC

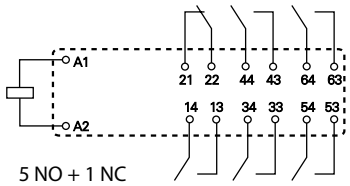


3 NO + 1 NC

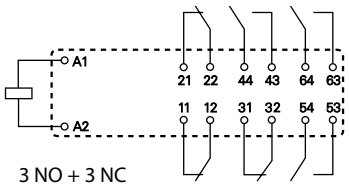
Type 50.16



4 NO + 2 NC



5 NO + 1 NC



3 NO + 3 NC

Approvals (according to type)

APPLICATIONS

For safety applications with forcibly guided contacts according to EN 61810-3.
Machine tools, elevators, safety barriers.

7S SERIES Modular relays with forcibly guided contacts 6 - 10 A

For safety applications, with class A forcibly guided contact relays EN 61810-3 (previously EN 50205).

7S Series
See the technical data sheet

- 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.

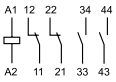
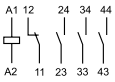
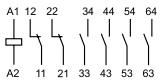
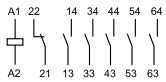
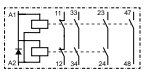
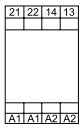
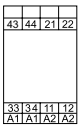
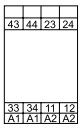
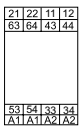
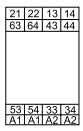
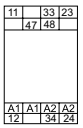
Type 7S.12

Type 7S.14

Type 7S.34

Type 7S.23

Type 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)

APPLICATIONS

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 Monitoring relays

- **Multifunction models able to monitor and control the characteristic variables of single-phase and three-phase electrical systems**
- 1 or 2 changeover contacts
- **Positive safety logic**
- Colored LEDs for clear & immediate visual indication
- NFC version
- Modular, 17.5, 22.5 or 35 mm wide
- 35 mm rail (EN 60715) mount

70 Series
See the technical data sheet

Type 70.51

Type 70.42

Approvals (according to type)

APPLICATIONS

For 1 or 3 phase systems, 1 or 2 contacts.

This product range is ideal for voltage control in equipment and machinery such as motors, lifts, elevators, hydraulic pumps, air-conditioning systems and air treatment machines.

72 SERIES Level control relays for conductive liquids

Type 72.01, 72.11: electrode type liquid level controllers with emptying or filling functions
Type 72.42: priority change relay for alternating loads

- **Multifunction versions**
- LED indicator
- Control about a single level or between Min./Max. limits (72.01/72.11)
- Complex load control to account for issues such as redundancy, maintenance, intervention of external override signals
- Reinforced insulation (6 kV - 1.2/50 µs) 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

Type 72.01

Type 72.42

Approvals (according to type)

APPLICATIONS

Type 72.01 and 72.11: level control of conductive liquids using electrodes.
Type 72.42 is ideal for alternating load sharing in applications with pumps, compressors, air conditioning and refrigeration units.

72 SERIES Accessories for relays Type 72.01 and 72.11

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 mm^2), 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).

REGISTERED COMMUNITY DESIGN

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.

72 SERIES Float switch suitable for fluid level regulation

- 1 changeover contact 10 A (resistive load) / 8 A (inductive load)
- Space saving version
- Cable length 5 m, 10 m, 15 m or 20 m
- **Suitable for emptying and filling**
- **Cable and plastic ACS certified version available for liquid foodstuff and potable water**
- Type 72.C1: Manual switch for automatic (ON/OFF) or manual (always ON) operation, cable length 2 m

72 Series
See the technical data sheet

Type 72.A1
ACS

Type 72.A1

Type 72.B1

Type 72.C1

Approvals (according to type)

CE UK CA EAC ACS

APPLICATIONS

Type 72.A1.1000.xxxx: for grey water, professional plumbing systems and waste water.
Type 72.A1.0000.xx02: for liquid foodstuff and potable water.
Type 72.B1.1000.xxxx: for black water systems, drainage plants and pumping stations.
Type 72.C1.0000.0201: space saving, clean or waste water wells, industrial and chemical waters.

6M SERIES Power analyzer products

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

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

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

- **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)

Type 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 slaves)**
- User interface: 6 LED
- Insulation between power supply, RS485, Ethernet: 1500 V
- DIN rail mounting

6M Series
See the technical data sheet

Approvals (according to type)

APPLICATIONS

Charging Stations, energy management, inverters, Industrial automation, panels for electrical distribution, PV applications.

7M SERIES SMART Energy meters with NFC technology

Control, measurement and data transmission via pulse communication interface, Mbus or Modbus.

- Bidirectional energy meters for measuring kWh, kvarh, kVAh, voltage and current, phase, line-to-line voltage, frequency, cosfi and THD.
  Equipped with double tariff and re-settable partial counters
- **Thanks to NFC technology it is possible to read the energy meter without the presence of the supply network, and also customize and program characteristics such as the primary address or baud rate.**
- **MID certified, according to type, up to 70°C**
- Modbus RS485, M-bus or Ethernet communication port incorporated into the meter - according to type
- Modular, 17.5 or 52.5 mm wide
- 35 mm rail (EN 60715) mount

7M Series
See the technical data sheet

Tipo 7M.24 Tipo 7M.38

Approvals (according to type)

APPLICATIONS

Energy meters ideal for remote monitoring and measurement of energy consumed in apartments, communal areas in apartment blocks, boilers, photovoltaic systems, machine tools, production lines and presses, etc…

7P SERIES Surge protection devices (SPD)

SPD, for single/three phase applications, for protection of photovoltaic systems and data lines.

- **Class I + II SPD with varistor and GDT guarantees high isolation and zero leakage current**
- Class I + II SPD, compact and efficient - effective protection starting from the point of delivery of energy
- Class I and Class II SPDs with replaceable module
- Class III SPDs for a wide range of applications such as LED lamps, sensitive electronics, data lines
- For panel or 35 mm rail (EN 60715) mount
- Equipped with replaceable modules with or without remote signalling contact
- Modular, from 18 to 144 mm wide

7P Series
See the technical data sheet

Type 7P.04

Type 7P.23.9.000.0015

Approvals (according to type)

APPLICATIONS

The ideal overvoltage protection system consists of the connection of Class I, II and III SPDs. Providing protection from atmospheric (lightning) and switching overvoltage for; **Residential and service installations** such as apartments, saunas, TVs, dishwashers, computers and modems; **Industrial installations** (elevators, motors, sensitive measurement and data transmission electronics) and Photovoltaic systems (inverters, panels and control and measurement devices).

7P SERIES Surge protection devices (SPD)

Type 7P.68

Type 7P.36

Type 7P.12

Type 7P.24

77 SERIES Solid State Relays (SSR)
5 - 15 - 30 - 50 A

Modular and “hockey puck”.

- 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
- **DC output with short circuit protection**
- Silent switching, arc and bounce-free switching
- Low control power

77 Series
See the technical data sheet

Type 77.01

Type 77.31

Type 77.25

Approvals (according to type)

APPLICATIONS

Particularly suitable for resistive loads and for industrial applications with high switching rate and loads with 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**
- Compact size
- **Low stand-by power consumption**
- Front panel access for easy replacement of input fuse
- Separate alert for thermal protection
- Compliant with EN 60950-1 and EN 61204-3

78 Series
See the technical data sheet

Type 78.12

Type 78.60

Type 78.2E

Approvals (according to type)

APPLICATIONS

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

Ensuring the performance and longevity of components
and instrumentation within control panels and enclosures.

Type 7T.51 - THERMO-HYGROSTAT

- **Compact size, 17.5 mm**
- 1 normally open contact (10 A)
- Multi-function

Electronic temperature control +10…+60°C and humidity control 50…90%

Type 7T.81 - THERMOSTATS

- **Compact size, 17.5 mm**
- 1 normally open contact (10 A) version for ventilation control
- 1 normally closed contact (10 A) version for heating control
- **Temperature setting 0…+60 °C , –20…+40 °C, –20…+60°C**

7T Series
See the technical data sheet

Type 7T.51

Type 7T.81.0.000.230x

Type 7T.81.0.000.240x

Approvals (according to type)

APPLICATIONS

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

Preventing the formation of condensation and ensuring
the optimum temperature within electrical enclosures.

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

7H Series
See the technical data sheet

Type 7H.51.0.230.0025

Type 7H.51.0.230.0100

Type 7H.51.8.230.0250

Approvals (according to type)

APPLICATIONS

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

7F SERIES Filter Fan (24...700)m³/h and Exhaust Filter

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

- **Air flow from 14 to 700 m³/h**
- Nominal voltage 24 V DC , 120 or 230 V AC
- **Protection category IP 54 and NEMA Type 12 and Type 3R (7F.30)**
- Available for indoor (7F.20) or outdoor (7F.30) applications
- Easily replaceable filter mat
- Push-in terminals
- Colours available: Types 7F.20 - Grey RAL 7035 and Black RAL 9004
  Types 7F.30 - Grey RAL 7000

7F Series
See the technical data sheet

Type 7F.02
Exhaust Filter

Type 7F.20
Filter Fan

Type 7F.03
Exhaust Filter

Type 7F.30
Filter Fan

Approvals (according to type)

APPLICATIONS

Used in control panels and enclosures to ventilate, and remove humidity that may be present.

7L SERIES LED panel lights

LED light for electrical panels with magnetic mounting, 600 or 1200 lumens.

- **Versions with: direct switching, switching via ON/OFF switch and switching via movement detector**
- Direct magnetic mounting or through a screw-fixed metallic support
- Power supply: 12…48 V AC/DC and 110…240 V AC/DC
- **Nominal power consumption: 6 W (600 lm), 9 W (1200 lm)**
- Radiation angle: 120°
- Colour temperature: 5,000 K
- Protection category: IP20
- Connector Type 07L.11 included in the packaging

7L Series
See the technical data sheet

DIRECT SWITCHING

SWITCHING VIA ON/OFF SOFT LATCH SWITCH

SWITCHING VIA MOTION DETECTOR

Approvals (according to type)

APPLICATIONS

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

7U SERIES Power outlets for electrical enclosures

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

- Nominal voltage: 230 V AC
- Nominal current: up to 16 A
- Compatible with Schuko and Italian Bipasso and with French systems
- **Available in grey and yellow**
- **Voltage indication LED version available**
- 45 mm wide
- 35 mm rail (EN 60715) mount

7U Series
See the technical data sheet

Type 7U.00.8.230.0010
Grey RAL 7035

Type 7U.00.8.230.0002
Yellow RAL 1021

Type 7U.01.8.230.0000
Grey RAL 7035

Type 7U.01.8.230.0012
Yellow RAL 1021

Approvals (according to type)

APPLICATIONS

For electrical enclosures.

9D SERIES High Current Terminal Blocks

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

9D Series
See the technical data sheet

Type 9D.01.5.250.0111
Type 9D.01.5.400.0111

Type 9D.01.5.080.0304
Type 9D.01.5.125.0206
Type 9D.01.5.175.0210

Approvals (according to type)

APPLICATIONS

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

80 SERIES Modular timer 1 - 6 - 8 - 16 A

Type 80.01

Modular timers 17.5 mm. Multi-voltage, Multi-function and Mono-function.

- "PWM clever" technology for automatic recognition of the supply voltage
- **Wide nominal voltage range of 12 to 240 V AC or DC (non-polarised)**
- Rated current up to 16 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

81 SERIES Modular timer 16 A

Multi-voltage Modular Timer 17.5 mm, with Start and Reset function.

- Multi-function (7 functions, 4 with power-on start and 3 with Start and Reset control signal inputs)
- **Reset function**
- Wide nominal voltage range of 12 to 230 V AC or DC (non-polarised)
- DIP switch for time and function controls
- Six time scales from 0.1s to 10h

81 Series
See the technical data sheet

Approvals (according to type)

APPLICATIONS

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.
81 Series: Automatic door and gate openers, shipyards, drills, cleaners, sanders, control panels, distribution, timers and lighting controls, milk-processing machines, control panels, industrial sweepers.

83 SERIES Modular timers 8 - 12 - 16 A

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

- Multi-function and Mono-function types available
- "PWM clever" technology for automatic recognition of the supply voltage
- **Wide nominal voltage range of 24 to 240 V AC or DC (non-polarised). Rated current up to 16 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**
- Eight time scales from 0.05 s to 10 days
- High input/output isolation
- Complies with EN 45545-2:2013 (protection against fire of materials), EN 61373 (resistance against random vibrations and shock, Category 1, Class B), EN 50155 (resistance to temperature and humidity, T1 class)

83 Series
See the technical data sheet

Type 83.02

Type 83.91

Approvals (according to type)

APPLICATIONS

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 16 A

Multi-function Digital SMARTimer.

- Two programming modes: "Smart" mode via smartphone with NFC communication or "Classic" mode via the joystick
- Wide backlit display
- **Multi-function; (the two channels, and their respective selected function, can be combined to create a new and more complex function)**
- High precision and flexibility, adjustable in tenths of a second, seconds, minutes, hours
- 2 changeover contacts 16 A output

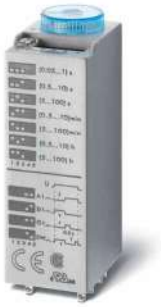
84 Series
See the technical data sheet

Approvals (according to type)

APPLICATIONS

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



Multi-functions, 94 Series sockets mount.

- AC/DC supply non polarized
- **Seven time scales, from 0.05 s to 100 h**
- 2, 3 or 4 changeover contacts
- Wide ambient temperature range: -20…+60°C

85 Series
See the technical data sheet

86 SERIES Timer modules

Type 86.00

Multi-function & multi-voltage.
Timer modules for use in conjunction with relay & socket.

- Wide supply voltage AC/DC range (non polarized)
- Seven time scale: from 0.05 s to 100 h
- **Option of functions with external start (Type 86.00)**
- LED indicator
- **Atex versions available**

86 Series
See the technical data sheet

Type 86.30

Approvals (according to type)

APPLICATIONS

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

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

88 Series
See the technical data sheet

Type 88.02

Type 88.92

Approvals (according to type)

APPLICATIONS

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

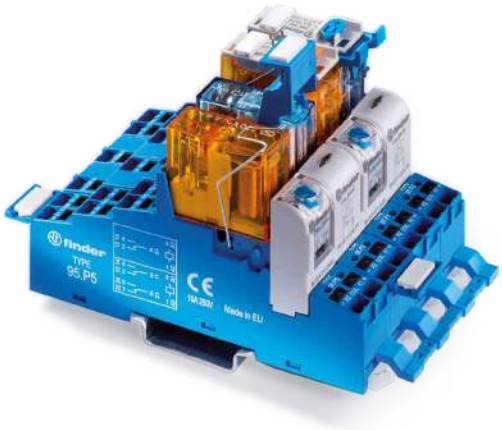
Socket-Timer compatibility

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

93 SERIES - Timed sockets

93.21 Timed socket - with output relay
makes interface module:
• 38.21 (SSR/EMR) with screw terminals

93.68 Timed socket - with output relay
makes interface modules:
• 39.81 (EMR) with screw terminals
• 39.80 (SSR) with screw terminals

93.69 Timed socket - with output relay
makes interface modules:
• 39.91 (EMR) with push-in terminals
• 39.90 (SSR) with push-in terminals

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FINDER S.p.A. sole proprietorship
Via Drubiaglio, 14 - 10040 ALMESE (TO) ITALY
tel +39 011 9346211 - export@findernet.com

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