

SELECTION GUIDE

Industrial Thermoregulation products and accessories for electrical panels

- 7T Series - Thermo-Hygrostats and Thermostats
- 7F Series - Filter Fans
- 7H Series - Panel Heaters
- 7L Series - LED panel lights
- 7U Series - Modular power outlets
- 9D Series - High Current Terminal Blocks



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 2019
Carbon Footprint verification



ISO 50001
Energy management system



FSC
Forest Stewardship Council



AEOEF
Simplified customs and enhanced supply chain security



Cribis Prime Company
Recognition of highest reliability of commercial relations



Industrial Thermoregulation products and accessories for electrical panels

7T Series

Thermo-hygrostats and ThermostatsPage 4

Ensuring the performance of components and instrumentation within control panels and enclosures - often enhancing product life.

7F Series

Filter FansPage 6

Filter fan range to ventilate and safeguard against high enclosure temperatures.

7H Series

HeatersPage 10

Preventing the formation of condensation and ensuring the optimum temperature within electrical enclosures. Heating power from 25 W to 400 W.

7L Series

LED panel lightsPage 12

Available in two brightness levels, 600 lumens or 1200 lumens, these 7L Series LED panel lights featuring magnetic mounting are the ideal solution for perfect lighting for machines and electrical panels.

7U Series

Modular power outletsPage 14

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

9D Series

High Current Terminal BlocksPage 15

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

7T Series

Thermo-Hygrostats

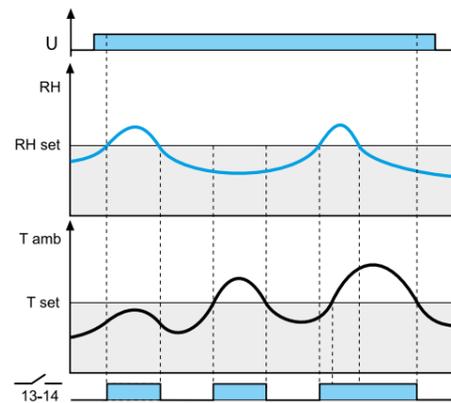


Type 7T.51.0.230.4360

- Electronic control
- Small, compact size (17.5 mm wide)
- 1 NO 10 A - 250 V AC1
- 4 functions
- Nominal voltage 110...240 V AC/DC
- Temperature ranges from +10° to +60°C
- Humidity range up to 90%
- LED status indication contact ON

Approvals (according to type):

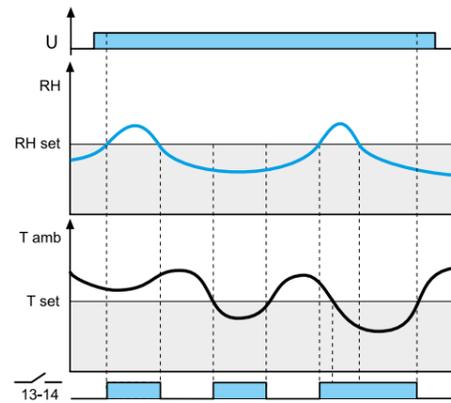
- Drying kilns
- Industrial refrigeration
- Road / tunnel lighting
- Industrial furnaces and ovens
- Automatic car-washes
- Panels for electrical distribution
- Control panels
- Forced-air ventilators



HT: RH > RHset OR Tamb > Tset

Power is permanently applied to the thermo-hygrostat. The contact 13-14 closes if the ambient humidity (RH) is > of set humidity (RHset) OR if the ambient temperature (Tamb) is > of set temperature (Tset).

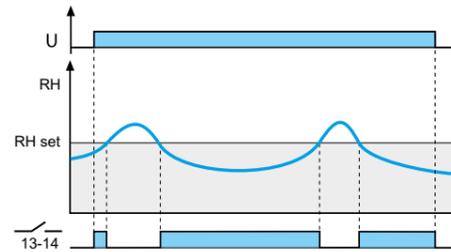
When contact is closed, LED is ON



TH: RH > RHset OR Tamb < Tset

The contact 13-14 closes if the ambient humidity (RH) is > of set humidity (RHset) OR if the ambient temperature (Tamb) is < of set temperature (Tset).

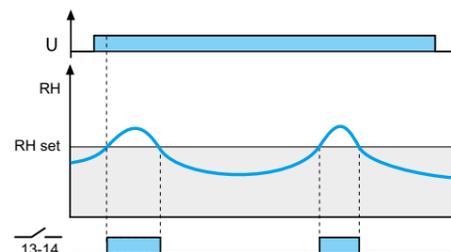
When contact is closed, LED is ON



HL: RH < RHset

The contact 13-14 closes if the ambient humidity (RH) is < of set humidity (RHset).

When contact is closed, LED is ON



HM: RH > RHset

The contact 13-14 closes if the ambient humidity (RH) is > of set humidity (RHset).

When contact is closed, LED is ON

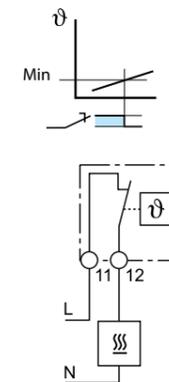
Thermostats

- Small, compact size (17.5 mm wide)
- 1 NO - 1 NC 10 A - 250 V AC1
- Snap action thermostatic Bimetal sensor
- Wide temperature setting range
- Long electrical life

Approvals (according to type):



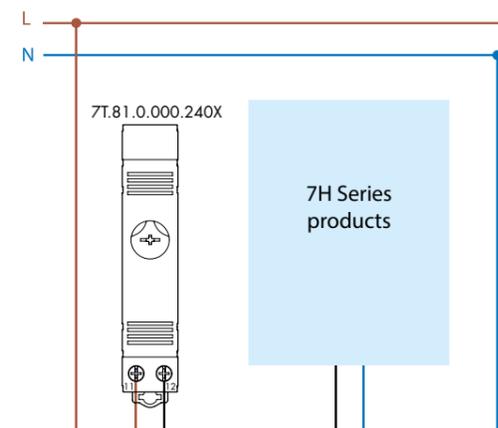
Type 7T.81.0.000.240x



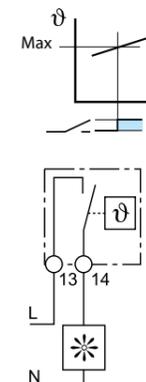
Heating control

Should the panel temperature fall below the (minimum) set temperature the contact will close to call for heat. The contact will open when this set temperature is exceeded.

Heating: Red Dial
Temperature ranges: -20° to +40°C
-20° to +60°C
0° to +60°C



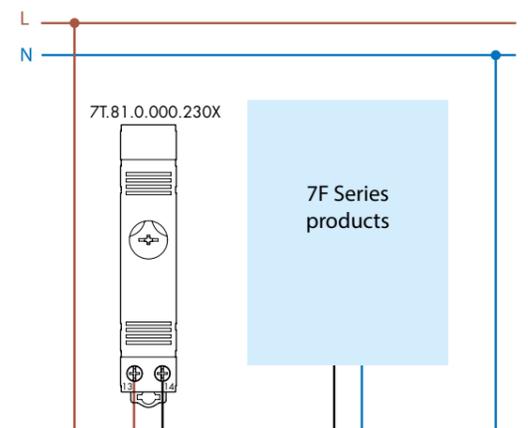
Type 7T.81.0.000.230x



Ventilation control

Should the panel temperature exceed the (maximum) set temperature then the contact will close to call for cooling. The contact will open when the temperature falls below this set temperature.

Ventilation: Blue Dial
Temperature ranges: -20° to +40°C
-20° to +60°C
0° to +60°C



7F Series

Filter Fans

- Operating voltage: 120 V AC, 230 V AC or 24 V DC (according to type)
- Easily replaceable filter mat
- Minimal depth within enclosure
- Air volume (24...700)m³/h
- Time-saving installation and maintenance
- Very low acoustic noise
- Protection category: IP54
- UL Type 12 (Type 7F.20)
- UL Type 3R (Type 7F.30)
- Reverse air flow versions available (7F.21 and 7F.31)
- Black colour RAL 9004 available (7F.20)
- Dimensions from 120 mm up to 320 mm

Approvals (according to type):



Drying kilns



Textile machines



Machines for paper processing



Machines for ceramics



Wood-processing machines



Panels for electrical distribution



Control panels



Forced-air ventilators

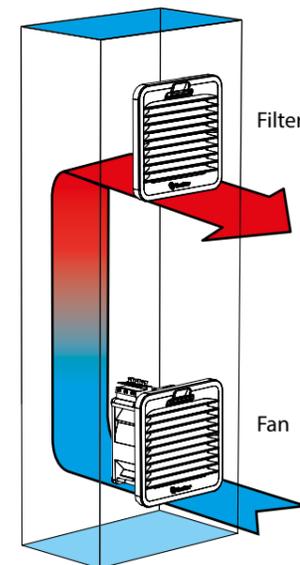
Exhaust Filters

- The size of the Exhaust Filter should match the size of the Filter Fan to achieve the best ventilation within the cabinet
- Minimal depth within enclosure
- Time-saving installation and maintenance
- Easily replaceable filter mat
- Protection category IP54
- UL Type 12 (Type 7F.02)
- UL Type 3R (Type 7F.03)
- Black colour RAL 9004 available (7F.02)

Approvals (according to type):



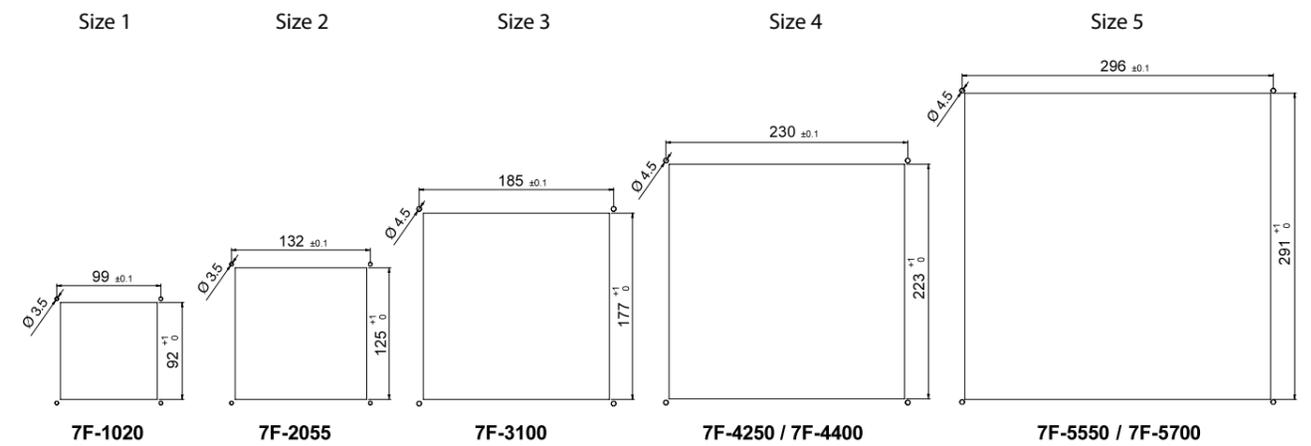
Mounting arrangement of Filter Fan and Exhaust Filter



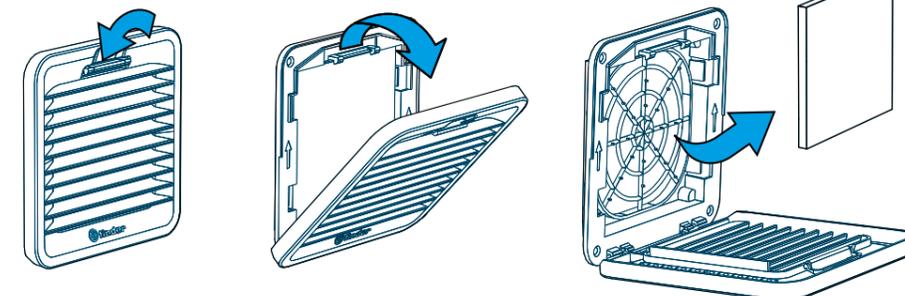
Filter Fans and Exhaust Filters

Standard Filter Fan	Operating voltage (V AC)	Operating voltage (V DC)	Air volume (CFM)	Rated power (W) 50/60 Hz	Size	Standard Exhaust Filter	Reverse flow versions	Filter mat
7F.x0.8.120.1020	120 V AC	—	17	27/21	1 (120 x 120 mm)	7F.0x.0.000.1000	7F.x1.8.120.1020	07F.15
7F.x0.8.230.1020	230 V AC	—	17	23/18	1 (120 x 120 mm)	7F.0x.0.000.1000	7F.x1.8.230.1020	07F.15
7F.x0.9.024.1020	—	24 V DC	14	3.6	1 (120 x 120 mm)	7F.0x.0.000.1000	7F.x1.9.024.1020	07F.15
7F.x0.8.120.2055	120 V AC	—	37	30/25	2 (155 x 155 mm)	7F.0x.0.000.2000	7F.x1.8.120.2055	07F.25
7F.x0.8.230.2055	230 V AC	—	37	29/25	2 (155 x 155 mm)	7F.0x.0.000.2000	7F.x1.8.230.2055	07F.25
7F.x0.9.024.2055	—	24 V DC	32	7	2 (155 x 155 mm)	7F.0x.0.000.2000	7F.x1.9.024.2055	07F.25
7F.x0.8.120.3100	120 V AC	—	68	30/25	3 (209 x 209 mm)	7F.0x.0.000.3000	7F.x1.8.120.3100	07F.35
7F.x0.8.230.3100	230 V AC	—	68	29/25	3 (209 x 209 mm)	7F.0x.0.000.3000	7F.x1.8.230.3100	07F.35
7F.x0.9.024.3100	—	24 V DC	59	7	3 (209 x 209 mm)	7F.0x.0.000.3000	7F.x1.9.024.3100	07F.35
7F.x0.8.120.4250	120 V AC	—	174	42/48	4 (255 x 255 mm)	7F.0x.0.000.4000	7F.x1.8.120.4250	07F.45
7F.x0.8.230.4250	230 V AC	—	174	46/50	4 (255 x 255 mm)	7F.0x.0.000.4000	7F.x1.8.230.4250	07F.45
7F.x0.9.024.4250	—	24 V DC	147	43	4 (255 x 255 mm)	7F.0x.0.000.4000	7F.x1.9.024.4250	07F.45
7F.x0.8.120.4400	120 V AC	—	262	72/120	4 (255 x 255 mm)	7F.0x.0.000.4000	7F.x1.8.120.4400	07F.46
7F.x0.8.230.4400	230 V AC	—	262	69/112	4 (255 x 255 mm)	7F.0x.0.000.4000	7F.x1.8.230.4400	07F.46
7F.x0.8.120.5550	120 V AC	—	356	75/102	5 (320 x 320 mm)	7F.0x.0.000.5000	7F.x1.8.120.5550	07F.56
7F.x0.8.230.5550	230 V AC	—	356	76/116	5 (320 x 320 mm)	7F.0x.0.000.5000	7F.x1.8.230.5550	07F.56
7F.x0.8.120.5700	120 V AC	—	412	110/140	5 (320 x 320 mm)	7F.0x.0.000.5000	7F.x0.8.120.5700	07F.55
7F.x0.8.230.5700	230 V AC	—	412	106/120	5 (320 x 320 mm)	7F.0x.0.000.5000	7F.x0.8.230.5700	07F.55

Drilling template



Replacement of Filter mat



7F Series

Filter Fans and Exhaust Filters for indoor use (7F.20)

Filter Fans and Exhaust Filters for outdoor use (7F.30)



Drying kilns



Textile machines



Machines for paper processing



Machines for ceramics



Wood-processing machines



Panels for electrical distribution



Control panels



Forced-air ventilators

Design by MINELLI | FOSSATI



7F.20.x.xxx.1020
7F.20.x.xxx.2055
7F.20.x.xxx.3100



7F.02.0.000.1000
7F.02.0.000.2000
7F.02.0.000.3000



7F.20.8.xxx.4250



7F.02.0.000.4000



7F.20.8.xxx.4400



7F.02.0.000.4000



7F.20.8.xxx.5550



7F.02.0.000.5000



7F.20.8.xxx.5700



7F.02.0.000.5000



7F.30.x.xxx.1020
7F.30.x.xxx.2055
7F.30.x.xxx.3100



7F.03.0.000.1000
7F.03.0.000.2000
7F.03.0.000.3000



7F.30.8.xxx.4250



7F.03.0.000.4000



7F.30.8.xxx.4400



7F.03.0.000.4000



7F.30.8.xxx.5550



7F.03.0.000.5000



7F.30.8.xxx.5700



7F.03.0.000.5000

7H Series

Heaters fan assisted

- Nominal voltage 120 or 230 V AC
- PTC resistor, self regulating heating system
- Fan assisted heaters
- Fast wiring terminals
- Safe touch
- Clip for 35 mm rail (EN 60715) mount

Approvals (according to type):



Type 7H.51.8.230.0250
Heater power 250 W
Fan assisted
Dimensions (w x h x d): 88.2 x 28.7 x 67 mm



Type 7H.51.8.230.0400
Heater power 400 W
Fan assisted
Dimensions (w x h x d): 88.2 x 28.7 x 67 mm



Drying kilns



Hoists and cranes



Road / tunnel lighting



Plastic moulding machines



Automatic car-washes



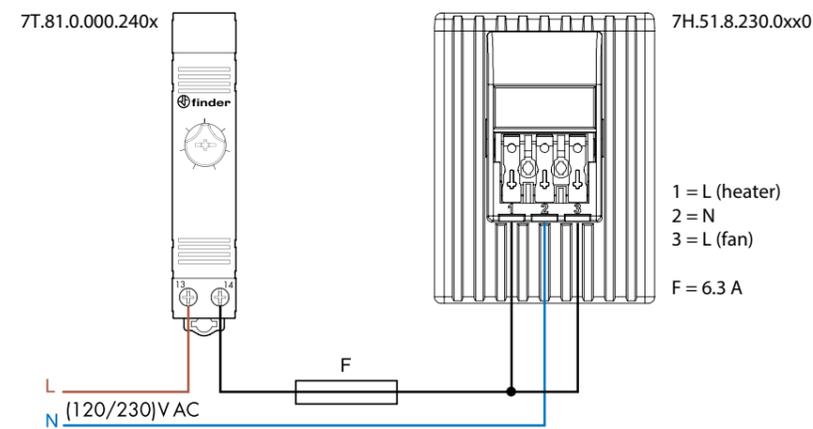
Panels for electrical distribution



Control panels



Forced-air ventilators



NOTE
Separate supply (L) terminals for the heater and the internal fan allow them to be powered independently. So, dependent on the specific situation, the installer might wish the heating element to be controlled by an upstream thermostat but require the fan to run continuously (although the latter will significantly reduce the product's life).

Heaters

- Nominal voltage (110...230)V AC/DC
- PTC self regulating heating system
- Screw terminals
- Safe touch
- Clip for 35 mm rail (EN 60715) mount

Approvals (according to type):



Type 7H.51.0.230.0025
Heater power 25 W



Type 7H.51.0.230.0100
Heater power 100 W
Dimensions (w x h x d): 70 x 140 x 63 mm

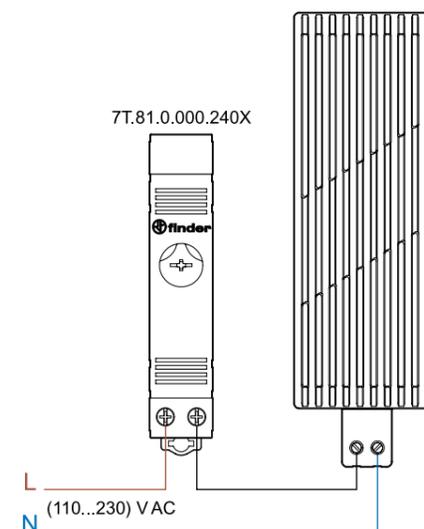


Type 7H.51.0.230.0150
Heater power 150 W
Dimensions (w x h x d): 70 x 220 x 63 mm

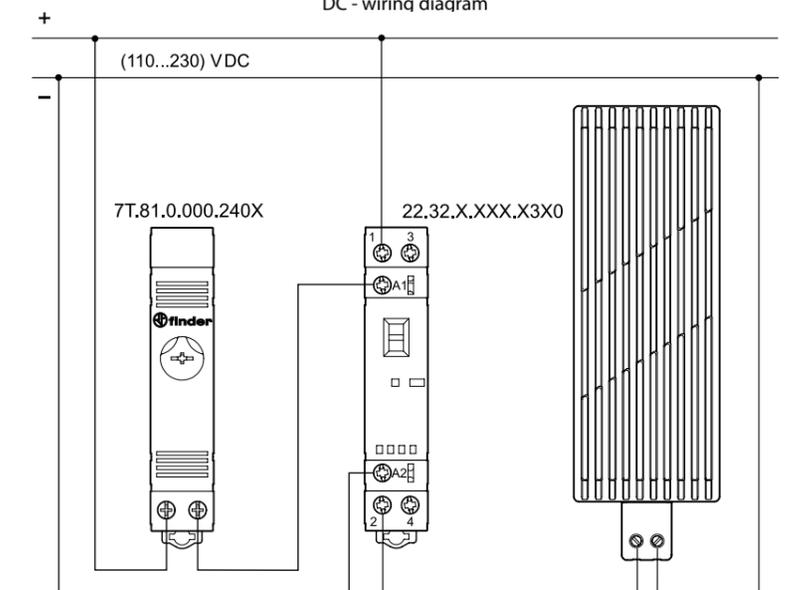
Type 7H.51.0.230.0050
Heater power 50 W

Dimensions (w x h x d): 41 x 125 x 41 mm

AC - wiring diagram



DC - wiring diagram



7L Series

LED panel lights

Type 7L.43.0.xxx.xx00 - Brightness level: 600 lumens

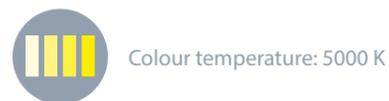
Type 7L.46.0.xxx.xx00 - Brightness level: 1200 lumens

- Direct magnetic mounting or through a screw-fixed metallic support
- Power supply - Multi-voltage: 12...48 V AC/DC and 110...240 V AC/DC
- Low energy consumption
- Nominal power consumption: 6 W (600 lm), 9 W (1200 lm)
- Push-in terminals for the connection to a single unit
- Plug-in terminals for the connection to a single or multiple units (up to 7 lamps)

Approvals (according to type):



Radiation angle: 120°



Colour temperature: 5000 K



Multi-voltage



Protection category: IP20



Push-in terminals for the connection to a single unit



Plug-in terminals for the connection to a single or multiple units (up to 7 lamps)

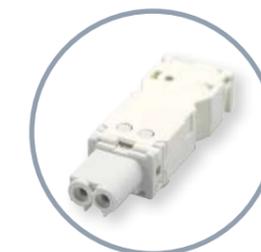
LED panel lights

Code Lamps	Lumen	Code Lamps	Lumen	Supply voltage	Switching	Connections
7L.43.0.024.0100	600	7L.46.0.024.0100	1200	024 = (12...48)V AC/DC	Direct switching	Push-in terminals
7L.43.0.024.0200	600	7L.46.0.024.0200	1200	024 = (12...48)V AC/DC	Direct switching	Plug-in terminals
7L.43.0.230.0100	600	7L.46.0.230.0100	1200	230 = (110...240)V AC/DC	Direct switching	Push-in terminals
7L.43.0.230.0200	600	7L.46.0.230.0200	1200	230 = (110...240)V AC/DC	Direct switching	Plug-in terminals
7L.43.0.024.1100	600	7L.46.0.024.1100	1200	024 = (12...48)V AC/DC	Via ON/OFF switch	Push-in terminals
7L.43.0.024.1200	600	7L.46.0.024.1200	1200	024 = (12...48)V AC/DC	Via ON/OFF switch	Plug-in terminals
7L.43.0.024.2100	600	7L.46.0.024.2100	1200	024 = (12...48)V AC/DC	Via movement detector	Push-in terminals
7L.43.0.024.2200	600	7L.46.0.024.2200	1200	024 = (12...48)V AC/DC	Via movement detector	Plug-in terminals
7L.43.0.230.1100	600	7L.46.0.230.1100	1200	230 = (110...240)V AC/DC	Via ON/OFF switch	Push-in terminals
7L.43.0.230.1200	600	7L.46.0.230.1200	1200	230 = (110...240)V AC/DC	Via ON/OFF switch	Plug-in terminals
7L.43.0.230.2100	600	7L.46.0.230.2100	1200	230 = (110...240)V AC/DC	Via movement detector	Push-in terminals
7L.43.0.230.2200	600	7L.46.0.230.2200	1200	230 = (110...240)V AC/DC	Via movement detector	Plug-in terminals

① Direct switching

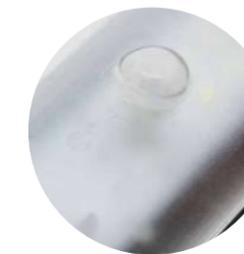


Magnetic fixing direct to metallic panel



Type 07L.11
Socket for connection to a 2-core cable (2 x 1.5 mm²), e.g. H05VV-F, 2 x 1.5 mm²
Loose item - for the input side (included in the package)

② Switching via motion detector



Magnetic fixing via screw-fixed metallic support



Type 07L.12
Plugs for connection to a 2-core cable (2 x 1.5 mm²), e.g. H05VV-F, 2 x 1.5 mm²
Loose item - for the output side (not included)

③ Switching via ON/OFF soft latch switch



Rotational adjustment 30°



7U Series

Modular power outlets

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

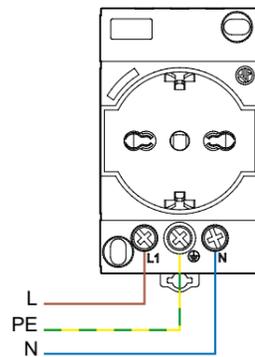
Approvals:



Type 7U.00.8.230.00x0
Grey RAL 70355



Type 7U.00.8.230.00x2
Yellow RAL 1021



Screw terminals



Panels for electrical distribution



Control panels

9D Series

High Current Terminal Blocks

- 3 configurations available in a single product:
- **Single, pole splitter:**
Split of main power input into 4, 6, 10 or 11 outputs
 - **Multiple, pole splitters:**
Splitting with increased number of outputs
 - **Grouping:** Combining several inputs to make a single output (eg. solar applications)

- Nominal current: 80, 125, 160, 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

Approvals (according to type):



Panels for electrical distribution



Control panels

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
• 80 A • 7 connections	• 125 A • 8 connections	• 175 A • 12 connections	• 250 A • 12 connections	• 400 A • 12 connections

INPUT WIRE SPECIFICATION (Solid/Stranded)

	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
Number of input	3	1	2	1	1
Terminal diameter	Ømm 6.6	9.8	11.8	15.3	15.3
Min. wire size	mm ² 2.5	10	10	35	95
	AWG 14	8	6	2	3/0
Max. wire size	mm ² 16	35	70	120	185
	AWG 6	2	2/0	250 Kcmil	400 Kcmil
Wire input stripping length	mm 15	15	15	28	28
Tool	Posidriv - flat screwdriver	Allen Key	Allen Key	Allen Key	Allen Key
Tool dimension	mm 5.5/PZ2	4	5	6	8
Torque	Nm 1.5...2	3.5...5	6...10	19...21	25

OUTPUT WIRE SPECIFICATION (Solid/Stranded)

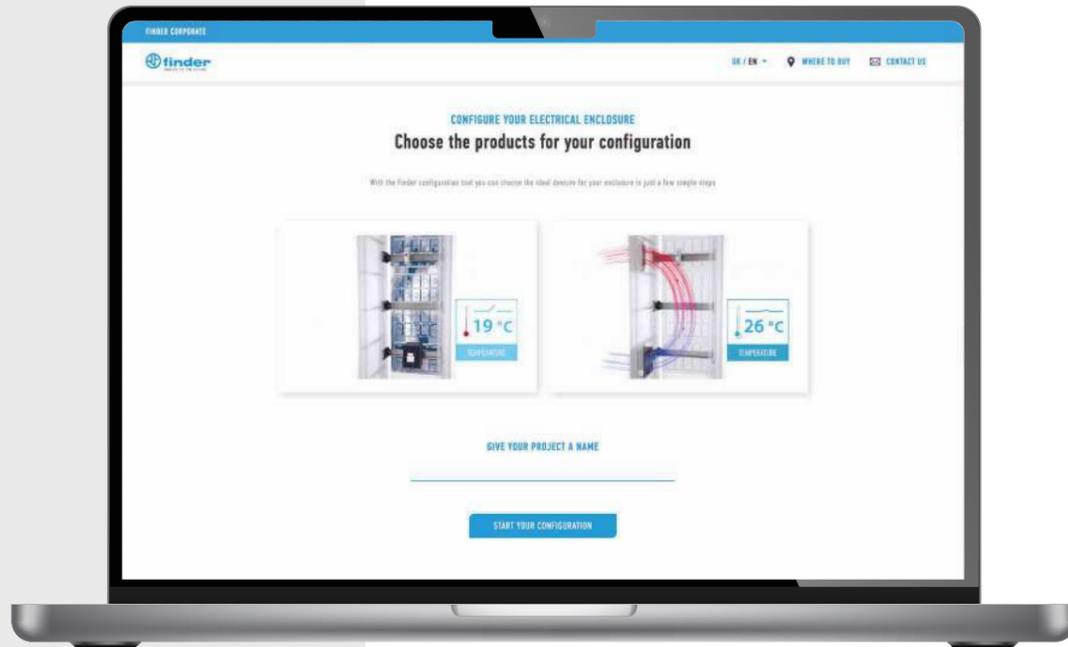
	9D.01.5.080.0304	9D.01.5.125.0206	9D.01.5.175.0210	9D.01.5.250.0111	9D.01.5.400.0111
Number of output	4	1, 6	10	2, 5, 4	2, 5, 4
Terminal diameter	Ømm 4.5	6.8, 6.4	6.4	8.7, 6.4, 5.7	8.7, 6.4, 5.7
Min. wire size	mm ² 2.5	6, 2.5	2.5	2.5, 2.5, 2.5	2.5, 2.5, 2.5
	AWG 14	10, 14	14	14, 14, 14	14, 14, 14
Max. wire size	mm ² 6	16, 16	16	35, 16, 10	35, 16, 10
	AWG 10	6, 6	6	2, 6, 8	2, 6, 8
Wire input stripping length	mm 11	11	11	11	11
Tool	Posidriv - flat screwdriver	Allen Key, Posidriv-flat screwdriver	Posidriv - flat screwdriver	Allen Key	Allen Key
Tool dimension	mm 4/PZ1	3, 5.5 PZ2	5.5/PZ2	4, 3, 3	4, 3, 3
Torque	Nm 0.8...12	2...3, 2...3	2...3	3.5...5, 2...3, 2...3	3.5...5, 2...3, 2...3

Electric shock hazard

Safety notes

Any equipment within an electrical system that remains live after turning off at the main switch, must be marked in compliance with standards DIN VDE 0105-1 and IEC 204-1 / EN 60204-1 / DIN VDE 0113 Part 1, as well as the VBG 4 accident prevention regulations. For these applications use the yellow power outlet.

Industrial configurator



<https://configuratore.findernet.com/en/>

Configure your electrical enclosure Choose the products for your configuration

For the **optimal performance** of an electrical panel it is necessary, at the design stage, to consider all those components that will influence the need to heat or cool the enclosure. Maintaining an ideal temperature and good air quality is important for the safety and optimal performance of the installed devices and the overall reliability of the system.

Finder have been supporting industry professionals for over 65 years in the installation of electronic and electromechanical devices, having developed a wide range of **thermostats, thermo-hygrostats, fans and panel heaters** - devices you can rely on to ensure the optimal climate is maintained within the electrical switchboard and with the confidence that comes with their numerous national and international approvals and certification.

Using the new Finder configurator for industrial thermoregulation greatly **simplifies the calculation process**, providing data and characteristics of the required products in a intuitive, downloadable and shareable report.

Once the configuration is complete, it is possible to request a quote as well as draw on the expertise of Finder technicians in the application and incorporation of other devices, such as **timers, modular contactors, industrial relays** and much more.



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