

# Industrial Applications


Relays, timers and control devices for industrial equipment











WE ARE THE  
BEATING HEART  
OF YOUR  
AUTOMATION



# 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 27 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, light and much more.

### OUR PRODUCTS CARRY MORE CERTIFICATIONS THAN ANY OTHER RELAY MANUFACTURER



## FINDER IS AN ITALIAN BRAND WITH A WORLDWIDE PRESENCE

4

PRODUCTION PLANTS  
IN EUROPE

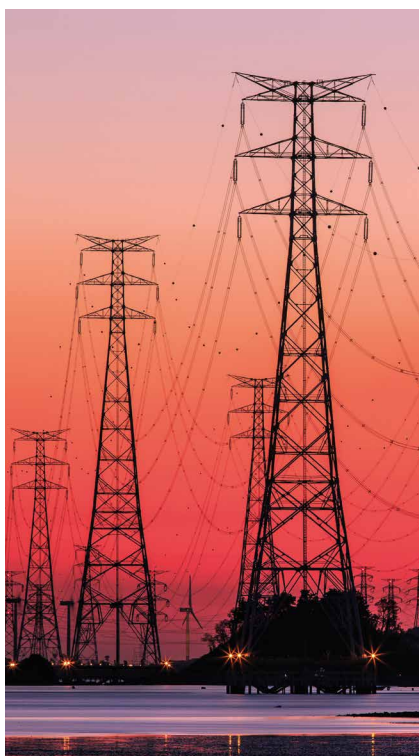
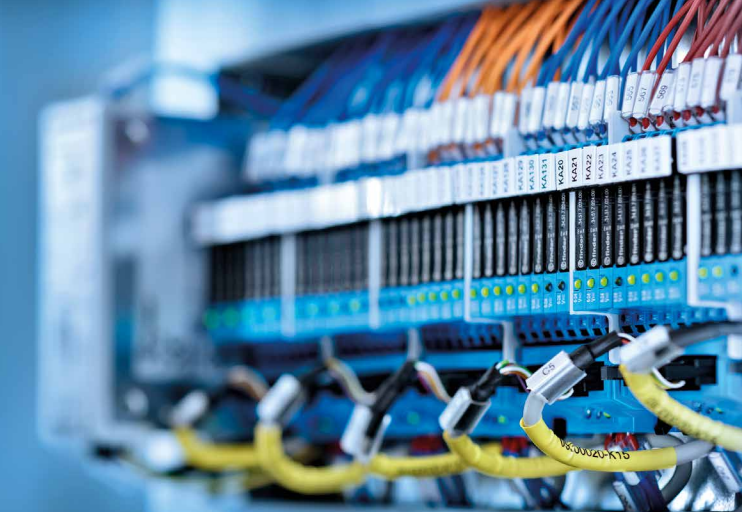
27

SUBSIDIARIES

80+

OFFICIAL  
DISTRIBUTORS





## SAFETY AND CONTROL IN ALL FIELDS OF APPLICATION

- AUTOMOTIVE
- INTERFACING
- ENERGY MANAGEMENT
- HVAC
- LOAD HANDLING
- LIGHTING
- TIME CONTROL
- THERMOREGULATION
- MONITORING



 **finder**





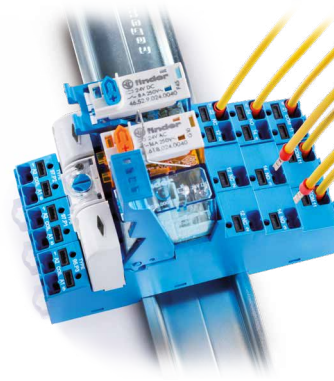
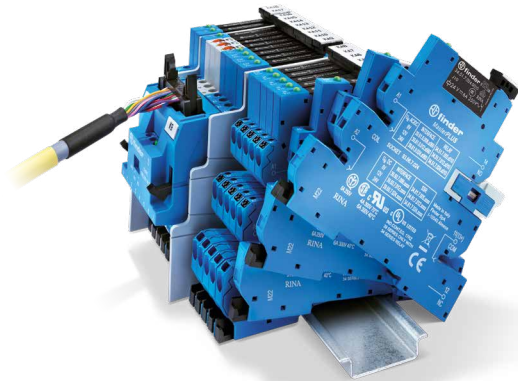
# SOLUTIONS FOR EACH AND EVERY NEED

From its inception, Finder's ethos has been to design, develop and build all its components totally in house – striving to fulfill the increasingly specific and ever-demanding requirements of the industrial market.

Today, the company offers a wide range of continuously evolving devices and accessories, providing flexible and customizable solutions with high-performance products that are ideal for easy and quick installation, often excelling where space is limited.

The extensive range of approvals and certifications testify to the highest standards of safety and quality of all our products.

Highly  
customizable  
configurations



Push-in technology  
for quick and safe  
wiring

Uncompromising  
high performance  
offered in particularly  
compact designs



Delivering  
performance and  
reliability under the  
harshest conditions

High precision  
monitoring and  
timing







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# INDUSTRIAL AUTOMATION



From packaging to the control of machine tools, from the automotive industry to the food sector – the demand for optimal automation and minimum cycle times has lead to the creation of specific products to meet virtually every need.

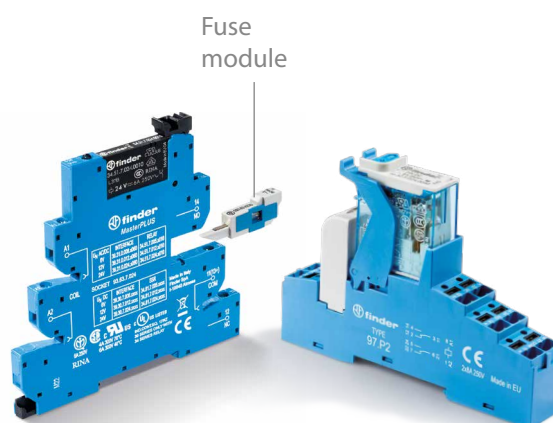
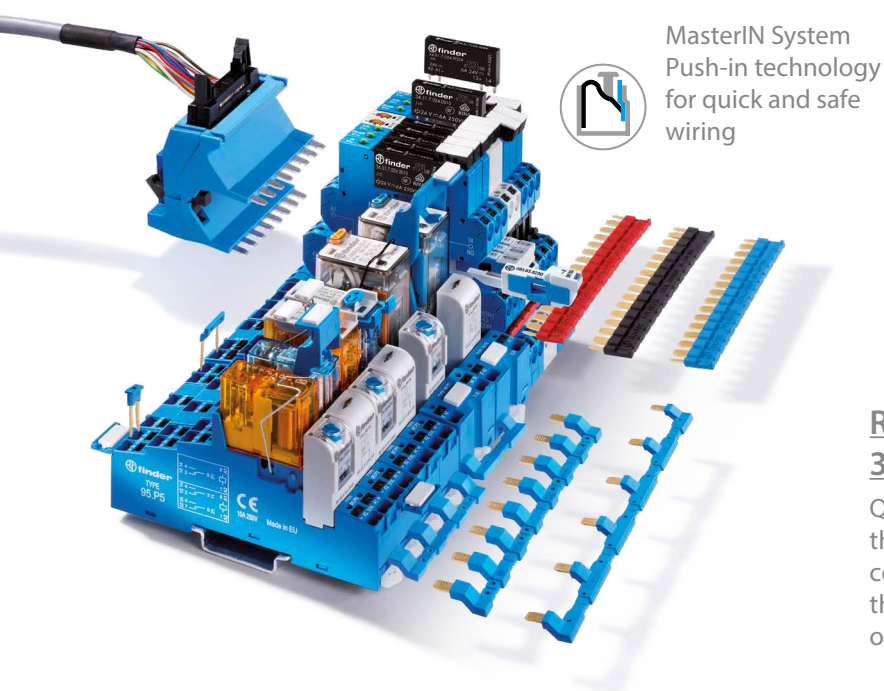


## Products and solutions

Finder products offer solutions for a wide range of applications. From simple or complex timing to rapid response relays. From power supplies for electronic systems to controls to maintain the ideal temperature, humidity and lighting conditions within electrical panels. All accompanied by the quality and reliability gained from years of experience in the sector.

## Benefits

- Highly versatile
- Low consumption
- Compact dimensions
- High build quality



### Relay interface modules 39, 4C, 48 and 58 Series

Quick to wire and highly efficient, these modules are ideal for electric panel construction thanks to the **MasterIN System** and they form the most comprehensive range of interfacing relays and accessories.





### Timers 83 Series

1 or 2 output contacts, rated up to 16 A – dependent on type. Available in single function or multi-function versions, satisfying virtually all timing requirements of the market.



### Solid state relays SSR 77 Series

Solid state relays with contact ratings up to 50 A – ideal for applications in which the switching life and the switching and response speed are critical factors.



### Switch mode power supplies 78 Series

Power supplies up to 10 A characterized by compact dimensions and high performance, Input protection fuse, replaceable from front panel.



### Fans with filter 7F Series

Fans with filter for the forced ventilation of electrical panels. Characterized by low noise and practicability, thanks to external access for the easy replacement of the internal filter.



### Panel-mounted heaters 7H Series

Compact anti-condensation heaters. Inherently safe thanks to the plastic protective case and automatic self-regulating PTC control. Also fan assisted versions.



### LED lights for panels 7L Series

New LED panel lights, for mounting using the integral mounting magnet. The light can be switched on either by its push-button or by integral movement detector (dependent on type). Designed to provide light where it is needed.



# LIFTING AND HOIST SYSTEMS



Control of hoists and remote controls for cranes used on construction sites, ports and industrial environments, as well as lifts, automatic doors and escalators in the commercial sector.



Whether the control system is a traditional hard-wired electrical panel or a more compact electronics based solution, Finder have products suited to either.

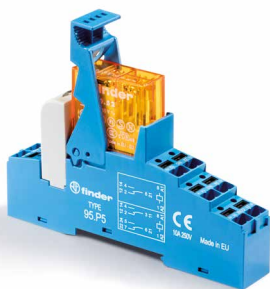
## Products and solutions

Finder meets this sector's needs with compact relays with enhanced electrical characteristics, well suited for the control of solenoid valves, contactor coils and small motors.

High safety standards are assured in such a demanding working environment – demonstrated by numerous product approvals.

## Benefits

- Compact, space saving devices
- Highly customizable configurations
- High safety standards even in harsh conditions
- Products carrying numerous approvals



### Relay interface modules **48 Series**

These modules are the ideal solution for panels: they are available in both AC and DC versions and with either screw terminal sockets, or sockets with push-in terminals for quick wiring.

They also come complete with the 99 Series of coil indication and protection modules.



### Relays with forcibly guided contacts for safety applications **50 Series**

These relays feature 2, 4 and 6 forcibly guided contacts for safety applications, according to EN 61810-3.

They are for PCB mounting and dimensionally compact, particularly the low profile versions.





### **Industrial relays, 7 to 10 A** **55 Series**

These relays feature 2, 3 or 4 changeover contacts for installation on printed circuit boards or sockets. Available with AC and DC coils.



### **Industrial relays** **60 Series**

Universally popular 2 or 3 pole changeover plug-in relay widely used in control panels as an interface or auxiliary relay.



### **Voltage monitoring relays** **70 Series**

Voltage monitoring and control relays used to prevent reversal of motor rotation in the event of incorrect phase sequence.



### **Switch mode power supplies** **78 Series**

Featuring a 24 V DC output rated at either 5 or 10 A, these power supplies typically power components within control panels.



### **Panel-mounted thermostats and thermo-hygrostats** **7T Series**

Panel-mounted thermostats and thermo-hygrostats, installed in combination with other products from the thermoregulation family, such as heaters and fans, will enhance the reliability of components within the panel – extending working life.



### **Modular relays with forcibly guided contacts** **7S Series**

Modular relays with screw or push-in terminals. Normally available with 2, 3, 4 and 6 forcibly guided contacts, "Type A", for safety applications up to SIL 3, pursuant to standard EN 61508.



# HEATING, VENTILATION AND AIR CONDITIONING



Climate control of large spaces such as shopping malls, hospitals and factories through the management of HVAC systems can be a particularly complex task, given the huge volumes involved and exacting climate targets to be met.

## Products and solutions

Finder products offer the ideal solution for the implementation of systems designed for climate control in large buildings. Interfaces, industrial relays, power relays and timers are some of the products specifically created to control applications such as compressor start-up, error warning messages and auxiliary interfaces.

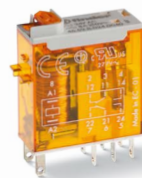
## Benefits

- High performance-to-size ratio
- Large range of monitoring devices
- Multiple connection solutions
- Wide selection of protections for control circuits



### Power relays 25 A 66 Series

This is the first power relay to be certified for ATEX applications and as such can be used in air conditioning panels where the presence of flammable gases require the use of certified devices - to minimize the risk of explosion.



### Miniature industrial relays 46 Series

Intended for generic use in control and HVAC panels, industrial automation panels, and as auxiliary and interface relays.





### Relay interface modules (EMR or SSR)

#### 39 Series

Generally made for interfacing applications, this product is widely used in automation solutions featuring a PLC and in installations where space saving is critical, thanks in part to the large number of accessories available for this range, including a fuse module.



### Power relays 62 Series

Used in generic switchboard installations, industrial automation, and as an auxiliary or interface relay. Special versions for applications with particularly onerous loads (e.g. magnetic blow-out versions used to control switchgear associated with electricity generation and distribution.)



### Modular timers 83 Series

Modular timers featuring either 1 or 2 contacts (up to 16 A). The availability of a multitude of functions and the possibility to operate with both AC and DC voltage make this product versatile and capable of fulfilling virtually any type of requirement.



### Voltage monitoring relays 70 Series

Relays designed to monitor both single and three-phase voltage within panels for HVAC systems.



# REFRIGERATION



Control and monitoring of compressors managed by programmable and interfacing electronics.  
Control of condensate levels in refrigerated display counters and cabinets.



## Products and solutions

Finder's response to the recently released standard on refrigeration gases can be seen in the new ATEX-certified products that complete the existing wide range of solutions used in the food industry. Ref. ATEX, II G, formerly nC II C Gc. (66 Series).  
Finder's offerings for the control of liquid condensate in refrigerated cabinets and cold rooms range from float switches to the conductive liquid level relays of the 72 Series.

## Benefits

- Highly sensitive and accurate control
- High inrush currents managed
- ATEX-certified products
- Compact size



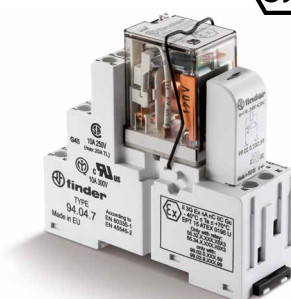
### Power relays 25 A 66 Series



This is the first power relay to be certified for ATEX applications and as such can be used in air conditioning panels where the presence of flammable gases require the use of certified devices – to minimize the risk of explosion.



### ATEX compliant relays 58 Series



This special, ATEX-certified version for zone 2 featuring 2 or 4 contacts can be used in situations where a risk of explosion exists, such as areas near compressors fitted in ice makers.



### Miniature relays for printed circuit boards and sockets **40 Series**

Featuring either 1 or 2 pole contacts, these relays are designed for installation on PCBs or sockets; having low power coils and contact ratings up to 16 A. They are available in both AC and DC version, as well as in bistable configuration.



### Industrial relays **55 Series**

Featuring 2, 3 or 4 pole contacts and designed for either PCB or plug-in use, these relays are typically used in auxiliary control circuits.



### Power relays, 20 to 30 A **65 Series**

Power relays designed for installation in PCBs or for use with Faston connectors. Versions with extra wide contact gap are available for applications with particularly heavy-duty loads.



### Voltage monitoring relays **70 Series**

For the control and correct functioning of compressor systems.



### Conductive liquid level monitoring relays **72 Series**

These devices working with suitable probes can monitor the condensate level in refrigerated display counters.



### Modular timers **80 Series**

Modular timers featuring 1 contact (16 A). These multi-voltage, single or multi-function products are compact and suitable for any type of application.





## HOUSEHOLD APPLIANCES

Components for integrating into washing machines, ovens and other small appliances, both in a residential and commercial context.

## Products and solutions

A wide range of products dedicated for use in the “white goods” sector. Control of water heating systems, timers for managing running and cycle times and PCB auxiliary relays for the appliance’s electronic control board. Products certified to EN 60335-1, according to type.

## Benefits

- Compact size
- Highly reliable components
- Resistant to high temperatures
- Suitable for especially heavy-duty applications



### PCB relays 36 Series

These miniature PCB relays are designed for the control of small actuators.



### Plug-in and miniature PCB relays 40 Series

These relays feature either 1 or 2 pole changeover contacts rated up to 10 A, together with low consumption coils. They are suitable for various fields of application in both the industrial and residential sectors.



### **Compact power relays 12 A 56 Series**

Featuring either 2 or 4 pole contacts these relays are designed for installation in sockets or on printed circuit boards.



### **Power relays 16 A 62 Series**

These relays have proved to be particularly suitable for the control of heating elements.



### **Power relays 66 Series**

Featuring 2 x 30 A changeover contacts and suitable for installation on printed circuit boards or using Faston connections.



### **Power relays 67 Series**

PCB relays featuring either 2 or 3 NO contacts, with ratings up to 50 A. They are a compact and high performance alternative to contactors.



### **Timer modules 86 Series**

These modules are for use in conjunction with socket-mounted relays from the 40, 55, 56 and 62 Series for simple timing applications.

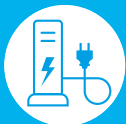


### **Plug-in timers 88 Series**

Multi-function, multi-voltage, back or front of panel timers – ideal where frequent changes to the time period is required.



# ENERGY – ELECTRIC VEHICLE CHARGING



The manufacturing sector of charging systems for electric vehicles of all types. Charging points for public places and the home.



## Products and solutions

Products that have been designed to meet the needs of charging systems supporting electric mobility. Characterized by product certification, dimensional constraints and the special electrical characteristics demanded by this new and rapidly evolving sector.

## Benefits

- Suitable for wide ranging climatic conditions
- High efficiency-to-size ratio
- Energy monitoring with high accuracy and reliability



### Power contactors 22 Series

Compact 2 or 4 pole modular contactors rated from 23 A up to 63 A.

4 pole versions available with a NC “mirror contact” if required.

Rated for ambient temperatures up to 70 °C. Particularly suited for vehicle connection and disconnection to the charging point, according to the charging conditions.



### Energy meters for single-phase and three-phase applications 7E Series

Available in both single-phase (40 A) and three-phase (80 A) versions, these meters measure and record energy consumption. Versions equipped with communications ports for data transfer between remote locations, are also available. Used within a vehicle charging system the charging energy can be related to the battery state of charge.





### **Power relays** **67 Series**

PCB relays featuring 2 or 3 NO contacts, rated up to 50 A. They offer a high performance alternative to contactors.



### **Switch mode power supplies** **78 Series**

Available in versions up to 10 A, these power supplies are compact in size and used to power the electronics in electric charging points such as data transmission boards, displays and control circuits.



### **Surge protection devices (SPD)** **7P Series**

These devices guarantee protection against direct, induced and load generated surges. Devices, featuring galvanic separation between the phases avoid leakage currents to earth resulting in a very long service life.



### **Fans with filter** **7F Series**

These fans are the ideal solution to provide for correct ventilation in the panel in order to prevent excessive temperatures.



### **Panel-mounted heaters** **7H Series**

These heaters are designed to keep the panel interior at optimised temperature when the panel is installed in cold locations or where wide swings in temperature would result in condensation.



# ENERGY – ENERGY GENERATION AND DISTRIBUTION



The manufacture of power station infrastructure – energy generation and distribution.



Electric systems, substations, control panels and interfacing solutions.

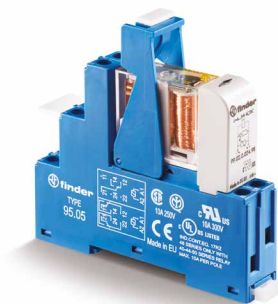
## Products and solutions

Products particularly suited to the generation and distribution sectors, including versions with characteristics compatible with type-approval requirements LV15 and LV16.

Fields of application include switchboards for power station automation, sensor interfacing, emergency systems, disconnecting devices and protection for electronic components

## Benefits

- Large range of customization options
- Magnetic blow-out versions
- Fast response relays



### Relay interface modules 48 and 4C Series

Relay interface modules with 1 or 2 changeover contacts for signal interfacing.

Available with either AC or DC coils and offering notable electrical benefits even under particularly critical conditions.



### Power relays 62 Series

These power relays featuring 1 or 2 pole contacts are also available with magnetic blow-out variants, where the need exists to switch significant DC inductive loads. A particularly effective solution for solenoid valve control.



### Relay interface modules **39 Series**

These Slim relay interface modules are designed to interface between the field and PLCs in power stations. Also available in SSR versions for quicker contact response time.



### Power relays **56 Series**

Compact power relay, with 2 or 4 changeover contacts for control applications. Suitable as an actuator for controlling power loads in the field.



### Panel-mounted thermostats and thermo-hygrostats **7T Series**

These panel-mounted thermostats and thermo-hygrostats, installed in combination with other products from the thermoregulation family, such as heaters and fans, will enhance the reliability of components within the panel – extending working life.



### Solid state relays SSR **77 Series**

SSR relays up to 50 A – also available with DC output. Particularly suited for the rapid response to signals from the field.



### Panel-mounted heaters **7H Series**

Heaters designed to keep the panel interior at optimal temperature when installed in cold locations.



### Bi-stable relays **RB and RR Series**

These bi-stable and fast response relays feature 2 or 4 pole contacts and are designed for use in emergency systems, for example in a TRIP chain.





# ENERGY – SOLAR AND WIND POWER PLANTS

The manufacture of panels and systems for solar and wind power plants, ranging from small plants for household use to large plants for the wholesale generation of renewable energy.

## Products and solutions

These products are commonly used in the construction of inverters, electronic control boards and measurement circuitry associated with solar and wind energy production.

## Benefits

- Compact size
- High performance
- Reliable and safe energy measurement
- Versatile installation options



### Power relays 50 A 67 Series

These compact power relays (up to 50 A) featuring 2 or 3 pole contacts are designed for the switching of significant DC loads.



### Surge protection devices (SPD) 7P Series

These surge protection devices can be used on both the DC side upstream for inverter protection and on the AC side – either single or three-phase – downstream of the inverter for protection of the entire line.



### Power relays 30 A 66 Series

2 pole changeover relay rated at 30 A for PCB mounting. Versions available with increased gap between relay and PCB to aid heat dissipation – particularly appropriate for inverter PCBs.



### Miniature relays for printed circuit boards 45 Series

These single contact relays (up to 16 A) are used in electronic boards where relay operation up to 125 °C may be necessary.



### Energy meters for single-phase and three-phase applications 7E Series

Available in both single-phase (40 A) and three-phase (80 A) versions, these meters measure and record energy consumption. Versions equipped with communications ports for data transfer between remote locations, are also available.



### Modular contactors 22 Series

Compact 2 or 4 pole modular contactors rated from 23 A up to 63 A. 4 pole versions available with a NC "mirror contact" if required. Rated for ambient temperatures up to 70 °C. Ideal for switching and routing the flow of renewable energy.



# AUTOMATIC DISPENSERS AND VENDING



The manufacture of electronic boards designed to control and monitor automatic dispensing and vending in the food and other sectors.



## Products and solutions

Products for use within automatic dispensing and vending machines. Typically for the control of small motors, actuators, push-button and coin mechanisms. Also, boiler heating element switching in the production of hot drinks.

## Benefits

- Compact size
- Large range of customization options
- High cycling rates and long operational life



### Miniature relays for printed circuit boards **41 Series**

Low profile relays featuring 1 or 2 pole contacts (up to 16 A) and ideal for installations where the available space is limited, particularly with respect to height.  
Also available in bi-stable version.



### Miniature relays for printed circuit boards **40 Series**

Offering 1 or 2 contacts, these relays are designed for either PCB or socket mounting. Available with either AC or DC coils with low power consumption.





### Miniature industrial relays **46 Series**

Designed for generic use in control panels, industrial automation panels, and as auxiliary and interface relays.



### Industrial relays **55 Series**

Featuring 2, 3 or 4 changeover contacts, these relays are designed for plug-in use with sockets and for auxiliary control.



### Solid state relays **77 Series**

Electronic SSR relays (Solid State Relay) featuring a single contact – designed for both AC and DC applications. They are best suited in applications requiring a high number of switching cycles, for instance where a boiler heater is continuously being switched to maintain the desired temperature.



### Power relays **65 Series**

Primarily designed for the control of boiler heating elements.

									ENERGY	ENERGY	ENERGY	
Category	Product	Series	Page no.	INDUSTRIAL AUTOMATION	LIFTING AND HOIST SYSTEMS	HEATING, VENTILATION AND AIR CONDITIONING	REFRIGERATION	HOUSEHOLD APPLIANCES	ELECTRIC VEHICLE CHARGING	ENERGY GENERATION AND DISTRIBUTION	ENERGY - SOLAR AND WIND POWER PLANTS	AUTOMATIC DISPENSERS AND VENDING
Relays	PCB relay	36 Series	p 16					✓✓	✓			✓
	Mini PCB relay	40 Series	p11, 15, 16, 24	✓	✓✓	✓	✓✓	✓✓	✓	✓	✓	✓✓
	Mini PCB relay	41 Series	p 24					✓	✓	✓	✓✓	✓✓
	Mini PCB relay	45 Series	p 23					✓	✓	✓✓	✓✓	✓
	Miniature Industrial relay	46 Series	p 12, 25	✓	✓	✓✓	✓	✓	✓	✓	✓	✓✓
	Industrial relay	55 Series	p 15, 11, 25	✓	✓✓	✓✓	✓✓	✓	✓	✓	✓	✓✓
	Power relay	56 Series	p 17, 21	✓	✓	✓	✓	✓✓	✓	✓✓	✓	✓
	Industrial relay	60 Series	p11	✓✓	✓✓	✓				✓		
	Power relay	62 Series	p 13, 17, 20	✓	✓	✓✓	✓✓	✓✓	✓	✓✓	✓	✓
	Power relay	65 Series	p15, 25	✓	✓	✓	✓✓	✓✓	✓	✓	✓✓	✓✓
	ATEX Power relay - 25A	66 Series	p 12, 14, 17, 23	✓	✓	✓✓	✓✓	✓✓	✓	✓	✓✓	✓
	Power relay - 50A	67 Series	p 17, 22				✓	✓	✓✓	✓	✓✓	✓
	Bi-stable and fast response relays	RB/RR Series	p 21							✓✓	✓	
Interface relays	Modular interface relay	39 Series	p 8, 13, 21	✓✓	✓	✓✓	✓	✓	✓	✓✓	✓	✓
	Modular interface relay	48 Series	p 8, 10, 20	✓✓	✓✓	✓	✓	✓	✓	✓✓	✓	✓
	Modular interface relay	4C Series	p 8, 20	✓✓	✓	✓	✓		✓	✓✓	✓	✓
	ATEX - Modular interface relay	58 Series	p 8, 14	✓✓	✓✓	✓✓	✓✓	✓	✓	✓	✓	✓
Forcibly guided contact relays	Forcibly guided contact relay	50 Series	p 10	✓	✓✓				✓	✓	✓	✓
	Modular forcibly guided contact relay	7S Series	p 11	✓✓	✓✓	✓			✓	✓	✓	
SSR	Solid State Relays (SSR)	77 Series	p 9, 21, 25	✓✓	✓	✓	✓	✓	✓	✓✓	✓	✓✓
Monitoring relays & SPDs	Voltage monitoring relays	70 Series	p11, 13, 15	✓✓	✓✓	✓✓	✓✓	✓		✓	✓	✓
	Conductive liquid level relay	72 Series	p15	✓✓	✓	✓	✓✓	✓	✓	✓	✓	✓
	Energy meters	7E Series	p 18, 23	✓	✓	✓	✓		✓✓	✓	✓✓	✓
	Surge protection devices	7P Series	p 19, 22	✓	✓	✓	✓	✓	✓✓	✓✓	✓✓	✓
Power supplies	Switch mode power supplies	78 Series	p 9, 11, 19	✓✓	✓✓	✓	✓	✓	✓✓	✓	✓	✓
Thermoregulation and panel lighting	Thermostats & thermo-hygrostats	7T Series	p 11, 21	✓✓	✓✓	✓	✓	✓	✓	✓✓	✓	✓
	Filter fans	7F Series	p 9, 19	✓✓	✓	✓	✓	✓	✓✓	✓	✓	✓
	Panel heaters	7H Series	p 9, 19, 21	✓✓	✓	✓	✓		✓✓	✓✓	✓	
	LED panel lights	7L Series	p 9	✓✓	✓	✓				✓	✓	
Timers	Modular timers	80 Series	p 15	✓	✓	✓	✓✓		✓	✓	✓	✓
	Modular timers	83 Series	p 9, 13	✓✓	✓✓	✓✓	✓		✓	✓	✓	
	Timer modules	86 Series	p 17	✓	✓	✓	✓	✓✓	✓	✓	✓	✓
	Plug-in timers	88 Series	p 17	✓✓	✓	✓	✓	✓✓		✓	✓	
Contactors	Power contactors	22 Series	p18, 23	✓	✓	✓	✓	✓	✓✓	✓	✓✓	✓

## NOTES



