



Relays and

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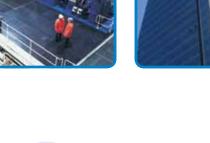
For complete specifications visit us online at

www.wago.us → Service → Documentation → Interface Modules

or look for the quick link 🦵



Technical documentation





# WAGO Relays and Optocouplers

# Features, Benefits and Applications

Modern equipment design requires multiple components that can meet diverse challenges.

WAGO AUTOMATION provides a broad range of relays and optocouplers to support some of the world's most demanding applications.





- Easy to install, easy to maintain
- Cost effective, efficient to install
- Operational reliability
- Maximum machine safety and uptime
- Relays sized to suit any space
- Easy planning and commissioning

# WAGO relay modules The convenient interface between electronics and field devices

In modern automation systems, electromechanical relays safely connect process peripherals with electronic control, alarm and monitoring systems. For example, relays perform the following tasks:

- Electrical isolation with high isolation levels between input and output circuits
- Adjustment of differing signal levels
- Signal amplification and/or signal multiplication if varying potentials exist

The comprehensive design of modern relays provides applications with the following benefits:

- Immunity to electromagnetic interference and transient voltages
- High, short-term overload capacity on both input and output sides
- Minimal switching loss
- A single module that switches both direct and alternating currents

To perform these tasks and more, WAGO AUTOMATION offers a full range of relay modules ready to support a diverse array of applications. Depending on the task and application requirements, there is a choice of relay modules with different rated voltages, contacts, contact materials, housings and designs. In addition to standard switching relays, bistable relays, timing relays, latching relays and safety relays with force-guided contacts are also available.



Relays and optocouplers are used everywhere where electrical signals must be transmitted and galvanic isolation, signal adjustment or amplification are required. They are suitable for all industrial applications: process and power technology, rail vehicles, shipbuilding, as well as control cabinet applications.

### Benefits of WAGO relays and optocouplers:

- Easy termination of conductors from 0.08 mm<sup>2</sup> to 2.5 mm<sup>2</sup> (28-12 AWG)
- Optimized for any application
- Wide range of accessories
   (e.g., adjacent jumpers, marking material)
- Switchable loads from 1 mA to 16 A

# WAGO optocouplers - The modern and powerful alternative

As a link between process peripherals and electronic control, alarm and monitoring systems, optocoupler modules boast the following advantages over electromechanical relays:

- Longer service life no mechanical wear
- High switching frequency due to short switch-on and switch-off times
- Vibration resistance
- No contact bouncing
- "Noiseless" switching
- Low control power requirement

WAGO AUTOMATION provides a full range of optocouplers to bring the above benefits to the following tasks:

- Electrical isolation between input and output circuits
- Adjustment of differing signal levels
- Signal amplification

Optocouplers are available with different rated voltages, switching capacities and housing options to suit any application.





## CAGE CLAMP®

## Vibration-proof – fast – maintenance-free

CAGE CLAMP  $^{\scriptsize @}$  termination for all conductor types.

### solid



fine-stranded



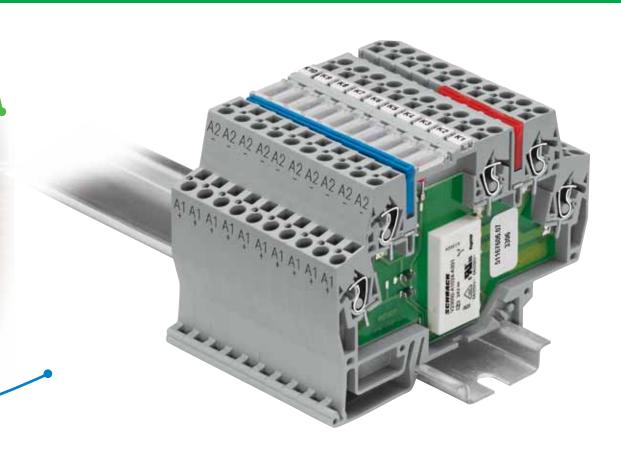
ferruled



With a large variety of relays and optocouplers, the 859 Series will suit any industrial interface application. The compact, 6 mm-wide housing is ideal for space-restricted control panels. Simple commoning at the control and load side streamlines redundant wiring of common input and output potentials. A robust design, utilizing vibration-proof CAGE-CLAMP® Spring Pressure Connection Technology, ensures continuous and uninterrupted operation for any system.

## Rail-Mounted Terminal Blocks with Miniature

## Switching Relay and Optocoupler – 859 Series



### 859 Series Features/Benefits:

- 6 mm-wide housing for DIN 35-rail mounting
- Front-side jumpers streamline connections
- LED for status signal indication
- Each termination point offers an integrated test location

# Rail-Mounted Terminal Blocks with Miniature Switching Relay, 859 Series

Description			Item No.	Input Nominal Voltage U <sub>N</sub>	Max. Switching Voltage	Max. Continuous Current
Relay with  1 changeover contact		A <sup>2</sup> 11 12	859-302 859-303 859-304 859-305 859-306 859-307 859-308	5 V DC 12 V DC 24 V DC 48 V DC 60 V DC 110 V DC 220 V DC	250 V AC	5 A
Relay with  1 changeover contact		A2 1 12	859-353 859-354 859-355 859-357 859-358	12 V AC/DC 24 V AC/DC 48 V AC/DC 115 V AC/DC 230 V AC/DC	250 V AC	5 A
Relay with  1 changeover contact, with gold contacts		A214	859-314 859-317 859-318	24 V DC 115 V DC 220 V DC	36 V DC *	50 mA *
Relay with  1 changeover contact, with gold contacts with an extended input voltage and temperature range		A1 12	859-392 859-386 859-384	24 V DC 36 V DC 48 V DC	36 V DC *	50 mA *
Relay with  1 changeover contact, with gold contacts		A2 14 11 12 12	859-359 859-360	230 V AC 115 V AC	36 V DC *	50 mA *
Relay with  1 changeover contact, with specified turn-on and turn-off threshold		22 11 11 12 12 12 12 12 12 12 12 12 12 1	859-367 859-368	115 V AC 230 V AC	250 V AC	5 A
Relay with  1 changeover contact, with an extended input voltage and temperature range	E B	A2 11 12 12	859-390 859-391	24 V DC 110 V DC	250 V AC	3 A
Relay with  1 changeover contact, with an extended input voltage and temperature range	<u>E</u> g	<sup>22</sup> 14 11 11 11 11 11 11 11 11 11 11 11 11	859-398 859-394 859-397 859-393 859-399	24 V DC 36 V DC 48 V DC 72 V DC 110 V DC	250 V AC	3 A

<sup>\*</sup> In order to prevent the gold layer from being damaged, these values shall not be exceeded.

Higher switching power leads to evaporation of the gold layer. The resulting deposits in the housing may cause sparkovers between the coil and the contact.

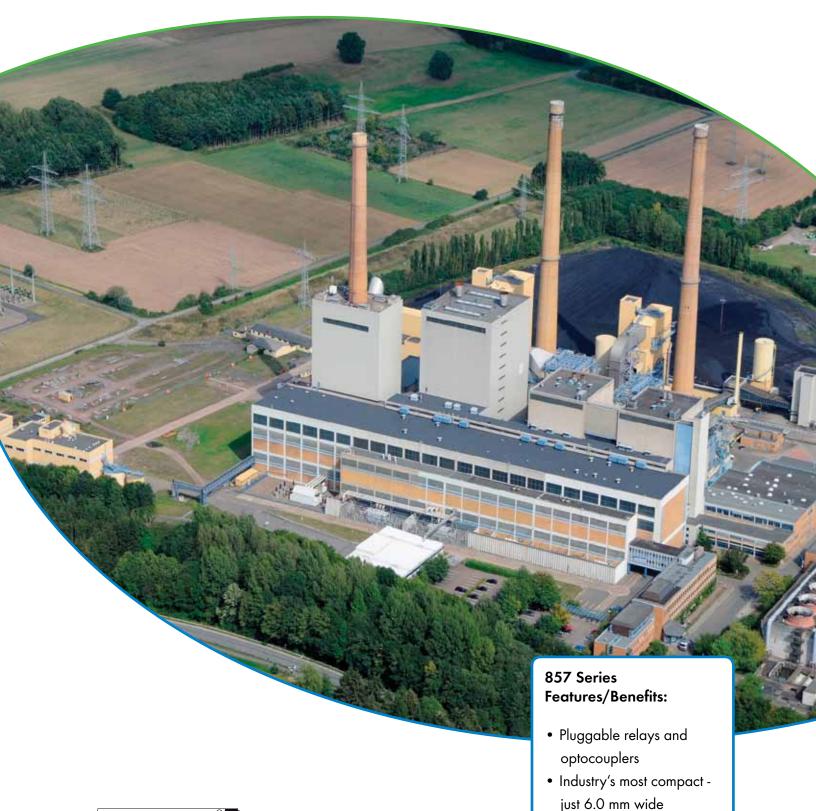
## Timer Relay

Description			Item No.	Input Nominal Voltage U <sub>N</sub>	Output Voltage Range	Max. Continuous Current
Relay with  1 changeover contact, with on or off delay timer ranging from 0.2 sec to 10 min		A1 11 11 14	51250280	24 V DC	120 V AC	6 A
Relay with  1 changeover contact, with on or off delay timer ranging from 2 sec to 35 min		A1 — 12 — 11 A2 — 14	51257796	24 V DC	120 V AC	6 A

# Rail-Mounted Terminal Blocks with Optocoupler, 859 Series

Description			Item No.	Input Nominal Voltage V <sub>N</sub>	Output Voltage Range	Max. Continuous Current
Optocoupler with an extended		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	859-793	5 V DC	3 V 60 V DC	100 mA
output voltage and temperature range for use in railway traffic		2 1	859-791 859-794	24 V DC 24 V DC	7 V 60 V DC 9 V 60 V DC	100 mA 100 mA
Optocoupler		2	859-795 859-796	5 V DC 24 V DC	3 V 30 V DC	100 mA
Optocoupler, negative switching Power optocoupler		A1 — D4 — A	859-720	24 V DC	10 V 30 V DC	3 A
		A)	859-730	24 V DC	3 V 30 V DC	3 A
Optocoupler, power optocoupler		R A2	859-740	24 V DC	3 V 30 V DC	3 A
		Al A	859-744	12 V 48 V DC	3 V 53 V DC	4 A
Optocoupler, positive switching, increased input frequency up to 100 Hz, input voltage up to 270 V AC		25 25 25 A	859-772	230 V AC	20 V 30 V DC	500 mA
Optocoupler, negative switching		N P P P P P P P P P P P P P P P P P P P	859-712	230 V AC	20 V 30 V DC	500 mA
Optocoupler, negative switching	0	NAME OF THE PARTY	859-702 859-708	5 V DC 24 V DC	20 V 30 V DC	500 mA
Optocoupler, negative switching		0V	859-706	24 V DC	4 V 6,25 V DC	500 mA
Optocoupler, positive switching		AD	859-752	5 V DC	20 V 30 V DC	500 mA
Optocoupler,		**************************************	859-758	24 V DC	20 V 30 V DC	500 mA
positive switching		,1 4 -24v	859-756	24 V DC	4 V 6,25 V DC	500 mA
Optocoupler		√- <b></b>	859-902	5 V DC	24 V 260 V AC	500 mA

Push-in jumper bar; part number 859-4XX (XX = number of poles; e.g. 02 = 2-pole up to 10 poles). Add to part number for color other than white... /000-029 (yellow), 000-006 (blue) 000-005 (red). End plate part number, 859-525.



## CAGE CLAMP®5

## Vibration-proof – fast – maintenance-free

CAGE CLAMP®S termination for all conductor types.

\*solid



fine-stranded



\*ferruled



• Potential commoning on

• Integrated LED for status

• Input voltage available in 5-230 V AC/DC variants

• Up to 6 A switching

every level

indication

current

\*Push-in wiring technology

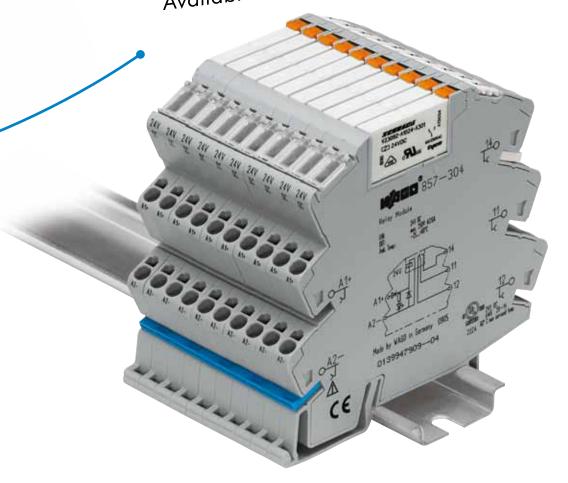
WAGO 857 Series relay and optocoupler modules are supplied in 6 mm-wide housing and share a common profile. The modules feature a single, flexible in-line jumper system (e.g., for supply voltages), eliminating discrete wiring. The pluggable relays can be replaced quickly and easily when needed.

## JUMPFLEX®, Sockets with Switching Relay and

## Optocoupler - 857 Series

An optional interface adapter plugs on the input or output side, combining eight modules and connecting them via a cable to reduce wiring time and errors.

# Available interface adapter



# Sockets with Miniature Switching Relay, 857 Series

Description	Description			Nominal Voltage	Current Carrying Capacity per Channel	Max. Total Current
Polov with	y with rangeover contact	*;; *** \tau \tau \tau \tau \tau \tau \tau \tau	857-303 857-304 857-305 857-306 857-307 857-308	12 V DC 24 V DC 48 V DC 60 V DC 110 V DC 220 V DC	250 V AC	6 A
1 ch'angeover contact			857-354 857-357 857-358	24 V AC/DC 115 V AC/DC 230 V AC/DC	250 V AC	6 A
Relay with 1 changeover contact,		, 7 t.,	857-314 857-317 857-318	24 V DC 110 V DC 220 V DC	36 V DC* / (250 V AC/DC)	50 mA* / (6 A )
with gold contacts			857-364 857-367 857-368	24 V AC/DC 115 V AC/DC 230 V AC/DC	36 V DC* / (250 V AC/DC)	50 mA* / (6 A )

<sup>\*</sup> In order to prevent the gold layer from being damaged, these values shall not be exceeded. (In case of damaged gold layer, the values in parenthesis apply). Higher switching power leads to evaporation of the gold layer.

## 8-Channel Interface Adapter for System Wiring

Description			Item No.	Nominal Voltage	Current Carrying Capacity per Channel	Max. Total Current
8-channel <i>adapter</i> with 1 <i>4</i> -pin flat cable connector, positive switching input**	and the same		857-981	24 V DC	1 A	3 A
8-channel <i>adapter</i> with 14-pin flat cable connector, positive switching output***	and the same		857-982	24 V DC	1 A	3 A
8-channel <i>adapter</i> with D-sub male connector, Input with 15-pin flat cable connector, positive switching**	ALL THE STREET	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	857-986	24 V DC	1 A	3 A

<sup>\*\*</sup> For use on the 857 Series socket's coil side

The resulting deposits in the housing may cause sparkovers between the coil and the contact.

<sup>\*\*\*</sup> For use on the 857 Series socket's contact side

# Sockets with Solid State Relay, 857 Series

Description		Item No.	Input Nominal Voltage V <sub>N</sub>	Output Voltage Range	Max. Continuous Current
	"J" t <sup>NC</sup>	857-704	24 V DC	0 V 48 V DC	100 mA
Solid state relay	Table	857-707	115 V AC/DC	0 V 48 V DC	100 mA
	", T	857-708	230 V AC/DC	0 V 48 V DC	100 mA
	T THE TOTAL PROPERTY TO THE PR	857-714	24 V DC	24 V 240 V AC	1 A
Solid state relay	THE TOTAL CONTROL OF THE CONTROL OF	857-717	115 V AC/DC	24 V 240 V AC	1 A
	T TNC	857-718	230 V AC/DC	24 V 240 V AC	1 A
	TNC TNC	857-724	24 V DC	0 V 24 V DC	2 A
Solid state relay	" T T T T T T T T T T T T T T T T T T T	857-727	115 V AC/DC	0 V 24 V DC	2 A
	"T TNC	857-728	230 V AC/DC	0 V 24 V DC	2 A

Push-in jumper bar; part number 859-4XX (XX = number of poles; e.g. 02 = 2-pole up to 10 poles). Add to part number for color other than white... /000-029 (yellow), 000-006 (blue) 000-005 (red).



## CAGE CLAMP®5

## Vibration-proof – fast – maintenance-free

CAGE CLAMP®S termination for all conductor types.

\*solid



fine-stranded



\*ferruled



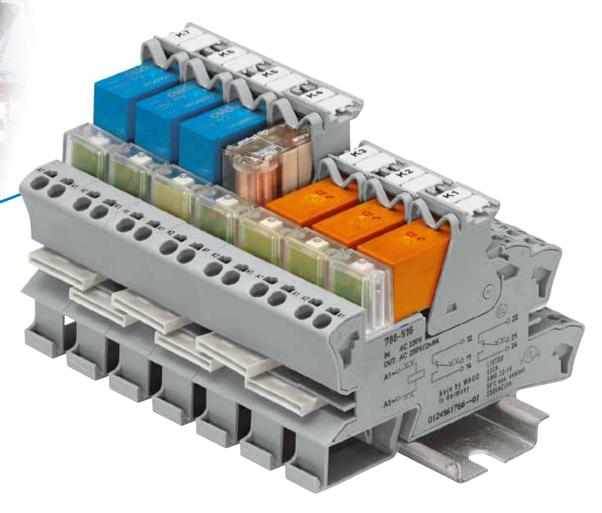
<sup>\*</sup>Push-in wiring technology

WAGO 788 Series Pluggable Relay Modules are an excellent platform for industrial and process automation switching relay applications. Featuring plug-and-play, miniature switching relays (1 or 2 changeover contacts), 788 Series relays are low profile, fitting where other relays do not.

## Sockets with Switching Relay and Optocoupler -

## 788 Series

A compact design is just one of the 788 Series' unique and highly beneficial features. A robust, easy-to-use lever lifts/ejects relays, simplifying replacement — even if relay modules are sideby-side. For flexibility and the reduction of part numbers, the 788 Series can be ordered as: a fully equipped relay module, a relay and LED for switching status indication, or as individual components.



# Sockets with Miniature Switching Relay, 788 Series

Description			Item No.	Input Nominal Voltage V <sub>N</sub>	Max. Switching Voltage	Max. Continuous Current
Relay with  1 changeover contact and status indication (15 mm high)		Al 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	788-303 788-304 788-305 788-306 788-307	12 V DC 24 V DC 48 V DC 60 V DC 110 V DC	250 V AC	16 A
Relay with 2 changeover contacts and status indication (15 mm high)		A1 12 12 12 12 12 12 12 12 12 12 12 12 12	788-311 788-312 788-313 788-314 788-315	12 V DC 24 V DC 48 V DC 60 V DC 110 V DC	250 V AC	2 x 8 A
Relay with  1 changeover contact  and status indication (15 mm high)		Al 14	788-506 788-507 788-508	24 V AC 115 V AC 230 V AC	250 V AC	16 A
Relay with 2 changeover contacts and status indication (15 mm high)		A1 14 11 11 12 12 12 12 12 12 12 12 12 12 12	788-512 788-515 788-516	24 V AC 115 V AC 230 V AC	250 V AC	2 x 8 A
Relay with 1 changeover contact, with gold contacts and status indication (15 mm high)	O MA	A1 14 14 12 12 12 12 12 12 12 12 12 12 12 12 12	788-404	24 V DC	36 V DC*	50 mA*
Relay with 2 changeover contacts, with gold contacts and status indication (15 mm high)		A1 12 12 12 12 12 12 12 12 12 12 12 12 12	788-412	24 V DC	36 V DC*	2 x 50 mA*
Relay with 1 changeover contact, with gold contacts and status indication (15 mm high)	0 12	A1 14 14 12 12 12 12 12 12 12 12 12 12 12 12 12	788-607 788-608	115 V AC 230 V AC	36 V DC*	50 mA*
Relay with 2 changeover contacts, with gold contacts and status indication (15 mm high)		A1 11 21 24 A2 -22	788-615 788-616	115 V AC 230 V AC	36 V DC*	2 x 50 mA*
Relay with  1 changeover contact and status indication (25 mm high)	dh	A1 14 14 11 A2 11	788-324	24 V DC	250 V AC	16 A
Relay with 2 changeover contacts and status indication (25 mm high)		A1 12 12 12 12 12 12 12 12 12 12 12 12 12	788-334	24 V DC	250 V AC	2 x 8 A
Relay with  1 changeover contact and status indication (25 mm high)		A1 14 14 11 A2 12 - 12	788-528	230 V AC	250 V AC	16 A
Relay with 2 changeover contacts and status indication (25 mm high)		A1 14 14 12 12 12 12 12 12 12 12 12 12 12 12 12	788-538	230 V AC	250 V AC	2 x 8 A

<sup>\*</sup> In order to prevent the gold layer from being damaged, these values shall not be exceeded. Higher switching power leads to evaporation of the gold layer.

The resulting deposits in the housing may cause sparkovers between the coil and the contact.

# Sockets with Miniature Switching Relay, 788 Series

Description			Item No.	Input Nominal Voltage V <sub>N</sub>	Max. Switching Voltage	Max. Continuous Current
Relay with  1 changeover contact and status indication (15 mm high)		A1 + > 14 + > 12 A2 - > 12	788-354	24 V DC	250 V AC	16 A
Relay with 1 make contact and status indication (25 mm high)	TO A	A1 +) A2 -)	788-355	24 V DC	250 V AC	16 A
Relay with 1 changeover contact, manual operation, eletrical and mechanical status indication		A1 7 7 14 12 12 12 12 12 12 12 12 12 12 12 12 12	788-341 788-342 788-344	24 V DC 48 V DC 110 V DC	250 V AC	16 A
Relay with <b>2 changeover contacts</b> , manual operation, eletrical and mechanical status indication		A1 12 12 12 12 12 12 12 12 12 12 12 12 12	788-346 788-347 788-349	24 V DC 48 V DC 110 V DC	250 V AC	2 x 8 A
Relay with 1 changeover contact, manual operation, eletrical and mechanical status indication	The state of the s	A1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	788-541 788-543 788-544	24 V AC 115 V AC 230 V AC	250 V AC	16 A
Relay with <b>2 changeover contacts</b> , manual operation, eletrical and mechanical status indication		Al 1 12 22 24 22 22	788-546 788-548 788-549	24 V AC 115 V AC 230 V AC	250 V AC	2 x 8 A
Safety relay SR2M (2 changeover contacts), with force-guided contacts and status indication	10	A1 14 11 11 11 11 12 12 12 12 12 12 12 12 12	788-384	24 V DC	250 V AC	6 A

# Sockets with Optocoupler, 788 Series

Description			Item No.	Input Nominal Voltage U <sub>N</sub>	Output Voltage Range	Max. Continuous Current
Optocoupler		A	788-700	24 V DC	0 V 24 V DC	3.5 A
Optocoupler		**************************************	788-701	24 V DC	0 V 24 V DC	5 A
Optocoupler		· · · · · · · · · · · · · · · · · · ·	788-720	24 V DC	24 V 240 V AC	1 A

Push-in Jumper Bar, part number 859-402 (2-pole jumper) and 788-113 (2-pole alternate jumper).



## CAGE CLAMP®5

### Vibration-proof – fast – maintenance-free

CAGE CLAMP®S termination for all conductor types.

\*solid



fine-stranded



\*ferruled



<sup>\*</sup>Push-in wiring technology

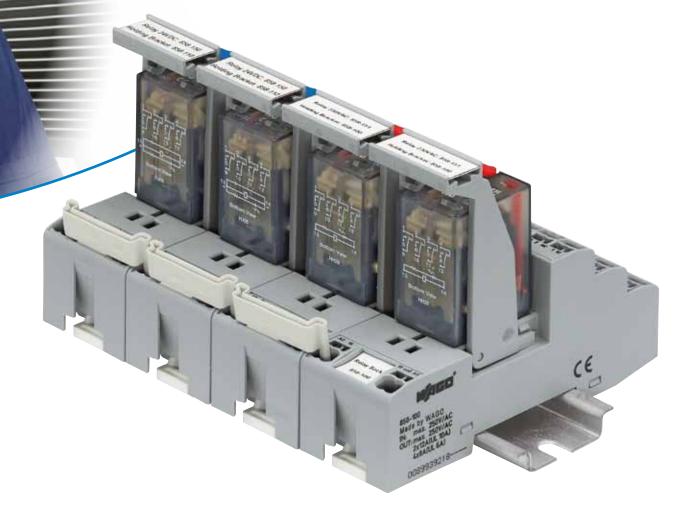
WAGO DIN-rail mount 858 Series relay sockets are designed for conventional industrial relays with standard pin spacing. The sockets carry 33.5 to 35.5 mm-high relays equipped with 2 or 4 changeover contacts. All socket contacts feature two conductor entries at each CAGE

CLAMP®S COMPACT connection point for 2 x 0.34 mm² (22 AWG) to 1.5 mm² (16 AWG) cross-section. CAGE CLAMP®S COMPACT Spring Pressure Connection Technology provides simple, push-in termination of solid or ferruled conductors.



858 Series

Speedy Socket Service: rapidly replace relays without removing conductors.



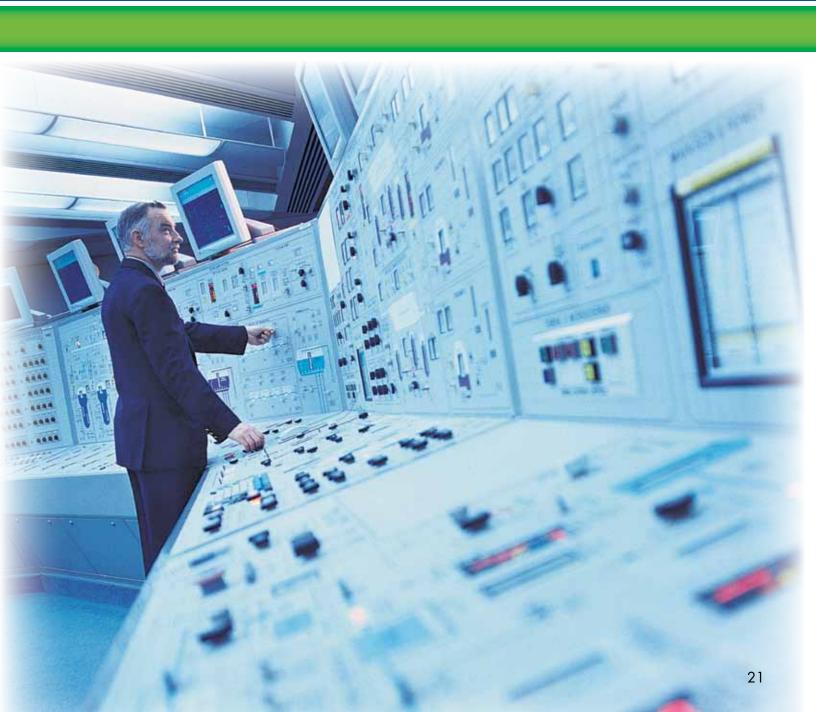
## Sockets with Industrial Relay, 858 Series

Description			Item No.	Input Nominal Voltage V <sub>N</sub>	Max. Switching Voltage	Max. Continuous Current
Relay with 4 changeover contacts	HILL S	A1	858-304	24 V DC	250 V AC / 30 V DC	5 A
Relay with 4 changeover contacts, with gold contacts			858-314	24 V DC	30 V DC *	50 mA *
Relay with 4 changeover contacts	HI TO	A1	858-507 858-508	115 V AC 230 V AC	250 V AC / 30 V DC	5 A
Relay with 4 changeover contacts, with gold contacts			858-517 858-518	115 V AC 230 V AC	30 V DC *	50 mA *
Relay with 4 changeover contacts, with an extended input voltage and temperature range			858-354	24 V DC	250 V AC / 30 V DC	5 A

<sup>\*</sup> In order to prevent the gold layer from being damaged, these values shall not be exceeded.

Higher switching power leads to evaporation of the gold layer.

The resulting deposits in the housing may cause sparkovers between the coil and the contact.





## CAGE CLAMP®

## Vibration-proof – fast – maintenance-free

CAGE CLAMP® termination for all conductor types.

### solid



### fine-stranded



ferruled



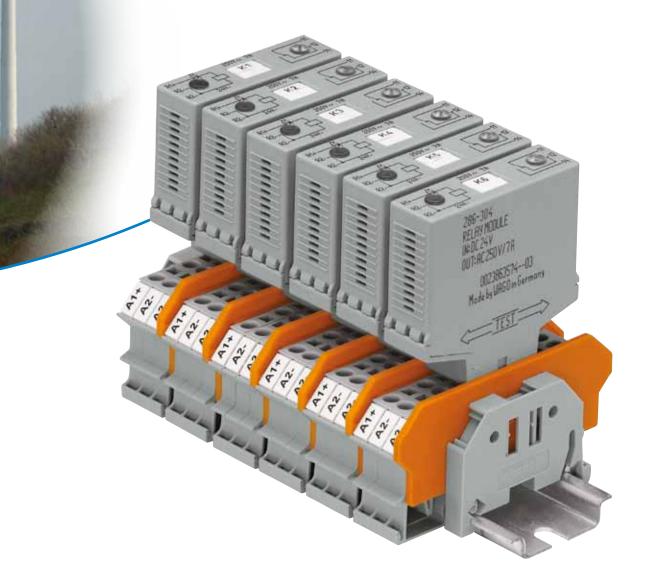
Pluggable modules for carrier terminal blocks maximize flexibility while simplifying maintenance:

- 1. The DIN-rail mount carrier block is wired just like a standard terminal block.
- 2. Modules are then plugged into the terminal block after wiring.
- 3. For ease of maintenance, the modules are replaced in one step without affecting terminal block wiring.

## Pluggable Relay and Optocoupler Modules for

## Carrier Terminal Blocks – 286 Series

This intelligent design also saves space and reduces wiring costs. A comprehensive range of function modules is available to complement these optocoupler and relay modules. The modules seamlessly integrate any required function into control cabinets via pluggable modules.



# Pluggable Modules – Relays, 286 Series

Description			Item No.	Input Nominal Voltage V <sub>N</sub>	Max. Switching Voltage	Max. Continuous Current
Relay with 1 make contact		**************************************	286-364 286-365 286-366 286-564 286-566 286-567	24 V DC 48 V DC 60 V DC 24 V AC 115 V AC 230 V AC	30 V DC / 250 V AC	5 A
Relay with 1 break contact		4-14-11 4-11-11-11-11-11-11-11-11-11-11-11-11-11	286-368 286-369 286-370 286-568	24 V DC 48 V DC 60 V DC 24 V AC	250 V DC / 250 V AC	5 A
Relay with 1 changeover contact		4)————————————————————————————————————	286-302 286-303 286-304 286-305 286-306 286-307 286-308	5/6 V DC 12 V DC 24 V DC 48 V DC 60 V DC 115 V DC 220 V DC	300 V DC / 250 V AC	7 A
Relay with <b>1 changeover contact</b>		* The state of the	286-502 286-503 286-504 286-505 286-506 286-507 286-508	5/6 V AC/DC 12 V AC/DC 24 V AC/DC 48 V AC/DC 60 V AC/DC 115 V AC 230 V AC	300 V DC / 250 V AC	7 A
Relay with  1 changeover contact, with gold contacts			286-394 286-395 286-594	24 V DC 48 V DC 24 V AC/DC	36 V DC	1 A
Relay with  2 changeover contacts		12 <b>4</b> 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	286-310 286-311 286-312 286-313 286-314 286-315 286-316	5/6 V DC 12 V DC 24 V DC 48 V DC 60 V DC 115 V DC 220 V DC	300 V DC / 250 V AC	7 A
Relay with 2 changeover contacts		2	286-510 286-511 286-512 286-513 286-514 286-515 286-516	5/6 V AC 12 V AC 24 V AC 48 V AC 60 V AC 115 V AC 230 V AC	300 V DC / 250 V AC	7 A
Relay with 1 break and 1 make contact			286-318 286-319 286-320 286-321 286-322 286-324 286-520	5/6 V DC 12 V DC 24 V DC 48 V DC 60 V DC 220 V DC 24 V AC	250 V DC / 380 V AC	6 A
Relay with  2 make contacts	THE STATE OF THE S	2 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	286-326 286-327 286-328 286-329 286-330 286-332	5/6 V DC 12 V DC 24 V DC 48 V DC 60 V DC 220 V DC	250 V DC / 380 V AC	6 A

Description			Item No.	Input Nominal Voltage V <sub>N</sub>	Max. Switching Voltage	Max. Continuous Current
Relay with 2 break contacts and 2 make contacts		2	286-334 286-335 286-336 286-337 286-338 286-339 286-536 286-540	5/6 V DC 12 V DC 24 V DC 48 V DC 60 V DC 115 V DC 24 V AC 230 V AC	250 V DC / 250 V AC	5 A
Relay with 1 break contact and 3 make contacts		11 12 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	286-342 286-343 286-344 286-345 286-346 286-347 286-544 286-547 286-548	5/6 V DC 12 V DC 24 V DC 48 V DC 60 V DC 115 V DC 24 V AC 115 V AC 230 V AC	250 V DC / 250 V AC	5 A
Relay with 4 make contacts		2 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	286-350 286-351 286-352 286-353 286-354 286-355 286-552 286-555 286-555	5/6 V DC 12 V DC 24 V DC 48 V DC 60 V DC 115 V DC 24 V AC 115 V AC 230 V AC	250 V DC / 250 V AC	5 A
Relay with 4 changeover contacts		2-2-01 M	286-375 286-578 286-579	24 V DC 110/120 V AC 230 V AC	60 V DC / 250 V AC	2 A DC / 4 A AC
Relay with 1 make contact, for higher DC loads	-	A-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1	286-376	24 V DC	250 V DC / 250 V AC	5 A
Relay with 2 changeover contacts, with gold contacts		A:	286-384	24 V DC	36 V DC*	50 mA *
Relay with 1 changeover contact, with specified switching threshold		A - 11	286-904	230 V AC	250 V DC / 380 V AC	5 A
Relay with  1 break and  1 make contact, minimal control power ≥ 7 mW, trigger voltage		;	286-906	24 V DC	250 V DC / 380 V AC	6 A
Latching relay with 1 break and 1 make contact	9		286-571 286-570	24 V DC 230 V AC	30 V DC / 250 V AC	5 A
Bistable relay with 1 changeover contact, positive switching / negative switching		2 4 5 - 1 2 2 4 5 1 1 2 2 4 5 1 1 2 2 4 5 1 1 2 4 5 1 1 2 4 5 1 1 2 5	286-380 286-381	24 V DC 24 V DC	250 V DC / 250 V AC	6 A

# Pluggable Modules – Relays, 286 Series

Description			Item No.	Input Nominal Voltage V <sub>N</sub>	Max. Switching Voltage	Max. Continuous Current
Relay with 1 make contact, with an extended input voltage and temperature range		0- <b>106</b>	286-364/004- 000	24 V DC	250 V AC	3 A
Relay with 1 break contact, with an extended input voltage and temperature range		4-144	286-368/ 004-000	24 V DC	250 V AC	3 A
Relay with  1 changeover contact, with an extended input voltage and temperature range		↑	286-304/ 004-000 286-307/ 004-000	24 V DC 110 V DC	250 V AC/DC	3 A
Relay with 1 changeover contact, with gold contacts with an extended input voltage and temperature range	F	2 - 4 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1	286-394/ 004-000	24 V DC	36 V DC*	50 mA *
Relay with <b>2 changeover contacts</b> , with an extended input voltage and temperature range	F	2)	286-312/ 004-000	24 V DC	250 V AC / 200 V DC	4 A
Relay with 1 break and 1 make contact, with an extended input voltage and temperature range	4	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	286-320/ 004-000	24 V DC	250 V AC / 200 V DC	4 A
Relay with <b>2 make contacts</b> , with an extended input voltage and temperature range		\$ 1 La	286-328/ 004-000	24 V DC	250 V AC / 200 V DC	4 A
Relay with 2 break con- tacts and 2 make contacts with an extended input voltage and temperature range	P	11 1 1 1 1 1 2 2 2 2 2 2 2 2 2 2 2 2 2	286-336/ 001-000	24 V DC	250 V AC / 200 V DC	4 A
Relay with 1 break contact and 3 make contacts with an extended input voltage and temperature range	To the second	11 11 12 12 12 12 12 12 12 12 12 12 12 1	286-344/ 004-000	24 V DC	250 V AC / 200 V DC	4 A
Relay with 4 make con- tacts, with an extended input voltage and temperature range		22 22 24 24 24 24 24 24 24 24 24 24 24 2	286-352/ 004-000	24 V DC	250 V AC / 30 V DC	4 A
Relay with 1 break and 1 make contact, with an extended input voltage and temperature range	F	2 — # ["] 2 — # ["] 2 — 2 — 2 — 2 — 2 — 2 — 2 — 2 — 2 — 2 —	286-906/ 004-000	24 V DC	250 V AC/DC	3 A

## Pluggable Modules – Optocouplers, 286 Series

Description			Item No.	Input Nominal	Output Voltage Range	Max. Continuous
			286-700	Voltage V <sub>N</sub>	5 V DC (3 V 6 V DC)	Current
Optocoupler, negative switching	EF-TE		286-701 286-702	24 V DC	15 V DC (10 V 20 V DC) 24 V DC (20 V 30 V DC)	500 mA
Optocoupler, positive switching		A. D.	286-750 286-751 286-752	24 V DC	5 V DC (3 V 6 V DC) 15 V DC (10 V 20 V DC) 24 V DC (20 V 30 V DC)	500 mA
Optocoupler, negative switching	The same of the sa		286-704 286-706 286-708	230 V AC	5 V DC (3.5 V 7 V DC) 15 V DC (10 V 20 V DC) 24 V DC (20 V 30 V DC)	500 mA
Optocoupler, positive switching	7		286-754 286-756 286-758	230 V AC	5 V DC (3.5 V 7 V DC) 15 V DC (10 V 20 V DC) 24 V DC (20 V 30 V DC)	500 mA
Optocoupler, negative switching	FF	A 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	286-720	24 V DC	15 V 40 V DC	2 A
Optocoupler, negative switching		A1	286-721	24 V DC	15 V 40 V DC	5 A
Optocoupler, positive switching	55-16		286-752/ 002-000	5 V DC	20 V 30 V DC	500 mA
Optocoupler, positive switching			286-723	24 V DC	20 V 30 V DC	4 A
Optocoupler, negative switching		,	286-726 286-728 286-730	5 V DC 12 V DC 24 V DC	99 V 121 V DC	1,6 A
Optocoupler			286-732 286-733 286-734	5 V DC 12 V DC 24 V DC	24 V 280 V AC	1 A
Optocoupler, negative switching			286-725	10 V 30 V AC/DC	20 V 30 V DC	500 mA
Optocoupler	7	A1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	286-791	24 V DC	20 V 60 V DC	100 mA
Optocoupler	The same of the sa	2 2	286-794	24 V DC	20 V 60 V DC	100 mA
Double optocoupler		A 2 2 4 A 2 A 2 A 2 A 2 A 2 A 2 A 2 A 2	286-792	2 x 24 V DC	2 × 20 V 30 V DC	2 x 250 mA
Optocoupler with 2 inverted outputs			286-790	24 V DC	20 V 30 V DC	500 mA
Optocoupler with bridge plug for programming the output	E. L.	\$ 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	286-938	24 V DC	10 V 30 V DC	300 mA (800 mA max. 30 s)



## CAGE CLAMP®

## Vibration-proof – fast – maintenance-free

CAGE CLAMP $^{\scriptsize \circledcirc}$  termination for all conductor types.





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Equipped with relay and PLC interface modules, WAGO DIN-rail mount carriers provide fast and easy peripheral signal connections.

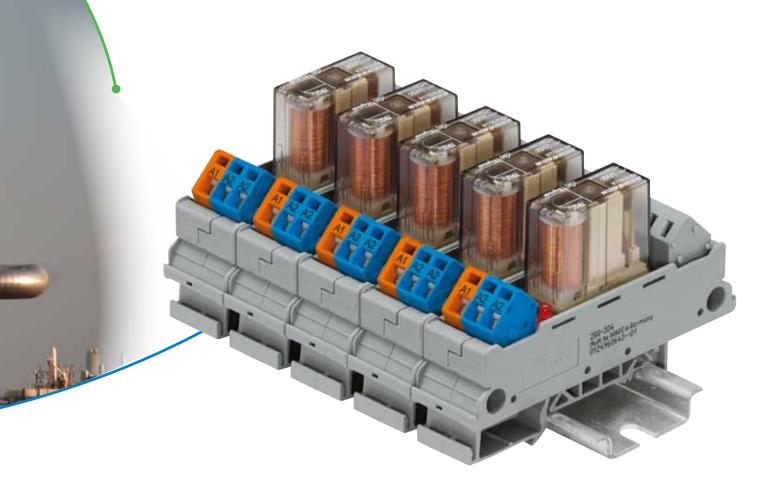
The fully wired modules - each with up to 16 high-performance relay outputs -

provide direct, in-the-field switching of actuators and other coupling elements.

To extend product life and increase machine uptime, each carries integrated recovery and reverse voltage protection diodes.

## **Mounting Carriers with Miniature**

## Switching Relay - 287, 288 Series



### 287, 288 Series Features/Benefits:

- Modules with up to 16 relay functions
- LED indicator, recovery and reverse voltage protection diodes
- Pluggable and easily replaceable relays
- Easy termination of conductors from 0.08 mm<sup>2</sup> to 2.5 mm<sup>2</sup> (28 -12 AWG)

## **Custom Product Design**

 Don't see what you need? Just ask us.
 WAGO offers design/build services to your specification

# Mounting Carriers with Miniature Switching Relay, 287, 288 Series

Description			Item No	Input Nominal Voltage V <sub>N</sub>	Max. Switching Voltage	Max. Continuous Current
Relay with 1 make contact, relay pre-soldered onto mounting carrier		A) - 14 A) - 14 A	288-364 288-564 288-565 288-567	24 V DC 24 V AC/DC 48 V AC/DC 115 V AC/DC	250 V DC / 250 V AC	5 A
Relay with 1 break contact, relay pre-soldered onto mounting carrier	1	A-112 A-112 A-2-11 A-11	288-368 288-568	24 V DC 24 V AC/DCV	250 V DC / 250 V AC	5 A
Relay with  1 changeover contact, relay pre-soldered onto mounting carrier, with connectors	No.	2 - 1 - 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	288-554	24 V AC/DC	250 V DC / 250 V AC	5 A
Relay with  1 changeover contact, relay pre-soldered onto mounting carrier		4 10 1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	288-304 288-504 288-508	24 V DC 24 V AC/DC 230 V AC	300 V DC / 250 V AC	6 A
Relay with <b>2 changeover contacts</b> , relay pre-soldered onto mounting carrier			288-312 288-512	24 V DC 24 V AC/DC	250 V DC / 250 V AC	6 A
2 relays with 1 changeover contact each, relays presoldered onto mounting carrier			288-758 288-761 288-762	24 V AC/DC 115 V AC/DC 230 V AC	300 V DC / 250 V AC	6 A
4 relays with 1 changeover contact each, pluggable relays pre-installed into mounting carrier		* <b>4</b>	287-774	24 V DC	300 V DC / 250 V AC	6 A
8 relays with 1 changeover contact each, relays pre-soldered onto mounting carrier	W. C.	*## *## *## *## ### ###	287-804 287-814	24 V DC 24 V AC/DC	250 V DC / 250 V AC	6 A
8 relays with 1 changeover contact each, pluggable relays pre-installed into mounting carrier	The state of the s		287-824 287-834	24 V DC 24 V AC/DC	300 V DC / 250 V AC	6 A
16 relays with  1 changeover contact each, pluggable relays pre-installed into mounting carrier	Comme of the last		287-853 287-854	12 V DC 24 V DC	250 V DC / 250 V AC	6 A

Description		Item No	Input Nominal Voltage V <sub>N</sub>	Max. Switching Voltage	Max. Continuous Current
Relay with 1 make contact, relay pre-soldered onto mounting carrier, designed for switching high inrush current loads (e.g., filament lamp loads)	**	288-320	24 V DC	440 V AC	16 A
4 relays with 1 make contact, relays pre-soldered onto mounting carrier, designed for switching high inrush current loads (e.g., filament lamp loads)	* # # \	287-475	24 V DC	440 V AC	16 A
4 relays with 1 make contact each, relays pre-soldered onto mounting carrier	***	287-474	24 V DC	250 V DC / 250 V AC	16 A
Bistable relay with  1 changeover contact, relay pre-soldered onto mounting carrier	12 12 14 14 14 15 11	288-380	24 V DC	300 V DC / 250 V AC	6 A
Relay with  2 changeover contacts, with force-guided contacts, relay pre-soldered onto mounting carrier	A)	288-437	24 V DC	380 V	5 A
2 safety relays, Hengstler H-462 type, with 3 make contacts and 1 break contact, pluggable relays pre-installed into mounting carrier	12 24 34 44 2 2 3 3 4 4 12 23 3 4 5 12 23 3 4 6 12 23 3 4 6 12 23 3 4 6 14 23 3 5 4 6 14 23 3 5 4 6 17 23 3 5 4 6	288-435	24 V DC	300 V DC / 230 V AC	6 A
Safety relay, SDS SF 4 type, with 4 break contacts and 4 make contacts, 1 module, relay pre-soldered onto mounting carrier		288-412 288-413 288-414 288-415 288-416 288-418	5 V DC 12 V DC 24 V AC/DC 48 V AC/DC 60 V AC/DC 230 V AC/DC	250 V AC	6 A
Safety relay, SDS SF 4 type, with 4 break contacts and 4 make contacts, 2 modules, relay pre-soldered onto mounting carrier		288-422 288-423 288-424 288-425 288-426 288-428	5 V DC 12 V DC 24 V AC/DC 48 V AC/DC 60 V AC/DC 230 V AC	250 V AC	6 A



## Vibration-proof – fast – maintenance-free

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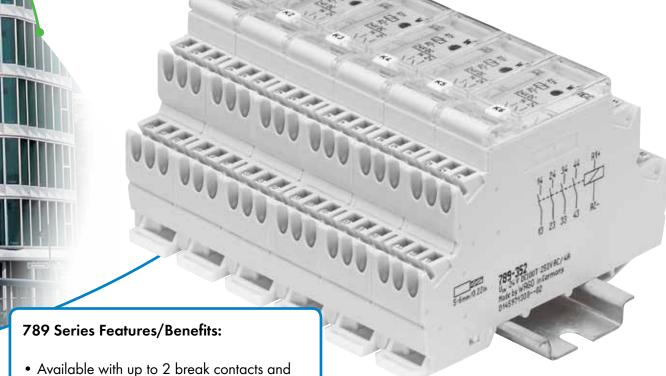


WAGO 789 Series switching relays serve a wide variety of applications, from basic lighting control – homes, hotels and commercial structures – to comprehensive industrial control cabinets. Just 17.5 mm wide, the compact DIN-rail mount enclosure is ideal for distribution boards and meter cabinets.

Available with up to four make contacts (with or without manual operation), 789 Series relay modules are ready to suit an increasingly diverse range of applications.

# Relay Modules in DIN-Rail Mountable

## **Enclosure - 789 Series**



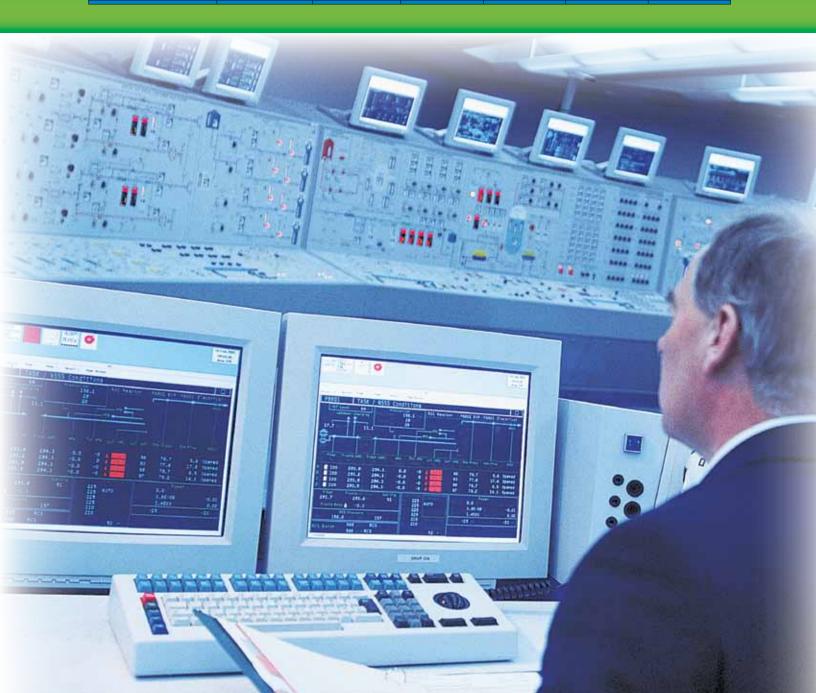
- Available with up to 2 break contacts and 2 make contacts, or 4 make contacts in a compact 17.5 mm enclosure
- Commoning on each level via push-in jumpers
- Marking via rail-mount terminal block accessories
- Clearly identified connection points
- LED indicator for switching status

# Relay Modules in DIN-Rail Mountable Enclosure, 789 Series

Description			Item No.	Input Nominal Voltage V <sub>N</sub>	Max. Switching Voltage	Max. Continuous Current
Relay with 1 changeover contact	Harris A. L. A. E. L.	A1 12 12 A2 A2 A2	789-304	24 V DC	250 V AC/DC	12 A
Relay with 1 changeover contact		A2 11 11	789-504 789-508	24 V AC/DC 230 V AC	250 V AC/DC	12 A
Relay with 2 changeover contacts	RA THE STREET	A1 14 12 24 22 22 22 22 21 11	789-312 789-313 789-315	24 V DC 48 V DC 110 V DC	250 V AC/DC	8 A
Relay with  2 changeover contacts		A1 12 14 12 12 12 11 11 11 11 11 11 11 11 11 11	789-512 789-515 789-516	24 V AC/DC 115 V AC 230 V AC	250 V AC/DC	8 A
Relay with 2 break contacts, 2 make contacts	R. P. ST. A.	A1 14 24 12 22 A2 13 23 11 21	789-336	24 V DC	250 V AC / 30 V DC	4 A AC / 3 A DC
Relay with 2 break contacts, 2 make contacts		A2 14 24 12 22 A2 13 23 11 21	789-535 789-536	12 V AC/DC 24 V AC/DC	250 V AC / 30 V DC	4 A AC / 3 A DC
Relay with 4 make contacts	R. A. Williams	A1	789-352	24 V DC	250 V AC / 30 V DC	4 A AC / 3 A DC
Relay with 4 make contacts		14243444 142434444 22 13233343	789-551 789-552	12 V AC/DC 24 V AC/DC	250 V AC / 30 V DC	4 A AC / 3 A DC
Latching relay with 1 make contact	R. B. T. T. T.	A1 14 14 A2 13	789-571	24 V DC	400 V AC	16 A
Latching relay with  1 make contact		A213	789-570	230 V AC	400 V AC	16 A

Push-in jumper bar, part number 789-112 (12-pole jumper, cut to length).

Description			Item No.	Input Nominal Voltage V <sub>N</sub>	Max. Switching Voltage	Max. Continuous Current
Relay with  1 make contact,  Manual/OFF/Auto switch	R. S. C.	A – Automotik 0 – OF 1 – Monoell PA 1 – 1 – Monoell PA 220) A3 2 – 13 1:	789-323	24 V DC	250 V AC	16 A
Relay with 1 make contact, Manual / Off / Auto switch with monitoring contact	E TOTAL STATE	A = Automorph (AUTO) O = Auto	789-325	24 V DC	250 V AC	16 A
Relay with 1 make contact, Manual / Off / Auto switch with switch position monitoring	E TOTAL STATE	A - Agreement (AURC)  O - AQU  O - AQU	789-329	24 V DC	250 V AC	12 A



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