



Relays



HENGSTLER

HENGSTLER Products



Encoders

Absolute Encoders ACURO drive and ACURO industry, Incremental Encoders, Ex-proof and stainless steel versions, Bus Encoders.



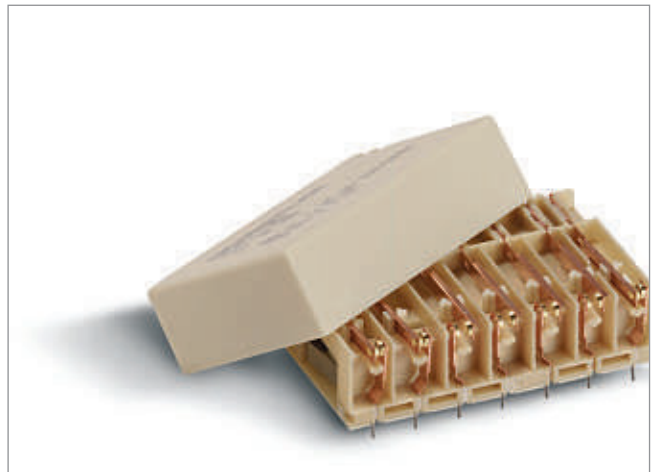
Industrial Counting and Control Components

Starting from mini-counters up to ambitious control counters, multi-function counters, counters with interface, position indicators, timers, tachometers.



Printers and Cutters

Printer solutions e.g. applications in the sector of info points, ticket dispensers, cash dispensers, POS systems, modular thermal and needle printers, accessories such as winders and cutters.



Relay technology

Main focus is the worldwide most versatile product range of safety relays – relays with forcibly guided contact sets. Furthermore: bistable relays, mains insulation relays, high-voltage relays, high current relays.

Further Danaher Brands of the Sensors & Controls Group

Dynapar™

Eagle Signal™

ENM™

Harowe™

Namco™

NorthStar™

Partlow™

Veeder-Root™

West™

Good reasons for working with Hengstler

Better by competence.

This catalog provides proof of our competence in the business field of relays – a comprehensive program characterized (as are all Hengstler products) by state-of-the-art technology, excellent design and highest standards of quality and reliability.

The Hengstler headquarters are located in Aldingen, in South-West Germany, on the edge of the Black Forest – a region famous for its industrial pioneers and inventors. The foundations for the Hengstler company were laid by one of these inventors, Johannes Hengstler, who, in 1846, set up a workshop which was later to become the center of the worldwide Hengstler group.

The workshop was started for the manufacture of clock springs; today, Hengstler products range from miniature counters to absolute hollow shaft encoders.



Hengstler – you can count on us.



The Hengstler headquarters in Aldingen.

All technical data and information contained herein, including the graphics, were collected and compiled with the utmost care.

This brochure provides information on products and accessories, which, however, does not constitute any guarantee for technical data or features. The user of these products must determine himself the suitability of the product for the intended use. All technical data is subject to alterations. For questions of technical nature or regarding prices and delivery, please contact our company headquarters or field service employees.

Successful with Hengstler



Innovation at an international level

Our numerous branches and representatives in Europe, America and Asia have made us a truly international enterprise. Our availability around the globe is, of course, a great benefit for our customers – the next Hengstler contact is never far away.

Our sound footing in all parts of the world also has a positive effect on our product know-how. Findings from worldwide research programs provide a pool of information from which, in turn, the material for the carefully directed, overall technological concept is won. These findings form the practice-oriented basis for ongoing innovation and efficiency in all corporate sectors.

The pace of innovation is getting faster and faster in all sectors of technology. Only those who are able to follow or even set this pace will continue to be competitive. Strong, reliable partners are needed to help you cope with these new demands. You need partners whose top priority is added product value/customer value, customer-orientation and high quality.

And taking all this into account, Hengstler is your partner of choice.

Hengstler is a leading European manufacturer in the field of industrial counting and control components, e.g. counters, encoders, as well as relays. The product range is completed by printers and cutters, with Hengstler being the greatest manufacturer for cutters in Europe.

Hengstler: Your Technology Partner

One of our particular strengths is the project management of custom applications. The basis for this is our wide experience gained over many years in the fields of electromechanics, mechanics, pneumatics and electronics which is, of course, mirrored in our product program. Hengstler offers its customers complete support starting at the project planning and development right through to the final product. At present we are handling complex projects in the field of pneumatics and printers for well-known companies, such as Bosch, Festo, IBM and Siemens.

**Talk to Hengstler.
We can offer solutions.**

Customer Orientation

- Hengstler is never far away – wherever you are in the world
- Application-specific assistance
- Customer-oriented manufacturing (one-piece-flow)
- Fair price/performance ratio
- Short delivery times and a high degree of availability

Experience

Hengstler was founded in 1846 and has been manufacturing counters since 1926, printers since 1970, sensors since 1987, relays since 1983...

Quality

- High-quality materials in accordance with VDE (Association of German Electrotechnical Engineers)
- UL, CL- and TÜV approvals
- TÜV-certified to ISO 9001
- Environmental certified to DIN ISO 14001

Competence

- Vast know-how in the fields of development, manufacturing and sales marketing
- Assistance and support are provided by specialists.

Variety

- Hengstler offers a wide range of components for counting, controlling, indicating, measuring, switching and printing
- Get it all from one source!
- Benefit from numerous variants – for added flexibility.

Innovation

- Product development is based on state-of-the-art technology and highly advanced processes.
- Our products are setting the pace - around the globe
- We offer communicative products with state-of-the-art bus technology.

Our service for you



Customer Service

– always remains close to you – thanks to our extensive sales & distribution network. Please contact your local Hengstler distributor, addresses see at: www.hengstler.com

Talk to Hengstler.
We offer solutions.

Customer Advantages:

- Personal customer service
- Many years of experience

Word-wide Representation

You will always find a friendly contact at Hengstler – wherever you are in the world. Our experienced, competent partners are familiar with your branch – just get in touch. Please contact your local Hengstler distributor, addresses see at: www.hengstler.com

Customer Advantages:

- We're there for you – wherever you are – worldwide

Technical Support

If you should have any technical questions concerning your product selection or specific application – get fast and competent help:

Phone: +49 7424 89 0
Fax: +49 7424 89 500
info.relay@hengstler.com

Customer Advantages:

- Quick response to your technical queries

Always on the safe side

Quality and reliability of our products are our top priority. Our quality management system is DQS-certified to DIN EN ISO 9001. Reg. No. 1540-01.

Environmental responsibility

We are committed to environmentally responsible business practices and production. This is why our company has been certified to the DIN ISO 14001: 2004 environmental management systems standard.

Order Service

You can reach our team to place your order by phone between 8.00 am and 4.30 pm:

00421 52 4667 920

Orders may also be placed 24 hours by
Fax 00421 52 4667 900

Customer Advantages:

At any time reachable for your orders

Your order will be processed immediately after receipt. If any question remains regarding your order, we will call you back.

Please contact us if you require a quotation for higher quantities, special versions or delivery times. If you can't find your desired product in our catalogue, don't hesitate to let us know - we would be glad to help you.

Please visit as well our website
www.hengstler.com

HENGSTLER worldwide

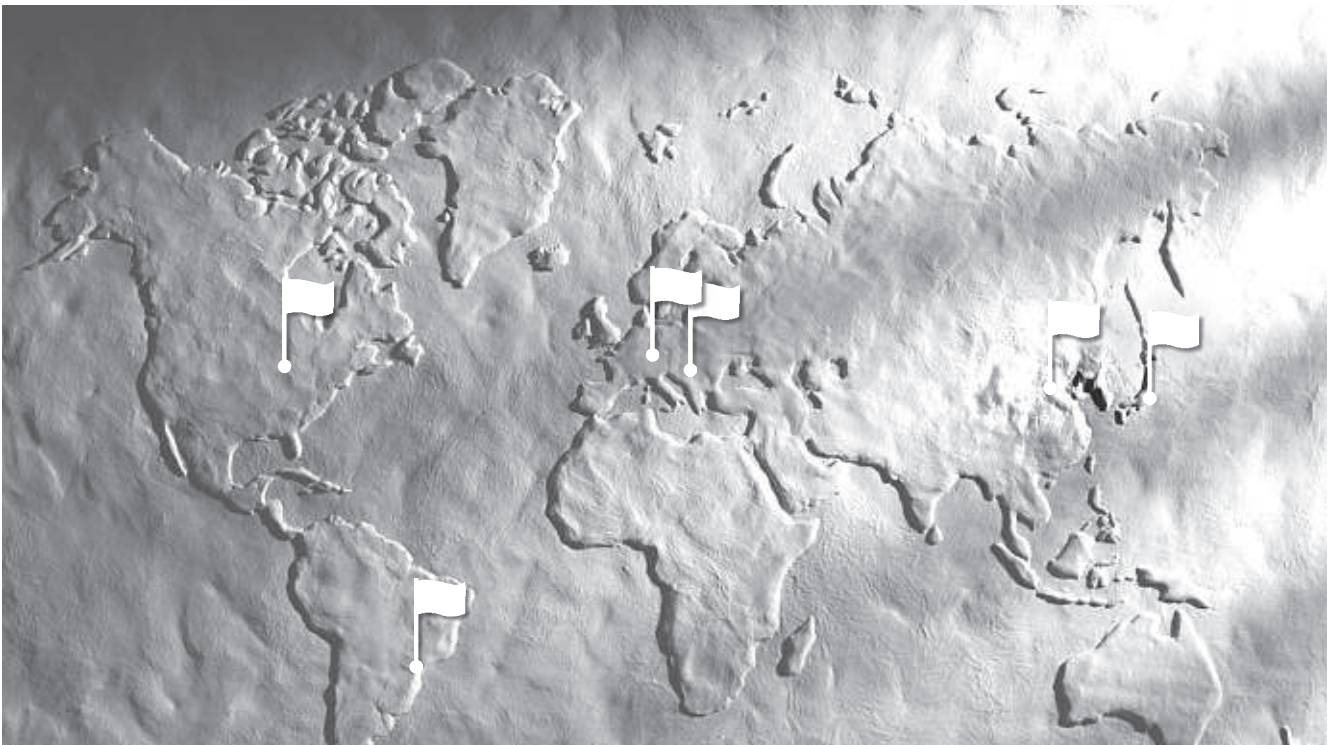
Germany – HENGSTLER GmbH
Aldingen



Slovakia – HENGSTLER sro
Kezmarok



USA – Danaher Controls
Gurnee, Illinois



Brasil – Veeder Root do Brasil
Sao Paulo



China – Danaher ICG China
Tianjin



Japan – Danaher ICG Japan Co.
Osaka

Experience and Versatility – HENGSTLER Relays



When it comes to selecting the appropriate type of relay, it's competence and flexibility that count. HENGSTLER relays offer a unique combination of competence, experience and flexibility. And this is not all: our wide product range, which has grown with our customers' requirements, forms an integral part of the company philosophy at HENGSTLER Relays.

The brand names of HENGSTLER and KACO have been a hallmark for leading-edge know-how in relay technology for decades. Their common product portfolio has been offered since 1996 and includes a variety of relays for switching currents from 1 to 100 A, relays with forcibly guided contact sets according to EN 50205, as well as a wide array of special relay versions.

Our large international circle of customers benefits from our long-standing experience. HENGSTLER relays are being used in a great variety of different applications all over the world - in Control and Medical Engineering, in Energy Management and laboratories, and in all safety-relevant tasks from A to Z.

To ensure absolutely reliable operation of our relays in your specific applications, we have made **QUALITY** our top priority at HENGSTLER. All our locations are certified to ISO 9001 and ISO 14001 and of course, the entire product range is compliant with RoHS (Regulations concerning the restriction of Hazardous Substances).

This catalog will give you an overview of our wide range of products. HENGSTLER offers relays from 1 through to 10 contacts, relays featuring various contact-set configurations and frame sizes, and the suitable contact materials for each individual load application.

If you should have any questions on how to select the best suitable relay type for your application, please contact our specialists by telephone or schedule a personal meeting.

You can reach us at our headquarters in Aldingen:

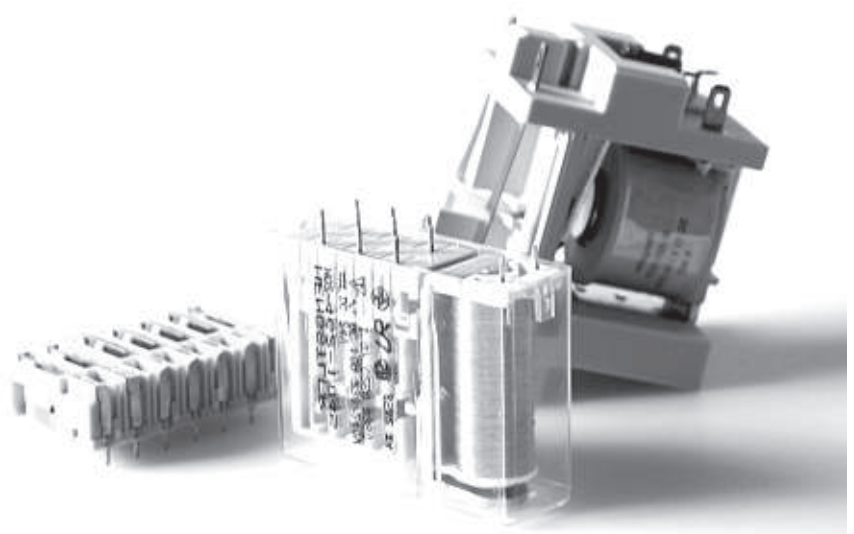
Phone: +49 (0) 7424 / 89 - 0

Freecall phone number: 0800 - 43647 85 37

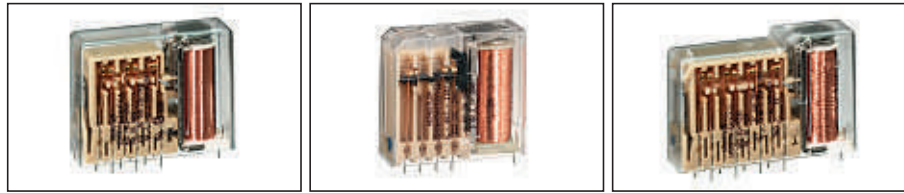
Fax: +49 (0) 7424 / 89 - 500

E-Mail: info.relay@hengstler.com

Internet: www.hengstler.com

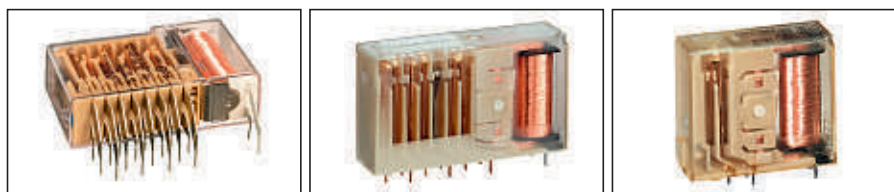


Overview of Relays



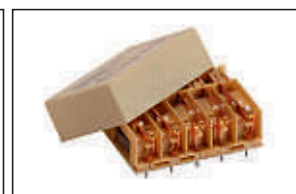
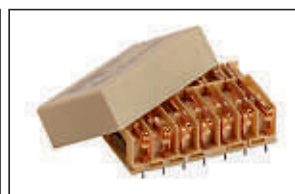
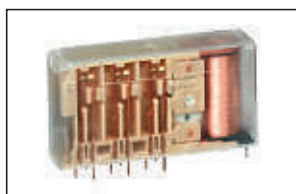
		Safety relay	Safety relay	Safety relay
		H-462	H-463	H-464
Typ				
Technical data – mechanical				
Dimensions (L x W x H)	mm	57,8 x 20,5 x 48,6 67,4 x 20,5 x 48,6	42,7 x 16 x 38,8	77,4 x 20,5 x 48,6 87,4 x 20,5 x 48,6
Contact configuration <small>Example: 110 = 1 NO, 1 NC, 0 CO</small>		220 310 330 420	220 310	260 550 350 620 370 640 440 730 530 820
Contact material		AgCdO + 0,2 µm Au AgCdO + 5 µm Au AgCdO + 10 µm Au AgSnO ₂ + 0,2 µm Au AgSnO ₂ + 5 µm Au	AgCdO + 0,2 µm Au AgCdO + 5 µm Au AgCdO + 10 µm Au AgSnO ₂ + 0,2 µm Au AgSnO ₂ + 5 µm Au	AgCdO + 0,2 µm Au AgCdO + 5 µm Au AgCdO + 10 µm Au AgSnO ₂ + 0,2 µm Au AgSnO ₂ + 5 µm Au
Operating time typical values at 1,4 x U ₁	ms	23	14	29
Releasing time typical values at 1,4 x U ₁	ms	7	4,5	7
Housing, type of enclosure		RT II	RT II, RT III	RT II
Technical data – electrical				
Switching voltage, max.	V AC	230/240	230/240	230/240
Switching current, max.	A	10	6	10
Switching capacity, max.	VA	2.000	1.200	2.000
Max. switching characteristics I _e AC-15 230/240 V I _e DC-13 24 V	A A	4 2	1,5 2	4 2
Coil operating range (U ₁ ... U ₂) <small>U₁: Min. Operating voltage, heated coil U₂: Max. voltage, thermic limited</small>	V DC V AC	2,5 ... 500 12 ... 290	2,5 ... 385	2,5 ... 500
Operating power typical	W	0,33 ... 0,4	0,4	0,48 ... 0,7
Insulation				
Insulation O=III; P=2; 120/240 V		Reinforced insulation	Reinforced insulation	Reinforced insulation
Insulation O=III; P=2; 230/400 V		Basic insulation	Basic insulation	Basic insulation
Others				
Ambient temperature	°C	-25/+80	-25/+80	-25/+80
Approvals		TÜV/cULus	TÜV/CSA	TÜV/cULus
Special features		Signal relay according to IEC 736e. Current controlled or bistable drive possible.	Bistable drive possible.	Signal relay according to IEC 736e. Current controlled or bistable drive possible.

Overview of Relays



		Safety relay	Safety relay	Safety relay
		H-466	H-468	H-469
Typ				
Technical data – mechanical				
Dimensions (L x W x H)	mm	57,7 x 66,5 x 20,5 67,4 x 66,5 x 20,5 77,4 x 66,5 x 20,5 87,4 x 66,5 x 20,5	44,6 x 12,5 x 30 50,0 x 12,5 x 30	37,6 x 12,5 x 30
Contact configuration Example: 110 = 1 NO, 1 NC, 0 CO		220 420 730 260 440 820 310 530 330 550 350 620 370 640	220 310 420 510	110
Contact material		AgCdO + 0,2 µm Au AgCdO + 5 µm Au AgCdO + 10 µm Au AgSnO ₂ + 0,2 µm Au AgSnO ₂ + 5 µm Au	AgNi + 0,2 µm Au AgNi + 2 µm Au AgSnO ₂ + 0,2 µm Au AgSnO ₂ + 2 µm Au	AgNi + 0,2 µm Au AgNi + 2 µm Au AgSnO ₂ + 0,2 µm Au AgSnO ₂ + 2 µm Au
Operating time typical values at 1,4 x U ₁	ms	23 ... 29	17	17
Releasing time typical values at 1,4 x U ₁	ms	7	8	7
Housing, type of enclosure		RT II, RT III upon request	RT II, RT III	RT II, RT III
Technical data – electrical				
Switching voltage, max.	V AC	230/240	230/240	230/240
Switching current, max.	A	10	8	8
Switching capacity, max.	VA	2.000	1.500	1.500
Max. switching characteristics le AC-15 230/240 V le DC-13 24 V	A A	4 2	4/2 (AgNi/AgSnO ₂) 2/1,5 (AgNi/AgSnO ₂)	4/2 (AgNi/AgSnO ₂) 2/2 (AgNi/AgSnO ₂)
Coil operating range (U ₁ ... U ₂) U ₁ : Min. Operating voltage, heated coil U ₂ : Max. voltage, thermic limited	V DC V AC	2,5 ... 500 12 ... 290*	4,5 ... 210	4 ... 210
Operating power typical	W	0,48 ... 0,7	0,26	0,21
Insulation				
Insulation O=III; P=2; 120/240 V		Reinforced insulation	Reinforced insulation	Reinforced insulation
Insulation O=III; P=2; 230/400 V		Basic insulation	Basic insulation/ reinforced insulation *	Basic insulation
Others				
Ambient temperature	°C	-25/+80	-25/+80	-25/+80
Approvals		TÜV/cULus	TÜV/cULus**	TÜV/cULus
Special features		Signal relay according to IEC 736e. Current controlled or bistable drive possible. *AC-drive upon request.	*Size 2 (6 contacts) **Size 2 pending	

Overview of Relays



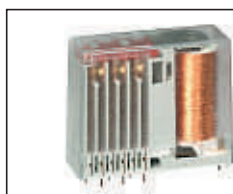
		Safety relay	Safety relay	Safety relay
		H-470	H-472	H-473
Typ				
Technical data – mechanical				
Dimensions (L x W x H)	mm	56 x 17 x 35 68 x 17 x 35	54,5 x 35,7 x 15,7	47,7 x 35,7 x 15,7
Contact configuration <small>Example: 110 = 1 NO, 1 NC, 0 CO</small>		220 310 420 510	430 520	230 320 410
Contact material		AgCdO + 0,2 µm Au AgCdO + 2 µm Au AgSnO ₂ + 0,2 µm Au AgSnO ₂ + 2 µm Au	AgNi + 0,2 µm Au AgNi + 2 µm Au AgNi + 5 µm Au AgSnO ₂ + 0,2 µm Au AgSnO ₂ + 2 µm Au	AgNi + 0,2 µm Au AgNi + 2 µm Au AgNi + 5 µm Au AgSnO ₂ + 0,2 µm Au AgSnO ₂ + 2 µm Au
Operating time typical values at 1,4 x U ₁	ms	18	21	21
Releasing time typical values at 1,4 x U ₁	ms	8	11	11
Housing, type of enclosure		RT II, RT III upon request	RT II, RT III	RT II, RT III
Technical data – electrical				
Switching voltage, max.	V AC	230/240	230/240	230/240
Switching current, max.	A	10	6	6
Switching capacity, max.	VA	2.000	1.380	1.380
Max. switching characteristics I _e AC-15 230/240 V I _e DC-13 24 V	A A	1,5 1,2	3 2,5	3 2,5
Coil operating range (U ₁ ... U ₂) <small>U₁: Min. Operating voltage, heated coil U₂: Max. voltage, thermic limited</small>	V DC V AC	4 ... 90	3 ... 195	3 ... 185
Operating power typical	W	0,44	0,33	0,35
Insulation				
Insulation O=III; P=2; 120/240 V		Reinforced insulation	Reinforced insulation	Reinforced insulation
Insulation O=III; P=2; 230/400 V		Reinforced insulation	Reinforced insulation	Reinforced insulation
Others				
Ambient temperature	°C	-25/+80	-25/+80	-25/+75
Approvals			TÜV/cULus	TÜV/cULus
Special features		Fault tolerant contact behaviour.	Signal relay according to UIC 736e. Fault tolerant contact behaviour.	Signal relay according to UIC 736e. Fault tolerant contact behaviour.

Overview of Relays



		Safety relay	Safety relay	Safety relay
		K-RAS	K-RBS	K-RDA
Typ				
Technical data – mechanical				
Dimensions (L x W x H)	mm	36 x 12,5 x 29	30 x 12,5 x 29	55 x 20,5 x 44
Contact configuration <small>Example: 110 = 1 NO, 1 NC, 0 CO</small>		220 310	110 002	330 420
Contact material		AgSnO ₂ + 0,2 μm Au AgSnO ₂ + 2 μm Au	AgSnO ₂ + 0,2 μm Au AgSnO ₂ + 2 μm Au	AgSnO ₂ + 0,2 μm Au AgSnO ₂ + 2 μm Au
Operating time typical values at 1,4 x U ₁	ms	12	12	15
Releasing time typical values at 1,4 x U ₁	ms	6	6	7
Housing, type of enclosure		RT II, RT III	RT II, RT III	RT II
Technical data – electrical				
Switching voltage, max.	V AC	230/240	230/240	230/240
Switching current, max.	A	6	6	8
Switching capacity, max.	VA	1.500	1.500	2.000
Max. switching characteristics le AC-15 230/240 V le DC-13 24 V	A A	4/1,2 (NO/NC) 2/1,2 (NO/NC)	4/1,2 (NO/NC) 2/1,2 (NO/NC)	4/1,5 (NO/NC) 1,2/1,2 (NO/NC)
Coil operating range (U ₁ ... U ₂) <small>U₁: Min. operating voltage, heated coil U₂: Max. voltage, thermic limited</small>	V DC V AC	2,5 ... 180	2,5 ... 195	4,5 ... 330
Operating power typical	W	0,25	0,25	0,37
Insulation				
Insulation O=III; P=2; 120/240 V		Reinforced insulation	Reinforced insulation	Reinforced insulation
Insulation O=III; P=2; 230/400 V		Basic insulation	Basic insulation	Basic insulation
Others				
Ambient temperature	°C	-25/+70	-10/+70	-15/+70
Approvals		TÜV/cULus	TÜV/cULus	TÜV/cULus
Special features		Different connection grids available.	Different connection grids available.	

Overview of Relays



		Safety relay	Safety relay	Safety relay
		K-RDB	K-RDM	K-ROS
Typ				
Technical data – mechanical				
Dimensions (L x W x H)	mm	55 x 20,5 x 44	70 x 20,5 x 44	42 x 16 x 32,2
Contact configuration <small>Example: 110 = 1 NO, 1 NC, 0 CO</small>		330 420	260 620 440 730 460 820 530	220 310
Contact material		AgSnO ₂ + 0,2 µm Au AgSnO ₂ + 2 µm Au	AgSnO ₂ + 0,2 µm Au AgSnO ₂ + 2 µm Au	AgCdO AgNi + 0,2 µm Au* AgNi + 10 µm Au* AgSnO ₂ + 0,2 µm Au AgSnO ₂ + 2 µm Au
Operating time typical values at 1,4 x U ₁	ms	15	15	12
Releasing time typical values at 1,4 x U ₁	ms	7	7	8
Housing, type of enclosure		RT II	RT II	RT II
Technical data – electrical				
Switching voltage, max.	V AC	230/240	230/240	230/240
Switching current, max.	A	8	8	8
Switching capacity, max.	VA	2.000	2.000	1.840
Max. switching characteristics I _e AC-15 230/240 V I _e DC-13 24 V	A A	4/1,5 (NO/NC) 1,2/1,2 (NO/NC)	4/1,5 (NO/NC) 1,2/1,2 (NO/NC)	4 1,2
Coil operating range (U ₁ ... U ₂) <small>U₁: Min. operating voltage, heated coil U₂: Max. voltage, thermic limited</small>	V DC V AC	4,5 ... 330	4 ... 380	3 ... 380
Operating power typical	W	0,37	0,6	0,4
Insulation				
Insulation O=III; P=2; 120/240 V		Reinforced insulation	Reinforced insulation	Reinforced insulation
Insulation O=III; P=2; 230/400 V		Basic insulation	Basic insulation	Basic insulation
Others				
Ambient temperature	°C	-15/+70	-15/+70	-15/+70
Approvals		TÜV/cULus	TÜV/cULus	TÜV/cULus
Special features				
				*For new projects upon request.

Overview of Relays



		Card relay	High voltage relay	High voltage relay
		H-045	H-507	H-509
Typ				
Technical data – mechanical				
Dimensions (L x W x H)	mm	28,7 x 30,7 x 11 28,7 x 38,2 x 11	76,5 x 48,7 x 62,5	72 x 42 x 43 (52)*
Contact configuration <small>Example: 110 = 1 NO, 1 NC, 0 CO</small>		001 002 004	002	100 010
Contact material		AgCdO AgCdO + 10 µm Au	AgCdO AgCdO + 10 µm Au AgCu + W	AgCdO W
Operating time typical values at 1,4 x U ₁	ms	15	40	40
Releasing time typical values at 1,4 x U ₁	ms	8	20	10
Housing, type of enclosure		RT II, RT III	RT 0	RT 0
Technical data – electrical				
Switching voltage, max.	V AC	230/240	5.000	5.000
Switching current, max.	A	3/5	10	10
Switching capacity, max.	VA	100/750	5.000	5.000
Max. switching characteristics le AC-15 230/240 V le DC-13 24 V	A A			
Coil operating range (U ₁ ... U ₂) <small>U₁: Min. Operating voltage, heated coil U₂: Max. voltage, thermic limited</small>	V DC V AC	3 ... 200	4 ... 260	10 ... 320
Operating power typical	W	0,14 ... 0,33	1,5	1,1
Insulation				
Insulation O=III; P=2; 120/240 V		See datasheet	See datasheet	See datasheet
Insulation O=III; P=2; 230/400 V		See datasheet	See datasheet	See datasheet
Others				
Ambient temperature	°C	-25/+70	-25/+40	-25/+70
Approvals		cULus		
Special features		Bistable drive possible.		*Dimension for NC-contact version.

Overview of Relays



		Card relay	Card relay	Bistable relay
		H-532	H-550	K-RH
Typ				
Technical data – mechanical				
Dimensions (L x W x H)	mm	30,1 x 16,5 x 39 37,7 x 16,5 x 39 45,3 x 16,5 x 39	28,6 x 13,3 x 25,9	66,7 x 49 x 24
Contact configuration <small>Example: 110 = 1 NO, 1 NC, 0 CO</small>		002 004 006	010 100 001	100
Contact material		AgCdO AgCu3 + 0,2 µm Au AgCdO + 10 µm Au	AgCdO AgCdO + 5 µm Au AgSnO ₂ AgCdO + W	AgSnO ₂
Operating time typical values at 1,4 x U ₁	ms	15	13	20
Releasing time typical values at 1,4 x U ₁	ms	8	4	20
Housing, type of enclosure		RT II, RT III	RT II, RT III	RT II
Technical data – electrical				
Switching voltage, max.	V AC	230/240	230/240	230/240
Switching current, max.	A	6/8	10/12/16	100
Switching capacity, max.	VA	1.250/2.000	2.500/4.000	24.000
Max. switching characteristics I _e AC-15 230/240 V I _e DC-13 24 V	A A			
Coil operating range (U ₁ ... U ₂) <small>U₁: Min. operating voltage, heated coil U₂: Max. voltage, thermic limited</small>	V DC V AC	3 ... 195 5 ... 240	3 ... 165 5 ... 240	4 ... 110
Operating power typical	W	0,13 ... 0,45	0,23	1,3/2,6*
Insulation				
Insulation O=III; P=2; 120/240 V		See datasheet	Reinforced insulation	Reinforced insulation
Insulation O=III; P=2; 230/400 V		See datasheet	Reinforced insulation	Reinforced insulation
Others				
Ambient temperature	°C	-25/+70	-25/+70 (-40/+125)	-25/+70
Approvals		cULus	cULus	
Special features		Bistable drive possible.	Bistable drive possible.	*1 coil / 2 coils Special version „Solar“ with 1,5 mm contact opening.

Overview of Relays



		Bistable relay	Bistable relay	Bistable relay
Typ		K-RP	K-RPH	K-RY
Technical data – mechanical				
Dimensions (L x W x H)	mm	37,7 x 13 x 28	55,5 x 15 x 29,5	50,2 x 31,2 x 28,7
Contact configuration <small>Example: 110 = 1 NO, 1 NC, 0 CO</small>		001 002	010 100 001	020 110 200*
Contact material		AgCdO	AgCdO	AgCdO AgCdO + 10 µm Au
Operating time typical values at 1,4 x U ₁	ms	10	10	15
Releasing time typical values at 1,4 x U ₁	ms	10	10	3
Housing, type of enclosure		RT II	RT II	RT II
Technical data – electrical				
Switching voltage, max.	V AC	230/240	230/240	230/240
Switching current, max.	A	20/10*	25	10/16*
Switching capacity, max.	VA	5.290/2.650*	6.615	2.300/3.680
Max. switching characteristics le AC-15 230/240 V le DC-13 24 V	A A			
Coil operating range (U ₁ ... U ₂) <small>U₁: Min. Operating voltage, heated coil U₂: Max. voltage, thermic limited</small>	V DC V AC	3 ... 110	3 ... 80	3 ... 145 5 ... 250
Operating power typical	W	0,35/0,7**	0,35/0,7**	0,8
Insulation				
Insulation O=III; P=2; 120/240 V		Reinforced insulation	Reinforced insulation	Reinforced insulation
Insulation O=III; P=2; 230/400 V		Reinforced insulation	Reinforced insulation	Basic insulation
Others				
Ambient temperature	°C	-25/+70	-25/+70	-25/+55
Approvals				cULus
Special features		*1 CO / 2 CO **1 coil / 2 coils	**1 coil / 2 coils	*16 A only for version with 2 NO.

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TÜV-zertifiziert nach DIN EN ISO 9001
Reg. Nr. 1540-01



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Relay Overview 07/2008.