Pure flexibility for superior relay solutions.

Independent, efficient, successful:

The leading supplier of latching relays.

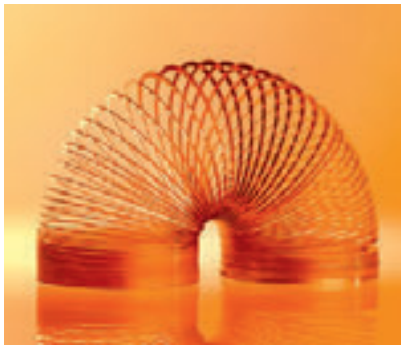
GRUNER

Schalten und Bewegen

When the market leader comes into play with agility …

Focus on latching relays: innovation, not imitation.

The Slinky was invented in 1945 by Richard James. It conveys the full fascination of physics – and simultaneously symbolizes pure flexibility. This symbolism is reflected in the core values of Gruner AG. In the area of latching relays for smart metering, the company is the undisputed technology leader and world market leader. Assuming one switching operation per day in load control and one every week in prepayment applications, there are more than 1000 Gruner relays switching every second – worldwide.



About current sensoring

Using a latching relay in energy management also requires a current Sensor. Today four major different current sensing technologies are available: current transformer, hall sensor based, Rogowski coil, shunt resistor.

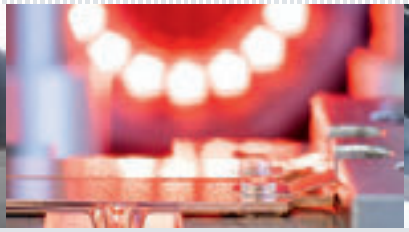
Gruner relays are available with an integrated shunt resistor. A strip of high precision shunt material is electron beam welded between two copper strips. The terminals of the relays could also be customized to integrate other current sensoring technologies.

Lamp load

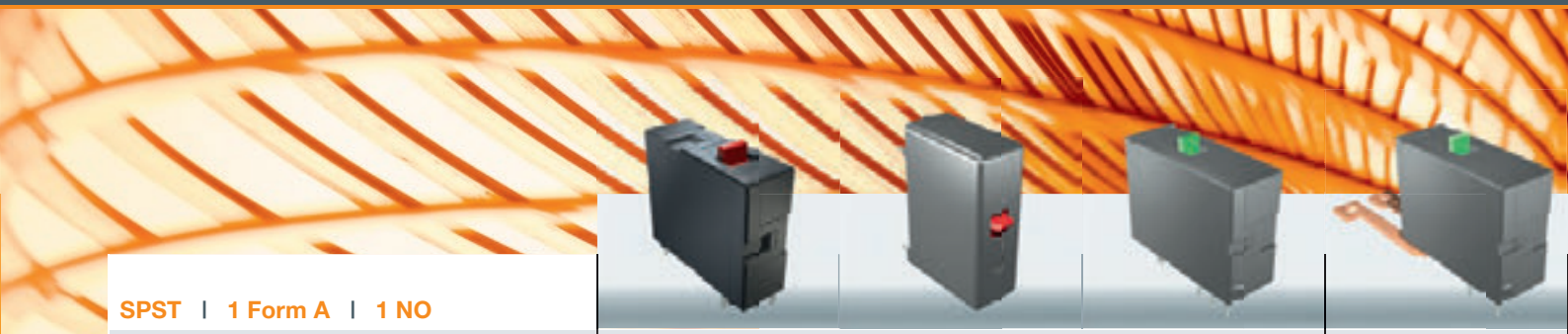
Another application for latching relays is lamp load switching. Because of high inrush current the 707L and 704L relays were adjusted to meet this requirement. They switch lamp load up to 4800 W or 200 µF parallel compensation. A strong connection between the H-armature and contact spring allows the relay to break micro welded contacts caused by the high inrush currents.

All Gruner relays meet the IEC 62053-21 and IEC 62054-11 requirements.

In addition relay types 721, 722, 723, 725, 733, 736 and 741 meet Utilisation Category UC3 in accordance with the new IEC standard 62055-31.



Product range: polarized latching relays.

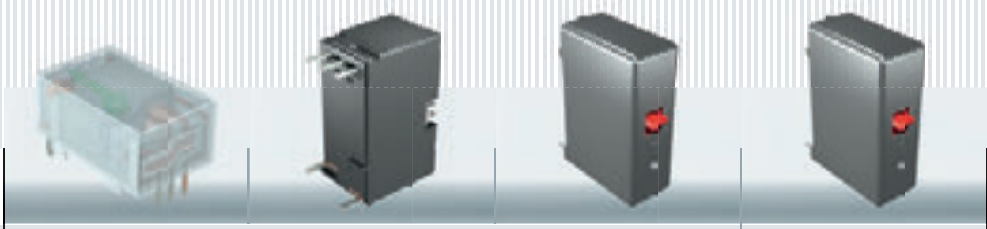


SPST | 1 Form A | 1 NO

Current range	**8 – 20 Ampere**			**25 – 80 Ampere**
Type	Type 714	Type 707L	Type 704L	Type 704
Max. switching current	10 A	10 A / 140 µF	20 A / 200 µF	60 A/250 VAC 60 A/12 VDC
Rated coil power	750 mW (20 ms)	1.5 W (20 ms)	3 W (20 ms)	3 W (20 ms)
Dimensions	28.5 x 10 x 24 mm	37.4 x 13.1 x 25 mm	39 x 15 x 29.3 mm	39 x 15 x 29.3 mm
Weight	12 g	21 g	36 g	36 g
Parallel contacts				
Integrated shunt				•
Lamp load version		•	•	

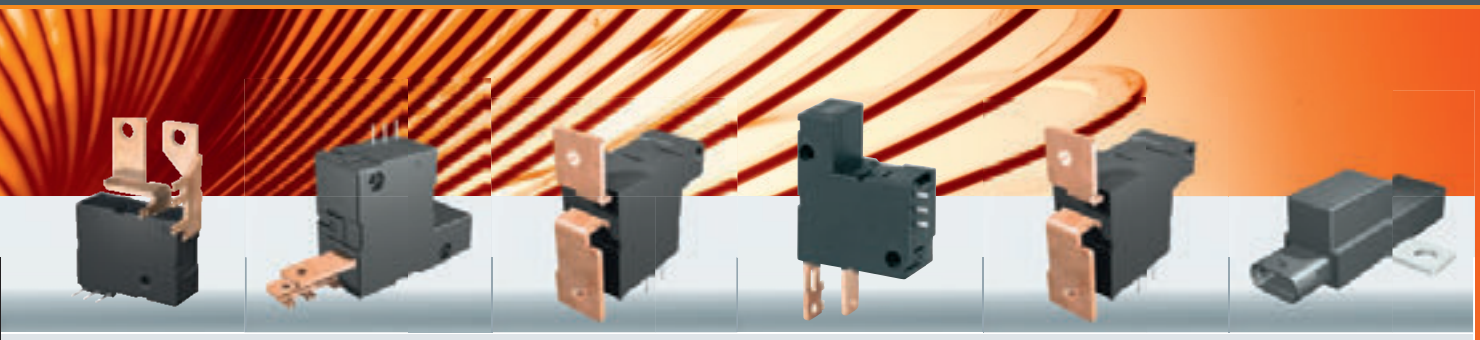
DPST | 2 Form A | 2 NO

Current range	**25 – 80 Ampere**	
Type	Type 742	Type 744
Max. switching current	80 A / 250 VAC	80 A / 250 VAC
Rated coil power	8 W (30 ms)	8 W (30 ms)
Dimensions	48 x 23 x 66 mm	64 x 22 x 45 mm
Weight	125 g	150 g
Parallel contacts		
Integrated shunt	•	•
Terminal grid		

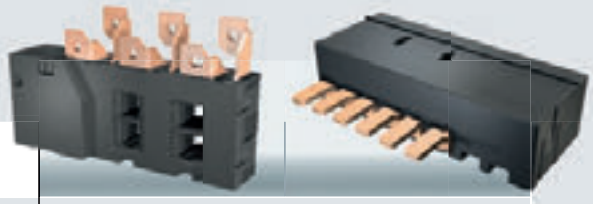


SPDT | 1 Form C | 1 CO

Current range	**8 – 20 Ampere**			
Type	Type 710	Type 715	Type 706	Type 707
Max. switching current	8 A / 250 VAC	16 A / 250 VAC	16 A / 250 VAC	20 A / 250 VAC
Rated coil power	300 mW (20 ms)	500 mW (20 ms)	1.5 W (20 ms)	1.5 W (20 ms)
Dimensions	22 x 14 x 12 mm	28.5 x 12.5 x 18 mm	37.4 x 13.1 x 25 mm	37.4 x 13.1 x 25 mm
Weight	5 g	12 g	21 g	21 g



100 – 250 Ampere					
Type 716	Type 721	Type 725	Type 722	Type 723	Type 750
80 A / 250 VAC	100 A / 250 VAC	100 A / 250 VAC	120 A / 250 VAC	120 A / 250 VAC	250 A / 12 VDC
4.5 W (20 ms)	4.5 W (20 ms)	5.5 W (20 ms)	6 W (20 ms)	5.5 W (20 ms)	12 W (20 ms)
30 x 16 x 40 mm	52 x 22 x 43 mm	47 x 22 x 38 mm	52 x 22 x 43 mm	47 x 22 x 38 mm	75.5 x 25 x 30 mm
45 g	75 g	70 g	90 g	70 g	85 g
			•	•	•
•	•	•	•	•	



3PST | 3 Form A | 3 NO

100 – 250 Ampere	Current range	100 – 250 Ampere	
Type 741	Type	Type 733	Type 736
100 A / 250 VAC	Max. switching current	100 A / 250 VAC	100 A / 250 VAC
8 W (30 ms)	Rated coil power	16 W (30 ms)	16 W (30 ms)
64 x 22 x 45 mm	Dimensions	132 x 77 x 30 mm	128 x 52 x 36 mm
150 g	Weight	300 g	360 g
•	Parallel contacts	•	•
•	Integrated shunt		•
	Terminal grid		

DPDT | 2 Form C | 2 CO

25 – 80 Ampere	Current range	8 – 20 Ampere
Type 703	Type	Type 709
25 A / 250 VAC	Max. switching current	10 A / 250 VAC
2 W (20 ms)	Rated coil power	1.5 W (20 ms)
39 x 15 x 29.3 mm	Dimensions	37.4 x 13.1 x 25 mm
36 g	Weight	21 g

Convincing advantages.

Contact design / Parallel contacts

Gruner relays meet the required contact gap with one contact only. The impedance and heat loss is much lower compared to designs based on series contacts. With two contacts switched in series, the power consumption and heat generated by the contact current are doubled.

At higher load currents or in applications, where self-heating is problematic, Gruner offers the 722, 723, 733, 736, 740 and 741 type relays with parallel contacts.

Rotary H-Armature driving system

The unique Rotary H-Armature driving system creates no acceleration forces during operation. Additionally, it is very robust against shock and vibration applied externally.

Small dimensions and lightweight

The dimensions and weights of Gruner latching relays are optimised to meet the performance requirements of each type.

Well-proven and optimised design

Gruner latching relays are constantly being improved and optimized. Data from the production process, testing and quality assurance at Gruner, feedback from customers and observations in the field are analyzed and taken into account.

At a glance:

- Optimised contact design for high overload and short circuit current
- Rotary H-Armature driving system for immunity against tamper, shock and vibration
- Small dimensions and lightweight
- Well proven and optimised design for high quality and reliability
- Excellent history with millions of latching relays in the field for many years

The perfect fit ...

Relays, solenoids and actuators from Gruner.

Gruner stands for flexibility, innovation and openness to electronic applications in the energy management, building management, drive technology and automotive sectors. As well as latching relays, the product range also includes solenoids and actuators. With locations in Germany, Tunisia, Serbia and India, the company has a worldwide presence. Find out more about the comprehensive Gruner portfolio online at www.gruner.de

Innovation, not imitation.

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