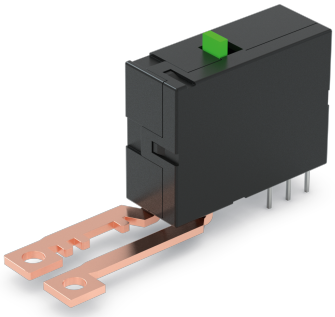
GRUNER
SWITCH TO INNOVATIONS

Technical data sheet

Relay 704



Description

Polarized latching relay, with position display and switch for manual operation

Using the H-armature principle the polarised latching relays are noted for their high resistance to shocks and vibrations. They are always in a defined switching-position and therefore there is no loss of information in case of power failure. The advantage of polarised latching relays is the pulse driven operation of some milliseconds, coil heating can be neglected. Relay can also be set by manual operation.

The relays are designed and manufactured in accordance to international Standards of IEC 61810 part 1 as well as they meet the requirements for Load Control Switches as of IEC 62052 part 31.

Technical data

Coil data	Rated voltage	6 – 48 VDC
	Rated power	3.0 W
	Operating power to set	2.0 W
	Pulse to set	20 ms
	Action time	< 15 ms
Contact data	Max. contact arrangement	
	Contact material	$AgSnO_2$
	Max. switching power	10.000 VA / 15.000 VA
	Max. switching voltage	440 VAC
	Max. switching current	40 A / 60 A
	Mechanical life	10^6
Insulation	Creepage and clearance distance coil - contact	8.0 mm
	Test voltage coil - contact	4000 V eff.
	Test voltage contact- contact	V eff.
	Test voltage open contact	1000 V eff.
	Dielectric strength coil - contact	12 kV / 1,2 / 50 µs

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Technical data

General data	Ambient temperature	-40 … +70 °C
	Weight	36 g
	Conform to	VDE, UL, CSA, SEV, SEMKO

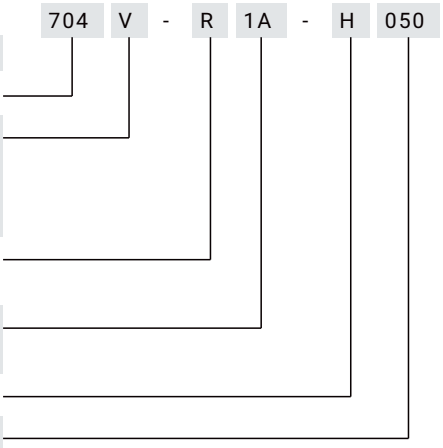
Standard windings

Standard winding No. Double winding	**Nominal coil voltage** (VDC)	**Operating voltageof the coil** U1 - U2 (VDC)	**Coil resistance** (Ohm)	**Tolerance** (± %)
011	6	4,8 - 7,8	2 x 11	10
050	12	9,6 - 15,6	2 x 50	10
180	24	19,2 - 31,2	2 x 180	10
800	48	38,4 - 62,4	2 x 800	15

Contact position		
Position	(a)	(b)
Terminal-grid	H 1(-)/5(+) 8shy; B 3(-)/4(+)	2(-)/5(+) 8shy; 2(-)/4(+)

The relay can also be used with a single winding (lower operating power to set) if the middle pin of coil is not used.

Identification



Identifcation code	
Type	704
Options	M = see dim. drawing Q = see dim. drawing V = see dim. drawing VR = see dim. drawing
Contact material	R = $AgSnO_2$
Contact arrangement	1A = 1 normally open
Terminal-grid	B / H
Winding No.	see coil table

Advice for soldering:

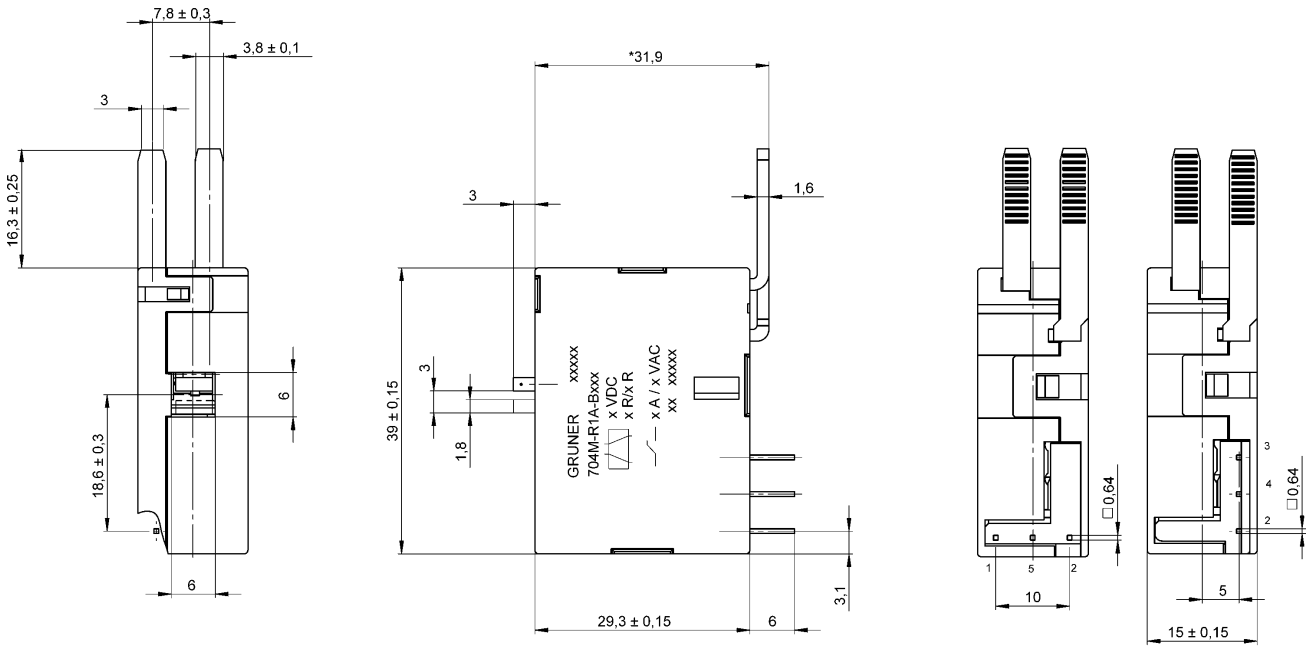
The relay is dust-protected. Take care to avoid that flux medium and lead-tin resp. their evaporations enter into the relay, i.e. the printed circuit board must not be flooded.

Extended storage could impact solderabilty due to increased oxidation on the terminals.

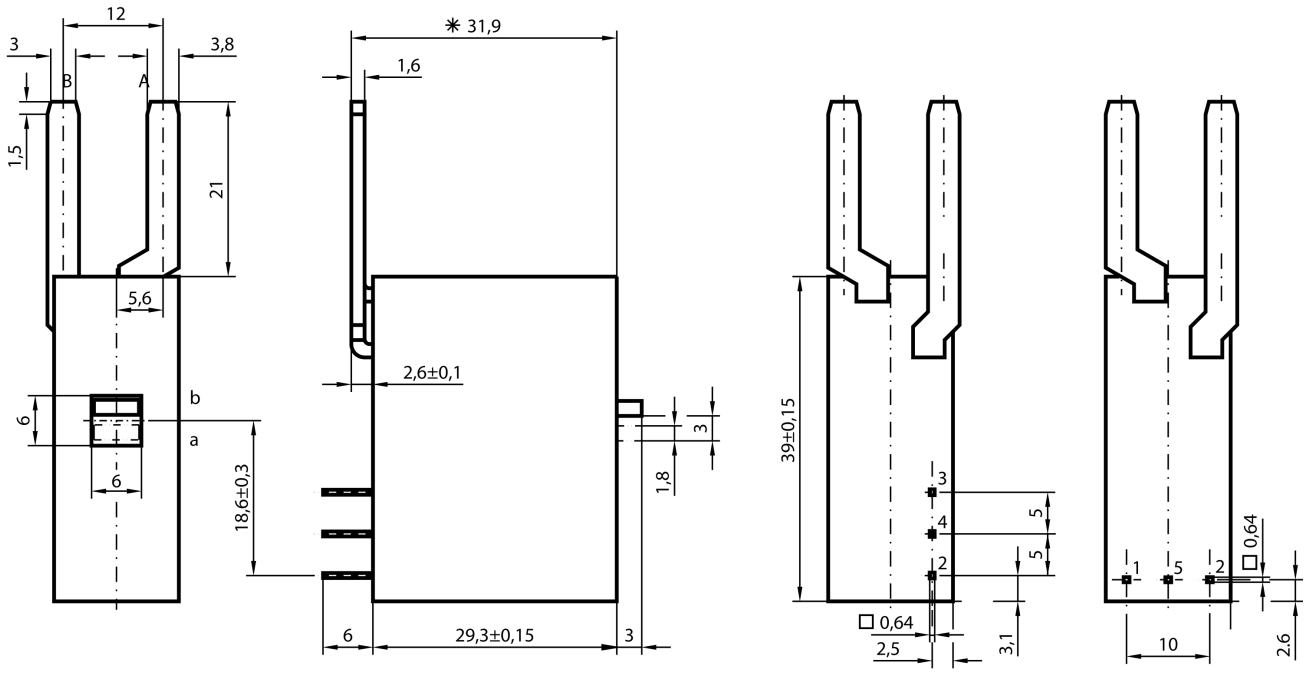
Shunt:

The Shunt is used to measure the energy consumed and, as it is integrated in the relay, can be utilised for load shedding in “Energy Management”. Two connectors are located on the terminal close to the shunt and only carry the current sensor signal. A third connector is the reference signal for the electronics and is located on the supply side of the terminal to avoid RF sensitivity.

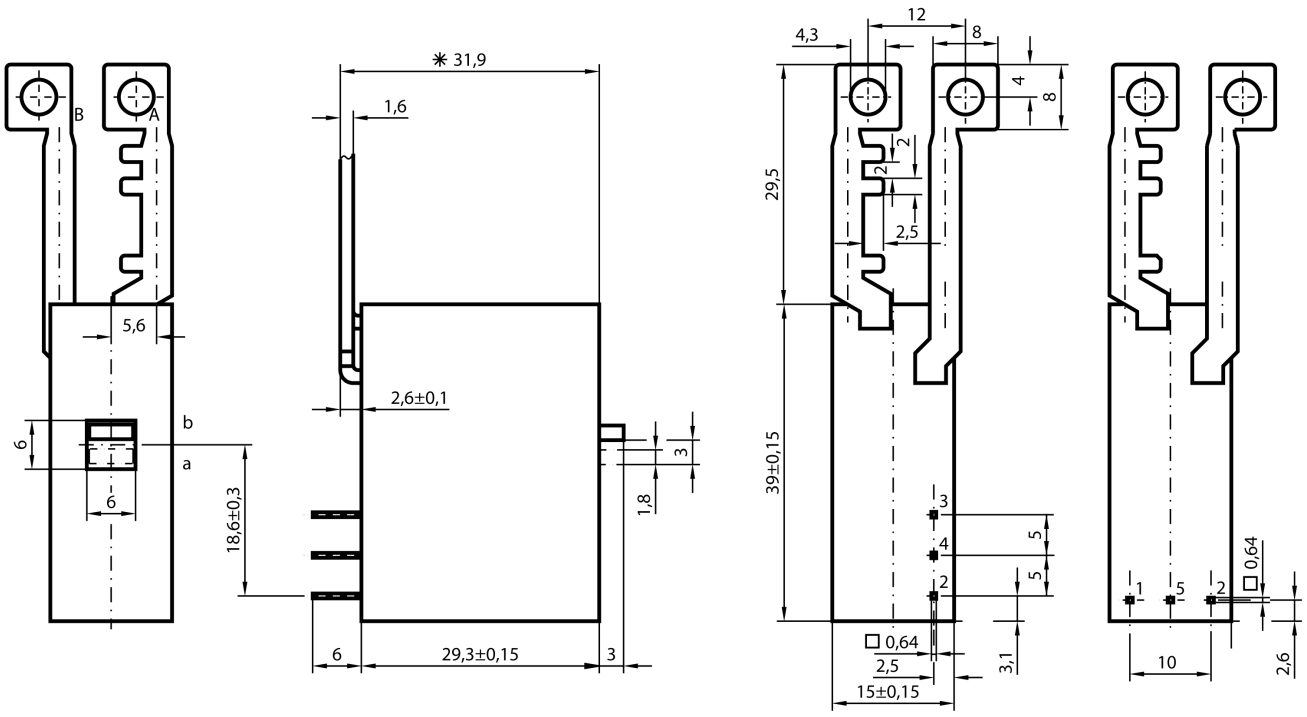
Technical drawing



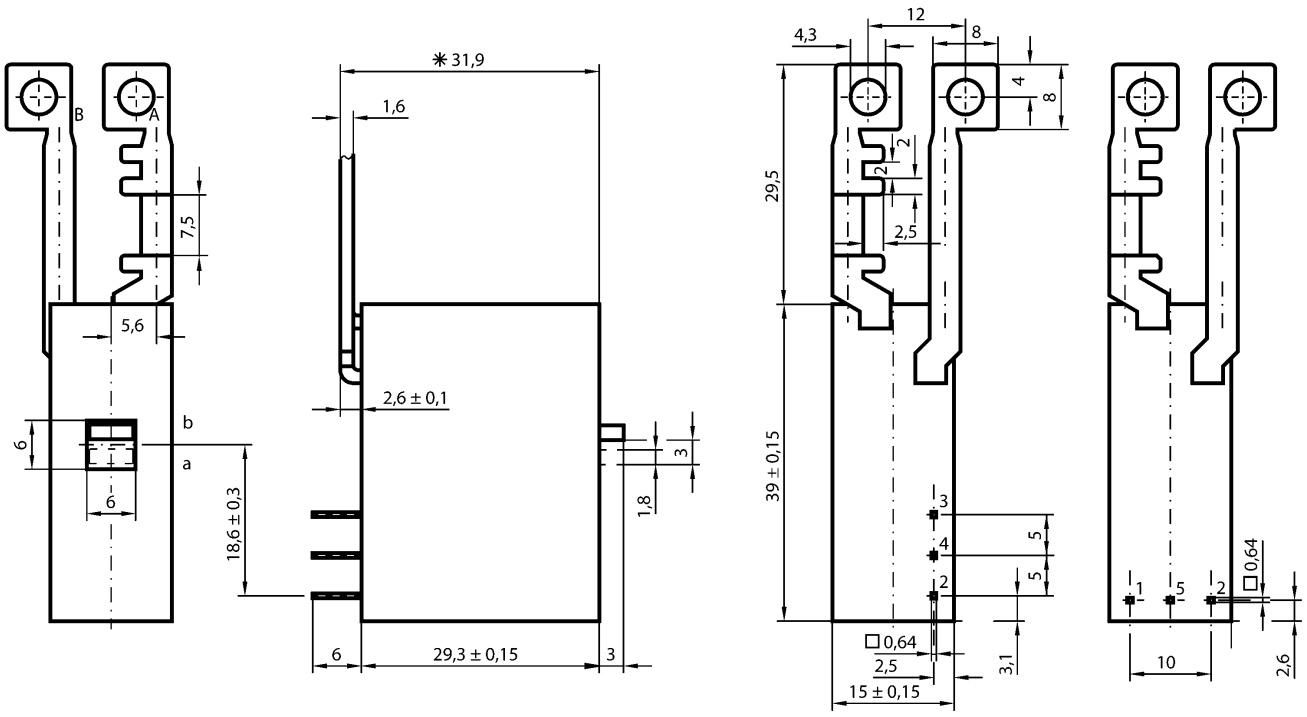
704 M



704 Q



704 V



704 VR