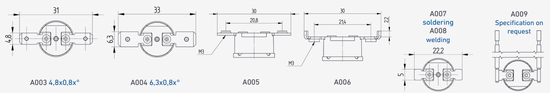
ELECTRICAL CONNECTION

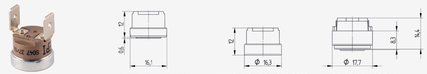
Flat-cable plug DIN 46244 | **Screw Connection** | **Soldering- welding- & lead wire terminal**



A003 4,8x0,8x* A004 6,3x0,8x* A005 A006

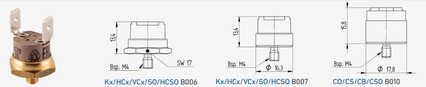
LOCK CAPS AND FASTENING CONNECTION

Lock caps - standard Material: Al or CrNi



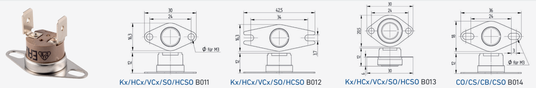
Kx/HCx/VCx/SO/HCSO B001 Kx/HCx/VCx/SO/HCSO B002 CO/CS/CB/CSO B004

Lock caps with screw fitting Material: Brass, standard threads m4x6, other sizes available



Kx/HCx/VCx/SO/HCSO B006 Kx/HCx/VCx/SO/HCSO B007 CO/CS/CB/CSO B010

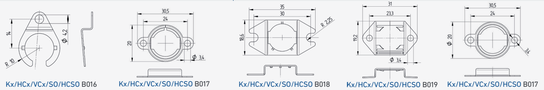
Lock caps with fastening flange Cap with fixed flange, (Material CrNi) / Air flange cap (Material Al or CrNi)



Kx/HCx/VCx/SO/HCSO B011 Kx/HCx/VCx/SO/HCSO B012 Kx/HCx/VCx/SO/HCSO B013 CO/CS/CB/CSO B014

LOOSE FLANGES

For all elecrical terminals | **For 90° beut off terminals only**



Kx/HCx/VCx/SO/HCSO B016 Kx/HCx/VCx/SO/HCSO B017 Kx/HCx/VCx/SO/HCSO B018 Kx/HCx/VCx/SO/HCSO B019 Kx/HCx/VCx/SO/HCSO B017

SPECIAL DESIGNS

Thermostats / temperature limiters

Bimetal Snap Disk Ø 12,7mm and 17mm

Switching temperature range -25°C up to 360°C, Tolerances and hysteresis of switching temperatures upon request

Special designs with diverse electrical and fastening connections, sealed sleeves, wire connections, trip-free mechanism as well as sensors with NTC- / PTC-starters are available upon request.

A click above

Eaw is a developer, manufacturer and distributor of innovative and reliable relay technology. Our range can be found in the automotive, energy-supply and mining industries, rail networks, household appliances, heating and air conditioning technology, and much, much more.

So when it comes to developing customized solutions both for and with our customers, not to mention setting the bar for standards, we have years of experience behind us. All of the premium quality you'd expect from anything a "Made in Germany" label.

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15711 Königs Wusterhausen
Deutschland

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Fax +49(0)3375 2131-200
info@eaw-relaistechnik.de
www.eaw-relaistechnik.de

Thermal Switch. Product Overview They're every-where you look.

eaw - your partner worldwide

All thermostats can be supplied with following operating principals:

- Automatic Operation
- Manual Reset
- Electric self-holding contacts (for reset, interrupt from the line)
- Single Operation Devices (SOD)
- Automatic Operation incl. time-delayed release by internal heating resistor

For solutions to your development and manufacturing tasks

EAW Relaistechnik GmbH has been successfully working in the market segment of temperature switches with bimetallic snap disks for more than 40 years. As a result, our employees have a wealth of experience. This is a guarantee that with ½ „thermostats from our diverse product range you will always find the optimal solution for temperature monitoring and control.

Individual designs according to your specifications

For the electrical connection or for the installation of ½ „thermostats, we have a comprehensive range of parts in our program. If required, we also produce special application-related solutions according to your documentation or requirements. The design of the switch contacts can be varied for the smallest switching loads from 10mA / 10mV up to switching loads of 16A / 400VAC.

Technical Paramters, Application and Tests

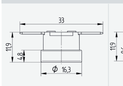
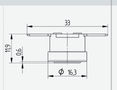
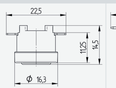
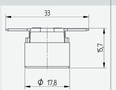
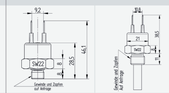
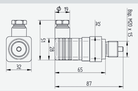
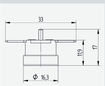
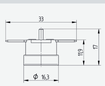
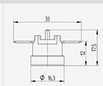
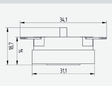
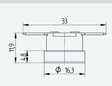
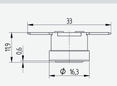
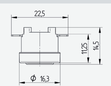
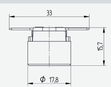
The technical parameters contained in the data sheet apply in conjunction with the test methods and equipment customary in our company and refer to the delivery condition of the products. In applications and use of other test methods differences to the measurement result are possible. The adaptation of our thermoswitches and proof of suitability for the intended use are to be carried out by the customer. A guarantee for mismatches and a use of the products outside the specified technical parameters is excluded. In addition, the guarantee for the installation of our products, which have been stored over a period of more than one year is not adopted (this period may be lower in aggressive environments). Changes in the interest of technical progress we reserve the right.

If you need samples, please use our inquiry form for thermoswitches on our website: **www.eaw-relaistechnik.de**

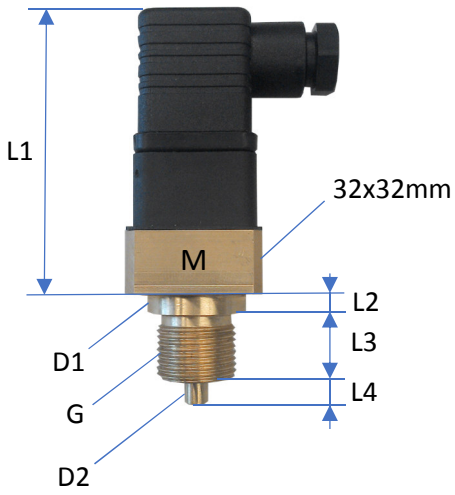
CE- and RoHS-Identification: The products of EAW Relaistechnik GmbH and labeled with CE- and RoHS-labels on their devices, packaging or in the documentation.

Quality system: Quality management according to DIN EN ISO 9001 **Documented proof:** certificate **Standard quality:** production-related routine inspection, voltage test, switching temperature test (limit value control)

THERMOSWITCHES | MANUAL RESET THERMAL CUT-OUTS | ELECTRIC SELF-HOLD TEMPERATURE LIMITERS

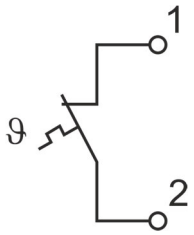
DESIGN	TEMP. CONTROLLER		TEMP. CONTROLLER		TEMPERATURE CONTROLLER	TEMPERATURE CONTROLLER		PROTECTION TEMPERATURE LIMITER			PROTECTION TEMPERATURE LIMITER		SELF-HOLDER		SELF-HOLDER	
Type & Housing material	KO NC Contact KS NO Contact Plastic	HCO NC Contact HCS NO Contact Ceramic	VCO NC Contact VCS NO Contact Ceramic	CO NC Contact CS NO Contact Ceramic	CW Changeover Contact Ceramic	THO NC Contact THS NO Contact Plastic	TGO NC Contact TGS NO Contact Plastic	KB(F) Plastic	HCB Ceramic	VCB Ceramic	CB Ceramic	C2B Ceramic	SO Plastic	HCSO Ceramic	VCSO Ceramic	CSO Ceramic
Function	Open respectively close an electrical contact when the temperature rises or falls				Changed an electrical contact when the temperature rises or falls	Open respectively close an electrical contact when the temperature rises or falls		Open an electrical contact when the temperature rises			Open an electrical contact when the temperature rises		Open an electrical contact when the temperature rises		Open an electrical contact when the temperature rises	
Reset Type	Automatically				Automatically			Manually					Electrical			
Rated Voltage (DC on Request)	250VAC		250VAC	400VAC	250VAC	250VAC		250VAC			400VAC	400VAC	250VAC		250VAC	
Rated current resistive/ inductive (DC on Request)	16A / 6A	16A / 6A (≤ 200°C) 4A / 1,5A (>200°C)	16A / 6A (≤ 200°C) 4A / 1,5A (>200°C)	16A / 6A (≤ 200°C) 4A / 1,5A (>200°C)	10A / 1,6A	8A / 1,6A	16A / 6A	16A / 6A	16A / 6A (≤ 200°C) 4A / 1,5A (>200°C)	16A / 6A (≤ 200°C) 4A / 1,5A (>200°C)	16A / 6A (≤ 200°C) 4A / 1,5A (>200°C)	2 x 16A 2 x 25A auf Anfrage	16A / 6A		16A / 6A	
Switching Cycles	100.000 (10A) 10.000 (16A)	100.000 (10A) 10.000 (16A ≤ 200°C / 4A >200°C)	100.000 (10A) 10.000 (16A ≤ 200°C / 4A >200°C)	10.000 (10A ≤ 200°C / 4A >200°C) 1.000 (16A)	50.000	100.000 (8A)	100.000 (10A) 10.000 (16A)	3.000 (10A) 1.000 (16A)	1.000 (16A, ≤ 200°C) 500 (4A, >200°C)	1.000 (16A, ≤ 200°C) 500 (4A, >200°C)	10.000 (10A, ≤ 200°C) 1.000 (16A, ≤ 200°C / 4A >200°C)	1.000	3.000 (10A) 1.000 (16A)		3.000 (10A) 1.000 (16A)	
Isolation Base/Disconnection $V_{eff.}$ 50Hz	2kV / 0,5kV	2kV / 0,5kV	2kV / 0,5kV	2kV / 0,88kV	2kV / 0,5kV	2kV / 0,5kV		2kV / 0,5kV	2kV / 0,5kV	2kV / 0,5kV	2kV / 0,88kV	2kV / 0,88kV	2kV / 0,5kV		2kV / 0,5kV	
Switching Temperature	-25 bis 200°C	-25 bis 360°C (NC Contact) -25 bis 340°C (NO Contact)	-25 bis 360°C (NC Contact) -25 bis 340°C (NO Contact)	-25 bis 360°C (NC Contact) -25 bis 340°C (NO Contact)	-25 bis 200°C	-25 bis 120°C		-25 bis 200°C -25 bis 120°C (with Free Mechanism)	-25 bis 360°C	-25 bis 360°C	-25 bis 360°C	-25 bis 200°C	-25 bis 200°C		-25 bis 200°C	
tolerance (other Values on Request)	±3K, ±5K, ±8K	±3K, ±5K, ±8K (≤ 200°C) ±10K, ±15K (> 200°C)	±3K, ±5K, ±8K (≤ 200°C) ±10K, ±15K (> 200°C)	±3K, ±5K, ±8K (≤ 200°C) ±10K, ±15K (> 200°C)	±3K, ±5K, ±8K	±3K, ±5K, ±8K		±3K, ±5K, ±8K	±3K, ±5K, ±8K (≤ 200°C) ±10K, ±15K (> 200°C)	±3K, ±5K, ±8K (≤ 200°C) ±10K, ±15K (> 200°C)	±3K, ±5K, ±8K (≤ 200°C) ±10K, ±15K (> 200°C)	±3K, ±5K, ±8K	±3K, ±5K, ±8K		±3K, ±5K, ±8K	
Switching temperature diffe-rence standard / minimum	15K / 5K	15K / 5K (≤ 200°C) 50K / 30K (≤ 300°C) 75K / 60K (>300°C)	15K / 5K (≤ 200°C) 50K / 30K (≤ 300°C) 75K / 60K (>300°C)	15K / 5K (≤ 200°C) 50K / 30K (≤ 300°C) 75K / 60K (>300°C)	15K / 5K	15K / 5K		manual Reset			manual Reset		Reset by Interrupting the Load Circuit		Reset by Interrupting the Load Circuit	
Contact Resistance Au/Ag/AgPd	≤10mΩ/≤25mΩ/---	≤10mΩ/≤25mΩ/≤75mΩ	≤10mΩ/≤25mΩ/≤75mΩ	≤10mΩ/≤25mΩ/≤75mΩ	≤25mΩ	≤10mΩ/≤25mΩ/---		≤10mΩ/≤25mΩ/---	≤10mΩ/≤25mΩ/≤75mΩ	≤10mΩ/≤25mΩ/≤75mΩ	≤10mΩ/≤25mΩ/≤75mΩ	≤25mΩ	≤25mΩ		≤25mΩ	
min. rate of change of the test temperature	0,5K/min		0,5K/min		0,5K/min	0,5K/min		0,5K/min			0,5K/min		0,5K/min		0,5K/min	
Ambient Temperature Limits	-40 bis 200°C	-40 bis 400°C	-40 bis 400°C	-40 bis 400°C	-40 bis 230°C	-40 bis 120°C		-40 bis 200°C -25 bis 120°C (with Free Mechanism)	-40 bis 400°C	-40 bis 400°C	-40 bis 400°C	-40 bis 200°C	-40 bis 200°C	-40 bis 230°C	-40 bis 230°C	
Ingress Protection Rating	IP40		IP40		IP40	IP40	bis IP65	IP40			IP40		IP40		IP40	
Dimensions																
Certifications	VDE/UL/CSA	VDE/VDE-CB	VDE (≤ 200°C)	VDE (≤ 200°C)	VDE	EAW		VDE/UL/CSA	VDE/VDE-CB	VDE/VDE-CB	VDE (≤ 200°C)	EAW	VDE/UL/CSA	EAW	EAW	
Product Standard	DIN EN 60730 UL873 CSA C22.2 Mo. 24	DIN EN 60730	DIN EN 60730	DIN EN 60730	DIN EN 60730	DIN EN 60730		DIN EN 60730 UL873 CSA C22.2 Mo. 24	DIN EN 60730	DIN EN 60730	DIN EN 60730	DIN EN 60730	DIN EN 60730 UL873 CSA C22.2 Mo. 24	DIN EN 60730	DIN EN 60730	

Thermoschalter TGO / TGS



Technische Daten	
Nennschaltvermögen AC	230V / 16A
Nennschaltvermögen DC	24V / 10A
Kontaktmaterial	AgNi, AgCdO, AgNi/Au
Schalttemperatur	-25 bis 120°C
Toleranz	±3K, ±5K, ±8K
Mindesthysterese T_{on}/T_{off}	5K
Schutzgrad	IP65
Kabeleinführung	PG9 / PG11 / M16
L1	min. 65mm
L2	0 bis 10mm
D1	d_G bis 32mm
L3	min. P_G*5
G	M5 bis G3/4“
L4	0 bis D2*5
D2	3mm bis d_G

Schaltbild



Typenschlüssel

Standardgewinde G:	1	G1/4“
	2	1/4 NPT
	3	M22x1,5
	4	G3/8“
	5	G1/2“

Gehäusematerial M:	1	Messing
	2	Edelstahl
	3	Aluminium

Kabeleinführung K:	1	PG9
	2	PG11
	3	M16

Bestellschlüssel: **TGO/S L1* L2* D1* L3* G L4* D2* M K T_{off}* T_{on}* T_{Tol}***

Bezeichnungsschlüssel: **TGO/S T_{off}* T_{on}* T_{Tol}* + xxxxx**

* - alle Angaben in mm/°C/K ohne Dimensionsangabe

Thermal switch C2B (16A)

The type C2B thermal switch is a very reliable temperature limiter with a long service life. It opens its two bimetal-based contact systems quasi-synchronously when the temperature rises at the preset setpoint. After the thermal switch has cooled down, its contact systems can be manually reset to the original switching condition.

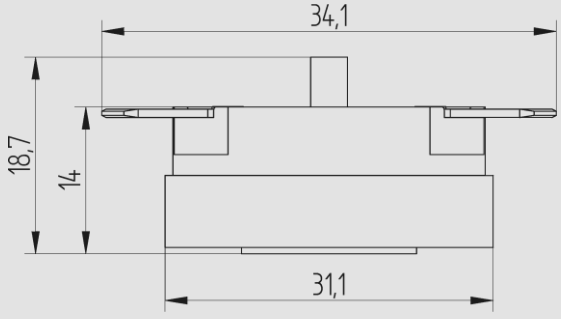
The main areas of application for this type of thermal switch are primarily applications for tempering of water, that require a two-pole switch-off. However, this thermal switch can also be used for any application that requires a two-pole switch-off.

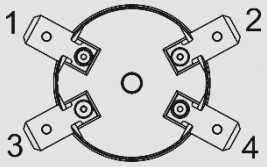
Benefits:

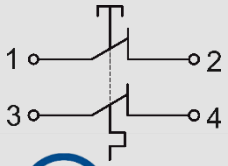
- Two potential-separated contact systems
- Quasi-synchronised switching behaviour
- Short switching and bouncing times
- High repeat accuracy
- High level of repeat accuracy
- Low tolerance up to +/-5K

Housing material	Ceramics
Reset function	manually
Rated voltage (DC on request)	400VAC
Rated current ohmsch per switching path (DC on request)	16A
Switching cycles	1.000
Isolation Base/ operation V_{eff}, 50Hz	2,5kV / 0,88kV
Switching temperature	-25 bis 200°C
Tolerance range (other values on request)	±5K, ±8K, ±10K
Contact resistance AgNi10	≤25mΩ
min. Rate of change of the test temperature	0,5K/min
Permissible ambient temperature	-40 bis 200°C
Ingress Protection rating	IP40
Product standard	DIN EN 60730

Dimensions / Circuit diagram

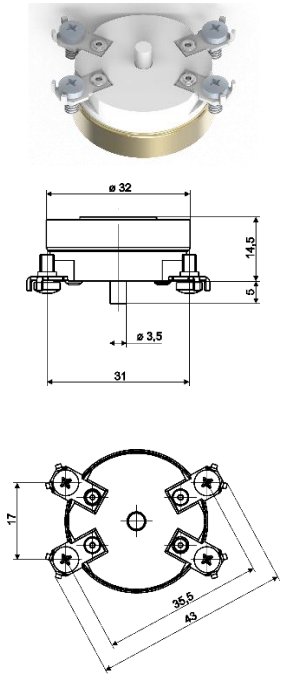
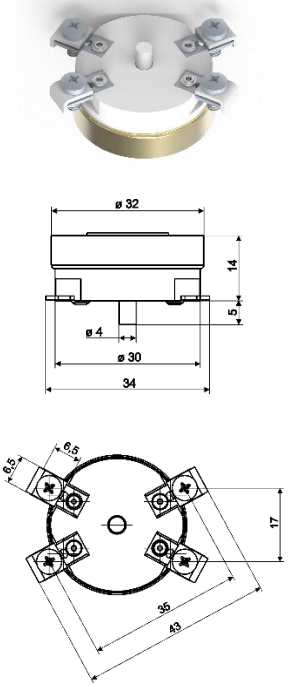
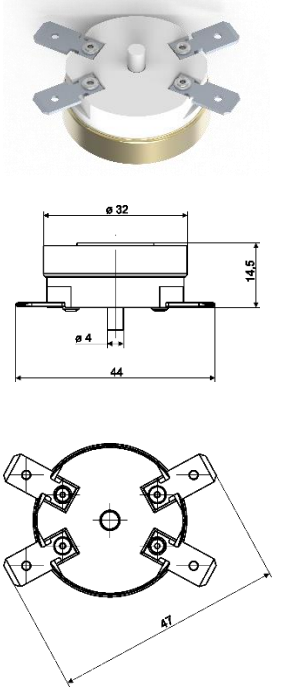
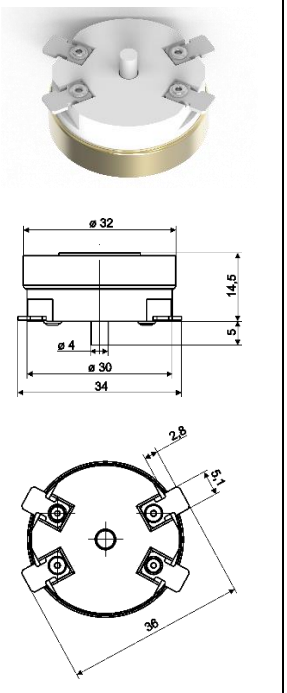


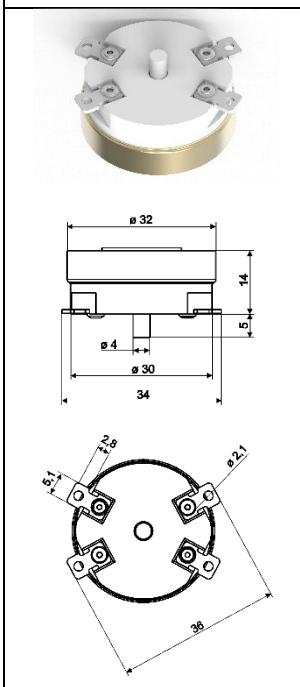
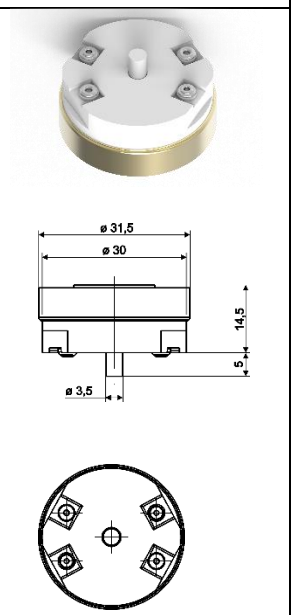
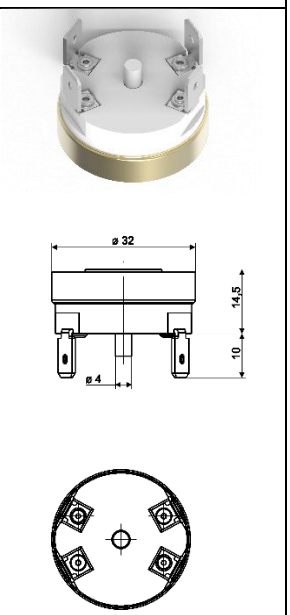




Variants

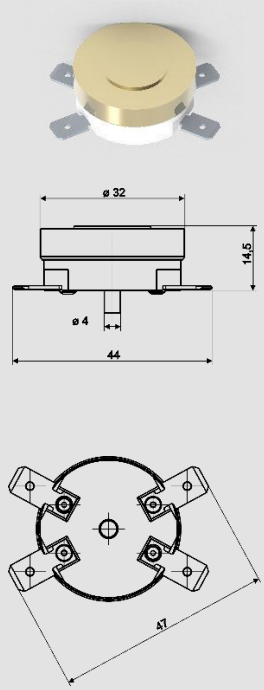
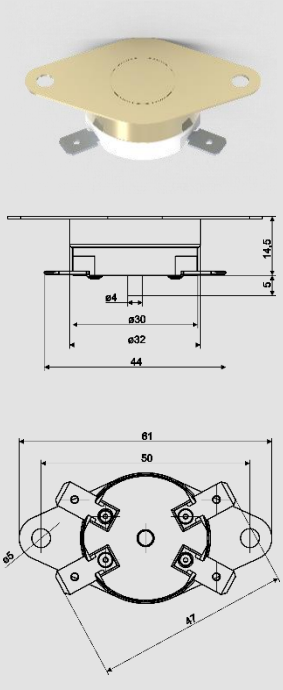
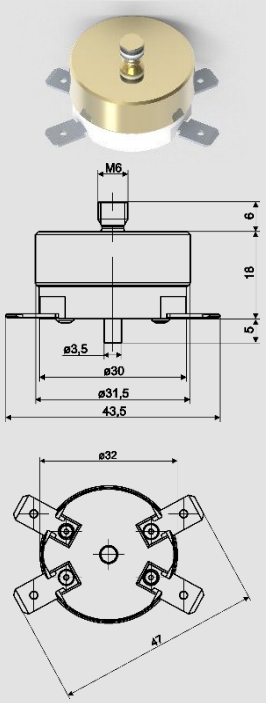
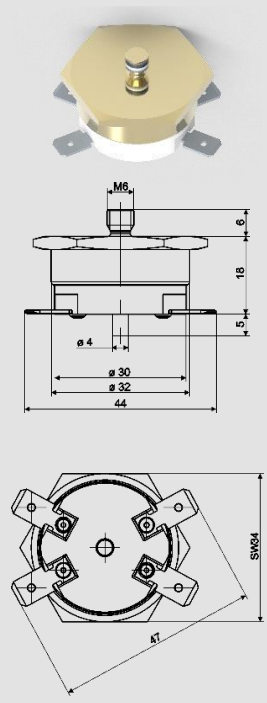
Connection technology

C2B 004	C2B 504	C2B 104	C2B T04
			
Screw connection for cross-sections up to 1,5mm²	Screw connection for cross-sections up to 2,5mm²	Blade terminal 6,3 x 0,8 mm	Welding connection

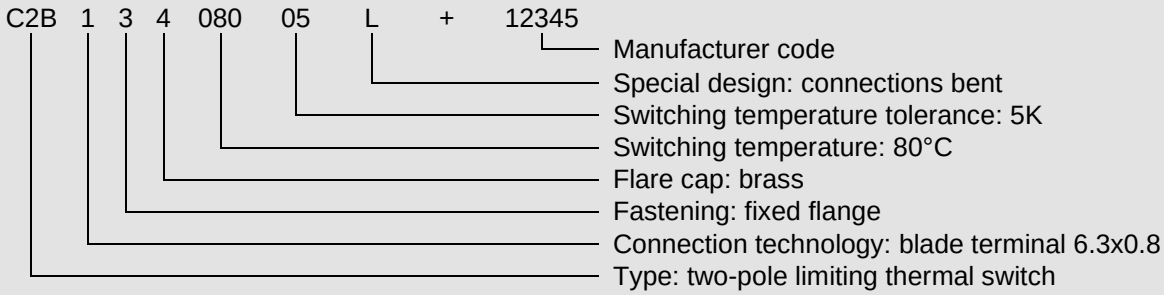
C2B A04	C2B P04		C2B
		The basic construction forms are extensively individualizable → Bending the connections; Fabrication with Braids; Fabrication with cables; different connector	
Solder connection	Without connection (BonBon)		Connection bend (example 6,3 x 0,8 90°)

Variants

Caps/fastenings

C2B 104	C2B 134	C2B 144	C2B 1D4
			
Without flange Materials: aluminium, brass, steel	Fixed flange Materials: brass, steal	Round brass screw fixing Thread selectable	Screw fixing SW32 brass Thread selectable

Order example



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