JUMO GmbH & Co. KG
Delivery address: Mackenrodtstraße 14,
36039 Fulda, Germany
Postal address: 36035 Fulda, Germany
Phone: +49 661 6003-0
Fax: +49 661 6003-607
e-mail: mail@jumo.net
Internet: www.jumo.net

JUMO Instrument Co. Ltd.
JUMO House
Temple Bank, Riverway
Harlow, Essex CM 20 2TT, UK
Phone: +44 1279 635533
Fax: +44 1279 635262
e-mail: sales@jumo.co.uk
Internet: www.jumo.co.uk

JUMO Process Control, Inc.
8 Technology Boulevard
Canastota, NY 13032, USA
Phone: 315-697-JUMO
1-800-554-JUMO
Fax: 315-697-5867
e-mail: info@jumo.us
Internet: www.jumo.us

Panel-mounting Thermostats EM Series

with 1, 2, 3 or 4 single-pole snap-action switches



Brief description

Thermostats control and monitor thermal processes. EM series instruments can be supplied as temperature controllers TR, temperature monitors TW, temperature limiters TB, safety temperature monitors STW (STB) and protection temperature limiters STB. In fault condition, the STB sets the system being monitored to a safe operational state.

Panel-mounting thermostats operate on the principle of liquid expansion, with a micro- switch serving as the electrical switching device.

Switching action

Temperature controller TR and temperature monitor TW

When the temperature at the probe exceeds the selected setpoint, the microswitch is actuated through a mechanism and the circuit is opened or closed. When the temperature drops below the selected setpoint (by the amount of the switching differential), the micro- switch returns to its initial position.

Lock-out facility
on the temperature limiter TB and protection temperature limiter STB

When the temperature at the probe exceeds the set limit, the circuit is opened and the miroswitch locked out mechanically.

After the temperature has dropped below the critical temperature by about 10 % of the scale span (approx. 15% for a limit setting above +350°C), the microswitch can be reset manually.

With limits above 120°C, the limit setting on the STB must be locked (e.g. by a seal) to prevent any shift.

Self-monitoring facility on the protection temperature limiter STB
and safety temperature monitor STW (STB)

In the case of the STB and STW (STB), any failure of the measuring system, i.e. a leakage of the expansion liquid, will cause the pressure under the diaphragm to drop, thus permanently opening the circuit. Resetting is now impossible.

When the temperature at the probe drops below -20°C (approx.), the circuit will also open, but will close again automatically when the temperature rises above -10°.

Use of the safety temperature monitor STW as a protection temperature limiter STB

The circuitry to which the thermostat is connected must comply with DIN 3440 and VDE 0116.

Approvals

DIN Geprüft	VDE	DVGW Gas Appliances Directive 90/396/EEC Type EM-50 only	Pressure Equipment Directive 97/23/EC CE0036 only Types EM-20 EM-30 EM-40 EM-50	c UL us	only Types EM-1 EM-2 EM-4 EM-50

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Types and DIN registration numbers

Version	Type	Switching action of the individual contacts (see example 1)	DIN Reg. No.	Important note
1 single-pole snap-action switch	EM-1 EM-2 EM-3 * EM-4 * EM-5	TR TW TW TB TB	TR 77703 TW 77803 TW 77903 TB 78003 TB 78103	DIN approved up to +500°C max. The DIN Reg. No. becomes invalid if pockets are used that are not listed in our Data Sheet 60.6710. Type EM-50 DVGW Reg. No. CE-0085 AR 0124 *Setpoint / limit permanently set at the factory to customer requirements
2 single-pole snap-action switches	EMF-13 EMF-23 EMF-33 * EMF-14 EMF-24 EMF-44 * EMF-54	TR / TW TW / TW TW / TW TR / TB TW / TB TB / TB TB / TB	TR 77703 TW 77803 TW 77903 TR 77703 TW 77803 TB 78003 TB 78103	
3 single-pole snap-action switches	EMF-133 EMF-134 EMF-233 EMF-234 EMF-333 * EMF-444 * EMF-544	TR / TW / TW TR / TW / TB TW / TW / TW TW / TW / TB TW / TW / TW TB / TB / TB TB / TB / TB	TR 77703 TR 77703 TW 77803 TW 77803 TW 77903 TB 78003 TB 78103	
4 single-pole snap-action switches	EMF-1333 EMF-2333 EMF-3333 *	TR / TW / TW / TW TW / TW / TW / TW TW / TW / TW / TW	TR 77703 TW 77803 TW 77903	
Fail-safe version	EM-40 * EM-50 EM-20 EM-30 *	STB STB STW (STB) STW (STB)	STB 78203 STB 78303 STW (STB) 77503 S STW (STB) 77603 S	

Technical data

Table of control ranges and probes for TR, TW, TB — liquid-filled

Control/limit range °C	Switching differential %	Max. probe temperature °C	Max. switch head temperature °C	Max. capillary length m	Max. contact spacing °C	Probe length "L" in mm, probe dia. "d" in mm, 6 mm dia. is standard	
						Ø 6	Ø 8
-20 to + 40	1	+ 50	+ 50	5	5	245	145
	2.5	+ 50	+ 50		8	245	145
	5	+ 95	+ 50 (80)[1)]		25	138	91
	7	+100	+ 50 (80)[1)]		50	103	73
0 to + 50	1	+ 60	+ 60	3	5	283	165
	2.5	+ 60	+ 60	3	10	283	165
	5	+105	+ 60 (80)[1)]	5	25	159	101
	7	+110	+ 60 (80)[1)]	5	50	117	80
+20 to + 90	1	+115	+ 80	1	7	210	127
	2.5	+115	+ 80	1	14	210	127
	5	+140	+100	5	35	121	82
	7	+175	+100	5	70	91	67
0 to +100	1	+125	+ 80	2	10	157	100
	2.5	+125	+ 80	2	20	157	100
	5	+165	+100	5	50	94	68
	7	+200	+100	5	100	73	58
+30 to +110	1	+135	+ 80	2	8	188	116
	2.5	+135	+ 80	2	16	188	116
	5	+170	+100	5	40	110	76
	7	+200	+100	5	80	84	63
0 to +150	1	+173	+ 80	1	15	113	78
	2.5	+173	+100		30	113	78
	5	+200	+100		75	72	57
0 to +200	1	+230	+ 80	1	20	113	78
	2.5	+230	+100		40		
+50 to +200	1	+230	+ 80	1	15	139	92
	2.5	+230	+100		30		
+50 to +250	1	+228	+ 80	1	20	105	70
	2.5	+228	+100	1	40	105	70
	5	+300	+100	5	100	64	49
+50 to +300	1	+345	+ 80	2	25	87	61
	2.5	+345	+100		50		

[1)] Values in brackets to special order only, taking into account operating conditions and capillary lengths

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Technical data

Table of control ranges and probes for TR, TW, TB — gas-filled

Control/limit range °C	Switching differential %	Max. probe temperature °C	Max. switch head temperature °C	Max. capillary length m	Max. contact spacing °C	Probe length "L" in mm, probe dia. "d" in mm, 6 mm dia. is standard	
						Ø 6	Ø 8
+20 to +400	6 10	+460 +500	+100 +100	5	75 200	237 127	137 81
+20 to +500	3 / 5 6 10	+530 +575 +575	+ 80 +100 +100	1 5 5	48 95 250	278 176 95	158 106 65

Control ranges and temperature probes for STB and STW (STB) — liquid-filled

Setting range °C	Scale span °⊀	Max. probe temperature °C	Max. switch head temperature °C	Max. capillary length m	Tolerance at limit °C	Probe length "L" in mm, probe dia. "d" in mm, 6 mm dia. is standard	
						Ø 6	Ø 8
+75 to +100	**78**	+125	+100	5	+0 -7	84	63
+85 to +110	78	+135			+0 -7		
+120 to +150	**77**	+173			+0 -9	80	57
+160 to +200	79	+230			+0 -12	64	49
+210 to +250	71	+288			+0 -13	61	47
+250 to +300	79	+345			+0 -16	55	–

Control ranges and temperature probes for STB and STW (STB)— gas-filled

Setting range °C	Scale span °⊀	Max. probe temperature °C	Max. switch head temperature °C	Max. capillary length m	Tolerance at limit °C	Probe length "L" in mm, probe dia. "d" in mm, 6 mm dia. is standard	
						Ø 6	Ø 8
+300 to +400	70	+460	+100	3	+0 -23	148	92
+350 to +500	72	+575			+0 -29	127	81

On thermostats with factory-set switching points, please specify the switch-off point in addition to the control range, e.g. control range +80 to +100°C, fixed at +95°C.

Capillaries and temperature probes

Type	End of scale	Capillary	Temperature probe	Notes
EM- . .	up to 200°C	copper (Cu) 1.5mm dia. Mat. Ref. Cu-DHP	copper (Cu) Mat. Ref. Cu-DHP brazed	–
	up to 350°C	copper (Cu) 1.5mm dia. Mat. Ref. Cu-DHP	stainless steel (CrNi) Mat. Ref. 1.4571 brazed	–
	up to 500°C	stainless steel (CrNi) 1.5mm dia. Mat. Ref. 1.4571	stainless steel (CrNi) Mat. Ref. 1.4571 welded	–
	up to 350°C	stainless steel (CrNi) 1.5mm dia. Mat. Ref. 1.4571	stainless steeel (CrNi) Mat. Ref. 1.4571 welded	at extra cost
Capillary length	standard: 1000 mm, max. 5000 mm			
Min. bending radius of capillary	5 mm			

Note
If the maximum permissible temperature at the probe, capillary and switch head is not fully utilized, it may be possible to increase the capillary length there where it is restricted to 1, 2 or 3 m according to the control range and probe table.
Please let us know the actual temperatures to which the thermostat is exposed.

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Electrical data

Switching device: 1, 2, 3 or 4 single-pole snap-action switches	EM.-1... EM-20 EM.-2... EM-30 EM.-3...	EM.-4... EM-40 EM.-5... EM-50	EM.-4.../U EM-40/U EM.-5.../U EM-50/U
	microswitch with changeover contact	microswitch with (n.c.) break contact and lock-out	microswitch with (n.c.) break contact, lock-out and additional signal contact
Contact rating	switching action switching differential	(n.c.) break contact terminal 2	(n.o.) make contact terminal 4
	TR, TW, STW (STB) 2,5%, 5%, 6%, 7%, 10%	16 (3) A, 230 V AC +10% p.f. = 1 (0.6) 0.25 A, 230 V DC +10%	8 (1.5) A, 230 V AC +10% p.f. = 1 (0.6) 0.25 A, 230 V DC +10%
	TB, STB		2 (1) A, 230 V AC +10% p.f. = 1 (0.6) 0.25 A, 230 V DC +10%
	TR, TW 1%, 3%	6 (2) A, 230 V AC +10%, p.f. = 1 (0.6) 0.25A, 230 V DC +10%	
	TR, TW 2.5%	microswitch, gold-plated, extra code “au” 0.1 A, 24 V AC/DC	
Contact reliability	To ensure the maximum switching reliability, we recommend a minimum load of: with silver contacts: AC/DC = 20 mA, 24 V	with gold-plated contacts (code “au”): AC/DC = 10 mA, 10 V	
Rated surge voltage	1500 V (400 V via the switching contacts)		
Overvoltage category	II		
Required fusing	see Contact rating		
Electrical connection	standard	faston connectors A 6.3 x 0.8 DIN 46 244	
	extra code X	screw terminal up to 2.5 mm^2 conductor cross-section (at extra cost) — also suitable for retrofitting —	

Operating data

Switching differential in % of control/limit range	Switching action	with liquid-filled system		
		Nominal value	Possible actual value	
	TR, TW	2.5	2.5 max. 3.5	standard
		5	5 max. 6	on request
		7	7 max. 8	on request
		1	1 max. 2	at extra cost
		with gas-filled system		
		5	5 max. 11	standard
		6	6 max. 14	on request
		10	10 max. 16	on request
		3	2.5 max. 4	at extra cost
	STW (STB)	with liquid-filled system		
		5	5 max. 7	standard
		with gas-filled system		
		6	6 max. 16	standard
Contact spacing on multi-pole thermostat	with switching differential	contact spacing of scale span minimum	 maximum	switching point accuracy of contact spacing of scale span
	1% 2.5% 3%, 5% 6%, 7%, 10%	1% 1% 2% 3%	according to control range table	≤1% ≤1% < 2% < 3%
	The contact spacing is specified in °C against the setpoint of contact I. (The contact number is marked on the back of the housing.)			
	sign **-** = switching **before** the setpoint sign **+** = switching **after** the setpoint For simultaneous switching, specify contact spacing “0”.			

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Operating data

Switching point accuracy in % of control /limit range	Switching action	Switching differential		in upper third of scale or at limit
		liquid-filled	gas-filled	
	TR	1%, 2.5% 5% 7%	— 3%, 5% 6%, 10%	± 1.5% ± 3 % ± 4 %
	TW	1%, 2.5% 5% 7%	— 3%, 5% 6%, 10%	+0 / -3% +0 / -6% +0 / -8%
	TB	—	—	+0% -5%
	STB, STW (STB)	see table of control ranges and probes, page 3		

Mean ambient temperature effect	Deviation of the ambient temperature at the switch head and/or capillary from the +22°C calibration ambient temperature produces a switching point shift: higher ambient temperature = lower switching point lower ambient temperature = higher switching point									
	for temperatures with end of scale/limit									
	< 200°C				≥ 200°C ≤ 350°C			≥ 400°C ≤ 500°C		
	TR, TW, TB			STW STB	TR, TW, TB		STW STB	TR, TW, TB STW, STB		
	switching differential in %									
	1 / 2.5	5	7	7 / - -	1 / 2.5	5	7 / - -	3 / 5	6	10
	ambient temperature effect on switch head, % per °C									
	0.15	0.26	0.34	0.43	0.12	0.21	0.35	0.12	0.17	0.24
	ambient temperature effect on capillary, % per °C per m length									
	0.05		0.09		0.04		0.07	0.05		
Temperature compensation* **(TK)**	* for detailed information, see diagram on page 8									
Temperatures	permissible storage temperature: -50 to +50°C				permissible ambient temperature in operation: +80°C max.					
Nom. position (NL)	unrestricted									

Housing

Housing in galvanized steel sheet	standard fixing	by 2 M3 screws, spaced 22 mm
	code b1	by 2 M4 screws, spaced 28 mm
	code b2	by 2 M3 screws, spaced 33 mm
	code b7	central fixing M 10 x 1 with cap nut (on TB and STB only)
Setpoint adjustment	TR: switching point externally adjustable by rotary knob	TW, TB, STB, STW (STB): switching point adjustable with screwdriver
	Types EM-3, EM-4, EM-33, EM-44, EM-444, EM-3333, EM-30, EM-40 permanently set at the factory to customer requirements	
Setpoint knob	see Data Sheet 60.6715	
Scale span	standard: 250°∢ (for STB and STW (STB), see table of control ranges and probes, page 3)	
Protection	EN 60 529-IP00	
Weight	approx. 0.3 kg	

Process connection*

EM Series with capillary	**plain cylindrical probe A** (standard)	
	pocket U (on request) screw-in pocket with screw-in spigot G 1/2 Form A to DIN 3852/2 and clamping clip with fixing screw for securing the probe	
Material	**pocket U**	up to +150°C: CuZn is standard above +150°C: St is standard (CrNi on request)
Fitting length S	standard lengths: 100, 120, 150, 200 or 300 mm (other lengths on request)	
Immersion tube dia.	D = 8 mm, D = 10 mm	

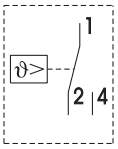
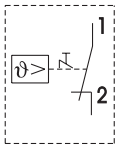
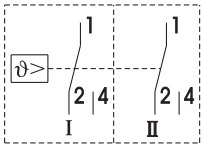
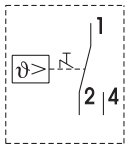
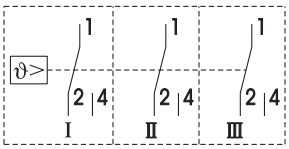
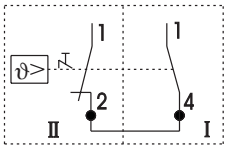
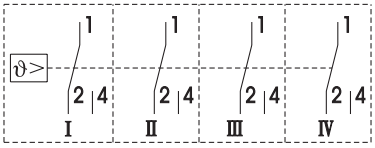
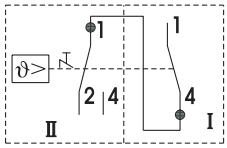
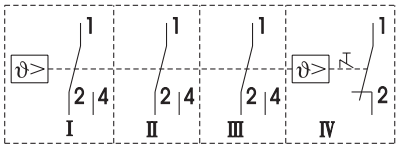
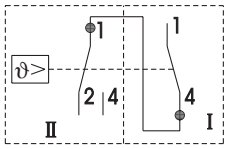
*See Data Sheet 60.6710 for additional process connections and pockets.

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Delivery address: Mackenrodtstraße 14,
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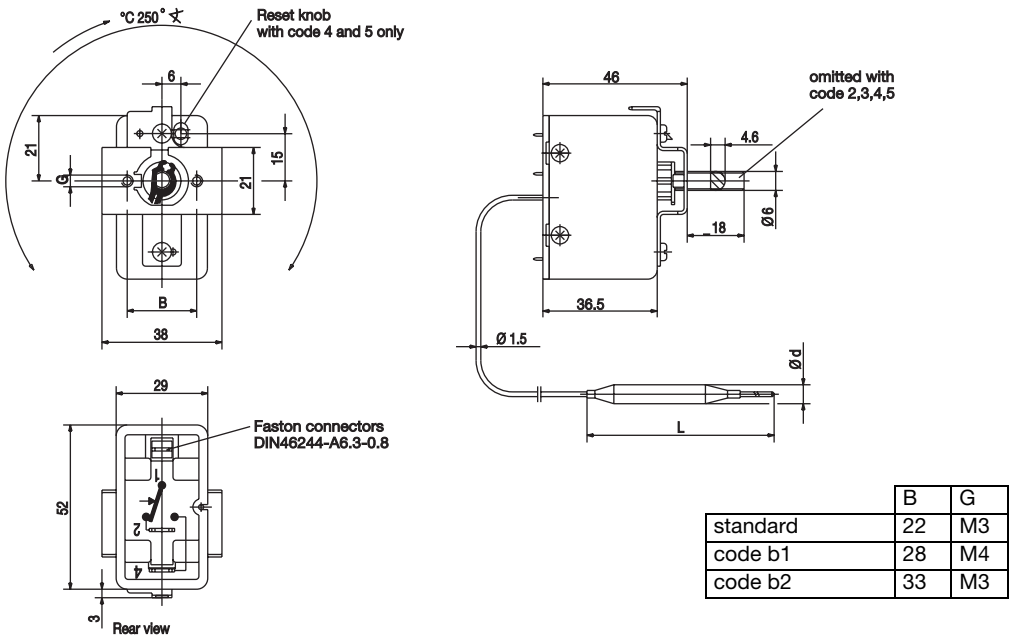
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Connection diagrams

EM-1 EM-2 EM-3		EM-4 EM-5	
EMF-13 EMF-23 EMF-33 Setpoint: **I** Follow-on contact: **II**		EM-4/U EM-5/U	
EMF-133 EMF-233 EMF-333 Setpoint: **I** Follow-on contact: **II, III**		EM-40 EM-50 **I** =break contact on system fracture and T < -10°C: **I** **II** =limit: **II**	
EMF-1333 EMF-2333 EMF-3333 Setpoint: **I** Follow-on contact: **II, III, IV**		EM-40/U EM-50/U **I** =break contact on system fracture and T < -10°C: **I** **II** =limit: **II**	
Example: EMF-1334 For other type variants, the connection diagrams have to be appropriately combined.		EM-20 EM-30 **I** =break contact on system fracture and T < -10°C: **I** **II** =limit: **II**	

Dimensions

EM-1
EM-2
EM-3
EM-4
EM-5



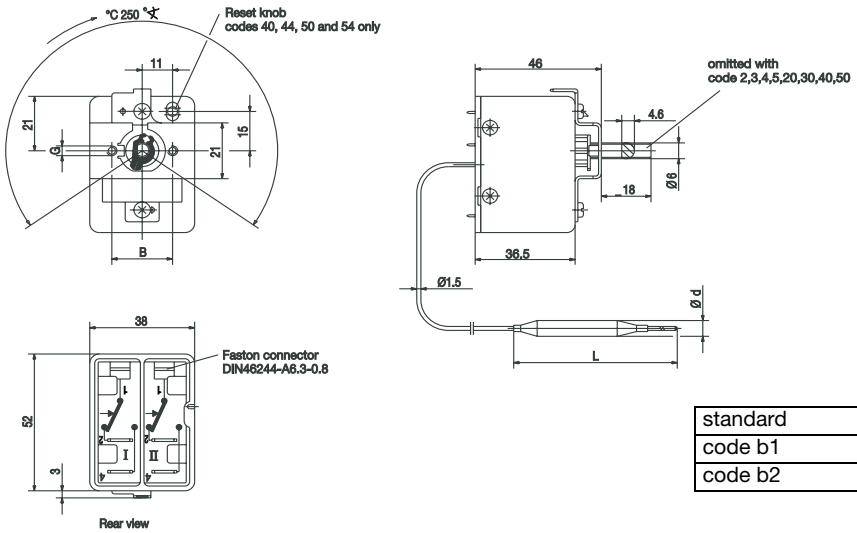
	B	G
standard	22	M3
code b1	28	M4
code b2	33	M3

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Internet: www.jumo.co.uk

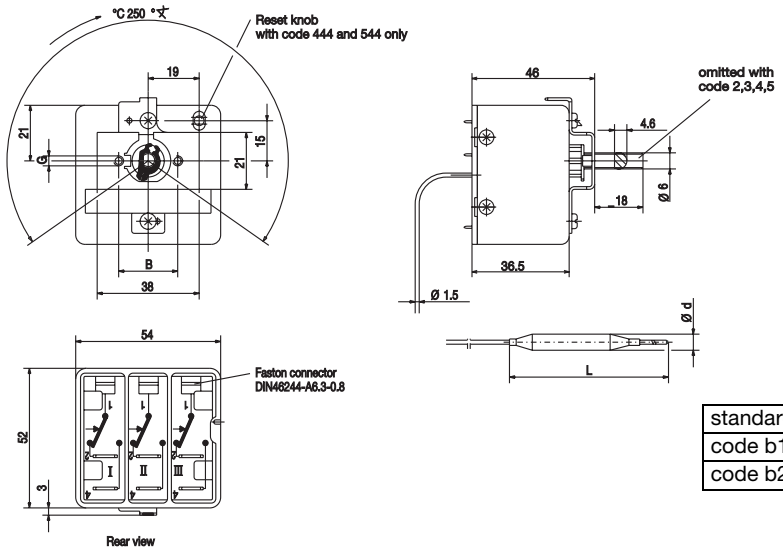
JUMO Process Control, Inc.
8 Technology Boulevard
Canastota, NY 13032, USA
Phone: 315-697-JUMO
1-800-554-JUMO
Fax: 315-697-5867
e-mail: info@jumo.us
Internet: www.jumo.us

EMF-13
EMF-23
EMF-33
EMF-14
EMF-24
EMF-44
EMF-54



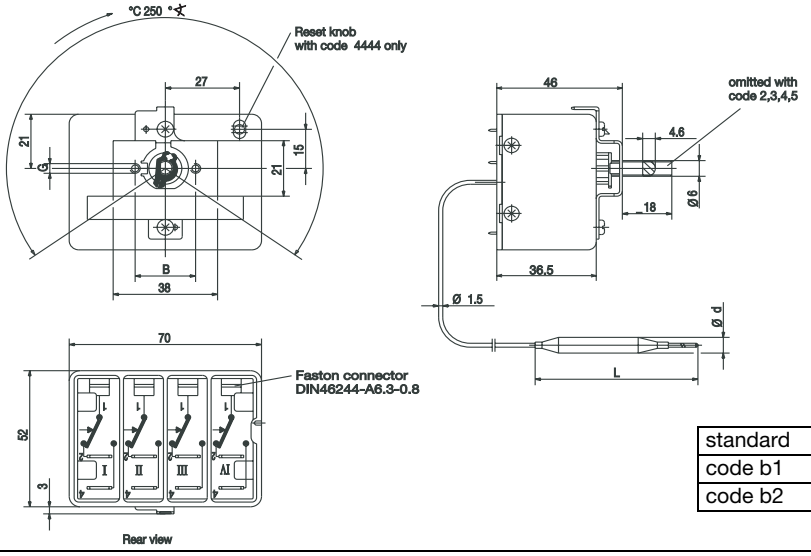
	B	G
standard	22	M3
code b1	28	M4
code b2	33	M3

EMF-133
EMF-134
EMF-233
EMF-234
EMF-333
EMF-444
EMF-544



	B	G
standard	22	M3
code b1	28	M4
code b2	33	M3

EMF-1333
EMF-2333
EMF-3333

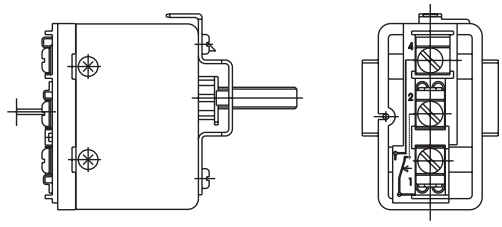


	B	G
standard	22	M3
code b1	28	M4
code b2	33	M3

JUMO GmbH & Co. KG
Delivery address: Mackenrodtstraße 14,
36039 Fulda, Germany
Postal address: 36035 Fulda, Germany
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Fax: +49 661 6003-607
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JUMO House
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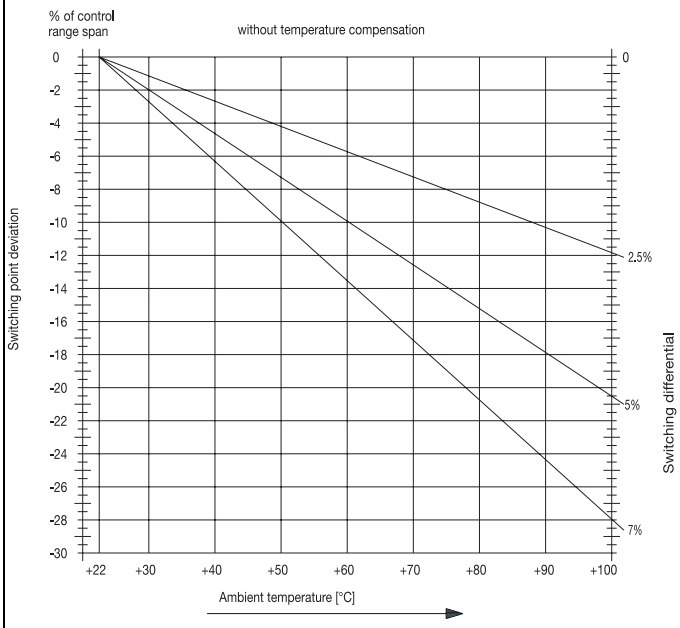
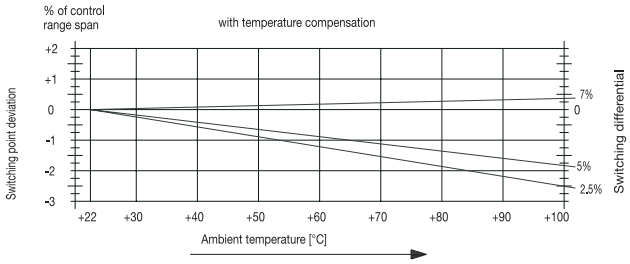
Screw connection EM-1 extra code X	

Temperature compensation (TK)

Any deviation of the temperature at the switch head from the +22°C calibration ambient temperature will produce a deviation of the switching point. With strongly fluctuating ambient temperatures it makes sense to use thermostats with temperature compensation (extra code TK).

Switching point deviation as a function of ambient temperature at the switch head, taking into account the switching differential.

The temperature effect on the capillary has not been allowed for and may introduce an additional error.

Version **without** temperature compensation	Version **with** temperature compensation
end of scale < +200°C	
EM 1-pole / EM 2-pole	**EM 1-pole TK**
	
	Note: Additional graphics of the temperature compensation TK with higher end-of-scale values and for the EM 2-pole version are available on request.

Note
Physical and toxicological properties of the expansion media that may escape in the event of a system fracture.

Control range with end of scale °C	Dangerous reactions	Fire/explosion hazard		Water contamination	Toxicological data		
		Ignition temperature °C	Explosion limit % v/v		irritant	danger to health	toxic
< +200	no	+ 355	0.6 — 0.8	yes	yes	[1]	no
≥ 200 ≤+350	no	+ 490	- -	yes	yes	[1]	no
> 350 ≤+500	no	no	no	no	no	no	no

[1] At present there is no restrictive statement from the health authorities concerning any danger to health over short periods and at low concentration, e.g. after a fracture of the measuring system.

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Postal address: 36035 Fulda, Germany
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e-mail: mail@jumo.net
Internet: www.jumo.net

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JUMO House
Temple Bank, Riverway
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Stock items

(delivery: 3 working days after receipt of order)

Sales No.	Type	Control range °C	Switching differential %	Capillary mm	Connection	Probe dia. x length mm
60/60001231	EM-1	- 20 to + 40	2.5	2000	A	6x245
60/60000492	EM-1	0 to + 50	2.5	1000	A	6x283
60/60001142	EM-1	+ 20 to + 90	2.5	1000	A	6x210
60/60000493	EM-1	+ 20 to + 90	7.0	1000	A	6x 91
60/60000215	EM-1	0 to +100	1.0	1000	A	6x157
60/60000494	EM-1	0 to +100	2.5	1000	A	6x157
60/60000219	EM-1	0 to +100	2.5	2000	A	6x157
60/60000285	EM-1	+ 30 to +110	7.0	1000	A	6x 84
60/60000921	EM-1	0 to +150	2.5	1000	A	6x113
60/60000217	EM-1	0 to +150	2.5	2000	A	6x113
60/60001141	EM-1	0 to +200	2.5	1000	A	6x114
60/60000220	EM-1	0 to +200	2.5	2000	A	6x114
60/60000216	EM-1	+ 50 to +250	2.5	2000	A	6x106
60/60000495	EM-1	+ 50 to +300	2.5	1000	A	6x 88
60/60000923	EM-1	+ 50 to +300	2.5	2000	A	6x 88
60/60002119	EM-1	+ 20 to +400	6.0	1000	A	8x137
60/60002083	EM-1	+ 20 to +500	5.0	1000	A	8x159
60/60000214	EM-2	0 to + 50	2.5	1000	A	6x286
60/60000497	EM-2	0 to +150	2.5	1000	A	6x113
60/60000213	EM-2	0 to +150	2.5	2000	A	6x113
60/60001380	EM-2	+ 50 to +300	2.5	1000	A	6x 88
60/60002120	EM-2	+ 20 to +400	6.0	1000	A	8x137
60/60002084	EM-2	+ 20 to +500	5.0	1000	A	8x159
60/60002112	EM-2	+20 to +500	6.0	2000	A	8x159
60/60000924	EM-5	0 to +150	2.5	1000	A	6x113
60/60000929	EM-5	0 to +200	2.5	1000	A	6x114
60/60000211	EM-5	+ 50 to +300	2.5	1000	A	6x 88
60/60002085	EM-5	+ 20 to +500	4.0	1000	A	8x159
60/60002244	EM-50/U,b7	+300 to +400	— —	1000	A	6x148
60/60002245	EM-50/U,b7	+350 to +500	— —	1000	A	6x127

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Order details for non-stock items:

Panel-mounting thermostats EM Series

Order code	(1) Basic type			
602021	EM panel-mounting thermostat with microswitch, with capillary			
	(2) Basic type extension			
0001	EM-1	Temperature controller	TR	
0002	EM-2	Temperature monitor	TW	
0003	EM-3 *	Temperature monitor	TW	1-pole
0004	EM-4 *	Temperature limiter	TB	
0005	EM-5	Temperature limiter	TB	
0013	EMF-13	Temperature controller	TR / TW	
0023	EMF-23	Temperature monitor	TW / TW	
0033	EMF-33 *	Temperature monitor	TW / TW	
0014	EMF-14	Temperature controller	TR / TB	2-pole
0024	EMF-24	Temperature monitor	TW / TB	
0044	EMF-44 *	Temperature limiter	TB / TB	
0054	EMF-54	Temperature limiter	TB / TB	
0133	EMF-133	Temperature controller	TR / TW / TW	
0134	EMF-134	Temperature controller	TR / TW / TB	
0233	EMF-233	Temperature monitor	TW / TW / TW	
0234	EMF-234	Temperature monitor	TW / TW / TB	3-pole
0333	EMF-333 *	Temperature monitor	TW / TW / TW	
0444	EMF-444 *	Temperature limiter	TB / TB / TB	
0544	EMF-544	Temperature limiter	TB / TB / TB	
1333	EMF-1333	Temperature controller	TR / TW / TW / TW	
2333	EMF-2333	Temperature monitor	TW / TW / TW / TW	4-pole
3333	EMF-3333 *	Temperature monitor	TW / TW / TW / TW	
0020	EM-20	Safety temperature monitor	STW (STB)	
0030	EM-30 *	Safety temperature monitor	STW (STB)	
0040	EM-40 *	Protection temperature limiter	STB	
0050	EM-50	Protection temperature limiter	STB	
	* setpoint/limit permanently set at the factory to customer requirements			
	(3) Control/limit ranges			
	for TR, TW and TB			
013	-20 to + 40			
021	0 to + 50			
041	+ 20 to + 90			
025	0 to +100			
052	+ 30 to +110			
027	0 to +150			
028	0 to +200			
062	+ 50 to +200			
063	+ 50 to +250			
064	+ 50 to +300			
045	+ 20 to +400			
046	+ 20 to +500			
	for STB and STW (STB)			
075	+ 75 to +100			
085	+ 85 to +110			
090	+120 to +150			
091	+160 to +200			
092	+210 to +250			
094	+250 to +300			
095	+300 to +400			
096	+350 to +500			
000	for limits with fixed settings			

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Panel-mounting thermostats EM Series

Order code		
	(4) Limits with fixed settings	
000	for adjustable control/limit ranges	
. . .	values in °C (must be within the control/limit ranges)	
	(5) Switching differential	
00	no switching differential (-40 STB, -50 STB)	
10	1 % * of scale span	with liquid-filled systems
25	2.5 % * of scale span	
50	5 % ** of scale span	
70	7 % ** of scale span	
30	3 % * of scale span	with gas-filled systems
50	5 % ** of scale span	
60	6% * of scale span	
01	10% * of scale span	
	* on TR + TW only	
	** on TR, TW and STW only	
	(6) Capillary length	
1000	1000 mm	
2000	2000 mm	
3000	3000 mm	
4000	4000 mm	
5000	5000 mm	
. . . .	(special length, details in plain text)	
	(7) Material of capillary	
40	Cu (copper)	
20	CrNi (stainless steel 1.4571)	
	(8) Process connection*	
10	A = plain cylindrical probe 	
20	U = screw-in pocket 	
	* for other probe mountings and pockets, see Data Sheet 60.6710.	
	(9) Thread of process connection	
00	no thread (process connection A)	
13	male thread $G^1/_2$	
	(10) Material of process connection	
00	only with process connection A	
46	CuZn (brass)	
01	St (steel)	
20	CrNi (stainless steel 1.4571)	
	(11) Fitting length S (immersion tube length)	
000	no pocket	
100	100mm	
150	150mm	
200	200mm	
300	300mm	
400	400mm	
. . . .	(special length, details in plain text)	

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Order details for non-stock items:

Panel-mounting thermostats EM Series

Order code		
	(12)	**Diameter D (immersion tube diameter)**
00		no pocket
8		8 mm
10		10 mm
	(13)	**Diameter d (probe diameter)**
6		6 mm
8		8 mm
	(14)	**Extra codes****
574		U TB/STB with (n.c.) break contact, lock-out and additional signal contact
702		ausnap-action switch contact, gold-plated (only on 1- and 2-pole version)
699		X screw connection up to 2.5 mm^2 conductor cross-section
704		b1switch head fixing by 2 M4 screws, spaced 28 mm
705		b2switch head fixing by 2 M3 screws, spaced 33 mm
710		b7central fixing with cap nut (on TB and STB only)
707		TKtemperature compensation (for 1- and 2-pole version only)

**List extra codes in sequence, separated by commas

Contact spacing for 2-, 3- and 4-pole termostats
details in plain text (e.g. +2°C, +5°C, +8°C)

Order code

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
602021 /	.... -	... -	... -	.. -	.... -	.. -	.. -	.. -	.. -	... -	.. -	. /	... , ... , ...

Order example

602021 / 0005 - 052 - 000 - 00 - 2000 - 40 - 10 - 00 - 00 - 000 - 00 - 6 / 574** , 710

** List extra codes in sequence, separated by commas.