

ELECTRONIC TEMPERATURE SWITCHES

Technical description

The electronic temperature switch of BEDIA is fitted with thin-film resistor Pt1000 in a bridge circuit. This sensor element provides close switch point tolerances and a quick response. Switch point and reset hysteresis may be selected within the admissible operating range when ordering so as to allow the monitoring of both very wide and very close temperature ranges. The switching output is protected from short-circuit and overload.

The short-circuit current is limited by the output transistor switching off in the event of a fault. It will automatically reset as soon as the fault has been remedied.

The switch is available with low-side, high-side or potential-free DC switching output.

The switch is open in the event of power failure or disconnection of the power supply, independent of the switching function. It is available both as normally open (NO) or normally closed (NC) switch.

Technical data

Nominal voltage:	12 VDC / 24 VDC (-25 %/+50 %) (9-36 VDC)
Current consumption:	< 10 mA
Operating temperature:	-40 °C to +125 °C
Medium temperature:	-50 °C to +150 °C
Sensor element:	Pt1000 Klasse B
Max. switching current:	1 A
Voltage drop:	< 1,5 V (1 A)
Max. switching voltage:	36 VDC
Off-state leakage current:	10 µA (25 °C)
Switch point:	freely selectable between -50 °C and +150 °C
Standard tolerance:	±3 K
Hysteresis:	freely selectable, ≥ 1 K
Switching mode:	a) potential free DC switch, either normally close or normally open b) low-side switch, either normally close or normally open c) high-side switch, either normally close or normally open
Measuring media:	lubricating oil, hydraulic oil, fuel, cooling water
Connector:	see order number overview
IP-protection:	depending on the connector type
Housing material:	brass (standard), stainless steel on request
EMC:	according to to e1 standard 72/245/EWG

CONNECTORS AND DESIGNS



- Connector bayonet according to ISO 15170
Protection class IP 69K according to DIN 40050
with thermal conductivity probe

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- Connector bayonet according to ISO 15170
Protection class IP 69K according to DIN 40050
with thermal conductivity probe

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- Connector bayonet 10SL according to VG 95234
Protection class IP 67 according to DIN 40050
with thermal conductivity probe

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- Connector DIN EN 175301-803-A
Protection class IP 65 according to DIN 40050
with thermal conductivity probe

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- Cable with flying leads
Protection class IP 69K according to DIN 40050
with thermal conductivity probe

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- Cable with flying leads
Protection class IP 69K according to DIN 4005
with thermal conductivity probe

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- Cable connection with bayonet according to ISO 15170 overmoulded
Protection class IP 69K according to DIN 40050
with thermal conductivity probe

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ORDER NUMBER OVERVIEW

Electronic temperature switches

Connector bayonet according to ISO 15170

Thread/HEX	Switch point	Function	Hysteresis	Electric potential	Order number
M 14 x 1,5 / 27	0 °C	normally open	5K	potential free	420 151
M 14 x 1,5 / 27	5 °C	normally open	3K	potential free	420 215
M 14 x 1,5 / 27	10 °C	normally closed	1K	potential free	420 509
M 14 x 1,5 / 27	15 °C	normally closed	5K	potential free	420 216
M 14 x 1,5 / 27	25 °C	normally open	15K	High side switch	420 510
M 14 x 1,5 / 27	75 °C	normally closed	7K	High side switch	420 518
M 14 x 1,5 / 27	75 °C	normally open	3K	Low side switch	420 507
M 14 x 1,5 / 27	82 °C	normally open	8K	Low side switch	420 131
M 14 x 1,5 / 27	86 °C	normally open	1K	Low side switch	420 176
M 14 x 1,5 / 27	87 °C	normally open	1K	Low side switch	420 139
M 14 x 1,5 / 27	92 °C	normally open	1K	Low side switch	420 142
M 14 x 1,5 / 27	96 °C	normally open	1K	Low side switch	420 137
M 14 x 1,5 / 27	120 °C	normally closed	1K	Low side switch	420 399
G 3/8" / 27	5 °C	normally open	5K	High side switch	420 499
G 3/8" / 27	15 °C	normally open	1K	High side switch	420 120
G 3/8" / 27	40 °C	normally open	15K	High side switch	420 199
G 3/8" / 27	50 °C	normally open	1K	High side switch	420 178
G 3/8" / 27	60 °C	normally open	1K	High side switch	420 121
G 3/8" / 27	80 °C	normally open	1K	High side switch	420 179
G 3/8" / 27	80 °C	normally open	15K	High side switch	420 195



Connector bayonet 10SL according to VG 95234

Thread/HEX	Switch point	Function	Hysteresis	Electric potential	Order number
M 14 x 1,5 / 27	0 °C	normally open	4K	Low side switch	420 229
M 14 x 1,5 / 27	0 °C	normally closed	10K	Low side switch	421 084
M 14 x 1,5 / 27	10 °C	normally open	10K	potential free	420 138
M 14 x 1,5 / 27	96 °C	normally open	1K	Low side switch	420 157



Connector DIN EN 175301-803-A

Thread/HEX	Switch point	Function	Hysteresis	Electric potential	Order number
G 1/4" / 27	80 °C	normally closed	10K	High side switch	420 352

