



# SENSORS: Temperature sensors and switches

## **MOTOMETER**

*Display your vision*

### **The following temperature sensors are available**

- Temperature sensor (40 °C – 120 °C)
- Temperature sensor (50 °C – 150 °C)
- Temperature sensor with warning contact (40 °C – 120 °C)
- Temperature switch

### **Temperature sensor**

MOTOMETER temperature sensors have a NTC resistor, that records the temperature of oil, water or air and forwards the measurement result to a temperature display. Brass casings are used, along with a special gel in the sensor housing, for the fast transfer of the detected temperature with little loss.

Operation is possible with 12 Volt or 24 Volt on-board supply system. The temperature range is between 40 °C and 120 °C or between 50°C and 150°C, depending on the type.

In addition to the listed standard temperature sensors, we can also offer you customised solutions.

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# SENSORS: Temperature sensors and switches



## Temperature sensors (40 °C – 120 °C)

The resistance characteristic is identical for all sensors

60 °C	134 Ohm
90 °C	51.2 Ohm
100 °C	38.5 Ohm

Compatible with MOTOMETER temperature displays

641 011 xxxx  
641 012 xxxx

The sensors are also available unearthed.

Thread	Measuring range	Voltage	Installation depth	Connection	Part No.
M10 x 1 K	40 – 120 °C	6 – 24 Volt	10,5mm	A 6,3 x 0,8	642 007 1015
M14 x 1.5	40 – 120 °C	6 – 24 Volt	24 mm	Round connector 4 mm	642 007 1018
M14 x 1.5	40 – 120 °C	6 – 24 Volt	29 mm	Thread M 4	642 007 1001
M14 x 1.5	40 – 120 °C	6 – 24 Volt	29 mm	A 6.3 x 0.8	642 007 1006
M14 x 1.5	40 – 120 °C	6 – 24 Volt	29 mm	A 6.3 x 0.8 unearthed	642 011 1001
M16 x 1.5	40 – 120 °C	6 – 24 Volt	29 mm	A 6.3 x 0.8	642 007 1021
1/2"-14 NPTF	40 – 120 °C	6 – 24 Volt	29 mm	A 6.3 x 0.8	642 007 1009
1/2"-14 NPTF	40 – 120 °C	6 – 24 Volt	29 mm	A 6.3 x 0.8 unearthed	642 011 1004

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## SENSORS: Temperature sensors and switches



### Temperature sensor (50 °C – 150 °C)

The resistance characteristic is identical for all sensors

60 °C 221.2 Ohm

90 °C 83.0 Ohm

120 °C 36.5 Ohm

Compatible with MOTOMETER temperature displays

641 011 xxxx

641 012 xxxx

Thread	Measuring range	Voltage	Installation depth	Connection	Connection characteristic	Part No.
M14 x 1.5	50 – 150 °C	6 – 24 Volt	15 mm	A 6.3 x 0.8	straight	642 009 1002
M14 x 1.5	50 – 150 °C	6 – 24 Volt	30 mm	A 6.3 x 0.8	straight	642 009 1021
M22 x 1.5	50 – 150 °C	6 – 24 Volt	30 mm	A 6.3 x 0.8	straight	642 009 1004
3/8"-18 NPTF	50 – 150 °C	6 – 24 Volt	29 mm	A 6.3 x 0.8	straight	642 009 1034
1/2"-14 NPTF	50 – 150 °C	6 – 24 Volt	30 mm	A 6.3 x 0.8	straight	642 009 1019

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## SENSORS: Temperature sensors and switches



### Temperature sensor with warning contact (40 – 120 °C)

Temperature sensors with a warning contact are used in vehicles and machines to record the temperature of oil, water or air and to forward the measurement result to a temperature display. A warning contact is closed at the same time as a defined temperature is reached.

MOTOMETER temperature sensors with a warning contact have a NTC resistor, a brass casing and a special gel for rapid temperature transfer with little loss.

The pre-tensioned bimetal strips are relaxed when the defined temperature is reached and the contact closes.

Operation is possible with 12 Volt or 24 Volt on-board supply system. The temperature range is between 40 °C and 120 °C, and the switching contact is in the range 80 °C to 118 °C. The switching capacity is 3 W.

The version is grounded.

### The resistance characteristic is identical for all sensors

60 °C 134 Ohm  
90 °C 51.2 Ohm  
100 °C 38.5 Ohm

### Compatible with MOTOMETER temperature displays

641 011 xxxx  
641 012 xxxx

In addition to the listed standard temperature sensors with warning contact, we can also offer you customised solutions.

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Warning contact (+/- 3 °C)	Thread	Measuring range	Connection	Part No.
80 °C	M14 x 1.5	40 – 120 °C	A 6.3 / A 4.8	642 016 1001
90 °C	M14 x 1.5	40 – 120 °C	A 6.3 / A 4.8	642 016 1002
92 °C	M14 x 1.5	40 – 120 °C	A 6.3 / A 4.8	642 016 1003
94 °C	M14 x 1.5	40 – 120 °C	A 6.3 / A 4.8	642 016 1004
95 °C	1/2"-14 NPTF	40 – 120 °C	A 6.3 / A 4.8	642 016 1015
96 °C	M14 x 1.5	40 – 120 °C	A 6.3 / A 4.8	642 016 1005
98 °C	M14 x 1.5	40 – 120 °C	A 6.3 / A 4.8	642 016 1006
100 °C	M14 x 1.5	40 – 120 °C	A 6.3 / A 4.8	642 016 1007
103 °C	M14 x 1.5	40 – 120 °C	A 6.3 / A 4.8	642 016 1008
103 °C	M18 x 1.5	40 – 120 °C	A 6.3 / A 4.8	642 016 1025
103 °C	1/2"-14 NPTF	40 – 120 °C	A 6.3 / A 4.8	642 016 1016
106 °C	M14 x 1.5	40 – 120 °C	A 6.3 / A 4.8	642 016 1009
110 °C	M14 x 1.5	40 – 120 °C	A 6.3 / A 4.8	642 016 1010
115 °C	M14 x 1.5	40 – 120 °C	A 6.3 / A 4.8	642 016 1012
120 °C	M14 x 1.5	50 – 150 °C	A 6.3 / A 4.8	642 040 1001

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# SENSORS: Temperature sensors and switches



## Temperature switch

Temperature switches are used in vehicles and machines to record the temperature of oil, water or air and to close a warning contact when a defined temperature is reached.

The MOTOMETER temperature switches have pre-tensioned bimetal strips. The use of brass casings and a special integrated gel allows fast temperature transmission with little loss. When the respective temperature range is reached, the pre-tensioning is released and the contact is closed with a switching capacity of 3 W or 100 W.

Operation is possible with an onboard 12 Volt or 24 Volt mains. The switching contact closes slowly at temperatures of 35 °C to 220 °C.

MOTOMETER temperature switches are also available mass-free.

In addition to the listed standard temperature switches, we can also offer you customised solutions.

Warning contact	Thread	Voltage	Tolerance	Switching capacity	Connection	Characteristic	Part No.
35 °C	M14 x 1.5	6 – 24 Volt	+/- 3 °C	3 W	A 6.3 x 0.8		610 003 1030
55 °C	M14 x 1.5	6 – 24 Volt	+/- 3 °C	3 W	A 6.3 x 0.8		610 003 1005
70 °C	M14 x 1.5	6 – 24 Volt	+/- 3 °C	3 W	A 6.3 x 0.8		610 003 1007
80 °C	M14 x 1.5	6 – 24 Volt	+/- 3 °C	3 W	A 6.3 x 0.8	short conical thread	610 003 1023
85 °C	M14 x 1.5	6 – 24 Volt	+/- 3 °C	3 W	A 6.3 x 0.8		610 003 1008
90 °C	M14 x 1.5	6 – 24 Volt	+/- 3 °C	3 W	A 6.3 x 0.8		610 003 1009
90 °C	M14 x 1.5	6 – 24 Volt	+/- 3 °C	3 W	AMP plug		610 003 1050
95 °C	M14 x 1.5	6 – 24 Volt	+/- 3 °C	3 W	A 6.3 x 0.8		610 003 1012

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Warning contact	Thread	Voltage	Tolerance	Switching capacity	Connection	Characteristic	Part No.
96 °C	M14 x 1.5	6 – 24 Volt	+/- 3 °C	3 W	A 6.3 x 0.8	unearthed	610 003 1031
100 °C	M14 x 1.5	6 – 24 Volt	+/- 3 °C	3 W	AMP plug		610 003 1051
103 °C	1/2"-14 NPTF	6 – 24 Volt	+/- 3 °C	3 W	A 6.3 x 0.8		610 003 1045
105 °C	M14 x 1.5	6 – 24 Volt	+/- 3 °C	3 W	A 6.3 x 0.8		610 003 1014
130 °C	M14 x 1.5	6 – 24 Volt	+/- 3 °C	3 W	A 6.3 x 0.8		610 003 1019
150 °C	M10 x 1.5	6 – 24 Volt	+/- 5 °C	3 W	M 4		610 010 1004
55 °C	M14 x 1.5	6 – 24 Volt	+/- 3 °C	100 W	A 6.3 x 0.8	unearthed	610 006 1006
On:70 °C	M14 x 1.5	6 – 24 Volt	Off:60 °C	100 W	A 6.3 x 0.8	control switch unearthed	610 004 1006
On:82 °C	M18 x 1.5	6 – 24 Volt	Off:74 °C	100 W	A 6.3 x 0.8	control switch unearthed	610 004 1004
On:92 °C	M18 x 1.5	6 – 24 Volt	Off:85 °C	100 W	A 6.3 x 0.8	control switch unearthed	610 004 1007
On:86 °C	M22 x 1.5	6 – 24 Volt	Off:81 °C	100 W	A 6.3 x 0.8	control switch unearthed	610 004 1010
100 °C	M14 x 1.5	6 – 24 Volt	+/- 3 °C	100 W	A 6.3 x 0.8	unearthed	610 006 1002

All data subject to technical changes.

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