Other Sensors

- Temperature sensors

- Float Switches

- Normally Closed

- Normally Open

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- Level Sensors

- Differential Configurable

Other Sensors

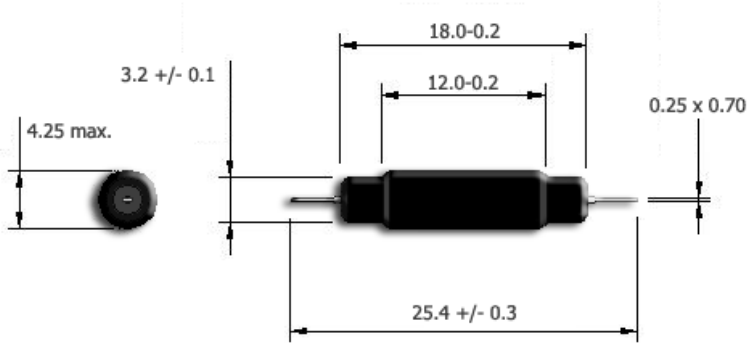
Contents

Unlike bi-metallic strips, the switching point of thermal reed switches is unaffected by the load current and the switching temperature is highly repeatable, ±1°C to ±3°C depending on the type, and minimum loads can be as low as 10 micro-amps. Built using reed switches, which are hermetically sealed with an inert gas and free from atmospheric impurities, and then molded or encapsulated, they can safely be used to sense temperature changes in solids, semi-solids, liquids, or gases.

	**TRS-M Thermal Reed Switch** Normally closed (NC), cut out temperatures available from 20°C to 150°C, differential of 10°C max, 10W switching capability.
	**TRS-W Thermal Reed Sensor** Normally closed (NC), cut out temperatures available from 20°C to 150°C, differential of 10°C max, 10W switching capability.
	**TRS-P High Power Thermal Reed Sensor** Thermal reed sensor in Aluminium housing for harsh industrial applications, normally closed (NC), cut out temperatures available from 20°C to 150°C, differential of 10°C max, 30W AC line voltage switching capability.
	**FS-V Float Switch for Vertical Mounting** Normally open (NO) and normally closed (NC) contacts, capable of switching loads of up to 60 W line voltage, shielded cables available on request, configurable cable lengths and connectors.
	**FS-H Float Switch for Horizontal Mounting** Normally open (NO) contacts, capable of switching loads of up to 60 W line voltage, shielded cables available on request, configurable cable lengths and connectors.
	**Restriction of Hazardous Substances** All reed switches are SGS certified for the RoHS compliant levels of Lead, Mercury, Cadmium and Hexalent Chromium.

TRS-M Thermal Reed Switch

Ultra-miniature, Normally closed contact, 10 W



All dimensions in mm

- Switching range available from 25°C to 130°C with +/- 3°C tolerance
- Does not require external power for operation
- Normally closed (NC) contact
- For low level 10W loads
- Temperature differential of 10°C max
- Lead (Pb) free and RoHS compliant

Applications

This thermal reed sensor is suitable for use in the following applications and in many others: overheat protection of power electronics, deep freezers, coolers, and aquariums, automobile climate control...

Specification

Temperature tolerance	°C	±3
Contact Form		B
Contact Rating (max)	W / VA	10.0
Switching Current (max)	A	0.5
Carry Current (max)	A	1.0
Switching Voltage (max)	V_{DC}	180
Switching Voltage (max)	V_{AC}	130
Breakdown Voltage (min)	V_{DC}	200
Initial Contact Resistance (max)	mΩ	150
Operating Temperature	°C	-20 to (cut-out + 20)
Shock Resistance (½Sin wave for 11ms)	g	30
Vibration Resistance (10-2000Hz)	g	20

Ordering Code

TRS-M-(Cut out temperature in °C)

Cut Out Temperature
25°C to 130°C

Example

TRS-M-50
Normally closed thermal reed switch with a release temperature of 50°C.

Due to continual improvement, specifications are subject to change without notice

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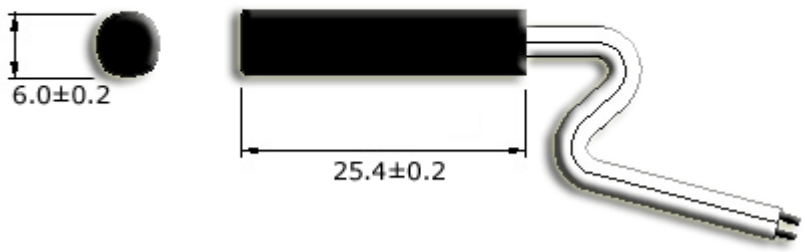
TRS-W Thermal Reed Sensor

Normally closed contact, 10 W



All dimensions in mm

- Switching range available from 25°C to 130°C with +/- 3°C tolerance
- Does not require external power for operation
- Normally closed (NC) contact
- Temperature differential of 10°C max
- Lead (Pb) free and RoHS compliant

Applications

This thermal reed sensor is suitable for use in the following applications and in many others: overheat protection of power electronics, instant water heaters, deep freezers, coolers…

Specification

Temperature tolerance	°C	±3
Contact Form		B
Contact Rating (max)	W / VA	10.0
Switching Current (max)	A	0.5
Carry Current (max)	A	1.0
Switching Voltage (max)	V_{DC}	180
Switching Voltage (max)	V_{AC}	130
Breakdown Voltage (min)	V_{DC}	200
Initial Contact Resistance (max)	mΩ	150
Operating Temperature	°C	-20 to (cut-out + 20)
Shock Resistance (½Sin wave for 11ms)	g	30
Vibration Resistance (10-2000Hz)	g	20

Ordering Code

TRS-W-(Cut out temperature in °C)-(Cable length in mm)-(Lead type)

Cut Out Temperature	Lead Type
25°C to 130°C	S. Stripped to 5 mm
	T. Stripped to 5 mm and Tinned
	M. Molex Connector

Example

TRS-W-50-500-M

TRS-W denotes a release of 50°C, having a 500 mm cable length and Molex connectors.

Due to continual improvement, specifications are subject to change without notice

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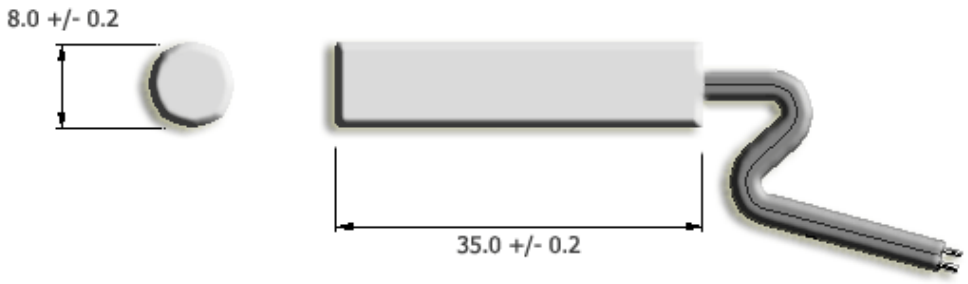
TRS-P High Power Thermal Reed Sensor

Normally closed contact, 30 W Line Voltage



All dimensions in mm

- Sensing range available from 25°C to 130°C with +/- 3°C tolerance
- Normally closed (NC) contact
- For 30W AC line voltage loads
- Temperature differential of 10°C max
- Lead (Pb) free and RoHS compliant

Applications

This thermal reed sensor is suitable for use in the following applications and in many others: rice cookers, radiator and engine temperature...

Specification

Temperature tolerance	°C	±3
Contact Form		B
Contact Rating (max)	W / VA	30.0
Switching Current (max)	A	1.0
Carry Current (max)	A	2.0
Switching Voltage (max)	V_{DC}	230
Switching Voltage (max)	V_{AC}	230
Breakdown Voltage (min)	V_{DC}	350
Initial Contact Resistance (max)	mΩ	150
Operating Temperature	°C	-20 to (cut-out + 20)
Shock Resistance (½Sin wave for 11ms)	g	50
Vibration Resistance (10-2000Hz)	g	20

Ordering Code

TRS-P-(Cut out temperature in °C)-(Cable length in mm)-(Lead type)

Cut Out Temperature	Lead Type
25°C to 130°C	S. Stripped to 5 mm
	T. Stripped to 5 mm and Tinned
	M. Molex Connector

Example

TRS-P-50-500-M

TRS-P denotes a release of 50°C, having a 500 mm cable length and Molex connectors.

Due to continual improvement, specifications are subject to change without notice

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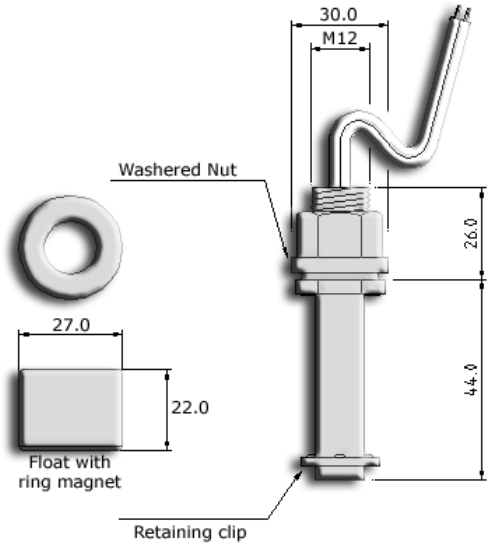
FS-V Float Switch for Vertical Mounting

For use with non-corrosive liquids, 30W



All dimensions in mm

- Normally open (NO) and normally closed (NC) contact available
- Different on and off levels available
- Does not require power for operation
- Various types of leads and connectors available
- Contact rating of up to 30W
- Lead (Pb) free and RoHS compliant

Applications

This magnet sensor is suitable for use in the following applications and in many others: domestic coffee machines, automatic pump control...

Specification

Contact Form		A / B
Contact Rating (max)	W / VA	30
Switching Current (max)	A	0.5
Carry Current (max)	A	2.5
Switching Voltage (max)	$V_{DC / AC}$	230
Breakdown Voltage (min)	V_{DC}	350
Initial Contact Resistance (max)	mΩ	200
Operating Temperature	°C	-40 to +70
Shock Resistance (½Sin wave for 11ms)	g	50
Vibration Resistance (10-2000Hz)	g	20

Ordering Code

FS-V-(Contact Type)-(Cable Length in mm)-(Lead Type)

Contact Type	Lead Type
NO. Normally Open when float is near retaining clip	S. Stripped to 5 mm
NC. Normally Closed when float is near retaining clip	T. Stripped to 5 mm and Tinned
	M. Molex Connector

Example

FS-V-NO-500-M

Denotes normally open FS-V Float Switch with 500 mm cable length and Molex connectors.

Due to continual improvement, specifications are subject to change without notice

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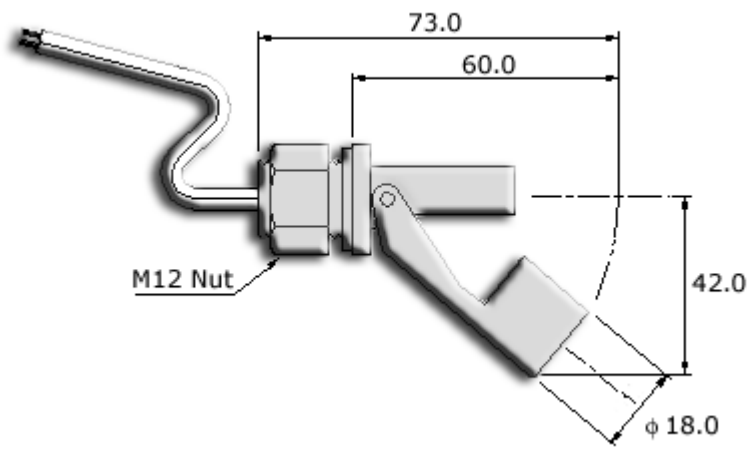
FS-H Float Switch for Horizontal Mounting

For use with non-corrosive liquids, 30W



All dimensions in mm

- Normally open (NO) contact
- Different on and off levels angles
- Does not require power for operation
- Various types of leads and connectors available
- Contact rating of up to 30W
- Lead (Pb) free and RoHS compliant

Applications

This magnet sensor is suitable for use in the following applications and in many others: domestic coffee machines, automatic pump control...

Specification

Contact Form		A
Contact Rating (max)	W / VA	30
Switching Current (max)	A	0.5
Carry Current (max)	A	2.5
Switching Voltage (max)	$V_{DC / AC}$	230
Breakdown Voltage (min)	V_{DC}	350
Initial Contact Resistance (max)	mΩ	150
Operating Temperature	°C	-40 to +70
Shock Resistance (½Sin wave for 11ms)	g	50
Vibration Resistance (10-2000Hz)	g	20

Ordering Code

FS-H-(Cable Length in mm)-(Lead Type)

Lead Type
S. Stripped to 5 mm
T. Stripped to 5 mm and Tinned
M. Molex Connector

Example

FS-H-500-M

Denotes normally open FS-H Float switch with 500 mm cable length and Molex connectors.

Due to continual improvement, specifications are subject to change without notice

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Restriction of Hazardous Substances

RoHS Compliance

In late 2002 the European Parliament approved two directives related to the reduction of electrical and electronic waste, namely the Waste Electrical and Electronic Equipment (WEEE) and Restriction of the use of certain Hazardous Substances (RoHS) Directives. The WEEE Directive aims to regulate the reuse, recycling and recovery of waste electrical and electronic equipment; the ultimate goal is to prevent the disposal of this waste.

In the RoHS Directive, the use of the aforementioned substances in most electrical and electronic equipment will be banned or severely restricted. The RoHS Directive calls for the elimination of these substances from most electronic equipment starting 1 July 2006. Our products are SGS certified for the RoHS compliant levels of Lead, Mercury, Cadmium and Hexalent Chromium.

End-of-Life Vehicle (ELV)

End-of-Life Vehicle (ELV) regulations set limits for the following substances:
Lead
Mercury
Cadmium
Hexavalent Chromium

Restriction of Hazardous Substances (RoHS)

The Reduction of Hazardous Substances (RoHS) regulations set limits for the following substances:
Lead
Mercury
Cadmium
Hexavalent Chromium
Polybrominated Biphenyls (PBB)
Polybrominated Diphenyl Ethers (PBDE)

To certify to the above compliances, these substances must not be intentionally added to the product AND cannot exceed the following maximum allowable levels as a trace substance:

0.1% (1,000 ppm) for: Lead*, Mercury, Hexavalent Chromium, PBB and PBDE
0.0075% (75 ppm) for: Cadmium

*Lead as an alloying element in copper alloys is allowed up to 4.0% (40,000 ppm); in steel up to 0.35% (3,500 ppm) is allowed; in aluminum alloys up to 0.40% (4,000 ppm) is allowed. These requirements must be applied at the homogeneous material level. Since RoHS compliance is a stricter standard than ELV compliance, parts that are RoHS compliant are also ELV compliant.

RRE **Reed Relays and Electronics India Limited • info@reed-switch.com • Tel 91-44-6528-4022**

Usage Notes

Do's and Don'ts

Thermal Reed switches are delicate products. Handle with extra care.

Cropping and forming of terminals will change the cut in and cut out temperatures.

Do's

When switching inductive or capacitive loads, use contact protection circuits.

When mounting near motors or other appliances which generate a magnetic field, use magnetic shielding.

Don'ts

Do not use Ferro-magnetic mounting parts, screws, or other Ferro-magnetic devices nearby. This will alter the switching temperature.

When manual soldering, do not subject to more than a 5 second dwell. This may cause damage to the seals, change switching temperature, and reduce solderability.

Do not drop. Dropping or subjection to shock will permanently damage the contact or alter the switching temperature.

Switching voltage, switching current and contact rating should not exceed maximum limits stated in specification sheets.

Do contact us for more information

Reed Relays and Electronics India Limited • info@reed-switch.com • Tel 91-44-6528-4022