High Temperature Capacitive

FEATURES:

- Sensor temperature range –200 to +250° C (-382 to +482° F)
- Operating distance of 5 or 15mm
- Sensitivity adjustment
- Stainless steel sensor housing
- 18 and 30mm diameters
- Sensor protection degree IP68: dust tight and protection against submersion

APPLICATIONS:

Typical applications include the level control of hot materials such as liquids, oils, powder and plastic granules. These sensors can also be used to sense solid metallic and non-metallic bodies positioned in areas of high temperature.

DESCRIPTION:

These high temperature sensors have an amplifier completely separate from the sensor. This allows the sensor to withstand temperatures from –200 to +250°C (-382 to +482°F). The sensors are available in 18mm and 30mm diameters, made of stainless steel and PTFE. Each sensor's operating distance is adjustable. This sensitivity regulation is useful in applications such as detection of full containers and non-detection of empty containers.

OPERATING PRINCIPLE:

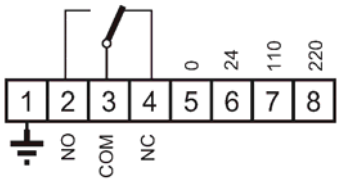
Capacitive proximity sensors use an oscillating field that can sense conductive and non-conductive materials (metals, liquids, glass, plastic, wood, paper and rubber). When an object enters this field, an electronic circuit begins to oscillate. The rise or fall of the oscillation is identified by a threshold circuit that drives an amplifier for the operation of an external load. The operating distance of the sensor depends on the target's shape and size and is strictly linked to the nature of the material (Table 1).

SPECIFICATIONS:

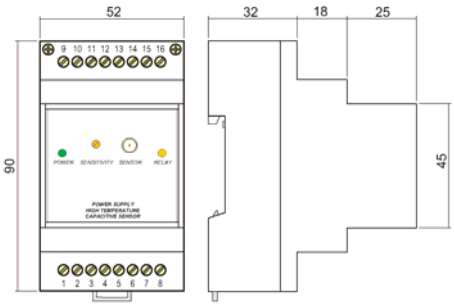
Sensor Model	**S3620** M18 x 1	**S3621** M18 x 1, 5m cable	**S3622** M30 x 1.5	**S3623** M30 x 1.5, 5m cable
Operating distance	5mm		15mm	
Temperature range	-200 to +250 °C (-382 to +482° F)			
Degree of protection	IP68			
Housing	Housing and nuts Stainless steel AISI 303, Sensing part in PTFE			
Flush mounting	No			
Output connection	L=2m w/ plug connector	L=5m w/ plug connector	L=2m w/ plug connector	L=5m w/ plug connector

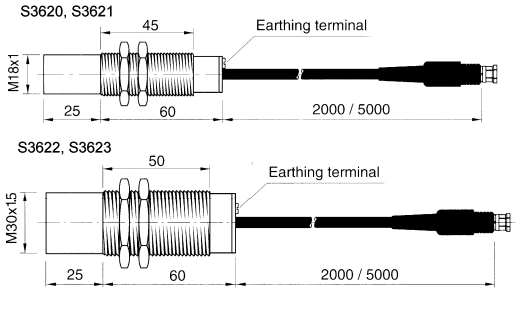
Amplifier Model	**S3624D**	**S3625D**
Number of sensors	**1**	
Power supply	24 Vac 50-60 Hz	110/220 Vac 50-60 Hz
Absorption	3 VA	
Indicators	1 Yellow LED - Operation, 1 Green LED - Power	
Temperature range	-20 to +60 °C (-4 to +140 °F)	
Output relay	1 relay - changeover, 5A @ 220Vac	
Housing	Plastic	
Degree of protection	IP20	
Sensitivity adjustment	Incorporated	

WIRING



DIMENSIONS (mm) 1mm = .03937"





INSTALLATION INSTRUCTIONS: If the material to be controlled is in a metallic container, the container and terminal 1 of the amplifier must be grounded. If the container is non-metallic, connect terminal 1 of the amplifier and the earthing terminal on sensor body to ground. The connection wire between the sensor and the amplifier must be separated from the power supply.

SENSITIVITY ADJUSTMENT: Trimmer. A clockwise rotation increases sensitivity while counter-clockwise rotation decreases sensitivity. It is advisable to adjust sensitivity with the sensor placed in its working position and with sensing side covered by the material to be detected by approx. 70% of its surface. Connect the sensor and adjust:

- If the LED is relay is NO turn the trimmer counter–clockwise until the LED goes OFF. Then turn the trimmer clockwise until the LED relay goes ON.
- If the LED is OFF turn the trimmer clockwise until the LED goes ON.

Small adjustments may be need in order to obtain the desired performance