



Temperature controller SMX-T80

Overview

This electronic automaton monitors the temperature of the controlled system and uses its communications modem to send SMS messages notifying about any important deviations detected on the measured value.

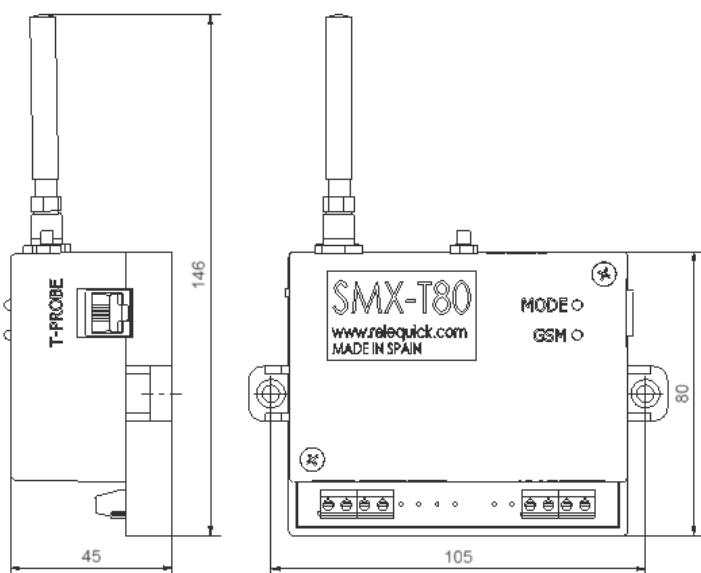
Uses and applications

This device is useful within systems that need real-time monitoring of the temperature or temperature control in general. The following are among the most common applications:

- Cold stores and food stores in general
- Refrigerated containers
- Freezing cabinets
- Ice cream freezers
- Refrigerated showcases
- Storerooms and cellars
- Server rooms



Product overview



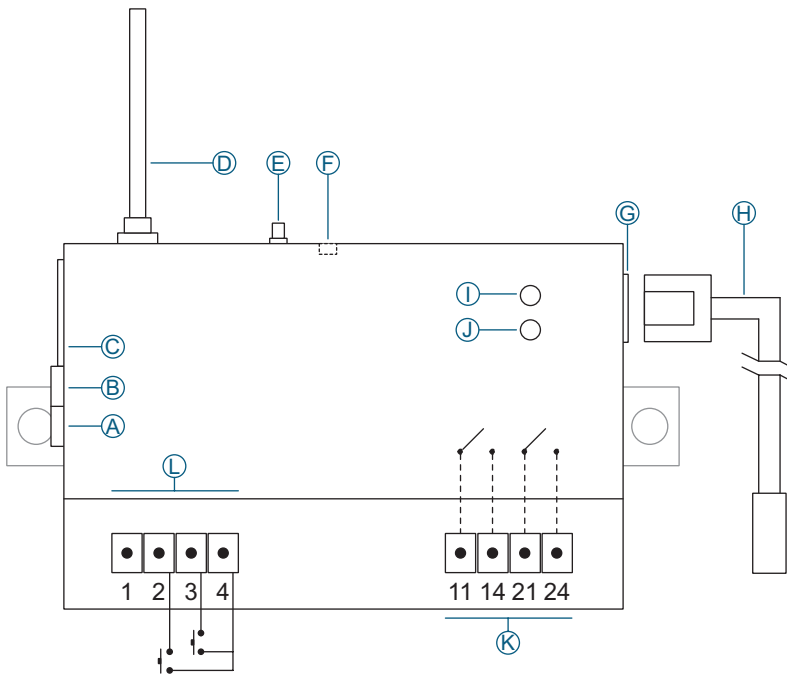
Features

- » Configurable per SMS or with a mobile application. A password protects the system against unauthorized access.
- » Information reforwarding without further configuration.
- » Temperature window alarm with 3 modes of alarm reset
 - Forced mode: keeps fixed the last fired alarm.
 - Timed mode: avoids a large number of alarm messages.
 - Automatic mode: resets the alarm when the temperature is back within the valid range.
- » Light indicator of fired temperature alarm.
- » Supply failure alarm (when using rechargeable battery). A delay can be programmed so that the alarm does not fire immediately.
- » Temperature probe failure alarm.
- » Adjustable thermostat hysteresis. Heat & cold mode possible.
- » Two switch-inputs for the manual control of the relays.
- » Built-in programmable switches to reset the alarms and the system memory. A system memory reset restores default values, such as the default access password.
- » CE and RoHS compliant.

Specifications

Connectivity	Communications standard	GSM - 4 bands (850 / 900 / 1,800 / 1,900 MHz)
	Phone connection capacity	Up to 6 alarm destinations with failure-retry mechanism
	Communications core	GSM SIEMENS - Centurion 4 bands
	Antenna	Antenna included
Temperature probe	External - Measuring range: -25° C to 85° C (lower temperatures at request)	
Supply	Batteries	Connector for lead batteries with charger
	Power supply	50 Hz (optional 60 Hz) ± 3 Hz
Mounting	Optional accessory for DIN-rail mounting	
Output	Relays	2 relays (5A SPDT) for the remotely controlled thermostat and alarm
	Outgoing supply	12 V output, for small devices (70mA consumption)

Connection diagram



- A) Power supply input. If no batteries are used the device supports power supply units of up to 28 VDC and 4 W.
- B) Backup lead battery connector.
- C) SIM card socket. It supports cards of any operator.
- D) GSM antenna connector.
- E) Configurable alarm reset switch.
- F) Internal memory reset switch.
- G) Digital temperature sensor connector.
- H) 2 to 3-meter-long temperature probe. One end has an RJ11 connector to plug the probe into the device; the second end is the temperature sensor, with a measuring range of -25° C to 80° C (lower temperatures at request).
- I) Status indicator:
 - Irregular yellow blink: system startup.
 - Fixed yellow light: system running, no alarms.
 - Green blink: minimum temperature alarm fired.
 - Red blink: maximum temperature alarm fired.
 - Regular yellow blink: customizable standby.
- J) GSM connection indicator.
- K) Relay terminals:
 - 21 - 24: first relay or thermostat.
 - 11 - 14: second relay or siren.

- L) Terminals for the connection of external switches to control the relays:
 - Terminal 1: VCC (not protected against short-circuits).
 - Terminal 4: GND.
 - Switch 2, 4: controls the second relay.
 - Switch 3, 4: controls the first relay.

Precautions for a correct use

Do not use the device outdoors or in very humid places.
 If you are working at 220 V install the device in a suitable box.
 Do not extract the SIM card while the system is working.
 Do not apply any tension to the external switches nor to VCC.
 VCC terminals are not protected against short-circuits.
 Inappropriate use or connections could lead to permanent damage of the device.

Do not install the module within metal boxes or in that case use external antennas.

If a backup battery is used charge it for 48 hours before connecting it to the device.

If a prepaid SIM card is used it must have credit left on it for the SMS system to work.

Do not apply the temperature probe directly to fluids or in environments with a high level of condensation. Use a probe sheath instead.