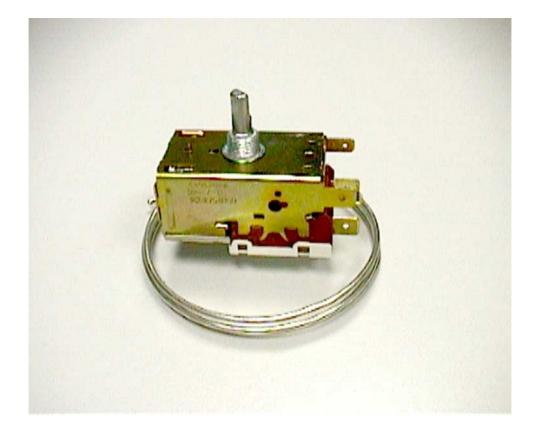
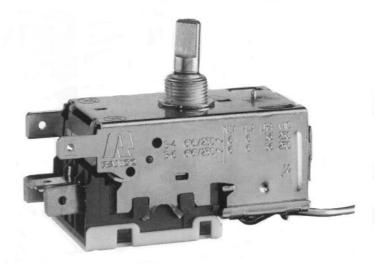
# RANGO K59 Thermostats





## Temperature control with SPST switch and auxiliary switch for OFF position. Automatic defrost function by constant cut-in value



#### Terminal 3-4 closes at temperature rise Terminal 3-6 opens in OFF position (version C without auxiliary terminal 6)

Closing with rising temperature and auxiliary switch (terminal 3-6) connected in series with the main switch breaks the current circuit as soon as the temperature control is set to OFF position.

The main feature of the temperature control K59 is the cut-out point adjustable via the dial shaft and the cut-in point remaining constant in all positions. As this cut-in point normally is in the positive range, automatic defrost-ing is initiated during each compressor stop period.

In general type K59 is classified into 3 basic versions:

Version A: as desbribed above

Version B: as desbribed above, but with so-called bellows heater. This is a metal film resistor (82 k $\Omega$ ) connected in paralle to the main switch, which when the main switch is open (compressor stop period), heats the control housing and bellows (diaphragm) of the capillary system. By this the X-ambient effect (crossing of ambient temperature) is avoied in the compressor stop period, i.e. defrost period of the evaporator. Heating of the bellows ensures that the defrost sensing point at the evaporator is the coldest point of the capillary system. Perfect function of the temperature control is guaranteed.

Version C: without bellows heater and without auxiliary switch for cut-out.

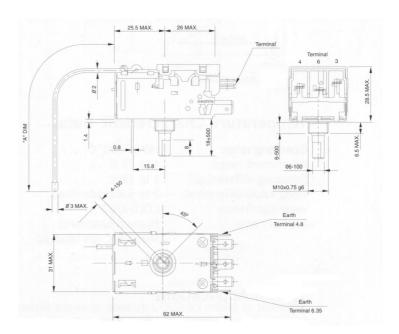
There is a possibility to choose between the type with wnd that without OFF position. OFF position here means manual opening of the main switch 3-4 within a dial angle of 45° and at the same time mechanical locking.

**Rating at 250 V, 50 Hz** 3-4: 6(6)A 3-6: 6(6)A

#### **Dimensions/Connections**

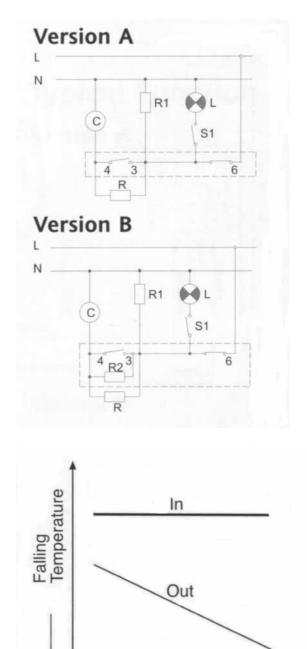
Control shown in position COLD according to standard type, other dial shaft positions on request.

For the type equipped with terminals 6,35 mm the external terminals are turned by 90° with respect to the a.m. figure.



### Typical Electrical Wiring Diagram

- 3-4 = main switch closes on temp rise
- 3-6 = aux switch opens in OFF position
- C = compressor
- L = lamp
- R = defrost heater
- R1 = collar heater
- R2 = heating resistor internal (82 k $\Omega$ )
- S1 = door switch



Warm

Cold

Adjustable Range

**Typical Function Chart** 

#### **Temperature Characteristic Data**

Operating range: -32 to 6 °C Adjustment range: 4 to 18 K Constant cut-in value: 2 to 8 K Capillary type: Shape A (standard) Shape B/C (on request)

**Typical Applications** Refrigerators

#### DISCLAIMER

This manual and its contents remain the sole property of Invensys, and shall not be reproduced or distributed without authorization. Although great care has been exercised in the preparation of this document, Invensys, its employees or its vendors, cannot accept any liability whatsoever connected with its use. Invensys reserves the right to make any changes or improvements without prior notice.



#### **Invensys Appliance and Climate Control Systems Europe**

#### HEADQUARTERS

Europa 3 - Parc d'Affaires International 74160 Archamps FRANCE tel. 0033.(0)450.820.813 fax. 0033.(0)450.820.831

#### PRODUCTION PLANT

Invensys Controls Italy s.r.l. Via del Seprio, 42 22074 Lomazzo (CO) ITALY tel. 0039.02.96768.1 fax. 0039.02.96768.250