
Series 270XT(AN) Freeze Protection Thermostats

These controls are designed for protection against freeze-up of hydronic heating coils, cooling coils and similar application.

Sensing element is 3 or 6 meters long to permit attaching across the surface of a coil to guard against freezing at any point.

When any 30 cm or more of this element senses a temperature as low as the control setpoint, it will "switch off".

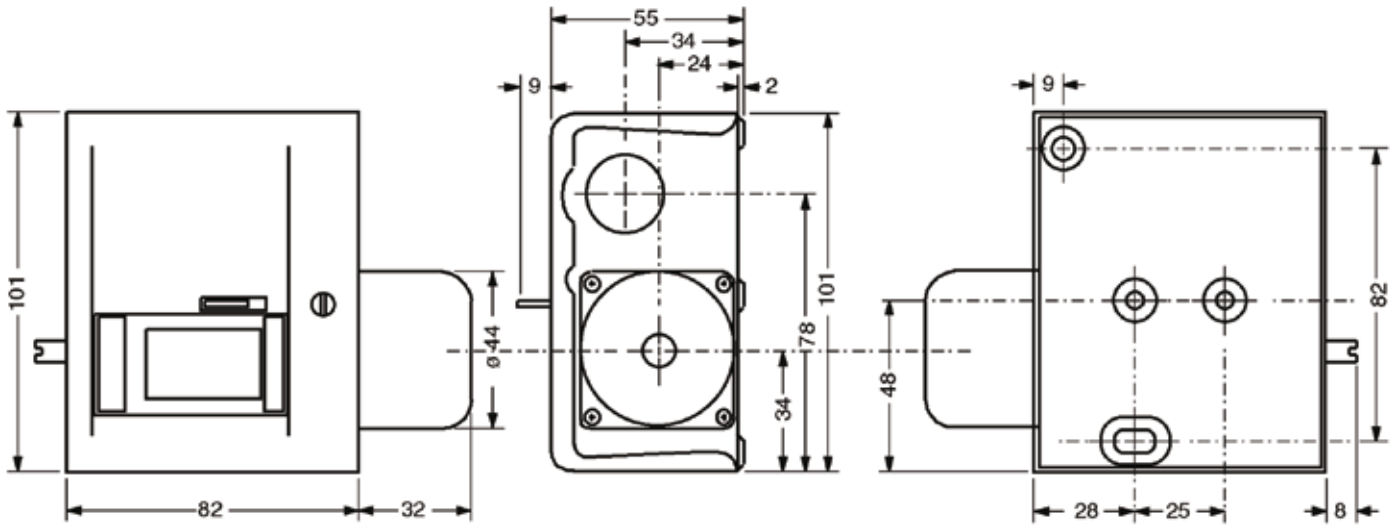
A special version is available with bulb and 2 m capillary, range -24/+18 °C for clamp-on or immersion purposes.

SPDT change over contacts permit the use of an alarm signal.

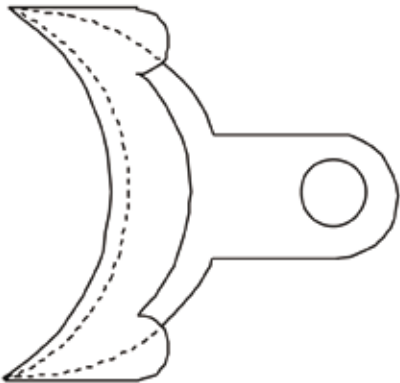


- **Dust tight Pennswitch**
Prevent pollution of the contacts by electrostatic influences
- **SPDT contacts**
Change-over contacts permits the use of an alarm signal
- **270XTAN provided with trip-free manual reset**
Safety lock-out, override is not possible in the control function
- **Controls have adjustable range**
Suitable for several applications

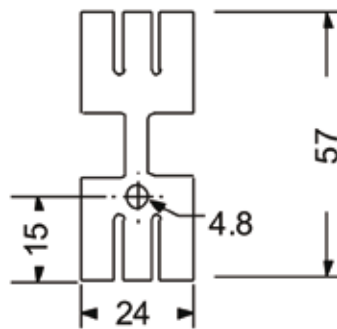
Dimensions in mm



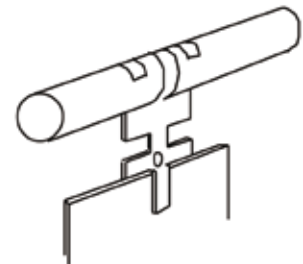
Optional accessories (for 270XT and 270XTAN, with "wrap-around" cap)



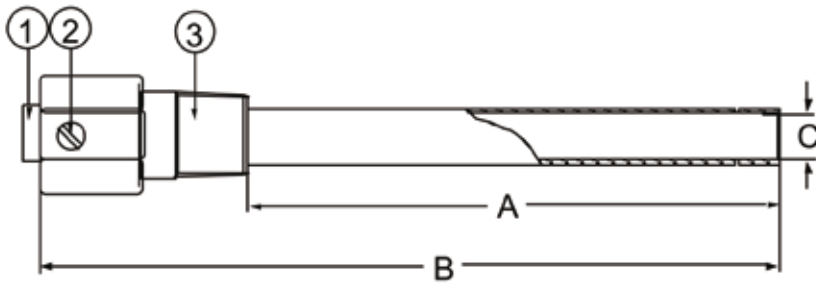
Bracket



Mounting clip



Optional accessories (for 270XT and 270XTAN with 2 m capillary and bulb)

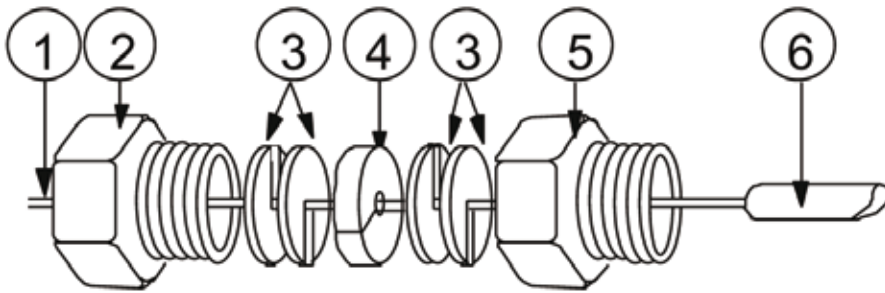


Bulb well

- 1. Bushing
- 2. Set screw
- 3. Adapter, 1/2" - 14 NPT

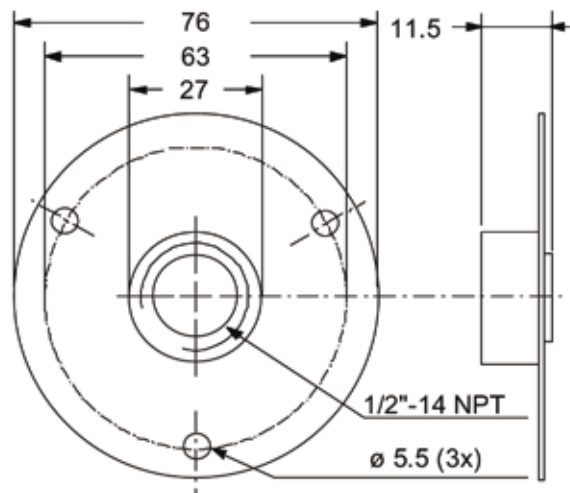
Dimensions

A	B	C internal
125 mm	171 mm	10 mm



Closed-tank-connector

- 1. Style 1b bulb support tube
- 2. Packing nut
- 3. Washer
- 4. Packing
- 5. Adapter, 1/2 " - 14 NPT
- 6. Bulb



Duct flange

Mounting

The control can be wall mounted either by using two screws through the holes in the back of the case or using the standard mounting bracket.

The control must be mounted in that position where the sensing element is downside the control.



These controls are designed for use only as operating controls. Where an operating control failure would result in personal injury or loss of property it is the responsibility of the installer to add devices or systems that protect against, or warn of, control failure.



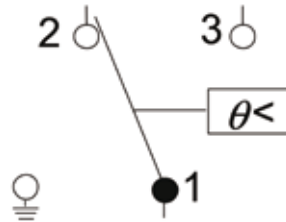
The control should be installed where the ambient temperature surrounding the case and bellows is always higher than the control setting. If the ambient temperature around the enclosure drops below the control setting the bellows rather than the sensing element will operate the control.

Adjustment

The controls have a field adjustable setting and a fixed differential.

A low limit stop, factory setting at 3 °C can be supplied at additional cost for quantity orders only.

Contact functions



1-2 open on temperature decrease

Repair and replacement

Repair is not possible. In case of an improperly functioning control, please check with your nearest supplier.

When contacting the supplier for a replacement you should state the type/model number of the control. This number can be found on the data plate or cover label.

Type number selection table

Order number	Range °C	Diff. °C	Bulb and capillary	Bulb well no (not incl.)	Sensing element	Max. bulb temp. °C
270XT-95078	-10 to +12	3 fixed	3 m cap. style 9**	-	3.2 mm x 3 m	200
270XTAN-95088	-10 to +12	manual reset	3 m cap. style 9**	-	3.2 mm x 3 m	200
270XT-95008	-10 to +12	3 fixed	6 m cap. style 9**	-	3.2 mm x 6 m	200
270XTAN-95008	-10 to +12	manual reset	6 m cap. style 9**	-	3.2 mm x 6 m	200
270XT-95068	-24 to +18	4 fixed	2 m cap. style 1*	WEL14A602R	9.5 x 77 mm bulb and 2 m cap.	120
270XTAN-95048	-24 to +18	manual reset	2 m cap. style 1*	WEL14A602R	9.5 x 77 mm bulb and 2 m cap.	120

* With 7.5 cm bulb support to apply packing nut FTG13A-600 for direct immersion applications.

** With 6 m "wrap-around" capillary, when any 30 cm or more of this element senses a temperature as low as the cut-out point, the contact will open.

Accessories Ordering Codes

KIT012N600	Bracket (6 pcs)
T-275-101	Mounting clip
WEL14A602R	Bulb well
FTG13A-600R	Closed-tank-connector
T-752-1001	Duct flange

Technical Specifications

Product type	270XT / 270XTAN	
Operating range	-24 to + 18 °C (refer to type number selection table)	
Differential	Fixed (refer to type number selection table)	
Range adjustment	Screwdriver, external scale	
Electrical rating	~15(8)A, 230V	
Contact function	SPDT	
Max. ambient temperature	55 °C <i>Note: The operating ambient temperature of the control should always be higher than the sensing element temperature</i>	
Material	<ul style="list-style-type: none"> - Case Galvanized steel - Cover Grey coloured galvanized steel 	
Enclosure (protection class)	IP30	
Dimensions (HxWxD)	82 x 101 x 53 mm (excl. bellows)	
Shipping weight	Individual pack standard	
	Ind. pack	270XT-95078/270XTAN-95088 1.00 Kg 270XT-95008/270XTAN-95008 1.15 Kg 270XT-95068/270XTAN-95048 0.9 Kg
	Overpack	270XT-95078/270XTAN-95088 13 Kg (13 pcs.) 270XT-95008/270XTAN-95008 15 Kg (13 pcs.) 270XT-95068/270XTAN-95048 12 Kg (13 pcs.)
CE Compliance	Johnson Controls, Inc., declares that these products are in compliance with the essential requirements and other relevant provisions of the EMC Directive 2004/108/EC and Low Voltage Directive 2006/95/EC.	

The performance specifications are nominal and conform to acceptable industry standards. For applications at conditions beyond these specifications, consult the local Johnson Controls office or representative. Johnson Controls shall not be liable for damages resulting from misapplication or misuse of its products.



Building Efficiency

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