A25 Series
Manual Reset Limit Controls

Application

A25 warm air limit controls "lockout" on a temperature increase to the control set point. Manual reset is required to reclose the electrical circuit.

The controls are normally located in return air, supply air or plenum and are designed to shut down fans, burners or operate dampers, when the temperature of the air becomes higher than the control setting.

A typical application is to stop air conditioning or ventilating fans in the event of excessive return air temperature, as from a fire. The use of these controls with the standard stop setting of 125°F (52°C) conforms to NFPA No. 90A-1981.

A25 controls may be used as a high limit control in the supply air duct or plenum where a "lockout" type control is desired or required by local code.

Factory Mutual approved models have a concealed setting with a visible scale. (See Fig. 1.)

Features

- Trip-free reset lever. Contacts cannot be blocked in a closed position.
- Pilot duty electrical rating for up to 600 volts allows direct control of high voltage motor starters, etc.

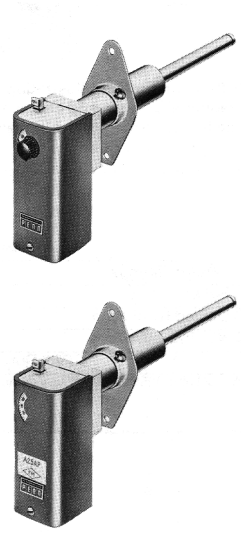


Fig. 1 -- A25 Manual Reset Limit Control. (Top) A25AN, A25CN, (Bottom) A25AP, A25CP.

Specifications

Product	**A25AN-1**	SPST, Opens on Temperature Rise, Range Knob Adjustment
	A25AP-1	SPST, Opens on Temperature Rise, Concealed Screwdriver Adjustment, Factory Mutual Approved
	A25CN-1	SPDT, Range Knob Adjustment
	A25CP-1	SPDT, Concealed Screwdriver Adjustment, Factory Mutual Approved
Range		25 to 215°F (–4 to 102°C)
Ambient Temperature (Maximum)	**Case**	104°F (40°C)
	Element	300°F (149°C)
Conduit Opening		7/8" (22 mm) Diameter Hole for 1/2" Conduit
Switch		Snap-Acting Contacts in Dust Protected Enclosure
Finish		Gray Baked Enamel
High Limit Dial Stop		Factory Set at 125°F (52°C), May be Field Adjusted
Material	**Case**	.063" (1.6 mm) Cold Rolled Steel
	Cover	.025" (0.64 mm) Cold Rolled Steel
Mounting		Flange for Flat Surface
Reset		Positive, Trip-Free Reset Mechanism, Control Can Be Reset When Temperature Drops 20F° (11C°) Below Dial Setting
Sensing Element		Rod and Tube Construction
Shipping Weight	**Individual Pack**	1.8 lb (0.8 kg)
	Overpack of 12 Units	23 lb (10.4 kg)
Wiring Connections		Screw Type Terminals

- Enclosed, dust protected switch. SPDT models have an auxiliary contact for operation of a warning light or audible alarm of the same voltage as the control circuit.
- Rod and tube sensing element gives maximum response, allows high maximum element temperature and reduces the probability of dirt build-up on the element.
- Adjustable duct mounting flange allows for duct insulation and/or various element insertion depths into the airstream.
- Wide temperature range allows use of control on many applications. Variable high limit stop may be job set by installer where 125°F (52°C) limit is not required.

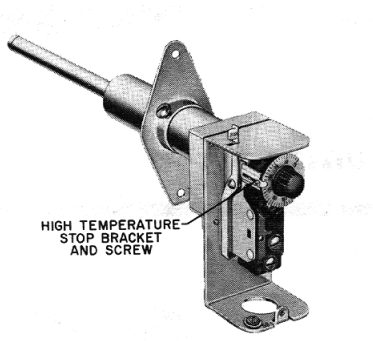


Fig. 2 -- Interior view illustrating high temperature stop and enclosed switch. Note generous wiring space provided.

General Description

A rod and tube type sensing element actuates the switch contacts. Main contacts are normally closed and open when the temperature at the element rises to the dial set point. Contacts are reclosed only by operation of the reset lever. The reset lever is "trip-free" and cannot be used to block contacts in a closed position.

The contacts on the SPDT models are color coded: main contacts (Red to Blue) open on temperature rise, auxiliary contacts (Red to Yellow) close on temperature rise.

Repairs and Replacement

Field repairs must not be made. For a replacement control, contact the nearest Johnson Controls wholesaler.

Ordering Information

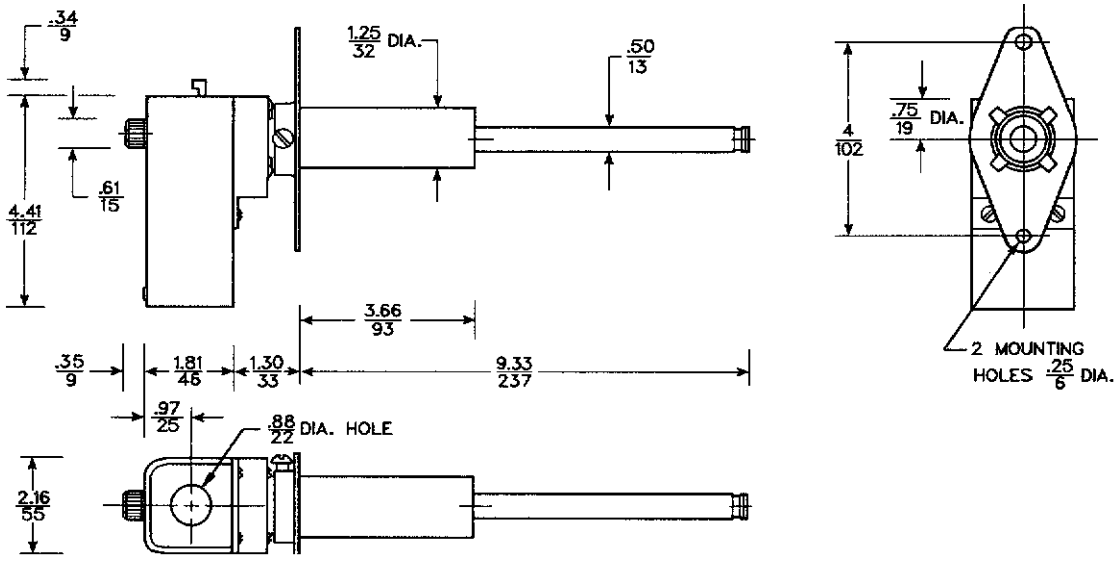
To order, specify:

1. Product Number.
2. Limit stop setting required. Limit setting is set at 125°F (52°C), unless otherwise specified.

Electrical Ratings

Motor Ratings	120V	208V	240V	277V
AC Full Load Amp	16.0	9.2	8.0	—
AC Locked Rotor Amp	96.0	55.2	48.0	—
AC Non-Inductive Amp	16.0	16.0	16.0	16.0
Pilot Duty — 125 VA, at 24/600 VAC				

On A25CN and A25CP the auxiliary contact (Red to Yellow) has pilot duty rating only.



Performance specifications appearing herein are nominal and are subject to accepted manufacturing tolerances and application variables.

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