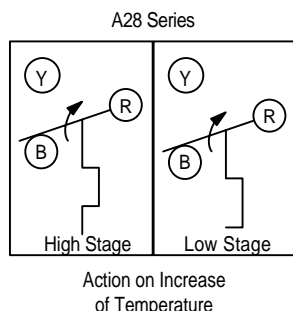


A28 Series

Two Stage Temperature Control



Description

The A28 Series are two stage temperature controls that incorporate a liquid filled sensing element.

Features

- wide temperature ranges available
- constant differential throughout the entire range
- SPDT snap acting switches
- unaffected by changes in barometric pressure
- unaffected by cross ambient conditions
- compact enclosure
- variety of sensing element styles

To Order

Specify the code number from the following selection chart.

Selection Chart

| Code Number | Switch Action | Range °F (°C) | Diff F° (C°) | Bulb and Capillary | Bulb Well No. (order separately) | Range Adjuster |
|--|---------------|---------------------------|---|--|----------------------------------|------------------|
| COILED BULB—FIXED DIFFERENTIAL | | | | | | |
| p A28AA-4C | 2-SPDT | 30 to 110 (-1 to 43) | 3 1/2 (1.9) Ea. Stage 3 (1.7) Fixed Between Stages | 1 3/8 in. x 2 1/4 in. Coiled | — | Convertible |
| CASE COMPENSATED—FIXED DIFFERENTIAL | | | | | | |
| A28AA-8C | 2-SPDT | -30 to 50 (-34 to 10) | 5 (2.8) Ea. Stage 3 (1.7) Fixed Between Stages | 3/8 in. x 4 in. 6 ft Cap. ^(a) | WEL14A-602R | Knob |
| A28AA-9C | 2-SPDT | 20 to 80 (-7 to 27) | 3 1/2 (1.9) Ea. Stage 3 (1.7) Fixed Between Stages | 3/8 in. x 5 in. 6 ft Cap. ^(a) | WEL14A-603R | Knob |
| WIDE RANGE—ADJUSTABLE INTERSTAGE DIFFERENTIAL | | | | | | |
| A28AA-28C | 2-SPDT | 30 to 110 (-1 to 43) | 3 1/2 (1.9) Ea. Stage 2 to 7 Adj. Between Stages | 12 ft averaging bulb 6 ft Cap. | — | Screwdriver Slot |
| p A28AA-29C | 2-SPDT | -30 to 100 (-34 to 38) | 5 (2.8) Ea. Stage 2 to 7 Adj. Between Stages | 3/8 in. x 4 in. 8 ft Cap. ^(a) | WEL14A-602R | Convertible |
| A28AA-36C | 2-SPDT | 40 to 90 (4 to 32) | 3 Ea. Stage 2 to 7 Adj. Between Stages | 3/8 in. x 5 3/4 in. 6 ft Cap. | — | Knob |
| A28AA-37C | 2-SPDT | 60 to 140 (16 to 60) | 5 Ea. Stage 2 to 7 Adj. Between Stages | 3/8 in. x 4 in. 6 ft Cap. | WEL14A-602R | Knob |

(a) Packing nut assembly available for direct immersion applications (Part No. FTG13A-600R).



A28AA-4



A28AA-29



A28AB

Applications

Temperature sensing applications requiring two-stage control of HVAC/Refrigeration equipment.

Specifications

- Maximum bulb temperature:
 - A28AA-37, 230°F (110°C)
 - all others, 140°F (60°C)

Accessories

- packing nut assembly available for direct immersion applications (Part No. FTG13A-600R)
- remote bulb models include 5/8 in. mounting clip

Replacement Parts

| Code Number | Description |
|-------------|----------------------|
| CVR28A-617R | Concealed adjustment |
| CVR28A-618R | Visible scale |
| KNB20A-602R | Knob kit |

Electrical Ratings

| Motor Ratings VAC | 120 | 208 | 240 | 277 |
|---|------|------|------|-----|
| A28AA, A | | | | |
| AC Full Load Amp | 16.0 | 9.2 | 8.0 | --- |
| AC Locked Rotor Amp | 96.0 | 55.2 | 48.0 | --- |
| Non-Inductive or Resistance Load Amp (Not Lamp Loads) | 16.0 | 9.2 | 8.0 | 7.2 |
| Pilot Duty — 125 VA, 24 to 277 VAC ^(a) | | | | |

(a) When used as two circuit control, the total connected load must not exceed 2000 VA.

s Universal Replacement (R) For Refrigerants Not Listed, Contact Application Engineering

The performance specifications are nominal and conform to acceptable industry standards. For applications at conditions beyond these specifications, consult the local Johnson Controls office. Neither Johnson Controls, Inc. nor its subsidiaries or affiliates shall be liable for damages resulting from misapplication or misuse of its products.

A28 Series Two Stage Temperature Control (Continued)

Selection Chart (Continued)

| Code Number | Switch Action | Range °F (°C) | Diff F° (C°) | Bulb and Capillary | Bulb Well No. (order separately) | Range Adjuster |
|---|-----------------------|------------------------|--|-----------------------------------|----------------------------------|------------------|
| WIDE RANGE--ADJUSTABLE INTERSTAGE DIFFERENTIAL (Continued) | | | | | | |
| A28AJ-4C | 2-SPDT | 20 to 80 (-7 to 27) | 2 Ea. Stage 2 to 7 Adj. Between Stages | 3/16 in. x 22 in. 6 ft Cap. | — | Knob |
| CHANGEOVER CONTROL | | | | | | |
| A28AB-1C | 2-SPDT ^(b) | 20 to 80 (-7 to 27) | 3 1/2 (1.9) | 3/8 in. x 5 in. 6 ft Cap. | WEL14A-603R | Screwdriver Slot |
| A28AB-2C ^(c) | 2-SPDT ^(d) | 60 to 90 (16 to 32) | 5 (2.8) | Strap-on Grid Bulb 42 in. Cap. | — | Screwdriver Slot |

(a) Packing nut assembly available for direct immersion applications (Part No. FTG13A-600R).

(b) Switches within 1 F° (0.6 C°) of each other.

(c) Maximum sensing element temperature is 250°F (121°C).

(d) Switches within 1.5 F° (0.9 C°) of each other.

Electrical Ratings (Continued)

| Motor Ratings VAC | 120 | 208 | 240 | 277 |
|---|------|------|------|-----|
| A28AJ | | | | |
| AC Full Load Amp | 6.0 | 3.4 | 3.0 | --- |
| AC Locked Rotor Amp | 36.0 | 20.4 | 18.0 | --- |
| Non-Inductive or Resistance Load Amp (Not Lamp Loads) | 15.0 | 9.2 | 8.0 | 7.2 |
| Pilot Duty – 125 VA, 24 to 277 VAC ^(a) | | | | |
| A28AB | | | | |
| AC Full Load Amp | 16.0 | 9.2 | 8.0 | --- |
| AC Locked Rotor Amp | 96.0 | 55.2 | 48.0 | --- |
| Non-Inductive or Resistance Load Amp (Not Lamp Loads) | 16.0 | 9.2 | 8.0 | 7.2 |
| Pilot Duty – 125 VA, 24 to 277 VAC ^(a) | | | | |

(a) When used as two circuit control, the total connected load must not exceed 2000 VA.