

## Final Control Elements

### POSITIONER BACKUP STATION

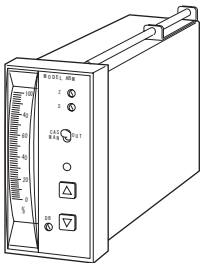
(with indicator)

#### Functions & Features

- I/I positioner incorporated
- Re-transmitted outputs available for valve position and manual status
- Potentiometer, voltage or current input for setpoint
- External contact closure for switching operation modes
- DIN size

#### Typical Applications

- Controlling electric valves from a computer
- Manual damper position control
- Remote manual control of electric valves



## MODEL: ABM-[1][2]A-R

### ORDERING INFORMATION

- Code number: ABM-[1][2]A-R  
Specify a code from below for each [1], [2].  
(e.g. ABM-AAA-R)
- For an optional scale range:  
• Scale (e.g. 0 - 5 m)

#### [1] CAS INPUT

##### Current

A: 4 - 20 mA DC (Input resistance 250  $\Omega$ )

##### Voltage

B: 1 - 5 V DC (Input resistance 1 M $\Omega$  min.)

#### [2] POSITION SETPOINT INPUT

##### Current

A: 4 - 20 mA DC (Input resistance 250  $\Omega$ )

##### Voltage

B: 1 - 5 V DC (Input resistance 1 M $\Omega$  min.)

##### Potentiometer

R: Total resistance 100  $\Omega$  - 10 k $\Omega$

### RE-TRANSMITTED OUTPUT

#### Current

A: 4 - 20 mA DC (Load resistance 350  $\Omega$  max.)

### POWER INPUT

#### DC Power

R: 24 V DC

(Operational voltage range 24 V  $\pm$ 10 %, ripple 10 %p-p max.)

### GENERAL SPECIFICATIONS

**Construction:** Panel flush mounting

**Connection:** M3.5 screw terminals (torque 0.8 N·m)

**Screw terminal:** Nickel-plated steel

**Housing material:** SECC

**Coating:** Gray; black front section

**Deadband adjustment:** 1 - 10 % (front)

**Manual status contact:** Turns on when manual operation is available

**Isolation:** CAS input or position input or retransmitted output to positioning output to manual status contact to remote output switching contact or power

**Zero adjustment:** 0 - 50 % (front)

**Span adjustment:** 50 - 100 % (front)

**Indicator:** Moving coil type

**Scale:** 0 - 100 % standard, engineering unit optional

**Scaleplate:** Aluminium; white scale and characters on black (black on white when optional scale is chosen)

**Scale length:** 66 mm

**Number of divisions:** 50

**Hysteresis (deadband):** 0.5 %

**Manual output switching:** By CAS (cascade) - MAN (manual) selector

**Remote output switching:** External contact closure switches the ABF to manual mode regardless of the CAS-MAN selector position

**Manual status indicator:** Red LED turns on in manual

### INPUT SPECIFICATIONS

#### • Position Setpoint Input

**Potentiometer:** 100  $\Omega$  - 10 k $\Omega$ ;

minimum span 50 % of total resistance; excitation 1 V DC

#### • Remote Output Switching Contact

**Sensing:** 24 V DC @ 40 mA

**ON/OFF level:**  $\geq$  100 k $\Omega$  for OFF;  $\leq$  100  $\Omega$  for ON

### OUTPUT SPECIFICATIONS

#### • Positioning Output & Manual Status Contact:

110 V AC or 30 V DC @ 1 A (resistive load)

For maximum relay life with inductive loads, external



protection is recommended.

**Mechanical life:**  $5 \times 10^7$  cycles

## INSTALLATION

**Power consumption:** approx. 100 mA

**Operating temperature:** -5 to +55°C (23 to 131°F)

**Operating humidity:** 30 to 90 %RH (non-condensing)

**Mounting:** Panel flush mounting (high-density mounting in horizontal direction)

**Weight:** 700 g (1.5 lbs)

## PERFORMANCE in percentage of span

**Indicator accuracy:**  $\pm 2$  %

**Re-transmitted output accuracy:**  $\pm 0.5$  %

**Temp. coefficient:**  $\pm 0.015$  %/°C ( $\pm 0.008$  %/°F)

**Manual output resolution:** Approx. 0.1 %

**Line voltage effect:**  $\pm 0.15$  % over voltage range

**Insulation resistance:**  $\geq 100$  M $\Omega$  with 500 V DC

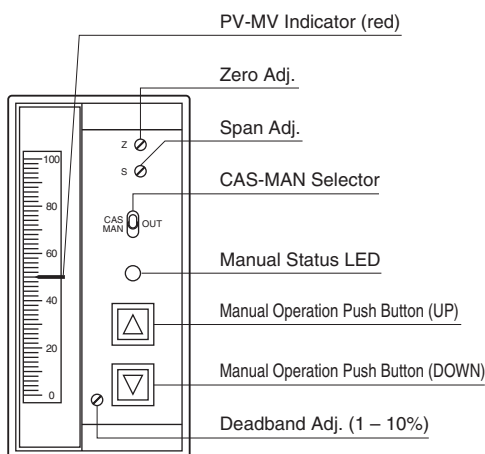
**Dielectric strength:** 1000 V AC @ 1 minute

(CAS input or setpoint input or retransmitted output or remote manual switching or power to positioning output to MAN status contact)

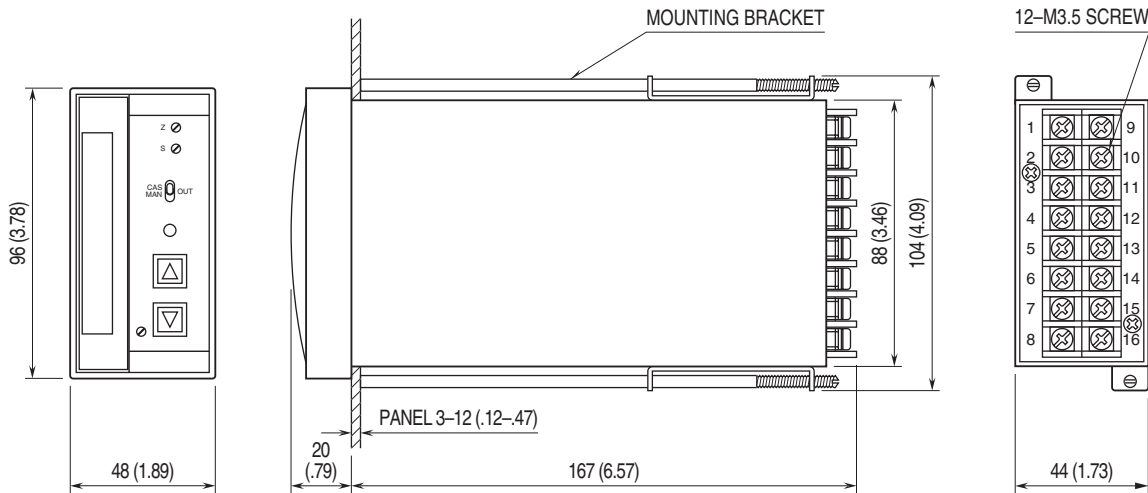
500 V AC @ 1 minute (CAS input or setpoint input or re-transmitted output or MAN status contact to remote manual switching or power)

1500 V AC @ 1 minute (CAS input or setpoint input or re-transmitted output or positioning output or MAN status contact or power to ground)

## EXTERNAL VIEW

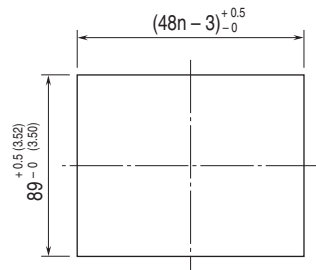
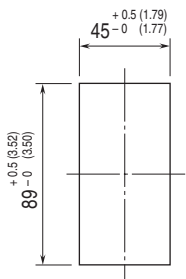


**EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm (inch)**



**PANEL CUTOUT unit: mm (inch)**

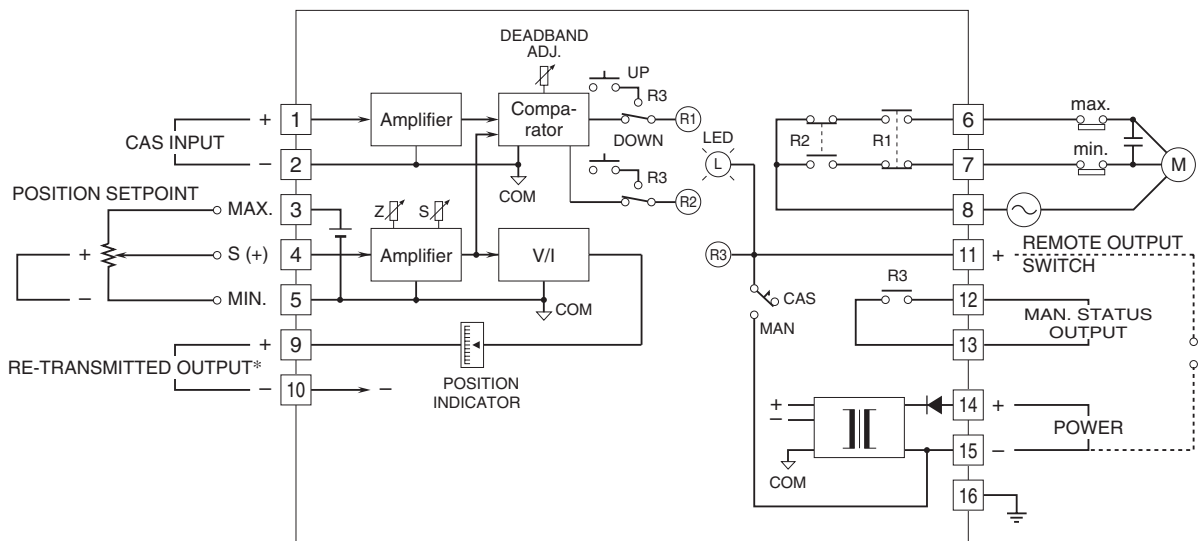
- SINGLE MOUNTING
- CLUSTERED MOUNTING



n: number of units

Panel thickness: 3 - 12 mm (0.12" - 0.47")

**SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM**



\*Do not connect the terminal No. 10 to other COM terminals since its potential is different from others.





Specifications are subject to change without notice.



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