



**BrayLINE**  
ACCESSORIES

**SERIES 50 – 0400, 0700**  
WITH MICRO SWITCHES,  
PROXIMITY & PNEUMATIC SWITCHES

# VALVE STATUS MONITORS

NEMA 4, 4X & 4, 4X, 7, 9

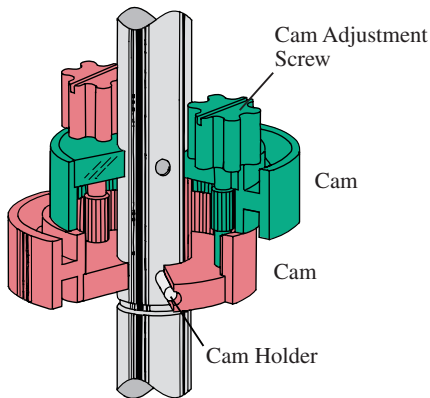
CELEBRATING  
**20**  
YEARS

**HO** The  
High  
Performance  
Company

# FEATURES

Bray Controls is proud to offer the Brayline Series 50 Valve Status Monitor, the future of valve position signaling. Bray's extensive field experience, research and development has produced the finest multi-purpose switch/control monitors for industrial plant automation. The Series 50 signals actuator and valve position to local and remote stations. The Series 50-0400 unit has a die cast aluminum housing which is waterproof (NEMA-4,4X). The Series 50-0700 housing is also die cast aluminum and rated waterproof and explosion proof (NEMA-4,4X,7,9).

The units have been designed for ease of wiring and a wide variety of switches. Both feature the same high quality internal parts and the same rugged reliability.



## (A) CAMS / CAM ADJUSTMENT

Featured in the Series 50 Valve Status Monitors are Bray's uniquely designed cams. A cam for each switch is mounted directly to the output shaft and each cam is color coded – red adjustment screw matches red cam (which closes valve), green screw matches green cam (which opens valve). The cams are *infinitely* adjustable from the top by finger touch or regular screw driver with no special tools needed. The adjustment screws rotate the eccentric shaped cams. The cams will not slip out of adjustment from line vibration. Standard factory settings are to the open and closed positions for 90° travel. To adjust the cams, first loosen the locking screw, make cam adjustment then retighten locking screw.

**(B) O-RING SEALS** Seals on the shaft and housing provide a waterproof enclosure and prevent internal corrosion.

**(C) SHAFT BEARINGS** The Series 50-0400 has acetal bearings on the top and bottom of the shaft which reduce friction and eliminate shaft binding.

**(D) SWITCHES** Both Valve Status Monitors come standard with 2 SPDT Micro switches. For other available switches consult the back page of this brochure.

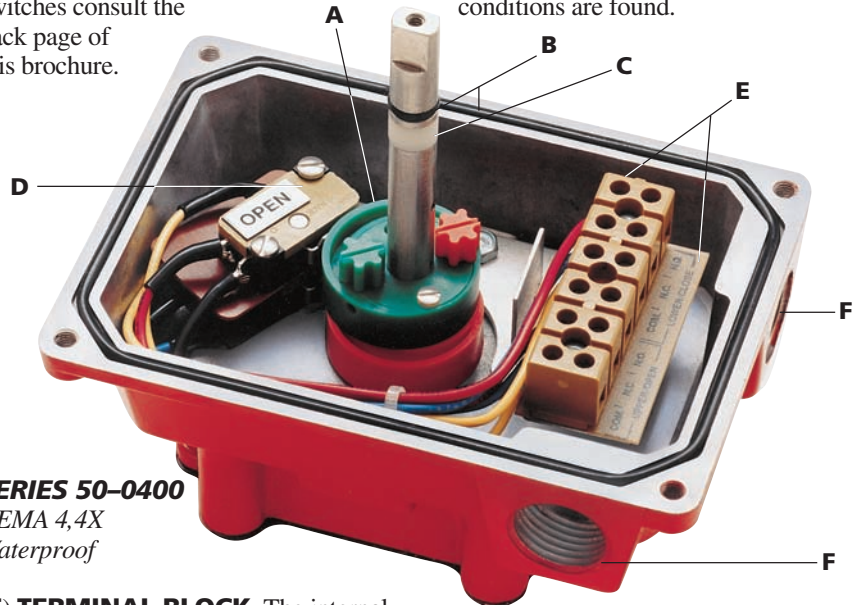
## SERIES 50-0400 NEMA 4,4X Waterproof

**(E) TERMINAL BLOCK** The internal switches are pre-wired to a terminal block. The block has been designed for ease of wiring installation with clearly marked wire numbers for both open and closed switches.

**(F) CONDUIT ENTRIES** For ease of wiring, the Series 50 features two conduit entries. The Series 50-0400 unit has 1/2" NPT conduit connections, and the Series 50-0700 has 3/4" NPT conduit connections.

## SERIES 50-0400

This waterproof unit is UL listed and CSA, CE certified NEMA-4,4X. The Series 50-0400 features a die cast aluminum housing coated with a chemical resistant epoxy for further protection. The Series 50-0400 is an excellent choice for use in a wide range of applications where harsh chemical conditions are found.



## SERIES 50-0700

The Series 50-0700 Valve Status Monitor is for application in hazardous locations. The waterproof/explosion proof housing is CSA (NRTL-C/US) certified Class I: Groups C & D, Class II: Groups E, F & G, Div. 1&2 and designed to meet UL NEMA-4,4X,7,9 and IP 65. The housing contains bronze bearings, top and bottom, which meet flame path requirements.



## SERIES 50-0700 NEMA 4,4X,7,9 Explosion Proof



### CAPTIVE HOUSING BOLTS

The housing covers of Bray Valve Status Monitors are attached to the housing bases by stainless steel bolts. When the cover is removed the bolts are held captive in the cover. This prevents time consuming problems caused from lost or misplaced bolts.

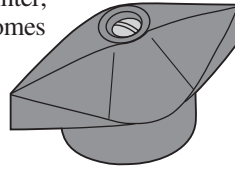


### SERIES 50-0700 ACCESSORY

A Bray Series 63 solenoid valve may easily be mounted to the Series 50-0700 Valve Status Monitor. The solenoid and monitor are electrically wired together to a common terminal block within the switch box.

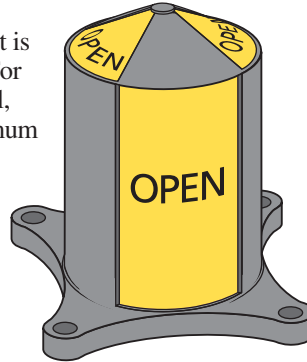
### POSITION INDICATORS

Bray has specially designed position indicators which locally signal valve position. The pointer, made of ABS, comes standard with all Series 50 units.



Bray offers a highly visible valve status display as an option. Prominently labeled and color coded – yellow for open, red for closed – the display indicates valve position through the full range of travel. Made of high impact, heat and chemical resistant clear polycarbonate, this display withstands caustic washdown and offers excellent corrosion protection. The display is designed to directly mount to the Series 50 housings.

Display height is 2.97 inches. For cover removal, allow a minimum of 2.72" for 50-0400 units and 3.00" for 50-0700 units.



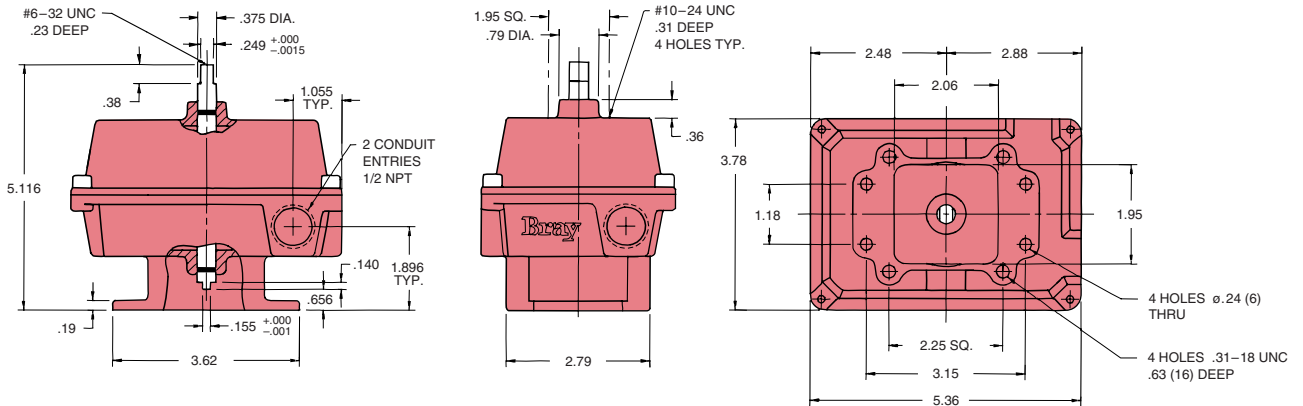
### DIRECT MOUNTING OF SERIES 50 VALVE STATUS MONITOR TO BRAY PNEUMATIC ACTUATORS

A compact, modular design allows direct mounting of the Brayline Valve Status Monitor to Bray Series 92 double acting and Series 93 spring return pneumatic actuators without any brackets or couplings. The mounting pattern complies with VDI/VDE 3845 (NAMUR recommendations).

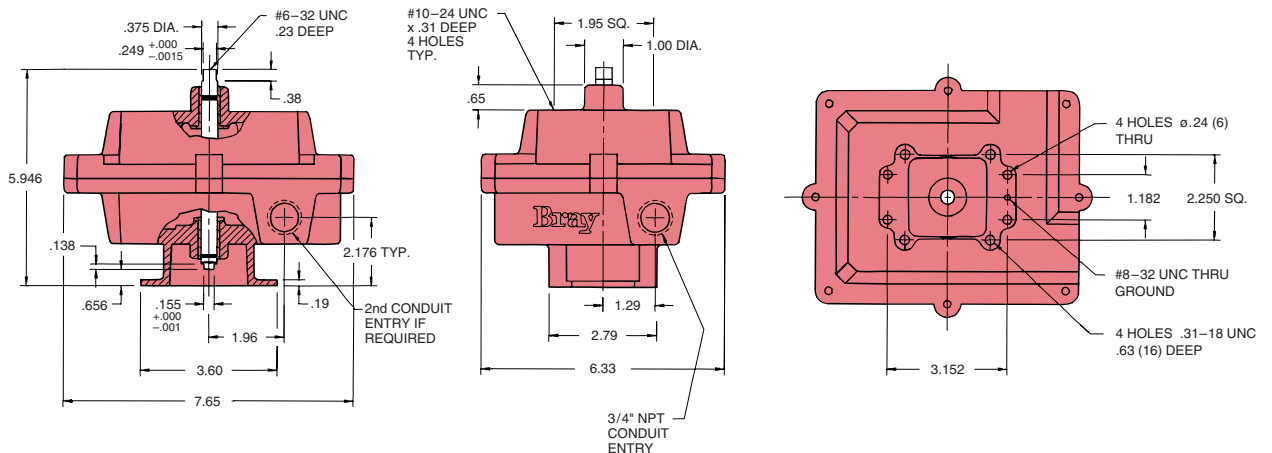


# DIMENSIONS

### SERIES 50-0400



### SERIES 50-0700



# SWITCHES

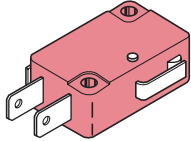
## MICRO SWITCHES

Economical switches with the highest current ratings on the market.

### 2, V3 TYPE SPDT SWITCHES

Contact material is fine silver.  
Max. Rating: 15A-120/250 VAC  
15A-24VDC

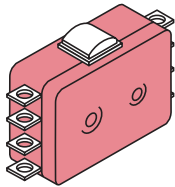
Max. Temperature: 176°F (80°C)  
4 or more switches are available.



### 2, TYPE DPDT SWITCHES

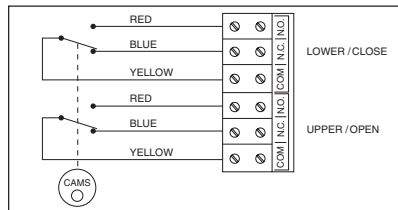
Contact material is fine silver.  
Max. Rating: 10A-120/250 VAC  
10A-24VDC

Max. Temperature: 158°F (70°C)

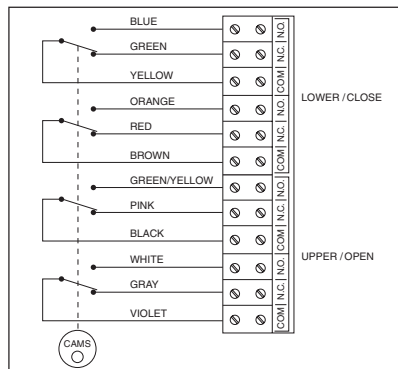


## MICRO SWITCHES

### SPDT



### DPDT

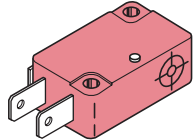


## PROXIMITY SWITCHES

Sealed against explosive gases and liquids, these switches offer long, trouble free life.

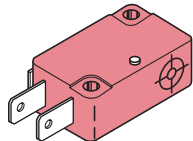
### 2, V3 TYPE N INDUCTIVE SWITCHES

(Intrinsically safe)  
Supply Volts: 5-25VDC  
Nominal Voltage: 8VDC  
Load Current: <1mA >3mA  
Max. Temperature: 212°F (100°C)  
Other types available, consult factory.



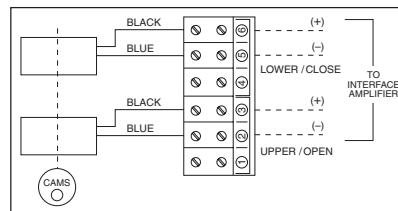
### 2, V3 TYPE E2 INDUCTIVE SWITCHES

Supply Volts: 5-25VDC  
Nominal Voltage: 8VDC  
Load Current: <1mA >3mA  
Max. Temperature: 212°F (100°C)  
Other types available, consult factory.

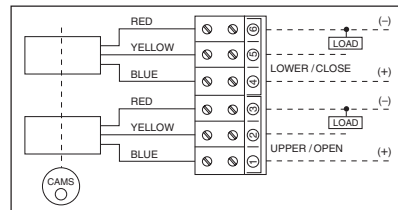


## PROXIMITY SWITCHES

### 2 WIRE TYPE N



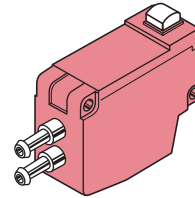
### 3 WIRE TYPE E2



DISTRIBUTOR

## PNEUMATIC SWITCH

For hazardous locations.  
2 switches are provided with 2 ports and vents.  
Rating: 150 psi (10 bar)  
Connections: 1/8" NPT  
Max. Temperature: 176°F (80°C)



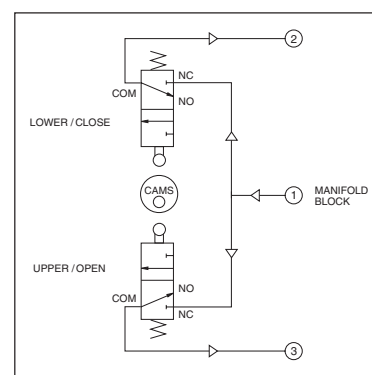
## POTENTIOMETER

For analog feedback of precise valve position a potentiometer can be mounted within the Series 50-0700 housing. The standard value is 1000 ohms, and the standard power rating at 158°F (70°C) is 1 watt.

## REED SWITCHES

2 magnetic reed switches (hermetically sealed) are available upon request.

## PNEUMATIC SWITCHES



All statements, technical information, and recommendations in this bulletin are for general use only. Consult Bray representatives or factory for the specific requirements and material selection for your intended application. The right to change or modify product design or product without prior notice is reserved.

United States patent number 5,305,781.

Other patents issued and applied for worldwide.

# Bray CONTROLS

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