SERIES 54

PROXIMITY SENSORS

Bray

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THE HIGH PERFORMANCE COMPANY

The Series 54 inductive proximity sensor provides position indication for quarter turn valves.

The superior design offers reliable and durable valve monitoring and control solutions for efficient plant operation.

The compact Series 54 directly mounts to VDI/VDE 3845 compliant actuators resulting in a smaller actuator profile while saving on cost.

Various electrical output options allow integration of the Series 54 into all standard process control environments.

	General Service	Industrial Service	Hazardous Location
Design	Extreme low profile	Compact	Non-Sparking
Housing material	Thermoplastic PBT	Thermoplastic PBT	Powder coated aluminum and polycarbonate (PC)
Mounting	30x80mm 30x130mm	30x80mm 30x130mm	30x80mm 30x130mm
Connectivity	Connector Cable gland	Connector Cable gland	Cable gland
Temperature range	-25 to 70°C -13 to 158°F	-25 to 70°C -13 to 158°F	-40 to 75°C -40 to 167°F
Ingress protection	IP66/67	IP66/67	IP66/67/69K
Electrical Output	2-wire DC 3-wire DC PNP	3-wire DC PNP 3-wire DC PNP with output AS-i with output AC/DC	2-wire DC
Solenoid outputs	None	One	One
Activator	Non adjustable	Standard adjustable High visibility adjustable	High visibility adjustable
Certifications	c UL us CE		Ex CE

Highlights at a glance

- Two independent sensors for open and close valve position indication
- Optimized for indoor and outdoor use
- Rugged design resistant to shock, vibration, UV and corrosion
- Maintenance free design
- Hermetically sealed to protect against the ingress of liquids or solids
- Non-contact sensor eliminates the effect of mechanical wear
- Eliminates potential switch welding, arcing and sparking
- Quick and easy installation

1 – **Sensor:** Extremely low profile with direct mounting to VDI/VDE 3845 compatible actuators.

2 – **Sensing Face:** Compact concave design for protection of sensor targets.

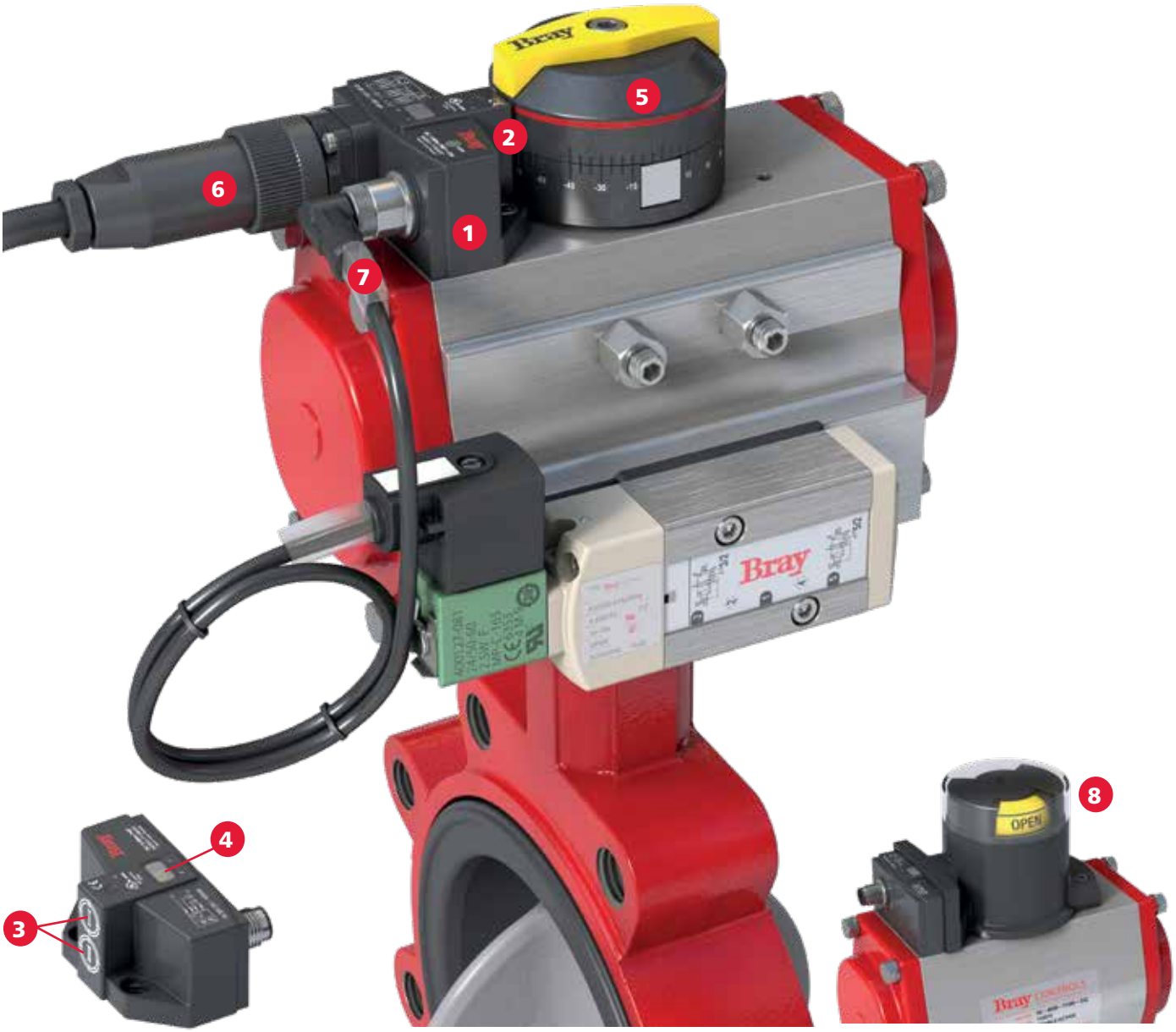
3 – **Bright LED:** Indication to display sensor power and switch status.

4 – **Activator:** Low resistivity material prevents electrostatic discharge. Contains two stainless steel targets for CW or CCW operation.

5 – **Indicator:** Bright yellow for improved visibility of valve position.

6 – **Connection:** Sensor connectivity includes single pin connector or cable gland.

7 – **Y-Connector (optional):** Reduces site cable requirements while decreasing installation time for sensor and valve solenoid. Allows power and signal on a single cable for the sensor and solenoid.



1 – **Sensor:** Low profile sensor with direct mounting to VDI/VDE 3845 compatible actuators.

2 – **Sensing Face:** Small sensing face ensures no pinch point hazard between sensor and activator.

3 – **Sensor Targets:** Sensor switch targets easily located and identified on sensor face.

4 – **Bright LEDs:** indication to display sensor power and switch status.

5 – **Activator:** Low resistivity material prevents electrostatic discharge. Contains two stainless steel targets for CW or CCW operation. Independently adjustable bottom level, top level and indicator (5 degree increments).

6 – **Connection:** Sensor connectivity includes single pin connector, dual pin connector or cable glands.

7 – **Optional Connector:** S-connector (shown) or Y-Connector reduce field wiring and eliminates common cabling errors.

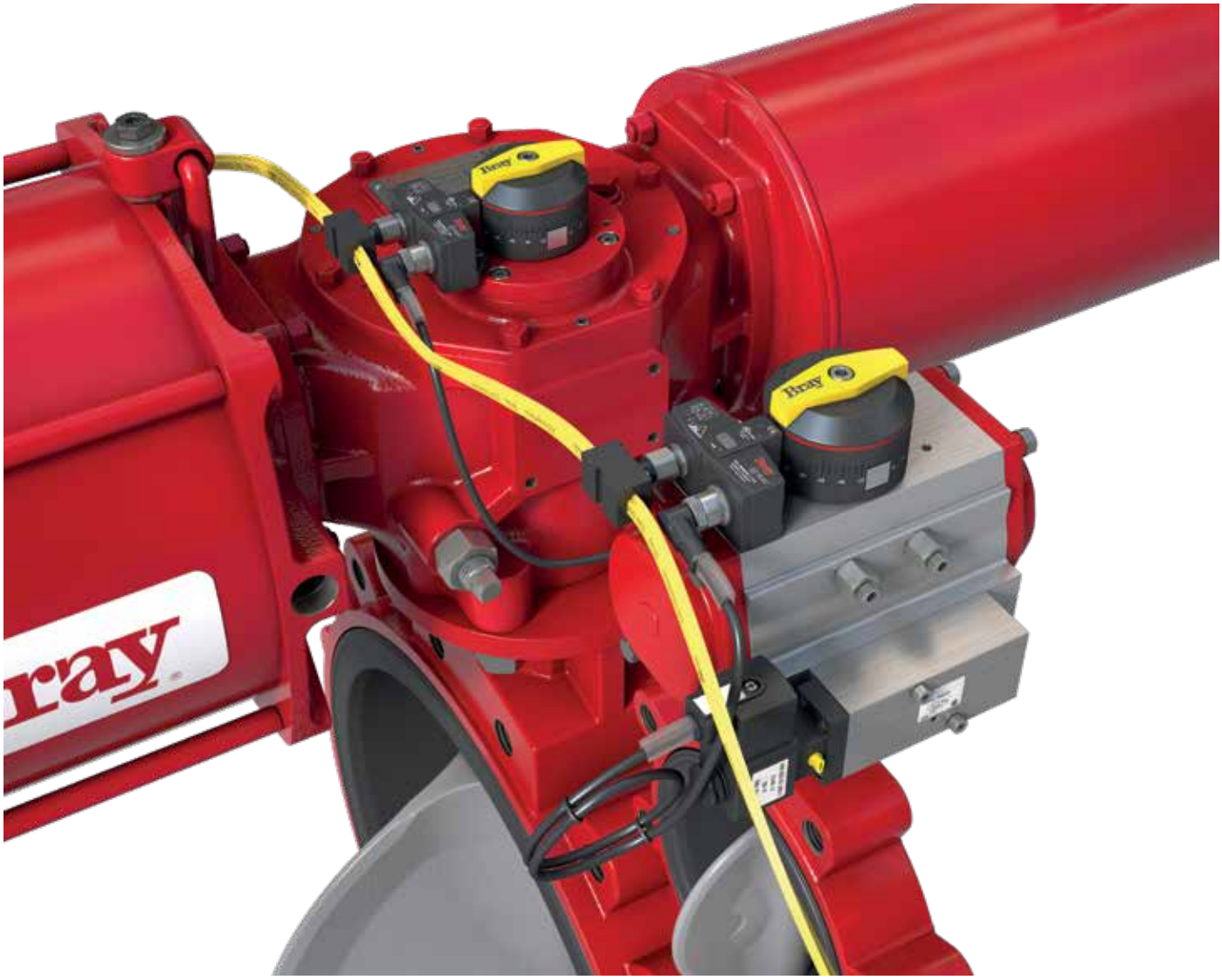
8 – **High Visibility Activator (optional):** Protective dome to prevent mechanical damage. Contains two stainless steel targets for CW or CCW operation. Fully independently adjustable, top level and indicator (5 degree increments). Bottom level adjustable in 90 degree increments.

With the increasing use of computer technology in plant operations, AS-I networks provide a cost effective solution to simplify wiring complexity for optimal use of available plant floor space.

AS-i sensor with cable gland

AS-I benefits include:

- Digital network solution for valve actuator networks
- Open standards based communication protocol with connectivity to higher level bus systems
- Allows 62 devices on a single network which reduces site wiring, cabling and junction boxes
- AS-i unique device addressing permits quick identification of fault conditions
- Supports AS-I industry standard cabling topologies
- Two wires provide power and communication for sensor and low power solenoids
- Provides solenoid valve status for indication of solenoid coil health
- Sensor connectivity choices include dual pin connector or cable glands



Harsh environments require rugged equipment. Bray's Series 54 hazardous location sensor design is optimized to provide unparalleled reliability and safe operation in these environments. This sensor is used in a broad range of applications, from high to low temperatures, water deluge, corrosive environments, and hazardous non-sparking locations. The Series 54 hazardous location proximity sensor thrives in applications where others fail.


Snow


Heat/UV


Washdown

1 – **Sensor:** Rugged housing resists high UV, temperature extremes, corrosion, shock and salt water exposure.
- Non-sparking
- IP69K: suitable for high temperature and pressure washdown.
- Captive sensor cover bolts prevents lost hardware during installation.

2 – **Connection:** Two M20 x 1.5 cable gland entries for system and solenoid connectivity.

3 – **Terminal Compartment:** Large terminal compartment for cable terminations.

4 – **Terminal Block:** Removable terminal block permits ergonomic and quick wire termination.

5 – **High Visibility Activator (standard):** Protective dome to ensure reliable operation. Contains two stainless steel targets for CW or CCW operation. Fully independently adjustable, top level and indicator (5 degree increments). Bottom level adjustable in 90 degree increments.

6 – **Protective Shield**: Stainless steel shield resists high mechanical impact.

7 – **Electrical output:** 2-wire DC configuration.

GENERAL SERVICE				
S54 Sensor	**Electrical output**	**Operating Voltage**	**Electrical connection**	**Activator Type**
540021-71104533	DC 3-wire PNP	10 ... 30 V DC	M12 x 1 connector, 4 pin	Non-adjustable
540022-71104533	DC 2-wire	5 ... 30 V DC	M12 x 1 connector, 4 pin	
540032-71104533	DC 2-wire	5 ... 30 V DC	M20 x 1.5 cable gland	
INDUSTRIAL SERVICE				
S54 Sensor	**Electrical output**	**Operating Voltage**	**Electrical connection**	**Activator Type**
540001-71104533	DC 3-wire PNP	10 ... 30 V DC	M12 x 1 connector, 4 pin	Adjustable or Adjustable High Visibility
540041-71104533	DC 3-wire PNP + Out	10 ... 30 V DC	Rd24 x 1/8, 6-pin+PE M12 x 1, 4-pin socket	
540004-71104533	AC/DC	20 ... 253 V AC	7/8" - 16 UN 2A connector	
540005-71104533	ASi-Interface + Out	26.5 - 31.9 V	M12 x 1 connector, 4 pin M12 x 1 socket, 4-pin	
540015-71104533	ASi-Interface + Out	26.5 - 31.9 V	M20 x 1.5, qty 2 cable gland M12 x 1.5 cable gland	
HAZARDOUS LOCATION (NON-SPARKING)				
S54 Sensor	**Electrical output**	**Operating Voltage**	**Electrical connection**	**Activator Type**
540102-126XX536	DC 2-wire -Hazardous Loc + Out	6 ... 30 V DC	M20 x 1.5, qty 2 cable gland	Adjustable High Visibility

ACTIVATOR AND MOUNTING KITS		
Kit Part Number	**Bray Actuator**	**Activator Type**
54063B-14800536	S92/93 Sizes 63-93, Imperial	Non-adjustable
54063B-14850536	S92/93 Sizes 63-93, S98 all sizes, Metric	Non-adjustable
54063A-14800536	S92/93 Sizes 63-128, Imperial	Adjustable
54063A-14850536	S92/93 Sizes 63-128, S98 all sizes, Metric	Adjustable
54063C-14800536	S92/93 Sizes 63-128, Imperial	High Visibility Adjustable
54063C-14850536	S92/93 Sizes 63-128, S98 all sizes, Metric	High Visibility Adjustable
54119B-14800536	S92/93 Sizes 119-210, Imperial	Non-adjustable
54119B-14850536	S92/93 Sizes 119-255, Metric	Non-adjustable
54160A-14800536	S92/93 Sizes 160-210, Imperial	Adjustable
54160A-14850536	S92/93 Sizes 160-255, Metric	Adjustable
54160C-14800536	S92/93 Sizes 160-210, Imperial	High Visibility Adjustable
54160C-14850536	S92/93 Sizes 160-255, Metric	High Visibility Adjustable

Note: Metric activator kits compatible with VDI/VDE 3845

ACCESSORIES		
Part Number	**Type**	**Description**
090005-76145882	Sensor cordset	4 pin female M12 to flying leads, Zn
090004-76145534	Sensor cordset	4 pin female M12 to flying leads, SS
090004-76144534	Sensor cordset	5 pin female 7/8" to flying leads, SS
090700-71155517	Rd24 x 1/8	6 pin + PE female field connector
66A000-14205533	As-i M12 to flat cable	Flat female field connector
090402-711555ZT	As-i M12 connector	4 pin M12 female field connector
600250-23663536	DC 3 wire PNP Y-connector	4 pin M12 to 24VDC S62/63 DIN Type I
600250-23666536	DC 3 wire PNP Y-connector	4 pin M12 to 24VDC S60 DIN Type A
090001-76159882	DC 3 wire PNP S-connector	4 pin M12 to 24VDC S62/63 DIN Type I
090001-76160882	DC 3 wire PNP S-connector	4 pin M12 to 24VDC S60 DIN Type A
090005-76148533	DC 3 wire PNP S-connector	Flying leads to 24VDC S60 DIN Type A

Bray

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