



# WEATHERING THE STORM VALVE POSITION SENSING WITH A GLOBAL VIEW



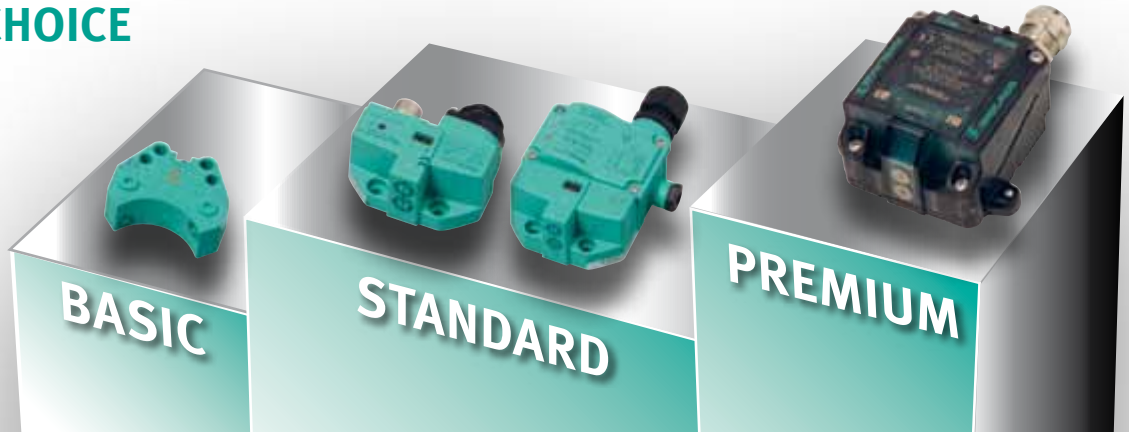
## THE SOLUTION FOR EVERY REQUIREMENT – VALVE POSITION SENSOR SOLUTION FOR STANDARD PNEUMATIC ACTUATORS








The release of Pepperl+Fuchs' new F31K2 valve position sensor completes the family of the most contemporary direct-mount, open solution products available. These dual inductive sensor models include our F25 series for smaller pneumatic actuators and manual valves, our F31 series for small or medium actuators with expanded electrical versions, and our F31K2. The new F31K2 is the most flexible, ruggedized and weatherproof model yet. An extended temperature range along with numerous options for electrical connections are just some of the features inherent in a sensor designed for today's valve automation and communication requirements.

Direct mount valve position sensors minimize space requirements, maintain assured sensing distance, and offer simplicity and sophistication in monitoring and reliability. Designed to meet the requirements of the process valve market, our dual sensors mount directly onto the actuator, and targets mount directly to the actuator stem.



## IT'S YOUR CHOICE



Sensors	Series F25	Series F31	Series F31K	Series F31K2
<b>Highlights</b>	<ul style="list-style-type: none"> <li>■ Dual sensor</li> <li>■ Direct mount to all standard pneumatic actuators</li> <li>■ For use with manual valves</li> </ul>	<ul style="list-style-type: none"> <li>■ Dual sensor</li> <li>■ Direct mount to all standard pneumatic actuators</li> </ul>		<ul style="list-style-type: none"> <li>■ Dual sensor</li> <li>■ Direct mount to all standard pneumatic actuators</li> <li>■ Robust and suitable for outdoor use</li> </ul>
<b>Application range</b>	For manually operated valves as well as small and medium-sized actuators	For direct mounting on actuators in indoor and outdoor areas		Optimized solution for outdoor use
<b>Design</b>	Very compact design	Compact design	Compact design with terminal compartment	Modular, robust "dual housing" design with large terminal compartment
<b>Housing material</b>	Plastics (PBT)	Plastics (PBT)		Translucent plastics (PC), aluminium
<b>Connectivity (mech. and electr.)</b>	<ul style="list-style-type: none"> <li>■ Cables</li> <li>■ Plug and socket</li> </ul>	<ul style="list-style-type: none"> <li>■ Cables</li> <li>■ Plug and socket</li> </ul>	<ul style="list-style-type: none"> <li>■ Terminal block</li> <li>■ Cable glands</li> </ul>	<ul style="list-style-type: none"> <li>■ Plug-in terminal block</li> <li>■ Cable glands or conduit connections</li> <li>■ Metric or inch threads</li> </ul>
<b>Temperature range</b>	-25 ... +70 °C	-25 ... +70 °C		-40 ... +75 °C
<b>IP protection</b>	IP 67	IP 67		IP 66, 67, 69K
<b>Electronics</b>	NAMUR  Safety NAMUR  , SIL3	NAMUR  , SIL2 DC 2-wire DC 3-wire AC/DC AS-Interface 		NAMUR  , SIL2* DC 2-wire  DC 3-wire 
<b>Solenoid outputs</b>	none	1 or 2 outputs		1 or 2 outputs

\* in preparation



### TYPICAL APPLICATIONS

- Oil and gas industry
- Chemical and petrochemical industry
- Offshore and marine
- Food industry
- Water treatment and wastewater industry
- Pulp and paper industry
- Pharmaceutical industry
- Metal and mining industry

## WEATHERING THE STORM

## VALVE POSITION SENSING WITH A GLOBAL VIEW





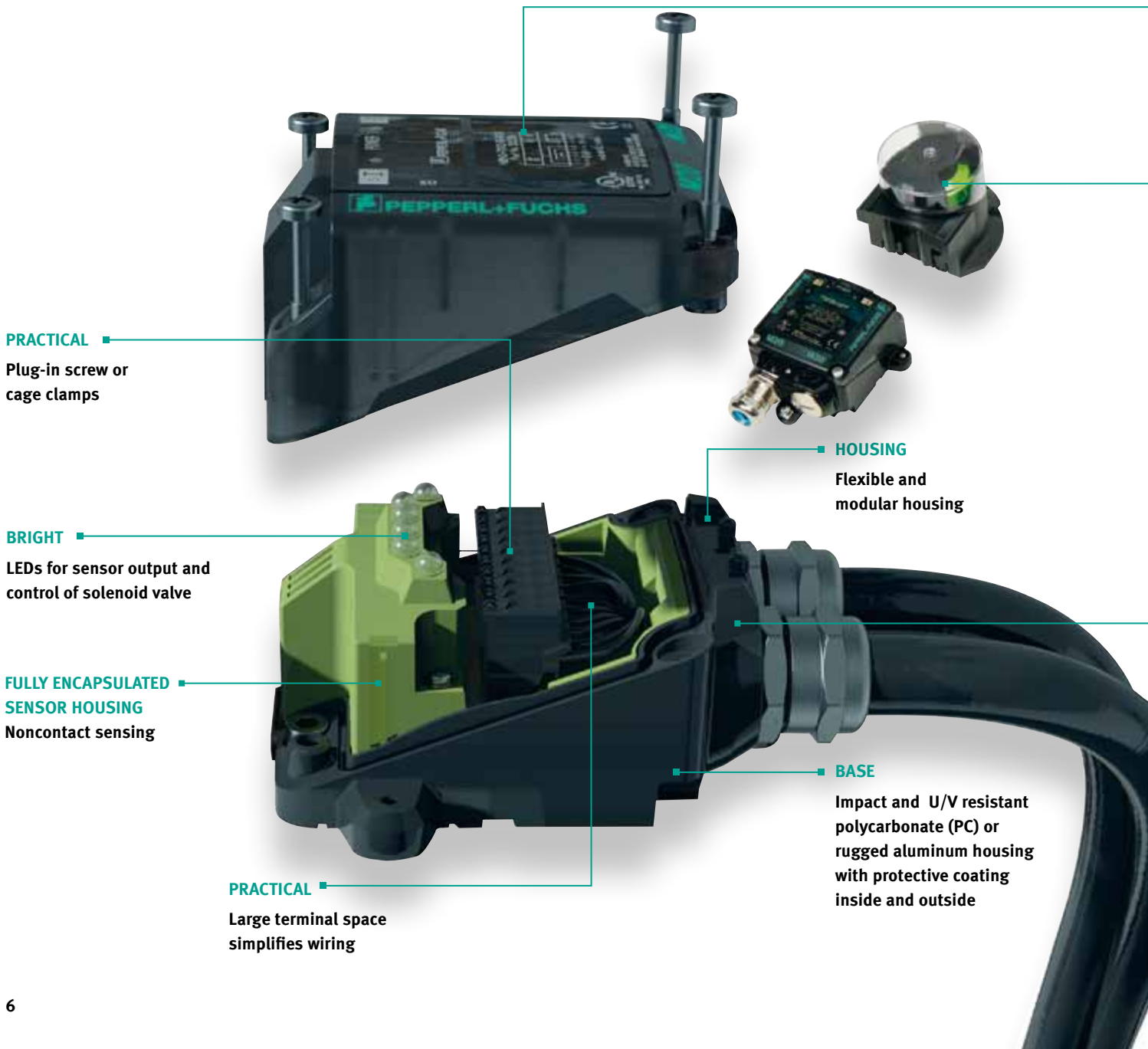
#### HIGHLIGHTS AT A GLANCE

- Direct mounting onto standard actuators
- Optional beacon in weatherproof housing
- Ruggedized modular housing – works with standard target
- Optimized for outdoor use – high temperature, U/V, and salt water resistant

## OPTIMIZED SOLUTION FOR OUTDOOR USE

The sensor series F31K2 is designed for uncompromised use in outdoor areas. The F31K2's unique double housing construction provides double mechanical protection and impermeability. The construction materials provide high U/V, elevated temperature, and corrosion resistance. Due to the open solution and the translucent housing, the integrated beacon is highly visible and customized versions are available.

Convince yourself:



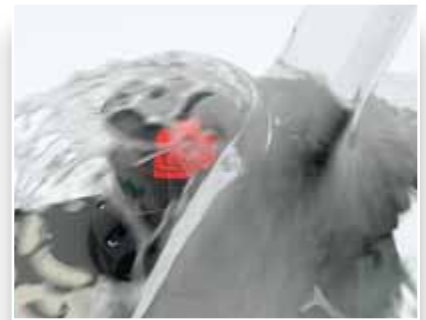
#### TEMPERATURE RESISTANT



#### U/V RESISTANT



#### WATERPROOF



#### EXTREMELY ROBUST

Optimized for outdoor use –  
high temperature, U/V, and salt water resistant

#### BEST VIEW

Highly visible beacon



#### FEATURES

- Inductive dual sensor with extended sensing range
- Electronic amplifiers with Ex approval
- Plug-in screw or cage clamps
- Connections for cable or conduit fittings with long screw threads
- Connection of 1 or 2 solenoid valves
- Direct installation on NAMUR actuator holes 30 x 80 mm, 30 x 130 mm

#### MOUNTING

Mounts directly on standard actuators

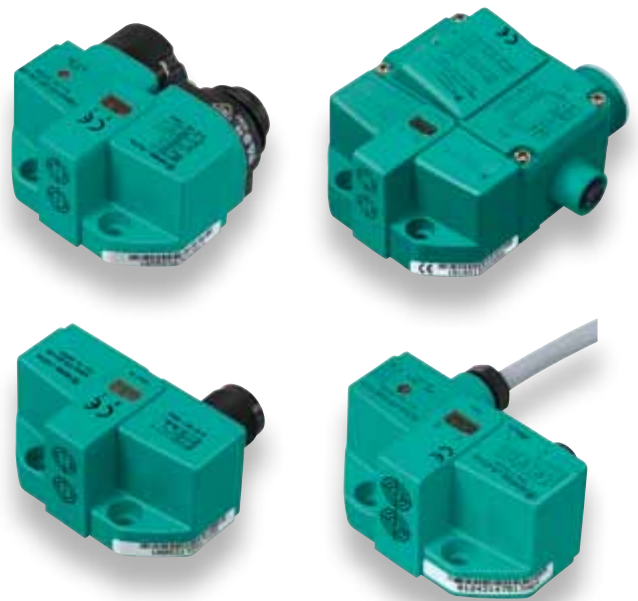


## FOR DIRECT MOUNTING ON ACTUATORS IN INDOOR AND OUTDOOR AREAS

The standard series F31/F31K are best suited for position feedback that enables direct, stable, and durable mounting of the sensor and actuator. The variable dual sensors are suitable for all normal actuators and are easy to mount.

### FEATURES

- Small sensing face ensures no pinch point hazard between sensor and puck
- Round mounting holes in the sensor housing ensure that no adjustment is necessary when installing the sensor
- Choices include cable connection, plug and socket, and terminal compartment
- Clear LED indication of switch status, supply voltage, and solenoid activation



### VARIABLE

Only two target sizes needed to fit all standard pneumatic actuators

### FIXED

Pre-engineered spacing for optimal sensing and preventing object obstruction

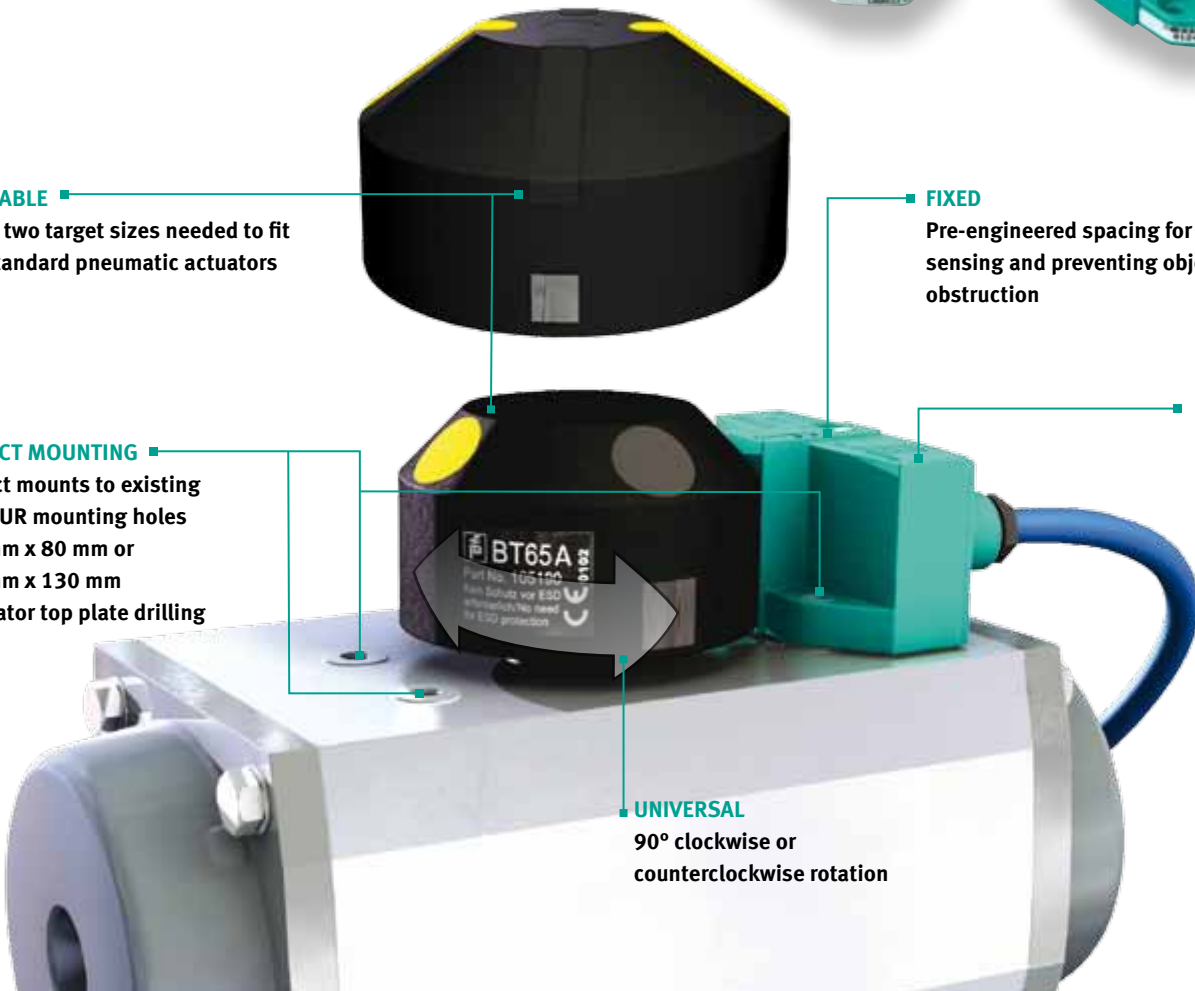
### DIRECT MOUNTING

Direct mounts to existing NAMUR mounting holes 30 mm x 80 mm or 30 mm x 130 mm actuator top plate drilling

**HOUSING**  
Low-profile housing

### UNIVERSAL

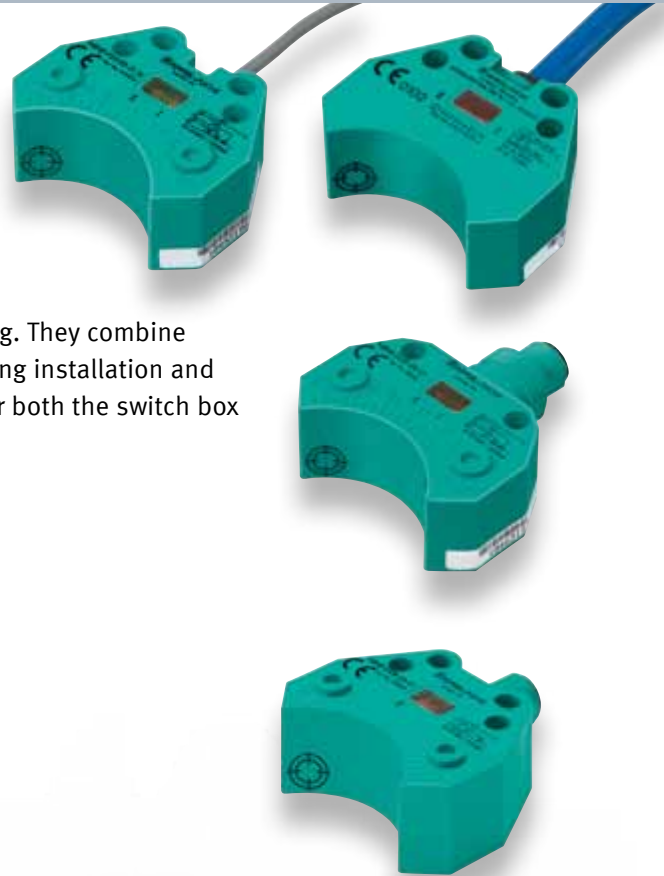
90° clockwise or counterclockwise rotation





## FOR MANUALLY OPERATED VALVES AS WELL AS SMALL AND MEDIUM-SIZED ACTUATORS

The F25 sensor series is an effective solution for valve positioning. They combine two sensing elements in one device inside one enclosure, reducing installation and maintenance costs considerably. The F25 sensors are suitable for both the switch box enclosure as well as for direct mount onto the actuator.



### FEATURES

- Dual sensor with two active zones
- Adjustment-free mounting: maintains accurate sensing distance
- Cable or plug connection

### MOUNTING

Sensor direct mounts to manual or automated rotary valves using NAMUR 30 mm-spaced mounting holes

### COMPACT

Actuator target for position monitoring applications

### SAFE

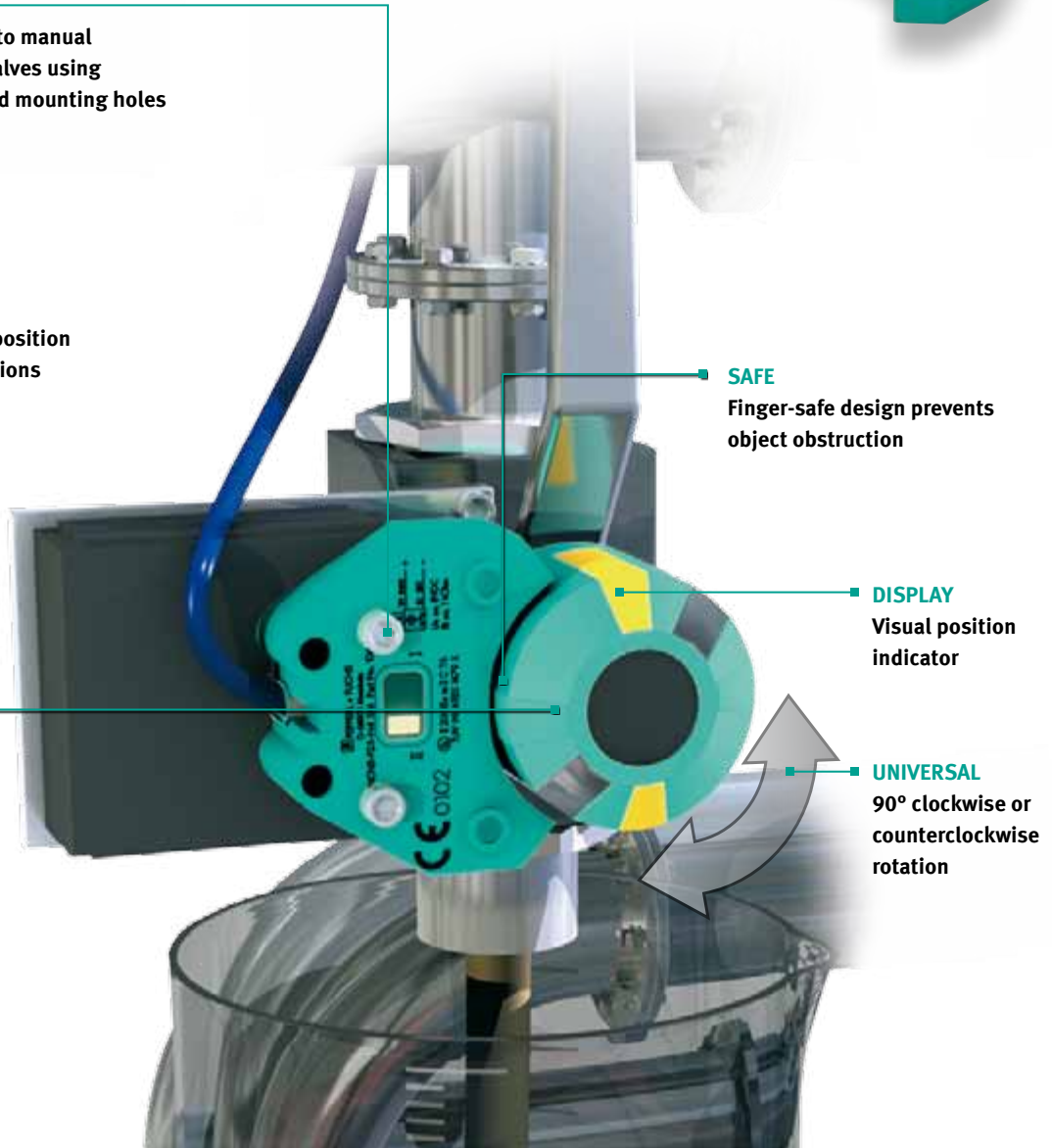
Finger-safe design prevents object obstruction

### DISPLAY

Visual position indicator

### UNIVERSAL

90° clockwise or counterclockwise rotation



# SENSOR TARGETS

## BT65A

- For standard 30 mm x 80 mm actuator top plate mounting
- For shaft heights of 20 mm and 30 mm (Spacers included in delivery package)
- For shaft diameters up to 58 mm
- For clockwise and counterclockwise rotating drives with 90° and 180° rotational movement
- With four actuating elements (fixed at 90° offset)
- Also available with reversed working direction



## BT65-F31K2-RG-EN

- Valve position indicator, OPEN/CLOSE in signal colors with high visibility and impact-resistant plastic housing SH-F31K2
- With two sensor targets in stainless steel, adjustable in 5° increments
- Standard size of 30 mm x 80 mm for mounting on the pneumatic actuator
- For shaft heights of 20 mm and 30 mm (spacers included)
- For shaft diameters of up to 49 mm
- For clockwise or counterclockwise rotation



## BT115A

- For standard 30 mm x 130 mm actuator top plate mounting
- For shaft heights of 30 mm and 50 mm (Spacers included in delivery package)
- For shaft diameters up to 90 mm
- For clockwise and counterclockwise rotating drives with 90° and 180° rotational movement
- With four actuating elements (fixed at 90° offset)
- Also available with reversed working direction



Actuator	Rotary F25	Rotary F31/F31K/F31K2
	Non-contact design	Non-contact design
For standard 30 mm x 80 mm actuator top plate mounting	■	■
For standard 30 mm x 130 mm actuator top plate mounting		■
90° rotation CW or CCW	■	■
180° rotation CW or CCW		■
Reversed working direction	■	■
Fully adjustable damping		■
Antistatic (conductive) construction		■

## SH-BT65-F31K2

- Protective housing for actuator series BT65-F31K2-...
- Impact and U/V resistant plastic material
- Captive screws in stainless steel
- Standard size 30 mm x 80 mm for mounting on the actuator



## SH-F31K2

- Protective cover for F31K2 in stainless steel
- Optimized for outdoor use – high temperature, U/V, and salt water resistant
- High impact protection
- Easy mounting



## MH-BT-F03...-F07 MOUNTS TO MANUAL VALVES USING APPROPRIATE BRACKETS

- Rugged stainless steel holder and vestamid plate
- Easy mounting
- Easy to adjust
- Conforms to standards ISO5211-DIN3337
- Sizes F03 to F07, lock nuts M6 to M8



# FACTORY AUTOMATION – SENSING YOUR NEEDS



Pepperl+Fuchs sets the standard in quality and innovative technology for the world of automation. Our expertise, dedication, and heritage of innovation have driven us to develop the largest and most versatile line of industrial sensor technologies and interface components in the world. With our global presence, reliable service and flexible production facilities, Pepperl+Fuchs delivers complete solutions for your automation requirements – wherever you need us.

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