

**CURTISS -  
WRIGHT**

**VALVES  
DIVISION**



# Monitoring Device

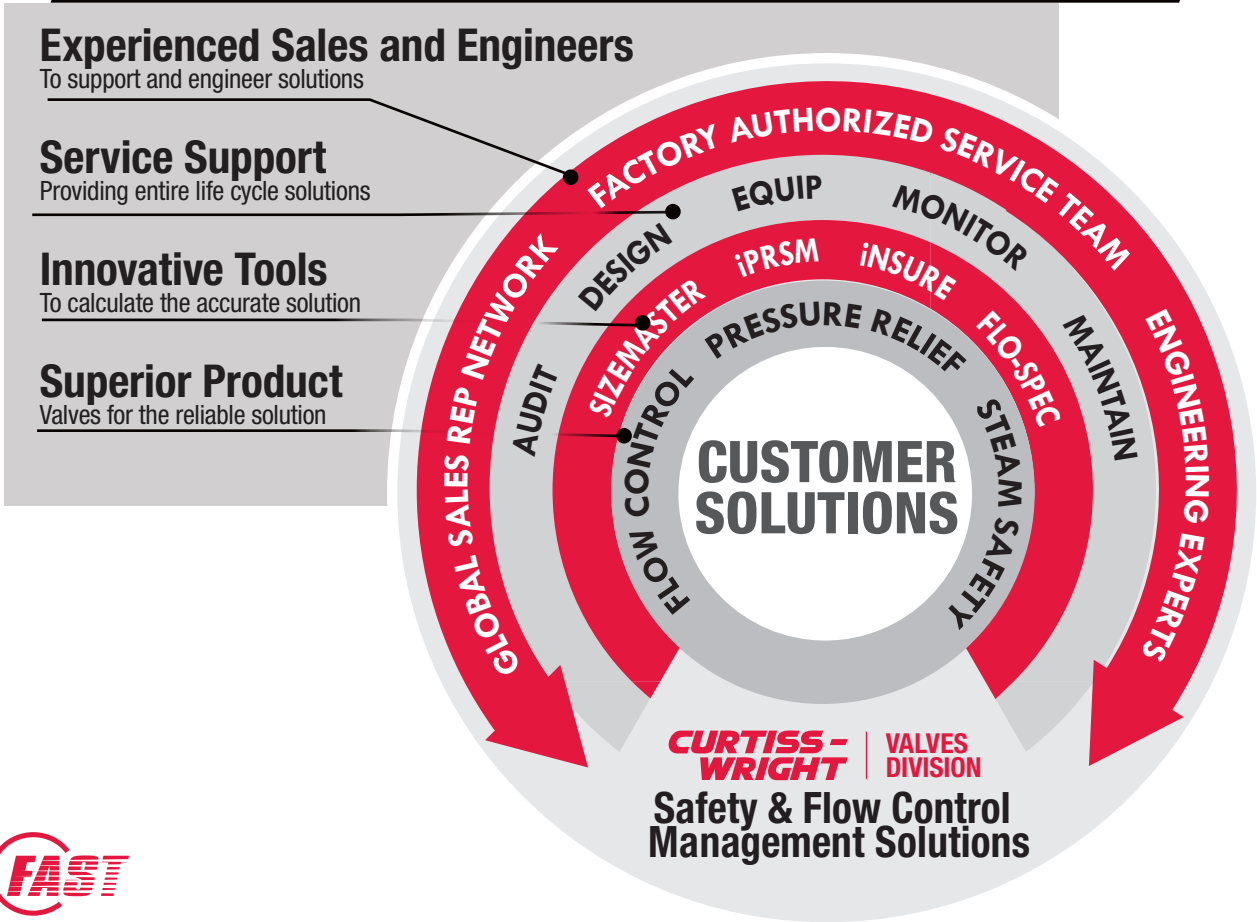
Real-Time Monitoring for Pressure Relief Valves

**Curtiss-Wright** is a worldwide leader in delivering solutions to improve safety, plant flexibility, reliability, and efficiency. Farris Engineering, a division of Curtiss-Wright, has been at the forefront in the design and manufacture of spring-loaded and pilot-operated pressure relief valves since 1943.

**Our Commitment;** To provide customers with total pressure and flow control management solutions supporting a facility’s entire lifecycle, transforming and ensuring plant safety.

## Focused On Customer Solutions

Experienced Engineers • Solution Management • Superior Products



### Factory Authorized Service Team

#### Sales Representative Network

- Factory trained technicians in OEM specifications
- Local service and in-line testing reducing maintenance cost.
- Capability to track and manage relief valve maintenance and repair history
- Access to sales network, and keeping global inventory local

<https://www.cw-valvegroup.com/en-gb/contact-us>





## Real-Time Monitoring of Your Pressure Relief Valves

The inSure<sup>®</sup> Monitoring Device detects pressure events by measuring valve stem movement and recording critical data to report fugitive emissions more accurately. It can also provide data driven insights to detect unstable flow in challenging applications to troubleshoot your system and reduce maintenance costs.

### Features:

- Detect and record pressure relief events to improve data acquisition and flow calculations
- Connect to DCS via wired or wireless communication
- Install easily with no penetration of valve pressure boundary
- Use in hazardous locations with intrinsic safety certification
- Powered by replaceable battery
- Retrofit to 2600 Series valve or purchase complete valve with factory installed monitor

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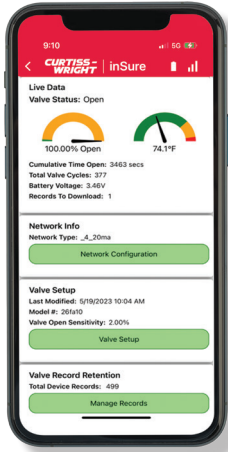
## Materials of Construction

The inSure Device comes fully assembled with key components defined below, for installation, setup and calibration.

inSure Monitoring Device		
	Description	Qty.
1	Enclosure Body	1
2	Sensor Alignment Module	1
3	Clamp Screws	4
4	Enclosure Clamp	1
5	Cable Gland or Antenna Bulkhead	1
6	Battery Module	1
7	Nameplate	1
8	Enclosure Cover	1
9	Cover Screws	4
10	Sensor Alignment Module Screws	2
11	Battery Connection	1
12	Battery Screws	2
13	Wireless Antenna	1
14	Magnet Holder	2
15	Magnet Wave Washer	1
16	Magnet	1
17	Replacement Cap	1

**Magnet Assembly**

# Communication Protocol



## inSure® App

The inSure device utilizes Bluetooth connectivity with the CW inSure App to calibrate the unit and provide live valve status of pressure events including time, temperature, battery voltage, valve open or closed, % open, and lift. This data can then be used to calculate volume of relief event emissions. Each unit can store 180MB of data that can be exported from the app.

### Wired or Wireless Distributed Control System (DCS)

Communication with your DCS is achieved through multiple protocols. The product offers a wired 4-20mA version, and *WirelessHART*® or ISA100Wireless™ for wireless connectivity. If using wireless communication, Bluetooth functionality will be disconnected since only one wireless protocol is active at one time.

Refer to the Installation Operation and Maintenance Manual for more information.

- ISA100 Wireless
- *WirelessHART*



- Wired 4-20mA



# Product Specification

Product Description	
Pressure Range:	Atmospheric
Temperature Range:	-40°F to +150°F      -40°C to 60°C
Size Range:	7" x 4" x 3"      178 x 102 x 76mm
Weight:	3 lb.
Communication Protocol	4-20mA, <i>WirelessHART</i> , ISA100 Wireless
Data Interface	Wired or Wireless
Power Source	Battery
Device Data Storage	180MB
Sampling Rate	1 per Second
Certifications	See back page of catalog

## Type Numbering System

Retrofit kits can be installed on many 2600 Series pressure relief valve with plain cap. This kit includes a monitor, battery, magnet, magnet holder, wave washer, replacement low ferrite stainless steel cap, and cap gasket.

<b>4KMON26</b>	<b>S</b>	<b>S</b>	<b>M-</b>	<b>W84</b>
Kit Number	Stem Thread Size	Cap Size	Communication Protocol	Cap Material
4KMON26	<b>S</b> Small <b>M</b> Medium <b>L</b> Large	<b>S</b> Small <b>L</b> Large	<b>M</b> Wired 4-20 mA <b>H</b> <i>WirelessHART</i> ® <b>S</b> ISA100 Wireless™	<b>W84</b> Stainless Steel inSure Cap

## Kit Number Examples:

**4KMON26SSM-W84:** Monitor retrofit kit for a 2600 Series D orifice valve with 150# flange class, 4-20mA communication protocol, and the standard stainless steel inSure cap.

**4KMON26MSH-W84:** Monitor retrofit kit for a 2600 Series F orifice with 300# flange class, WiHart communication protocol, and the standard stainless steel inSure cap.

**4KMON26LLS-W84:** Monitor retrofit kit for a 2600 Series L orifice with 600# flange class, ISA100 communication protocol, and the standard stainless steel inSure cap.

## Factory Installed Monitor

The inSure Monitor can be purchased with a 2600 Series Valve as a complete unit, installed and calibrated at the factory. Choose the 2600 Series Valve to for your application and replace the “Cap Construction” character with the following designator based on your communication protocol:

- M** Wired 4-20mA protocol
- H** *WirelessHART* protocol
- S** Wireless ISA100 protocol

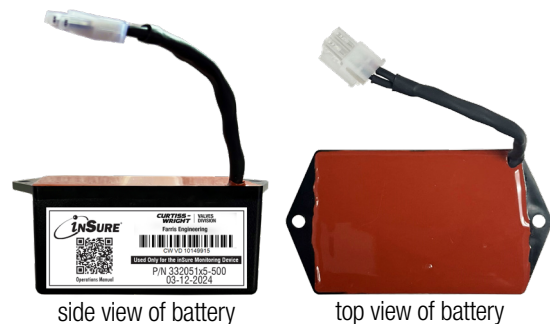
## Model Number Examples:

**26DA10-1M0:** 26DA10-120 valve with inSure 4-20mA monitor factory installed and calibrated.

**26GA13-1H0:** 26GA13-120 valve with inSure *WirelessHart* monitor factory installed and calibrated.

## Authorized Replacement Parts

<b>inSure   Battery Kits</b>		
Part Number	Description	Qty.
332051X6-500	Battery Module, Spare Screws and Spacers	1
332051X5-500	Battery Module Only	1



# 2600 Series Retrofit Kit Selection

**Table 1: Monitor Selection for Air/Gas/Steam Service (Serial Suffix: A10, A11, A10R, A11R)**

Valve Type Number	Flange Class	Orifice Size						
		D	E	F	G	H	J	K
260010	150#	4KMON26SS0-0	4KMON26SS0-0	4KMON26SS0-0	4KMON26SS0-0	4KMON26SS0-0	4KMON26MS0-0	4KMON26MS0-0
260011	300# LW	4KMON26SS0-0	4KMON26SS0-0	4KMON26SS0-0	4KMON26SS0-0	4KMON26SS0-0	4KMON26MS0-0	4KMON26MS0-0
260012	300#	4KMON26SS0-0	4KMON26SS0-0	4KMON26MS0-0	4KMON26MS0-0	4KMON26MS0-0	4KMON26MS0-0	4KMON26MS0-0
260013	600#	4KMON26SS0-0	4KMON26SS0-0	4KMON26MS0-0	4KMON26MS0-0	4KMON26MS0-0	4KMON26MS0-0	4KMON26LL0-0
260014	900#	4KMON26MS0-0	4KMON26MS0-0	4KMON26MS0-0	4KMON26MS0-0	4KMON26MS0-0	4KMON26LL0-0	4KMON26LL0-0
260015	1500#	4KMON26MS0-0	4KMON26MS0-0	4KMON26MS0-0	4KMON26MS0-0	4KMON26MS0-0	4KMON26LL0-0	4KMON26LL0-0
260016	2500#	4KMON26MS0-0	4KMON26MS0-0	4KMON26MS0-0	4KMON26MS0-0			

Valve Type Number	Flange Class	Orifice Size						
		L	M	N	P	Q	R	T
260010	150#	4KMON26MS0-0	4KMON26MS0-0	4KMON26MS0-0	4KMON26MS0-0	4KMON26LL0-0	4KMON26LL0-0	4KMON26LL0-0
260011	300# LW	4KMON26MS0-0	4KMON26MS0-0	4KMON26MS0-0	4KMON26MS0-0	4KMON26LL0-0	4KMON26LL0-0	4KMON26LL0-0
260012	300#	4KMON26LL0-0	4KMON26LL0-0	4KMON26LL0-0	4KMON26LL0-0	4KMON26LL0-0	4KMON26LL0-0	4KMON26LL0-0
260013	600#	4KMON26LL0-0	4KMON26LL0-0	4KMON26LL0-0	4KMON26LL0-0	4KMON26LL0-0	4KMON26LL0-0	4KMON26LL0-0
260014	900#	4KMON26LL0-0	4KMON26LL0-0	4KMON26LL0-0	4KMON26LL0-0			
260015	1500#	4KMON26LL0-0						
260016	2500#							

**Table 2: Monitor Selection for Liquid Service (Serial Suffix: A14, A15, A14R, A15R)**

Valve Type Number	Flange Class	Orifice Size						
		D	E	F	G	H	J	K
260010	150#	4KMON26SS0-0	4KMON26SS0-0	4KMON26SS0-0	4KMON26SS0-0	4KMON26SS0-0	4KMON26MS0-0	4KMON26MS0-0
260011	300# LW	4KMON26SS0-0	4KMON26SS0-0	4KMON26SS0-0	4KMON26SS0-0	4KMON26SS0-0	4KMON26MS0-0	4KMON26MS0-0
260012	300#	4KMON26SS0-0	4KMON26SS0-0	4KMON26MS0-0	4KMON26MS0-0	4KMON26MS0-0	4KMON26MS0-0	4KMON26MS0-0
260013	600#	4KMON26SS0-0	4KMON26SS0-0	4KMON26MS0-0	4KMON26MS0-0	4KMON26MS0-0	4KMON26LL0-0	4KMON26LL0-0
260014	900#	4KMON26MS0-0	4KMON26MS0-0	4KMON26MS0-0	4KMON26MS0-0	4KMON26MS0-0	4KMON26LL0-0	4KMON26LL0-0
260015	1500#	4KMON26MS0-0	4KMON26MS0-0	4KMON26MS0-0	4KMON26MS0-0	4KMON26MS0-0	4KMON26LL0-0	4KMON26LL0-0
260016	2500#	4KMON26MS0-0	4KMON26MS0-0	4KMON26MS0-0	4KMON26MS0-0			

Valve Type Number	Flange Class	Orifice Size						
		L	M	N	P	Q	R	T
260010	150#	4KMON26MS0-0	4KMON26LL0-0	4KMON26LL0-0	4KMON26LL0-0	4KMON26LL0-0	4KMON26LL0-0	4KMON26LL0-0
260011	300# LW	4KMON26MS0-0	4KMON26LL0-0	4KMON26LL0-0	4KMON26LL0-0	4KMON26LL0-0	4KMON26LL0-0	4KMON26LL0-0
260012	300#	4KMON26LL0-0	4KMON26LL0-0	4KMON26LL0-0	4KMON26LL0-0	4KMON26LL0-0	4KMON26LL0-0	4KMON26LL0-0
260013	600#	4KMON26LL0-0	4KMON26LL0-0	4KMON26LL0-0	4KMON26LL0-0	4KMON26LL0-0	4KMON26LL0-0	4KMON26LL0-0
260014	900#	4KMON26LL0-0	4KMON26LL0-0	4KMON26LL0-0	4KMON26LL0-0			
260015	1500#	4KMON26LL0-0						
260016	2500#							



## WARRANTY

Curtiss-Wright products have a warranty period of twelve months from first installation or eighteen months from delivery, whichever is sooner. All other warranty terms are as per Curtiss-Wright Industrial Standard Terms and Conditions, a copy which is available at [www.cw-industrialgroup.com/About/Group-Policies/Terms-Conditions.aspx](http://www.cw-industrialgroup.com/About/Group-Policies/Terms-Conditions.aspx) or contact your local representative.

## Certifications, Compliances and Approvals

- **USA/Canada:** IS, Class I, Div 1, Groups A, B, C, D T3
- **Europe (ATEX):** Group II, Cat 1 G, Ex ia IIC T3 Ga
- **International (IECEX):** Ex ia IIC T3 Ga
- **Ingress Protection:** IP66

### Environmental Conditions:

This equipment approved for outdoor use and wet locations.

- Altitude limit of 2000 M
- Temperature range of -40°C to 60°C
- Relative Humidity: 10-90% non-condensing
- Pollution degree: 4

### FCC

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.



NA: CSA 24CA80199237X  
IECEX: IECEX CSA 24.0025X  
ATEX: CSANe 24 ATEX 1120X

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