

# CERTIFICATE OF CONFORMITY



- HAZARDOUS (CLASSIFIED) LOCATION ELECTRICAL EQUIPMENT PER US REQUIREMENTS**
- Certificate No:** FM18US0336X
- Equipment:** 360/366 Control monitor ,  
(Type Reference and Name) 460 / 470 / SS421 EPIC Position Transmitter  
and the Series GK, GM, GN and GS Valve Position  
Monitor
- Name of Listing Company:** Westlock Controls Corp
- Address of Listing Company:** 280 N Midland Ave, Ste 258  
Saddle Brook  
NJ 07663  
United States
- The examination and test results are recorded in confidential report number:  
2Z0A6.AE dated 18<sup>th</sup> January 1996
- FM Approvals LLC, certifies that the equipment described has been found to comply with the following Approval standards and other documents:  
FM Class 3600:2018, FM Class 3611:2004, FM Class 3615:2018, FM Class 3810:2018,  
ANSI/ISA 60079-0:2007, ANSI/ISA 60079-1:2007, ANSI/NEMA 250:2003, ANSI/IEC 60529:2004
- If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to specific conditions of use specified in the schedule to this certificate.
- This certificate relates to the design, examination and testing of the products specified herein. The FM Approvals surveillance audit program has further determined that the manufacturing processes and quality control procedures in place are satisfactory to manufacture the product as examined, tested and Approved.
- Equipment Ratings:  
360 or 366 Control Monitor  
Explosionproof for Class I, Division 1, Groups \*A, B, C and D; T5 Ta= -50°C to +60°C; Non-Incendive for Class I, Division 2, Groups A, B, C, and D; T5 Ta= -50°C to +60°C; Dust-ignitionproof for Class II/III Division 1, Groups E, F and G; T5 Ta= -50°C to +60°C; Hazardous (Classified) Locations, indoors and outdoors (Type 4, 4X, and 6P) when provided with solenoid coil; with an ambient temperature rating of -50°C to +60°C.

**Certificate issued by:**

J. E. Marquedant

September 13, 2019

Date

To verify the availability of the Approved product, please refer to [www.approvalguide.com](http://www.approvalguide.com)

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## SCHEDULE

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### 460 and 470 EPIC Position Transmitter.

Explosionproof for Class I, Division 1, Groups \*A,B, C and D; T5 Ta=+85°C;  
Non-Incendive for Class I, Division 2, Groups A, B, C, and D; T4 Ta=+40°C;  
Dust-ignitionproof for Class II/III Division 1, Groups E, F and G; T5 Ta= +85°C;  
Hazardous (Classified) Locations, indoors and outdoors (Type 4, 4X, 6P and IP68). Derated for Group C and D when provided with solenoid coil.

### SS421 EPIC Position Transmitters

Explosionproof for Class I, Division 1, Groups \*B, C and D; T5 Ta=+85°C ;  
Suitable for Non-Incendive for Class I, Division 2, Groups A, B, C, and D; T4 Ta=+40°C;  
Dust-ignitionproof for Class II/III Division 1, Groups E, F and G; T5 Ta= +85C;  
Hazardous (Classified) Locations, indoors and outdoors (Type 4, 4X, 6P and IP68). Derated for Group C and D when provided with solenoid coil.

### The Series GK, GM, GN and GS Valve Position Monitor

Explosionproof for Class I, Division 1, Groups C and D; and Dust-ignitionproof for Class II/III Division 1, Groups E, F and G; T5 Ta= +85°C; and Non-Incendive for Class I, Division 2, Groups A, B, C, and D; T4 Ta=+40°C; and a Hazardous (Classified) Locations, indoors and outdoors (Type 4, 4X, 6P and IP66).  
Flameproof AEx d Group IIB, with a T6 Temperature Class for Hazardous (Classified) Locations and an indoor/outdoor IP66 environmental rating. The equipment Ambient Operating Temperature is Ta = -50°C to 60°C.

11. The marking of the equipment shall include:

### 360 or 366 Control Monitor

Class I Division 1, Groups \*A, B, C, D; T5 Ta = -50°C to +60°C;  
Class II / III, Division 1, Groups E, F, G; T5 Ta = -50°C to +60°C;  
Class I, Division 2, Groups A, B, C, D, T5 Ta=-50°C to +60°C;  
Type 4, 4X, 6P;

### 460 and 470 EPIC Position Transmitter.

Class I Division 1, Groups \*A, B, C, D; T5 Ta = +85°C;  
Class II / III, Division 1, Groups E, F, G; T5 Ta = +85°C  
Class I, Division 2, Groups A,B, C, D, T4 Ta= +40°C;  
Type 4, 4X, 6P; IP68

### SS421 EPIC Position Transmitters

Class I Division 1, Groups \*B, C, D; T5 Ta = +85°C;  
Class II / III, Division 1, Groups E, F, G; T5 Ta = +85°C  
Class I, Division 2, Groups A,B, C, D, T4 Ta= +40°C;  
Type 4, 4X, 6P; IP68

### Series GK, GM, GN and GS Valve Position Monitor

Class I Division 1, Groups C, D; T6 Ta = -50°C to +60°C;  
Class II / III, Division 1, Groups E, F, G; T6 Ta = -50°C to +60°C;  
Class I, Division 2, Groups A,B, C, D, T6 Ta = -50°C to +60°C;  
Ex d Group IIB T6 Ta = -50°C to +60°C;  
Type 4, 4X, 6P; IP66

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## SCHEDULE

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### 12. Description of Equipment:

**General** – The 360 & 366, Control Monitors and 460, 470 and SS421 Position Transmitters are for use in valve positioning applications with a solenoid coil for actuator control rated for Groups C and D locations. The enclosure tested consists of one aluminum compartment enclosure with a threaded cover and three entries. The apparatus without solenoid coil is rated for use in Groups A, B, C and D hazardous (classified) locations.

The Series GK, GM, GN and GS Valve Position Monitor is a magnetic device which senses the presence or absence of ferrous material, and actuates internal switches with pneumatic pressure and utilizes a visible beacon indicator which signals valve status (open or closed) and valve position.

**Construction** – The 360 & 366 enclosure has a shaft passing through the base of the enclosure, whereas for the 460, 470 and SS421 enclosure, the shaft is replaced by a 0.623 inch diameter, 2.56 inch long stainless steel tube. The enclosure also contains switches which are connected to a connection terminal strip located inside the enclosure. The switches are operated by changes in the shaft position for the 360/ 366 models or for the 460/ 470/ SS421 models. A Hall Effect Sensor is potted inside the stainless steel tube of the 460/ 470/ SS421. The 460/ 470/ SS421 enclosure also contains a terminal strip for all input/output wiring and one circuit board. The SS421 is a stainless steel version of the 460/ 470 aluminum models.

The Series GK, GM, GN and GS Valve Position Monitor consists of a solenoid housing assembly that threads into a cast aluminium enclosure. The compressed air or inert gas to the internal pneumatically operated switch is made by through a sinter arrestor in the pneumatic air supply, pneumatic air return and pneumatic air exhaust from the internal switch located within the enclosure which provides a pneumatic signal to show that the valve is either opened or closed. An additional crimped ribbon flame arrestor is press fit into the side of the enclosure. For protection against the entrance of water, O-rings are provided between the aluminium enclosure cover and base, between the protruding shaft and aluminium enclosure, between the solenoid housing and aluminium enclosure and in the solenoid housing assembly. The maximum operating pressure for the solenoid valve is 150 psi (10.3 Bar).

**Ratings** – The Series 360 and 366 Position Transmitters ambient temperature range of -50°C to +60°C with an environmental rating of Type 4, 4X, and 6P;

The Series 460/ 470/ SS421 Position Transmitters Explosionproof and Dustexclusion ambient operating temperature range is -20°C to 85°C and non-incendive ambient operating temperature range of -20°C to 40°C and environmental rating of Type 4, 4X, 6P and IP68;

The Series GK, GM, GN and GS Valve Position Monitor ambient operating temperature range of -50°C to 60°C with an environmental rating of Type 4, 4X, 6P and IP66;

#### Models 360, 366

#### **360-abcdefgh or 366-abcdefgh. Control Monitor.**

a = Shaft: S, D or N.

b = Beacon type: BY or RG

c = Conduit: 1B or 2B.

d = Internal switch selection: (Mechanical non - NI rated) 2M02, 2M04 or 4M02;  
(Hermetically Sealed – NI rated) 2M06, 2M12, 2M17, 2M18, 4M06 or 4M12.

e = Position Transmitter: 00, CS, or DS.

f = \*Solenoid Coil: 24Vdc, 120 Vac or None (\*Derated to Group C and D when provided with solenoid coil).

g = Valve Body: Any (Not safety related).

h = Override Options: 0, X, M, L, R, N or E.

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### The Series 460 and 470 Position Transmitters

#### ***Dabcdefg. EPIC Position Transmitter.***

a = Enclosure: 460 or 470.

b = Valve Type: LV, LR, RO or RR.

c = ESD / PST: 0 or 1.

d = Conduit Qty: 3 (¾ inch - with solenoid) or 4 (¾ inch - without solenoid).

e = \*Solenoid Coil: 24 Vdc or None (\*Derated to Group C and D when provided with solenoid coil).

f = Valve Body: 00 (none), 22, 32, 42, 52, 23, 33, 34, 43, 53 and 54.

g = Valve Feature: 0, V or I.

### SS421 EPIC Position Transmitters

#### ***SS421abXcdef. EPIC Position Transmitters.***

a = Enclosure: 1 (#60 Aluminum ) or 2 (#70 Stainless Steel).

b = Application Type: LV, LR, RO or RV.

c = Conduit: 1, 2, 3 or 6.

d = \*Solenoid: 2100, 2500, 3100, 3500, 4100, 4500, 5100, 5500 or None (\*Derated to Group C and D when provided with solenoid coil).

e = Special operation: 0 or 1.

f = Beacon option: two digits.

### Series GK, GM, GN and GS Valve Position Monitor

#### ***Ga – bcdefghij. Valve Positioner Monitor.***

a = Shaft: S, N, K or M.

b = Conduits: 1, 2, 3, 4, 5, 6, 7, 8, 9, A, B or C.

c = Beacon type: By, B1, B3, B5, B7, B9, RG, SP or FC.

d = Number of switches: 1, 2, 3 or 4.

e = Switch type: A, B, C, D, E, F, G, H, I, J, K, M, N, O, or P.

f = Solenoid (Voltage): 0, 1, 2, 3, 4, 5, 6, 7, or 9.

g = Solenoid (Material): 0, 1, 2, 3 Or 4.

h = Solenoid (Cv): 0, 1, 2, 3 or 4.

i = Solenoid (Options): 0, M, L, E, R, or N.

j = Solenoid (Special features): 0 or 1

### 13. **Specific Conditions of Use:**

#### Models 360, and 366 Control Monitor.

NONE

#### Models 460, 470 and 421 Position Transmitters

NONE

#### The Series GK, GM, GN and GS Valve Position Monitor

Consult the manufacturer if dimensional information on the flameproof joints is necessary.

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**14. Test and Assessment Procedure and Conditions:**

This Certificate has been issued in accordance with FM Approvals US Certification Requirements.

**15. Schedule Drawings**

A copy of the technical documentation has been kept by FM Approvals.

**16. Certificate History**

Details of the supplements to this certificate are described below:

Date	Description
18 <sup>th</sup> January 1996	Original Issue.
19 <sup>th</sup> February 2019	<u>Supplement 15:</u> Report Reference: RR217405 Dated 19 <sup>th</sup> February 2019 Description of the Change: Update certificate to new format. Addiiton of switch. Refer to Project ID 2Z0A6.AE for 360 /366, Project ID 3041173 for 360 /366 EPIC, SS421 and Project ID 3040307 for Series GK, GM, GN and GS . These projects are listed on CofC 2Z0A6.AE.
13 <sup>th</sup> September 2019	<u>Supplement 16:</u> Report Reference: – RR219379 Dated 13 <sup>th</sup> September 2019 Description of the Change: Added additional model code 'DS'.

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