

Fenwal Engineered Fire Suppression System

Designed for use with 3M™ Novec™ 1230 Fire Protection Fluid
Valve Actuator Assembly Data Sheet



A UTC Fire & Security Company

F-44-9049

P/N: 81-100000-001

FEATURES

- **Explosion Proof :**
 - **UL Listed as Suitable for Hazardous Locations:**
 - Class I Div 1 Groups C and D
 - Class II Div 1 Groups E, F and G
- **FM Approved**
- **Compatible with UL Listed and FM Approved Suppression Systems**
 - FM-200® Systems, including the Phoenix
 - Carbon Dioxide Systems
 - FE-13™ Systems
- **Operated By:**
 - Control Panel
 - Mechanical Manual Actuator
- **Nominal 24 Vdc Operation**
- **Low Current Consumption**
- **Operates:**
 - Cylinder Valves
 - Stop Valves
 - Directional Valves
- **Wide Operating Temperature Range**
- **Rugged Brass Body**

DESCRIPTION

The Explosion Proof Control Head is designed to operate FM-200®, Phoenix, Carbon Dioxide and FE-13™ cylinder valves, stop valves and directional valves. The Explosion Proof Control Head can be operated electronically from the Detection and Control system, or by local manual operation via an affixed manual control head. The Explosion Proof Control Head has a continuous current draw, which must be accommodated for at the Control Panel. The actuating pin latches in the released position and must be mechanically reset prior to re-arming the system.

A suitable Control Panel, Listed and/or Approved for use with the Explosion Proof Control Head, shall be provided for supervision of the releasing circuit per NFPA requirements.

The Explosion Proof Control Head is designed and rated for use in the following hazardous areas: Class I Division 1 Group C and D and Class II Division 1 Group E, F and G.

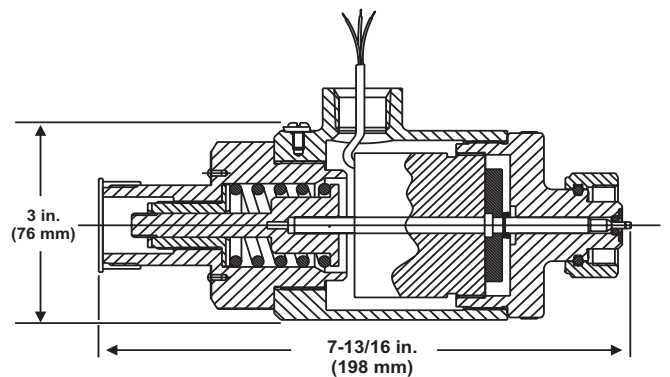


Figure 1. Assembly Drawing

INSTALLATION

The Explosion Proof Control Head can be mounted directly on either the cylinder valve or stop/directional valve.



Care should be taken to ensure that the actuating pin is in the set position when attaching the control head to the cylinder or the stop/directional valve. Accidental system discharge could occur, which could cause property damage, personal injury and/or death.

Tighten the swivel nut securely in place.

When installing the Explosion Proof Control Head in hazardous locations, wiring connections must be terminated in explosion proof junction boxes.

The lead wires must be connected using the indicated polarity (red to positive, black to negative) in order to obtain correct operation.

MAINTENANCE

Regular scheduled maintenance should be performed on the Explosion Proof Control Head to ensure that the unit operates correctly if and when required.

MONTHLY

The Explosion Proof Control Head should be inspected for any signs of physical damage, deterioration, corrosion, distortion, cracks, dirt ingress and loose couplings. Tighten any loose couplings. Replace damaged or missing caps. Replace control head if damage is found. Ensure that all explosion proof control heads are in the "set" position.

SEMI-ANNUALLY

The Explosion Proof Control Head should be tested for proper operation.



All Flameproof and Explosion Proof Control Heads should be removed from agent cylinders (Carbon Dioxide, FM-200 or FE-13) to avoid accidental system discharge which could cause property damage, personal injury and/or death.

Remove control heads from all master cylinders within the hazard area being tested. Let the Explosion Proof Control Head hang freely from the flexible electrical conduit connections. Operate the Explosion Proof Control Head, either by actuation at the system control panel or via manual operation of an electric pull station. Ensure that the control head has operated. Observe that the actuating pin has moved to the fully released position. If any control heads have not operated, check circuit for electric continuity. Replace all damaged control heads. Repeat operation test if any control heads have been replaced. Replace any damaged control head which fails to reset properly. Make certain that electric control heads are in the set position before reconnecting to agent cylinders. Reattach all control heads to threaded ports on cylinder valves and tighten swivel nuts securely.

SPECIFICATIONS

Part Number:	81-100000-001
Applications:	FM-200, Phoenix, Carbon Dioxide and FE-13 Suppression Systems utilizing Novec 1230 fluid
Approval/Listing:	
Releasing Device	UL, FM
HazLoc	UL, FM, DEMKO
HazLoc Ratings:	- Class I Division 1 Group C and D - Class II Division 1 Group E, F, and G
Operating Voltage:	18 Vdc @ 0.20 A to 30 Vdc @ 0.50 A
Current Draw:	
at 24 Vdc	270 mA continuous
at 30 Vdc	500 mA continuous
Wiring Connections:	
Wire Size	18 AWG
Lead Length	36 in. (914 m)
Ambient Temperature:	-40°F to 130°F (-40°C to 55°C)
Construction:	
Material	Brass body
Weight	8.1 lb. (3.7 kg)
Dimensions:	3 in. D x 7.8 in. L (76 mm D x 198 mm L)

ORDERING INFORMATION

Part Number	Description
81-100000-001	Explosion Proof Solenoid (Electric Control Head)
870652	Mechanical Manual Actuator
81-129958-001	Reset Tool Assembly

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