

# Fenwal Engineered Fire Suppression System

Effective March 2005

F-44-9049

Designed for use with 3M™ Novec™ 1230 Fire Protection Fluid

## 3" Discharge Valve Component Sheet

# FENWAL®

P/N: 44-170000-000

### 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
- **Flameproof:**
  - DEMKO Certified to CENELEC Requirements
- **FM Approved**
- **Compatible with UL Listed and FM Approved Fenwal Engineered 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 Flameproof and Explosion Proof Solenoid (Electric Control Head) is designed to operate Fenwal Engineered System cylinder valves, stop valves and directional valves. The Control Head can be operated electronically from the Detection and Control system, or by local manual operation via an affixed manual control head. The 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 Control Head, shall be provided for supervision of the releasing circuit per NFPA requirements.

The Flameproof and 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.

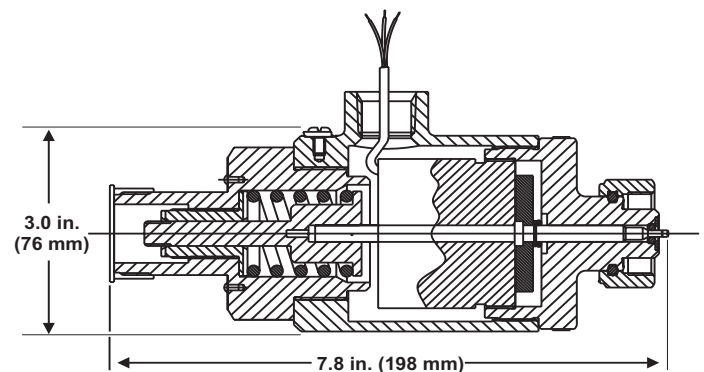


Figure 1. Assembly Drawing

### INSTALLATION

The Flameproof and Explosion Proof Electric Control Head can be mounted directly on either the cylinder valve, stop/directional valve.

#### **⚠ WARNING**

**Care should be taken to ensure that the actuating pin is in the set position when attaching the control head to the cylinder or to 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 Flameproof and 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 Flameproof and Explosion Proof Control Head to ensure that the unit operates correctly if and when required.

### MONTHLY

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

### WARNING

**All Flameproof and Explosion Proof Control Heads should be removed from agent cylinders 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 Flameproof and Explosion Proof Control Head hang freely from the flexible electrical conduit connections. Operate the Flameproof and 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

<b>Part Number:</b>	81-100000-001
<b>Applications:</b>	Kidde Engineered Systems utilizing Novec 1230 fluid
<b>Approval/Listing:</b>	
Releasing Device–	UL, FM
HazLoc–	UL, FM, DEMKO
<b>HazLoc Ratings:</b>	Class I Division 1 Group C and D Class II Division 1 Group E, F and G
<b>Flameproof Solenoid:</b>	EEx dIIc T6 0539II2G DEMKO 02 ATEX 0135367
<b>Operating Voltage:</b>	18 Vdc @ 0.20 A to 30 Vdc @ 0.50 A
<b>Current Draw:</b>	
At 24 Vdc–	270 mA continuous
At 30 Vdc–	500 mA continuous
<b>Wiring Connections:</b>	
Wire Size–	18 AWG
Lead Length–	36 in. (914 mm)
<b>Ambient Temperature:</b>	-40°F to 130°F (-40°C to 55°C)
<b>Construction:</b>	
Material–	Brass body
Weight–	8.1 lb. (3.7 kg)
<b>Dimensions:</b>	3 in. D x 7.8 in. L (76 mm D x 198 mm L)

## ORDERING INFORMATION

Part Number	Description
81-100000-001	Flamproof and Explosion Proof Solenoid (Electric Control Head)
870652	Mechanical Manual Actuator

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**Protection Systems**

KIDDE-FENWAL, INC.  
400 MAIN STREET, ASHLAND, MA 01721  
TEL: (508)881-2000 FAX: (508) 881-8920  
www.fenwalfire.com

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