

KRS-50 Control Box

P/N: 87-120010-001

Effective: June 2010
K-87-009

FEATURES

- For Use in WHDR™ Commercial Cooking Fire Suppression Systems
- Pneumatic Release of Up to 5 Agent Cylinders
- Wall Mount in any Orientation
- Up to 200 ft. Mechanical Detection Cable
- Single or Dual Microswitches
- Easy to Install and Maintain
- Rugged, Cost-Effective Design
- UL & ULC Listed

DESCRIPTION

The KRS-50 Control Box (Figure 1) is a cost-effective, robust control unit used to actuate up to five agent storage cylinders on a Kidde WHDR wet chemical fire suppression system for commercial cooking operations.

The KRS-50 can be operated via a single detection line with up to 40 fusible link and/or thermo bulb link heat detectors or via a Kidde in-line remote manual pull station. Upon operation, the KRS-50 discharges the system CO₂ cartridge, pressurizing the actuation line and

System Valve Actuators (SVA) mounted on the cylinder valve(s). The SVA(s) open the cylinder valve(s), discharging the WHDR system wet chemical suppression agent. A second mechanical cable is used to concurrently close the gas supply valve, shutting off fuel to the appliance(s).

The KRS-50 is UL and ULC listed and includes one System Valve Actuator and two CO₂ actuation cartridges (for test and final set-up).

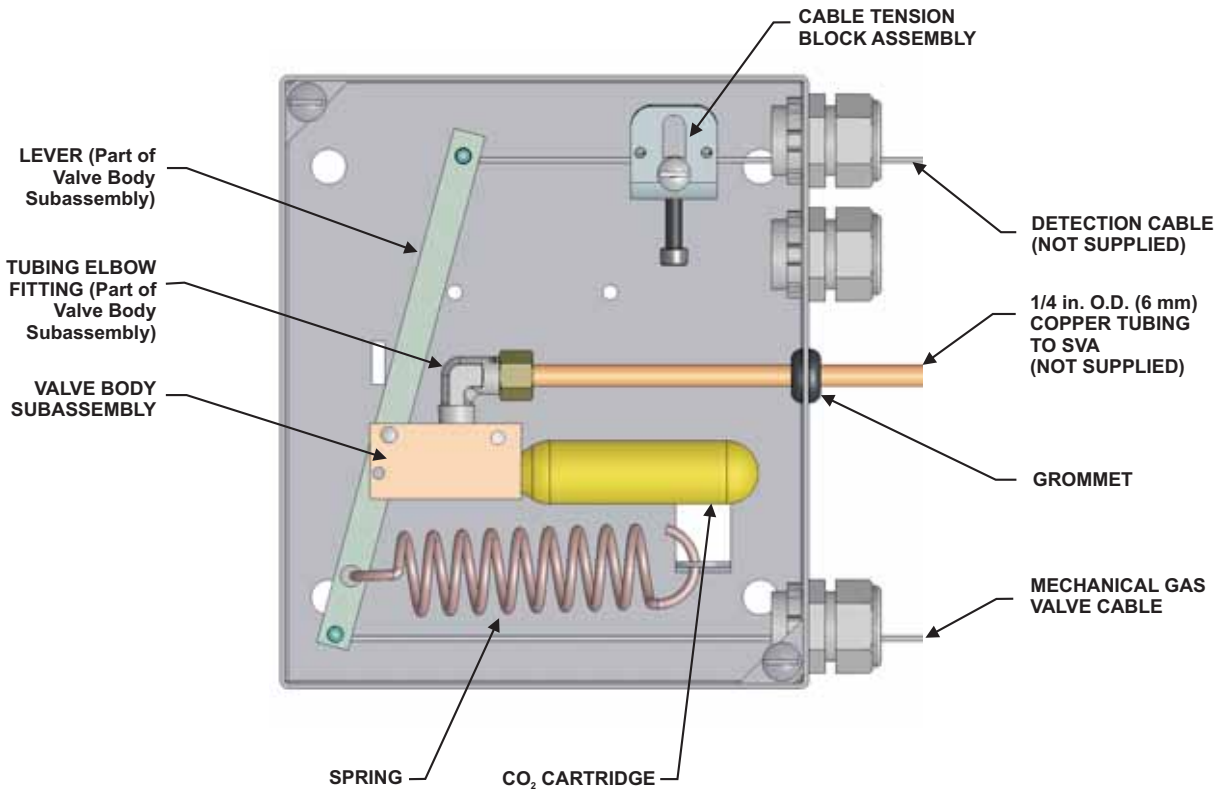


Figure 1. KRS-50 Control Box, P/N 87-120010-001 (Cover Removed)

CO₂ CARTRIDGE, P/N 06-235557-001

When the CO₂ cartridge discharges, the CO₂ gas pressurizes the copper actuation tubing to the System Valve Actuator(s), located on the system Cylinder Valve, and actuates the cylinder(s) (see Figure 2).

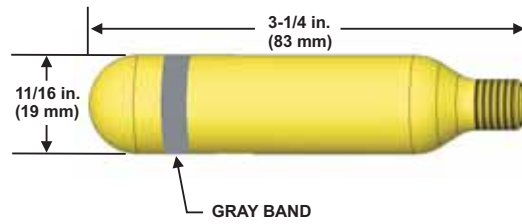


Figure 2. CO₂ Cartridge, P/N 06-235557-001

SYSTEM VALVE ACTUATOR (SVA), (P/N 87-120042-001)

A System Valve Actuator (SVA) is mounted to every wet chemical cylinder valve assembly (Figure 3). The SVA has ports for low profile tubing runs, and is also equipped with a spring loaded plunger that locks the piston in the discharged position, ensuring complete discharge of the cylinder(s) contents.

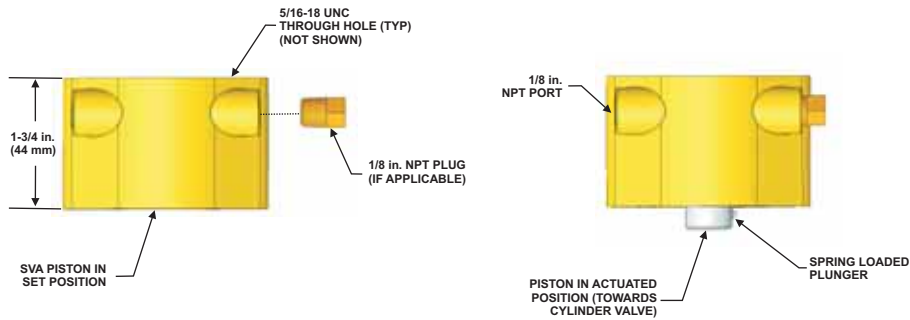


Figure 3. System Valve Actuator, P/N 87-120042-001

CABLE TENSION BLOCK, P/N 60-9197220-000

The Cable Tension Block (Figure 4) is used to set and maintain tension on the detector cable within the KRS-50 Control Box.

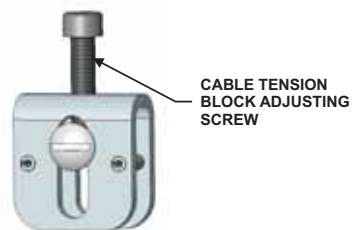


Figure 4. Cable Tension Block, P/N 60-9197220-000

KEEPER PIN, P/N 60-9197108-000

The Keeper Pin (P/N 60-9197108-000) is used to prevent actuation while installing the system.



Figure 5. Keeper Pin, P/N 60-9197108-000

KRS-50 DESIGN PARAMETERS

The following tables detail the mechanical operation and actuation design parameters for the Kidde KRS-50 Control Box.

Table 1. KRS-50 Mechanical Cable Parameters

| Kidde Cable Line | Max Cable Length | Max Corner Pulleys | Max Detectors |
|---|-------------------|--------------------|---------------|
| Detection / In-Line Remote Manual Release | 200 ft. (60.96 m) | 40 | 40 |
| Gas Valve | 50 ft. (15.24 m) | 16 | n/a |

Table 2. KRS-50 Actuation Parameters

| Operating Temperature Range | Number of Extinguishing System Cylinders | Minimum Length Copper Actuation Tubing ¹ | Maximum Total Length Copper Actuation Tubing ¹ |
|---------------------------------|--|---|---|
| 0°F to 120°F (-18°C to 49°C) | 1 - 5 | 3 ft. (0.91 m) from KRS-50 to 1st system cylinder | 23 ft. (7.0 m) |

¹ High pressure 1/4-in. OD x 0.031 wall tubing with compression or flare fittings.

ORDERING INFORMATION

| Description | Part Number |
|---|----------------|
| KRS-50 Control Box includes: 1 ea. 87-120042-001 System Valve Actuator 2 ea. 06-235557-001 CO ₂ Cartridges 1 ea. 60-9197220-000 Cable Tension Block | 87-120010-001 |
| CO ₂ System/Test Cartridge | 06-235557-001 |
| Cable Tension Block | 60-9197220-000 |
| Keeper Pin | 60-9197108-000 |
| System Valve Actuator (SVA) | 87-120042-001 |

DIMENSIONS

The KRS-50 Control Box (Figure 6) is mounted with four 3/8-inch diameter bolts or screws to a wall. The KRS-50 Control Box may be installed in any position, allowing the cable to enter from the top, bottom or either side.

The cover labels are applied to the outside of the cover after the KRS-50 Control Box is mounted.

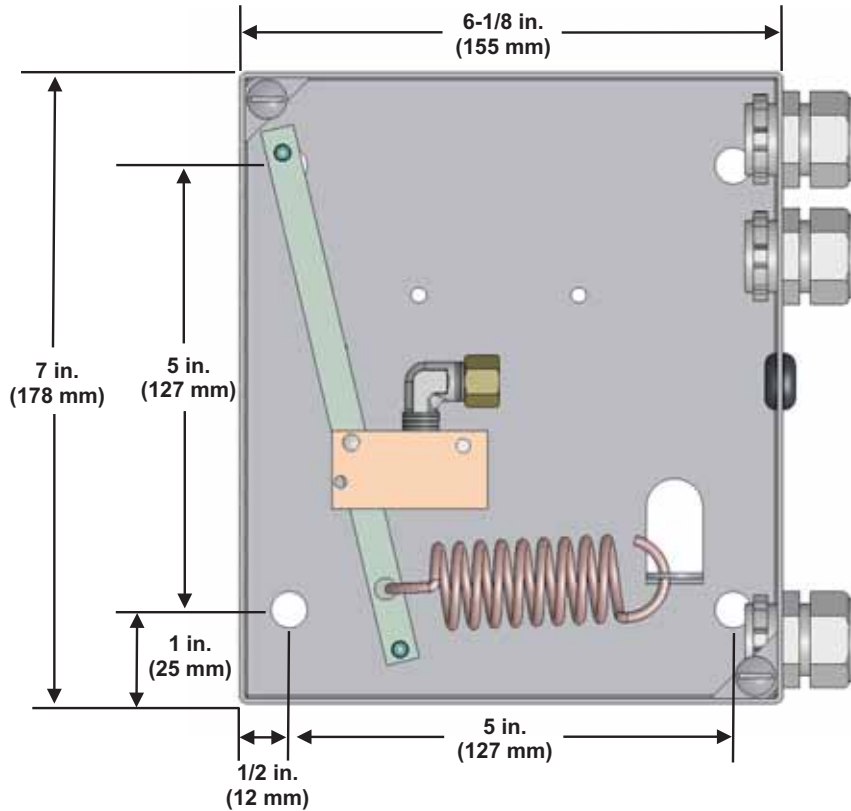


Figure 6. Location of Mounting Holes

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