


Installation, Operation and Maintenance Manual


Deringer™

Gear Box Wiring

⚠ WARNING



Read this manual **BEFORE** using this equipment. Failure to read and follow all safety and use information can result in death, serious personal injury, property damage, or damage to the equipment.



Keep this manual for future reference.

⚠ WARNING

You are required to consult the local building and plumbing codes prior to installation. If the information in this manual is not consistent with local building or plumbing codes, the local codes should be followed. Inquire with governing authorities for additional local requirements.

Valve Performance

Formula for K_v $\Delta P = Q^2 / K_v^2$

K_v = Flow Factor

Q = Flow (m³ / hr)

ΔP = Pressure (bar)

Formula for C_v $\Delta P = Q^2 / C_v^2$

C_v = Flow Coefficient

Q = Flow (GPM)

ΔP = Pressure Drop (psi)

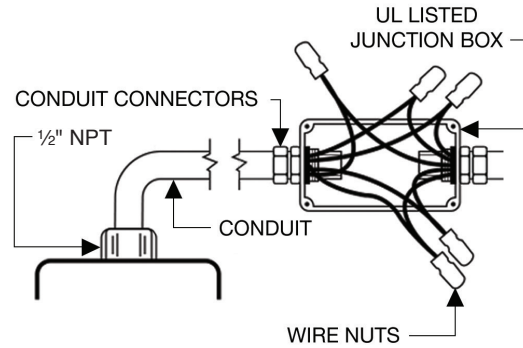
VALVE SIZE	ACTUAL OUTSIDE DIAMETER		FLOW COEFFICIENT (CV)	FLOW FACTOR (KV)	EQUIVALENT FEET OF PIPE*
	<i>in.</i>	<i>mm</i>	<i>English</i>	<i>Metric</i>	<i>ft</i>
2½	2.9	73.0	250	216	4.6
3	3.5	88.9	400	346	5.6
4	4.5	114.3	700	606	7.5
6	6.6	168.3	1600	1384	11.9
8	8.6	219.1	3100	2682	13.3

* Specified for standard schedule 40 steel pipe.



Wiring Instructions

1. The supervisory switch assembly contains two single pole, double throw, pre-wired switches. A primary and an auxiliary.
2. Switch ratings:
 - 10 amps @ 125 or 250 VAC/60 Hz
 - 0.5 amps @ 125 VDC
 - 0.25 amps @ 250 VDC
3. Primary and Auxiliary, supervise the valve in the "OPEN" position.
4. Primary has two #18 insulated wires per terminal, permitting complete supervision of leads. Auxiliary has one #18 insulated wire per terminal. This double circuit allows for the operation of two separate electrical devices (audible alarms, indicating lights, etc.) in close proximity to the valve installation.
5. A #14 insulated ground lead (green) is provided

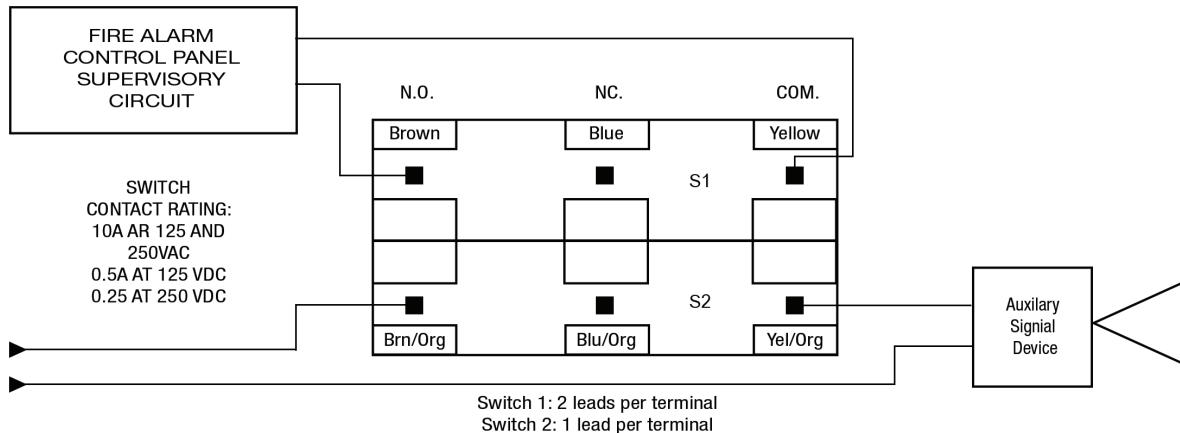


Primary (S1) For connection to a supervisory circuit of a UL Listed alarm control panel

Auxiliary (S2) For connection to auxiliary devices per the authority having jurisdiction

S1	Normally Closed: (2) Blue Normally Open: (2) Brown Common: (2) Yellow
S2	Normally Closed: Blue with Orange Stripe Normally Open: Brown with Orange Stripe Common: Yellow with Orange Stripe

NOTE: The below diagram shows a connection between terminals (S1: Yellow / S2: Yellow with Orange Stripe) and the normally Open Terminals (S1: Brown / S2: Brown with Orange Stripe). In this example the signal switch will remain open (No current through switch) as long as the valve remains Fully Opened. Once the Valve begins to close the signal switch will change from open to close (current will flow through switch). Only S1 (two leads per terminal) may be connected to the fire alarm control panel. The connection of the alarm switch wiring shall be in accordance with NFPA 72 and the auxiliary switch per NAPA 70 (NEC). Remember to cap off any unused wire and that your conduit connections are water tight.



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