Installation & Parts Manual
5-Digit Preset Counter Model D4190

www.lcmeter.com

Installation: M500-20
Description

The preset is manually programmable two-stage product quantity control device. It has a positive, non-topping vernier clutch and a positive acting stop button. After a desired quantity is preset, it counts down to the first knock-off where delivery is slowed. At the second or final knock-off, the preset actuates a valve to stop delivery. Mechanical knock-off is standard; electrical knock-off optional.

Features

• Fully automatic precision preset control. Shuts off when predetermined quantity is delivered.
• Field adjustable, two-stage control knock-off; final knock-off trims to precise zero for extra accuracy in any application.
• Latest technology, modern materials give maximum dependability at speeds to 250 RPM of the right hand wheel.
• Preset mounts on all Liquid Controls meters, which normally accept a Veeder-Root register; adapter kits are available for factory installation or field retrofit.

Optional, Electrical Switch

Features

Explosion-proof electric knock-off switch, with or without handle (handle used with electrically controlled valves).
• UL listed and CSA certified for use in hazardous locations, Class 1 Group D.
• Switch assembly can be right or left side mounted.
• Four single pole, double throw switches (15A, 125/250 VAC)
(½ A, 125 VDC; ¼ A, 250 VDC)

INSTALLATION AND LINKAGE HARDWARE KITS

1. Misc. hardware kit required for factory installation or field retrofit P/N 48420
2. Linkage for M-5 or M-7 using D-4190 Preset and V-7 Valve (less valve handle) P/N 48315
3. Linkage for M-15 using D-4190 Preset and V-15 Valve (less valve handle) P/N 48316
4. Linkage for M-30 using D-4190 Preset and V-30 Valve (less valve handle) P/N 48446

Operating Specifications

Specifications listed are standard unless otherwise noted. Optional features are available at additional cost.

• Speed: 250 RPM of the right hand wheel.
• Drive Torque: During counting, average running torque at room temperature is 10 oz-in. (7.1 N-Cm). During wheel transfer from all 9’s to all 0’s, the torque may reach 16 oz-in. (11.3 N-Cm). During preset knock-off with a maximum valve load of 60 pounds (27.2 kg), a momentary peak of 40 oz-in. (28.2 N-Cm) may be experienced during valve shut-off.
• Operating Temperature Range: -40°F (-40°C) to 160°F (+71°C).
• Mounting: Eight 1/4 x 28 tapped holes with steel inserts on 6 5/8” (168.3 mm) diameter.
• Construction: Cover-cast aluminum; case and sub-frames-cast zanak; wheel, pinions and clutch-acetal resin.
• Lubrication: Periodic.
• Rated Life: 50,000 preset cycles of 25,000,000 revolutions of right hand wheel, whichever comes first, under normal operating conditions.
• Number of Figures: Five (5).
• Size of Figures: 0.500” high, 0.267” side (12.7, 6.8 mm).
• Color of Figures: White on black.
• Character Configuration: 0 to 9.
• Push Buttons: Five (5) preset, one for each wheel, Plus one (1) set button left side and one (1) stop button on right side.
• Set Button: Operable after valve is shut off. Pushes in to lock during presetting of individual wheels; releases automatically by valve shut-off ring.
• First Stage Shut-Off: Adjustable on second wheel with inserts at 10, 20, 30, 40, 50, 60, 70, 80, 90 and 3, 4, 5, 6, 7, 8, or 9 on first wheel.
• Final Stage Shut-Off: Externally trimmable to any position on right hand wheel from 0 to 9.
• Valve Shut-Off Ring: Eight (8) attachment positions.
## Dimensions

### Preset Counter Dimensions

**Front**

- 124.8mm, 4.913”
- 101.7mm, 4.005”
- 15.86mm, 0.625”
- 22.2mm, 0.875”
- 3/4-14 NPT Conduit Opening

**Bottom**

- 10.3mm, 0.404”
- 86.9mm, 3.422”
- 16.7mm, 0.656”
- 31.8mm, 1.250”
- 48.4mm, 1.9”

### Preset Counter with Register Dimensions

**Mounting Dimensions**

- 168.3mm, 6.610” Dia

**Dimension Identification**

<table>
<thead>
<tr>
<th>Millimeters</th>
<th>mm</th>
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<td>Inches</td>
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0.250-28 UNF 28
8 holes equally spaced (2 pieces)
Studs must not enter tapped hole more than 7.5mm (0.295”)


## Ordering Information

### Electrical Switch Kits

- 8% 4049 Switch Assembly with 4 SPDT Switches and Handle for Electrically Controlled Valves
- 8% 31220X4 Switch Assembly with 4 (2 SPDT) Switches for Mechanically Linked Valves
- Electric Knockoff Switch Right Side or Left Rear Mounted and Special Left Hand Side Mount

### Swivel Kit

- 1/1 Ratio With (2) Voac Gear Plate With Screws
- 8% 41228 Swivel Kit With Hardware
- 3/32-20X1/2 Adaptor Kit With Screws
- Special Dual Drive Gear Plate With Screws

### Standard Mounting Kit

- G3184-31 (4 Required) Register To Cover
- Special Dual Drive Gear Plate With Screws
- 8% 31220X4 (2 Required) Gear Plate to Register (Register to Gear Plate)
Backed by our Worldwide reputation for Quality, Accuracy and Advanced Design.