

Fisher® LCP100 Local Control Panel

The LCP100 local control panel is used in conjunction with the FIELDVUE™ DVC6200 SIS digital valve controller to manually open, close, or test a safety shutdown valve. The LCP100 has three protected pushbuttons to allow the user to open, close or test the safety valve. There are also three lights to visually indicate if the valve is open, closed, or locked in safety and ready for reset.

Features

Reliability

- **Rugged Enclosure**—The filled polyester enclosure, encapsulated electronics, pushbuttons, and lights are designed to withstand harsh industrial environments.
- **Proof Testing**—The open and close pushbuttons provide a means to manually perform an offline full stroke test to help identify dangerous undetected failures.
- **Partial Valve Stroke Test**—The test pushbutton provides a means to manually perform an online partial stroke test to help improve the diagnostic coverage factor.

Safety

- **Manual Reset**—After a safety demand, the DVC6200 SIS will remain locked in the safe state. The manual reset pushbutton provides user control over when the valve can return to the normal operating state.
- **Lockable Pushbutton Covers**—Each pushbutton can be locked to prevent unauthorized access to the safety valve operation.
- **Safety Certification**—The LCP100 contribution to failure rates is documented in the DVC6200 SIS safety manual.



FISHER LCP100 LOCAL CONTROL PANEL, WITH FIELDVUE DVC6200 SIS DIGITAL VALVE CONTROLLER AND BETTIS™ ACTUATOR

X0247

Ease of Use

- **Loop vs. External Power**—The LCP100 can be powered by the same loop as the DVC6200 SIS or independently powered by a 24 VDC source.
- **Simple Configuration**—The DVC6200 SIS setup wizard automatically configures the LCP100 functions.

Value

- **Visual Indication**—The LCP100 can be mounted remote from the valve in an easily accessible location to view the status and perform periodic testing.
- **Reduce I/O Count**—The LCP100 combines open/closed/ready-to-reset lights and open/close pushbuttons into a single field enclosure, thus eliminating 3 discrete out (DO) and 2 discrete in (DI) channels from the logic solver.



Specifications

Power Options (switch selectable)

- External: 24 VDC +/- 10% @ 50 mA maximum continuous current (100 mA maximum inrush)
- Loop: 8-20 mA (LCP100 and DVC6200 SIS combined)

Temperature Limits⁽¹⁾

-40 to 65 °C (-40 to 149 °F)

Maximum distance between LCP100 and DVC6200 SIS digital valve controller

Cable length is limited by maximum cable capacitance of 100,000 pF⁽²⁾. Typical 314 meters (1030 feet) with 18 AWG shielded Audio, Control and Instrumentation Cable

Electrical Classification

CSA— Ex em IIC T4
Suitable for Zone 1 and Zone 2 locations

ATEX— Ex e mb [ib] IIC T4 Gb
Suitable for Zone 1 and Zone 2 locations
Ex ic IIC T4 Gc
Suitable for Zone 2 locations

IECEX— Ex e mb [ib] IIC T4
Suitable for Zone 1 and Zone 2 locations
Ex ic IIC T4 Gc
Suitable for Zone 2 locations

Refer to table 1 and 2 for specific approval information

Electrical Housing:

IP66

Electromagnetic Interference (EMI)

Meets EN 61326-1 (First Edition)
Immunity—Industrial locations per Table 2 of EN 61326-1 Standard. Performance is shown in table 3 below.
Emissions—Class A
ISM equipment rating: Group 1, Class A

Connections

Conduit: ■ 3/4 NPT or ■ M20

Wiring

14 to 26 AWG

Electrical Installation

Wire connections are polarity sensitive

Installation Orientation

Wiring entrance must be pointed down for self-draining

Pushbuttons

Protected with lockable covers

Dimensions

253.1 mm (10 inches) long by 109.5 mm (4.3 inches) wide by 127.8 mm (5 inches) deep. See figure 1.

Construction Materials

Housing material: filled polyester

Approximate Weight

2.2 kg (4.9 lbs)

Lights

Green: Solid when the valve is at its normal operating position, and loop current is normal. Flashing when the valve is not at its normal operating position, and loop current is normal.

Red: Solid when the valve is at its Fail Safe State and loop current is tripped. Flashing when valve is not at its Fail Safe State and loop current is tripped.

Yellow (Ready-to-Reset): Solid when the valve is latched in the trip position, and loop current is normal.

Pushbuttons

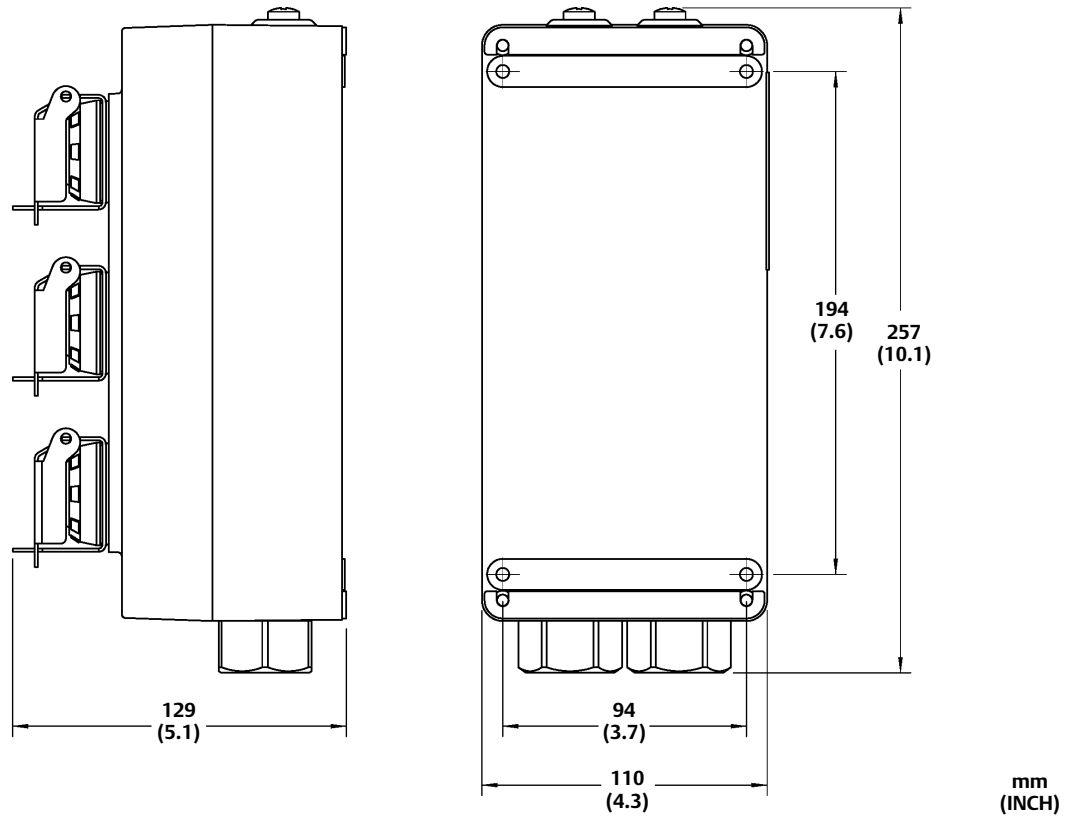
Green: After an emergency demand— commands the valve to its normal position only after control current is restored (manual reset).

Red: Always commands the valve to its Fail Safe State regardless of the control current.

Black: Commands the configured partial stroke test. Can be overridden by the Close button, Open button, or Emergency Demand.

1. The pressure/temperature limits in this document and any other applicable code or standard should not be exceeded.
2. DVC6000 SIS: Cable length is limited by maximum cable capacitance of 18000 pF.

Figure 1. Dimensions



E1077-1

Table 1. Hazardous Area Classifications for Fisher LCP100—CSA (Canada)

Certification Body	Certification Obtained	Entity Rating	Temperature Code	Enclosure Rating
CSA	Zone Ex em IIC T4	---	T4 (Tamb ≤ 65°C)	IP66

Table 2. Hazardous Area Classifications for Fisher LCP100—ATEX / IECEx

Certification	Certification Obtained	Entity Rating	Temperature Code	Enclosure Rating
ATEX / IECEx	Zone Ex e mb [ib] IIC T4 Gb	---	T4 (Tamb ≤ 65°C)	IP66
	Zone Ex ic IIC T4 Gc	Ui = 27 VDC Ci = 1.1 nF Li = 0	T4 (Tamb ≤ 65°C)	IP66

Table 3. Electromagnetic Immunity Performance for Fisher LCP100

Port	Phenomenon	Basic Standard	Test Level	Performance Criteria ⁽¹⁾
Enclosure	Electrostatic discharge (ESD)	IEC 61000-4-2	± 4 kV contact ± 8 kV air	A
	Radiated EM field	IEC 61000-4-3	80 to 1000 MHz @ 10V/m with 1 kHz AM at 80% 1400 to 2000 MHz @ 3V/m with 1 kHz AM at 80% 2000 to 2700 MHz @ 1V/m with 1 kHz AM at 80%	A
I/O signal/control	Burst (fast transients)	IEC 61000-4-4	± 1 kV, I/O lines ± 2 kV, DC power lines	A
	Surge	IEC 61000-4-5	± 1 kV, I/O lines ± 2 kV, DC power lines)	A
	Conducted RF	IEC 61000-4-6	150 kHz to 80 MHz at 3 Vrms with 1 kHz AM at 80%	A
Specification limit = ±1% of span 1. A = No degradation during testing. B = Temporary degradation during testing, but is self-recovering.				

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