TEK-LCD 7800C

Panel Mount Loop-Powered Process Indicator

Decimal Display with Bar Graph

Quick Start Guide

1. Before You Begin

The Quick Start guide provides essential information to assist you in quickly getting started. Go to our website to download the full User Guide for detailed installation and other information.

⚠️ Read complete instructions before the installation and operation of the meter.

⚠️ Failure to follow installation guidelines could result in death or serious injury.

⚠️ Make sure only qualified personnel perform the installation.

⚠️ Risk of electric shock or personal injury.

2. Unpack

Tek-LCD 7800C Panel Mount Loop-Powered Process Indicator

3. Dimensional View

Enclosure Dimension - Side View

Units: Inch (mm)

1 ¾" (45mm)
2 ½" (62mm)
½" (15mm)
3 ¼" (81mm)
3 ¾" (91mm)

▲ Meter Dimensions - Side View
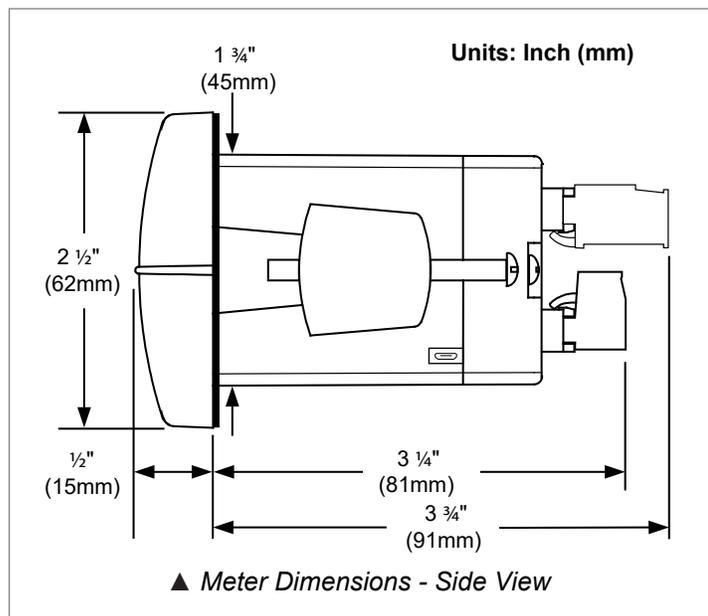
Fig 1: Enclosure Dimension - Side View

Enclosure Dimension - Side View

MENU
F1
F2
ENTER F3

2 ½" (62mm)
4 ¾" (119mm)

▲ Meter Dimensions - Front View
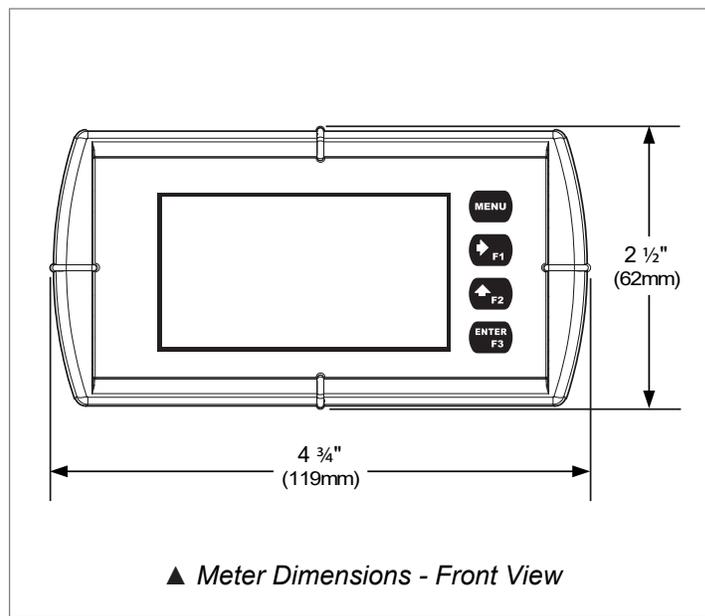
Fig 2: Enclosure Dimension - Front View

⚠️ The supplied conduit plug may extend up to ¼" from the conduit opening when installed.

4. Mounting

The TEK-LCD 7800C Series has two slotted mounting flanges that may be used for pipe or wall mounting. Alternatively, the unit may be supported by the conduit through provided conduit holes.

⚠️ Do not loosen or remove flange bolts while the meter is in service.

5. Power Connections

The TEK-LCD 7800C Series has two slotted mounting flanges that may be used for pipe or wall mounting. Alternatively, the unit may be supported by the conduit through provided conduit holes.
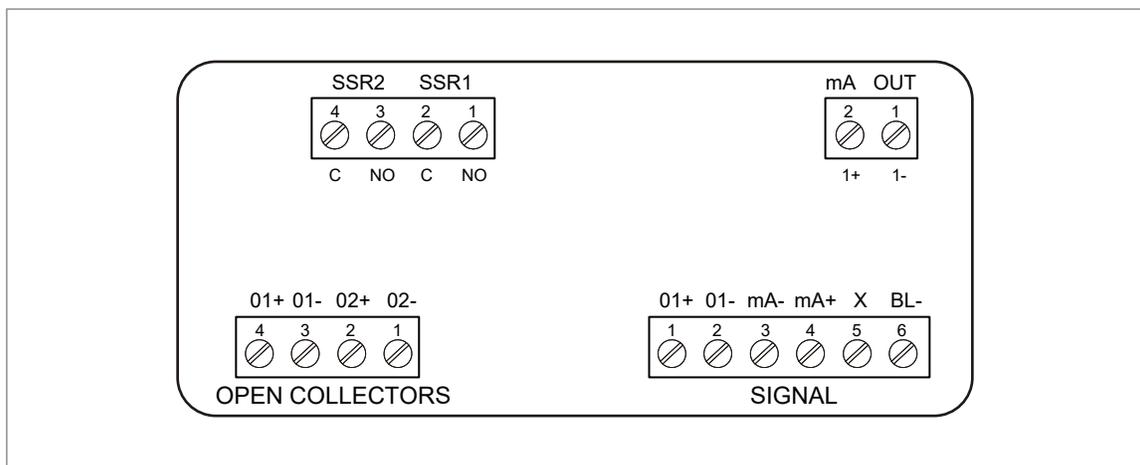
Fig 3: Wiring Diagram

Table 1: Power Connections

SIGNAL +	4-20mA input signal positive terminal connection
SIGNAL -	4-20 mA signal return/negative terminal connection, when not using loop-powered backlight
BACKLIGHT +	+9-36 VDC when powering backlight from external supply
BACKLIGHT -	4-20 mA signal return/negative terminal, when using the installed loop-powered backlight or ground/negative when powering backlight from external supply

⚠️ Observe all safety regulations. Electrical wiring should be performed in accordance with all agency requirements and applicable national, state, and local codes to prevent damage to the meter and ensure personnel safety.

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Input Loop (4-20 mA) Connections

The following figures 4 and 5 shows 4-20 mA loop connected to the meter. Figure 4 shows the connection without the backlight and figure 5 shows the connection with the backlight. The meter is powered by the 4-20mA current loop.
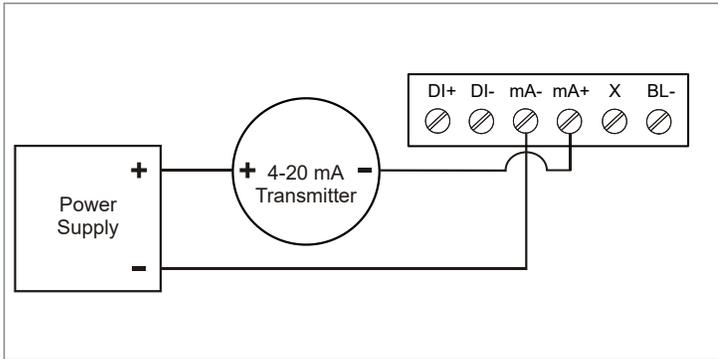
Fig 4: 4-20mA Input Connection without Backlight
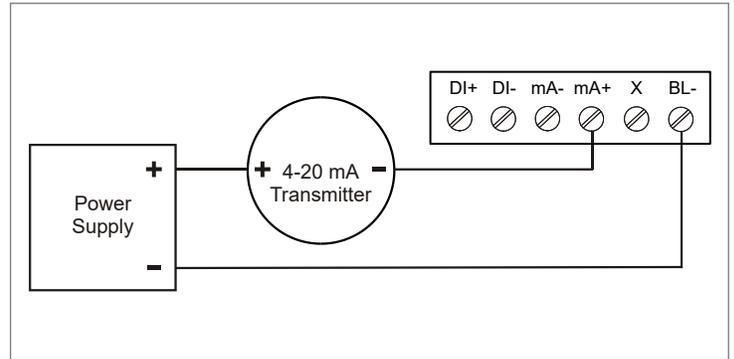
Fig 5: 4-20mA Input Connection with Backlight

Digital Input Connection

A digital input is standard on the meter. This digital input is generally connected with an open contact across DI+ and DI-, or with an active low signal applied to DI+.
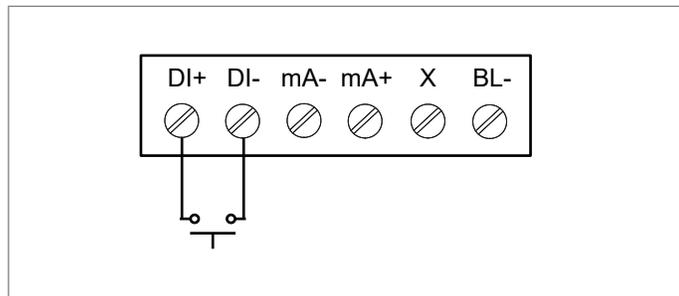
Fig 6: Digital Input Connection

4-20 mA Output Connections

Connections for the 4-20 mA transmitter output terminals are labeled as mA OUT. The 4-20mA output must be powered from an external power supply.
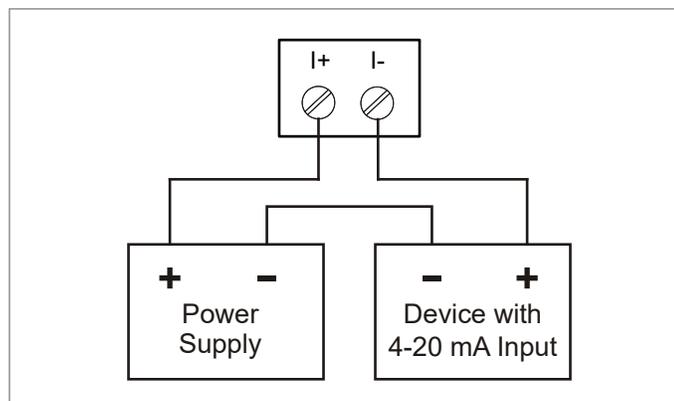
Fig 7: 4-20 mA Output Connections

Solid State Relay Connections

Relay connections are made to a four-terminal connector. For each relay's, C terminal is common for the normally open (NO) contact of the corresponding relay.
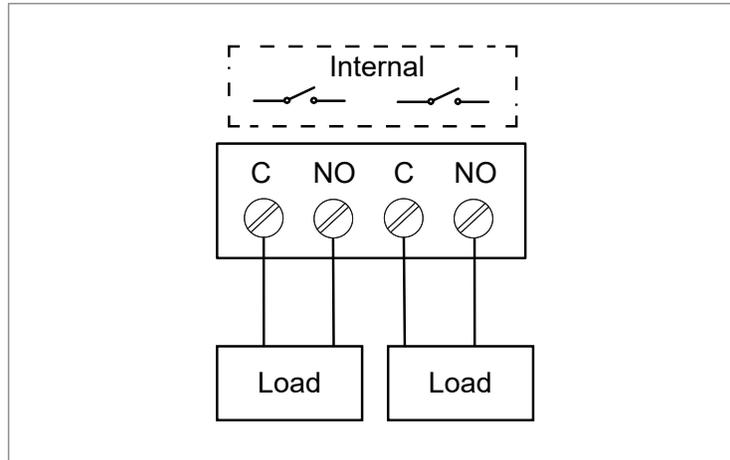
Fig 8: Solid State Relay Connections

Open Collector Outputs

Open collector output 1 and 2 connections are made to terminals which are labeled as O1+ and O1-, and O2+ and O2-. Please connect the alarm or pulse input device as shown below.
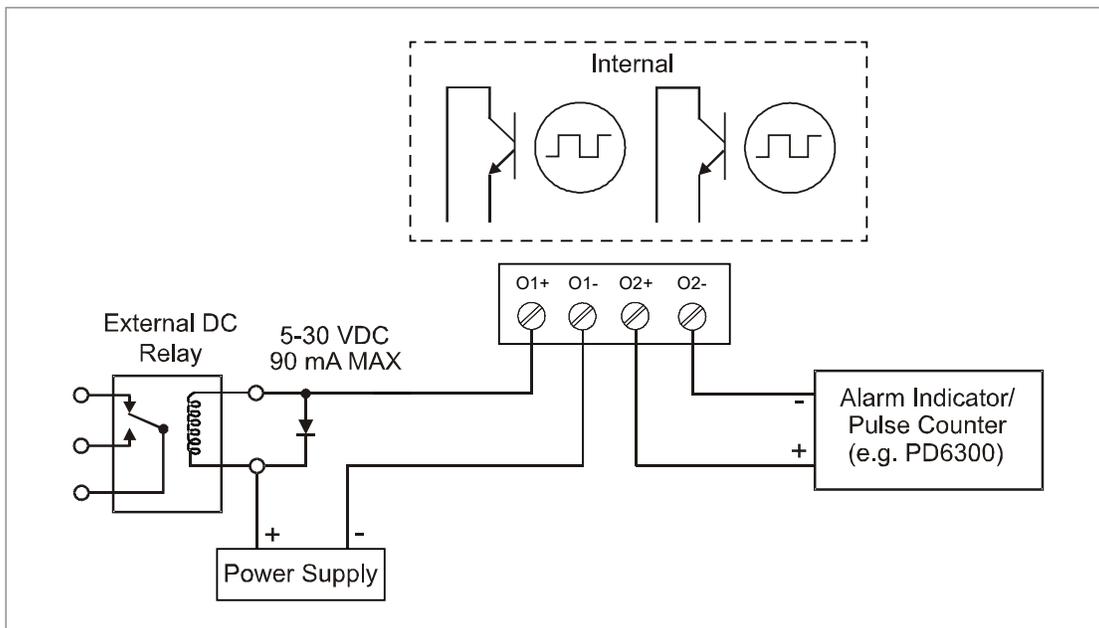
Fig 9: Open Collector Outputs

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6. Display and Buttons

Fig 10: Display

Fig 11: Display Buttons

- Press the **Menu** button to enter or exit the Programming Mode.
- Press the **F1-arrow** button to move to the next digit or decimal position during programming.
- Press the **F2-arrow** button to scroll the menu, decimal point, or to increment the value of a digit.
- Press the **Enter** button to access a menu or to accept a setting.
- Press and hold the **Menu** button for five seconds to access the advanced features.

Main Menu Display Functions & Messages

Table 2 shows the main menu functions and messages in the order they appear on the menu:

Table 2: Main Menu Display Functions & Messages

Display	Parameter	Action/Setting
SETUP	Setup	Enter setup menu
DEC.Pt	Decimal Point	Enter decimal point menu
ProG	Program	Enter the program menu
SCALE	Scale	Enter the scale menu
CAL	Calibrate	Enter the calibrate menu
inPt 1	Input 1	Calibrate input 1 signal or program input 1 value
dSPL 1	Display 1	Program display 1 value
inPt2	Input 2	Calibrate input 2 signal or program input 2 value
SPAN ERROR	Span Error	Error, calibration not successful, check signal
t29	Tag/Units	Enter the tag/units menu

ΩΠ	Tag On	Enable tag/units
OFF	Tag Off	Disable tag/units
PASSWRD	Password	Enter the password in menu section
UNLOCKD	Unlocked	Program password to lock meter
LOCKED	Locked	Enter password to unlock meter
99999 -9999	Flashing Display	Overrange condition under range condition
SERV ı CE	Service	Set to "service" before opening the cover for maintenance.

7. Advanced Features Menu

- Press and hold the **Menu** button for five seconds to access the Advanced Features Menu.
- Press the **Enter** button to access any menu or press **UP** arrow button to scroll menu.
- Press the **Menu** button to exit at any time.
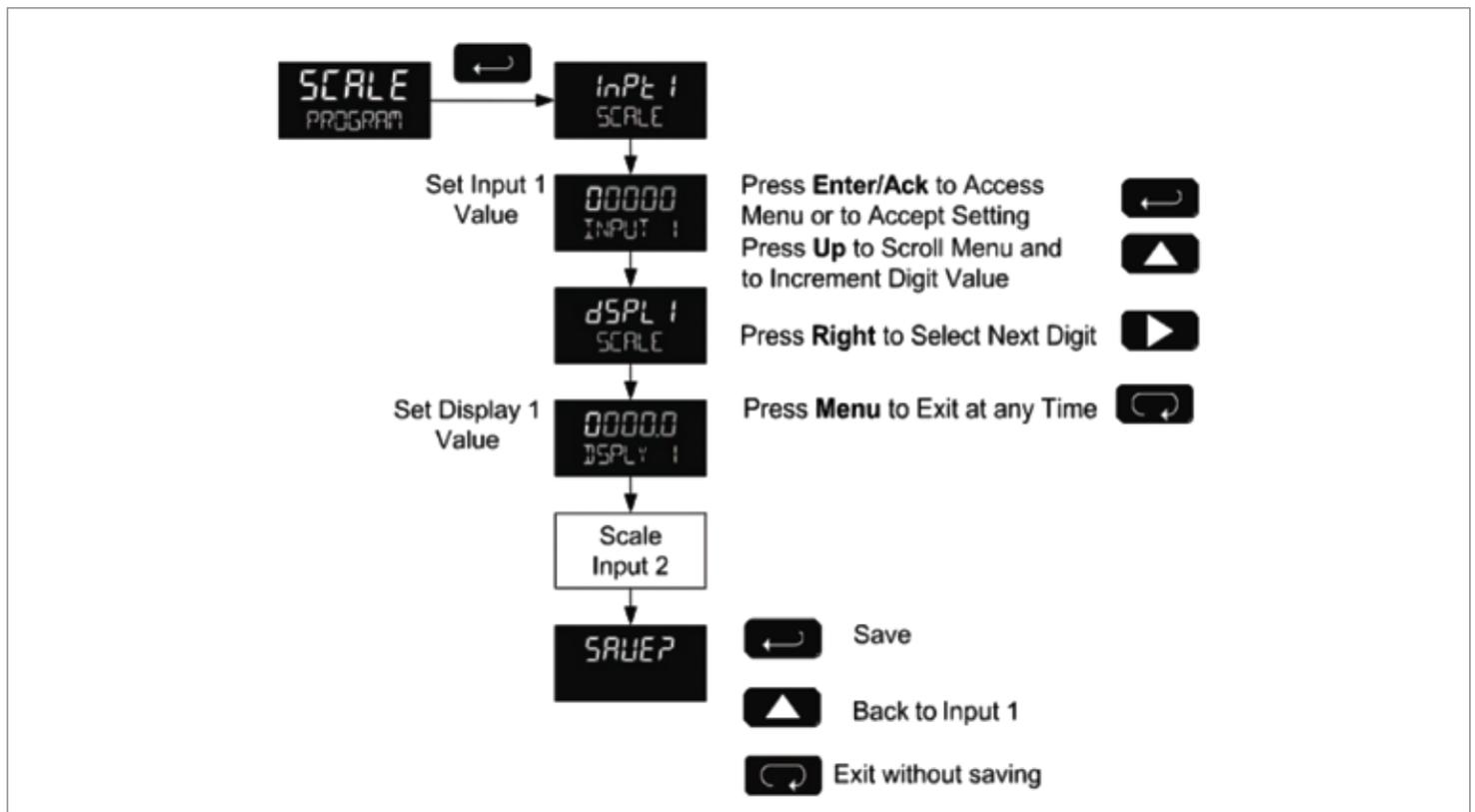
Fig 12: Advanced Features Menu

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Advanced Features Menu and Display Messages

Table 3 shows the Advanced Features Menu functions and messages in the order they appear on the menu:

Table 3: Advanced Features Menu and Display Messages

Display	Parameter	Action/Setting
INDICAT	Indicate	Enter Indication (Alarm) menu
OFF	Off	Disable alarm
ALRM	Alarm	Enter alarm indication menu
SET	Set Point	Program set point
RESET	Reset Point	Program reset point
Funct	Function	Enter advanced function menu
LnEAr	Linear	Set linear scaling
SQUAR	Square Root	Set square root extraction
ProG E	Programmable Exponent	Set programmable exponent
CUTOFF	Low-Flow Cut-off	Set low-flow cut-off
FILTER	Filter	Set noise filter
OFF	Filter Off	Disable noise filter
On	Filter Low	Set noise filter to low setting
MED	Filter Medium	Set noise filter to medium setting
HI	Filter High	Set noise filter to high setting
ICAL	Internal Calibration	Enter internal reference calibration
INFO	Meter Information	Show software number and version, or reset to factory defaults
SFt	Software	Software number
UEr	Software Version	Software Version
rESEt DFALTS?	Reset Defaults	Restore factory default parameter settings

8. Troubleshooting

Table 4 provides troubleshooting techniques for most common operating problems.

Table 4: Troubleshooting Tips

Symptom	Check/Action
No display or faint display	Check input signal connections. Perform hard reset by shorting S+ and S- terminals.
Rate display unsteady	Increase filter setting in Advanced menu.
Meter displays error message during calibration (Span error)	Check signal connections. Verify minimum input span requirements.
Meter flashes 99999 or -9999	Check input signal is within the scaled range (99999 and -9999).
Display stuck displaying MAXIMUM or MINIMUM	Press Menu to exit Max/Min display readings.
Display response is too slow	Check filter setting to see if it can be lowered to LOW or OFF.
If the display locks up or the meter does not respond at all	Perform hard reset by shorting S+ and S- terminals.
Backlight does not appear	Backlight is intended for viewing assistance in dim lighting conditions. It may not be noticeable under good lighting conditions.
Other symptoms not described above	Call Technical Support for assistance.
Through-window buttons do not respond	Service menu was selected, or mechanical button was pushed. The through-window buttons will be re-enabled automatically 60 seconds after the last button push. If slide switch on connector board is in Lock position, switch to Unlock. Sunlight can interfere with the sensors. It is recommended to shield the window from sunlight as it can interfere with the sensors while operating the buttons.

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