EZ-220/420/220L

Overview

The EZ-220 and EZ-420 line of panels feature pushbuttons with LEDs, control pushbuttons, and an LCD display. The EZ-220L is a longer version of the EZ-220 panel with larger characters on the LCD display. Pushbuttons are often used to begin events or tasks in the PLC and are monitored for ON/OFF conditions in the ladder logic program. There are five function pushbuttons with LEDs and four control pushbuttons.

The LCD displays are either two lines by 20 characters (2x20) or four lines by 20 characters (4x20).

Descriptions

Control pushbuttons

There are four control pushbuttons on the front of the panels. These pushbuttons are used to scroll through messages. If a message contains embedded data that can be changed, the buttons can be used to adjust the value. The enter button will complete the entry or the esc button will clear/cancel the action.

User-defined pushbuttons

There are five pushbuttons that are user-defined. These pushbuttons can be configured as alternate, momentary, or alternate with PLC release. The pushbuttons can also be custom labeled to suit their function or application with the blank labels supplied.

PLC message LED
2x20 LCD display

Five user-defined pushbuttons with LEDs
Four control pushbuttons
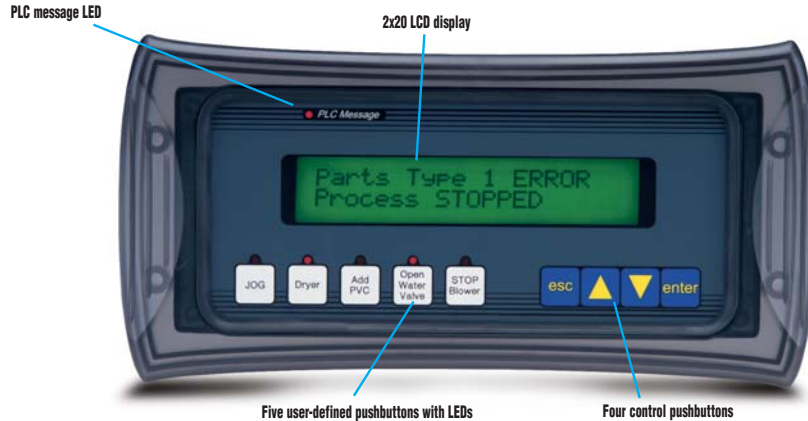
Pushbutton LEDs

Each pushbutton has an associated LED. They can be programmed to represent the status of the pushbutton or they can be programmed to be controlled by a function in the PLC program. The three different control types (alternate, momentary, or alternate with PLC release) will determine the LED response when the pushbuttons are pressed. The LED can also be made to flash.

PLC message LED

The panels have a PLC message LED. The LED will illuminate to indicate that the PLC has triggered a message that will be displayed in the LCD window. The LED will turn OFF when the *esc* pushbutton is pressed.

Character LCD display

The LCD screen on the EZ-220/420 models displays two different message types: local and PLC. In normal operation, the local messages are displayed on the screen. The messages have a menu tree structure with file folders that can be scrolled through using the control pushbuttons. A message with a "+" in the first character location indicates that it is a folder. When it is selected, *(enter)*, the first character turns to a "-" and all associated messages can be viewed.

The PLC message mode allows the PLC to display non-user accessed messages. When the PLC triggers a message, the PLC Message light will illuminate and the current text message on the display will be overwritten by the PLC message. As soon as the message is acknowledged, the display will return back to the previous local message.

Up to 256 total messages may be configured and stored in the EZText Panels. The message can be three types: static, dynamic, or interactive.

Part Number	Description	Price
EZ-220	2x20 LCD display, 5 pushbuttons, 5 LEDs (all user defined), 4 control pushbuttons	<--->
EZ-220L	2x20 LCD display (large characters), 5 pushbuttons, 5 LEDs (all user defined), 4 control pushbuttons	<--->
EZ-420	4x20 LCD display, 5 pushbuttons, 5 LEDs (all user defined), 4 control pushbuttons	<--->

Manual sold separately EZ-TEXT-M <--->

EZTEXT PANELS SELECTION GUIDE

EZ Text Panel Specifications					
Part Number	**EZ-220**	**EZ-220L**	**EZ-420**	**EZ-220P**	**EZ-SP**
Price	<--->	<--->	<--->	<--->	<--->
Description	2x20 LCD display, five user defined pushbuttons, five LEDs	2x20 LCD display, large characters, five user defined pushbuttons, five LEDs	4x20 LCD display, five user defined pushbuttons, five LEDs	2x20 LCD display, numeric keypad, five user defined pushbuttons, three tri-color LED annunciators	1x16 LCD display, 8 digit LED display, five control pushbuttons
Display Type	Character LCD, 2 lines by 20 characters w/LED backlight		Character LCD, 4 lines by 20 characters w/LED backlight	Character LCD, 2 lines by 20 characters w/LED backlight	Character LCD, 1 line by 16 characters w/8 digit .52" LED numeric display
Character Height	5.55mm (0.22")	8.06mm (0.316")	4.75mm (0.187")	5.55mm (0.22")	8.06mm (0.316")
Keypad Overlay	Five user-defined pushbuttons and four control pushbuttons			Numeric keypad, five user defined pushbuttons and four control pushbuttons	Four control pushbuttons
CPU Type	8-bit	8-bit	8-bit	8-bit	8-bit
Service Power	24VDC (20-30VDC operating range)				
Power Consumption	4 Watts @ 24VDC	4.5 Watts @ 24VDC	4 Watts @ 24VDC	5.5 Watts @ 24VDC	6.5 Watts @ 24VDC
Enclosure	NEMA 4, 4X (indoor)				
Agency Approval	UL, cUL, CE				
Operating Temperature	0° to 45°C (32° to 113°F)				
Storage Temperature	-20° to 60°C (-4° to 140°F)				
Humidity	10-95% RH, (non-condensing)				
Electrical Noise	NEMA ICS 2-230 showering arc ANSI C37.90a-1974 SWC Level C Chattering Relay Test				
Withstand Voltage	1000VDC (1 minute), between power supply input terminal and protective ground (FG)				
Vibration	5 - 55Hz 2G for 2 hours in the X, Y, and Z axes				
Shock	10G for under 12 ms in the X, Y, and Z axes				
Burn-in	Temperature cycled 96 hours and then fully functional tested				
LED/LCD Life	100,000 hours				
Serial Communications	Download/Program/PLC Port RS-232/RS422 15-pin D-sub (female)				
Dimensions (in/mm)	7.418x5.00 (188.419x126.998)	10.018x5.00 (254.458x126.998)	7.418x5.00 (188.419x126.998)	10.018x5.00 (254.458x126.998)	10.018x5.00 (254.458x126.998)
Weight (lbs.)	.65	.85	.65	.85	.85

EZTEXT PANELS SPECIFICATIONS

Introduction

EZText panels provide a low-cost, easy-to-use operator interface alternative for your PLC system. With easy-to-configure Windows-based software and simple installation, you can be connected and running in minutes. If your application requires pushbuttons, LEDs, or text display, but your budget is low, check out our complete line of EZText panels.

Features

The following features are common to all EZText panels:
- LCD display
- Five user-defined pushbuttons (except EZ-SP)
- Five user-defined LEDs (except EZ-SP)
- Up to three embedded PLC data variables (except EZ-SP)
- Built-in menu system
- EMI filtered power supply to reduce communication problems

Display

Depending on the model, the LCD display window supports one, two or four message lines that can display up to 20 characters each (16 on EZ-SP). Messages are programmed using the EZText Programming Software and can be static text, dynamic text, or interactive. The messages are controlled by the PLC program.

Pushbuttons

The panels have sealed membrane pushbuttons that allow you to trigger PLC actions. Each pushbutton can be configured to function as one of three switch types:

Alternate switch — keeps its current state until the button is pushed again

Momentary switch — activated only while the button is being pushed

Set with release switch — similar to the alternate switch except that the PLC can control the release

Compatibility

The EZText panels can be connected to several types of PLCs: Allen-Bradley, GE, Mitsubishi, Omron, and Modicon . Review the PLC compatibility table below to determine if your PLC is supported. With the proper cable and the EZText programming software, you can be easily connected.

Getting started

Below is a quick checklist of what you will need to get started:
- EZText panel
- Programming cable
- 24 VDC power supply
- PLC
- Cable to connect to PLC
- Personal computer
- EZText Programming Software

PLC Compatibility Table			
PLC	**Model**		**Protocols**
Allen-Bradley	MicroLogix 1000, 1200 and 1500; SLC 5/03, /04, /05, PLC5		DF1
GE	90/30, 90/70		SNPX
Mitsubishi	FX Series (all)		Direct, Multidrop
Omron	C200, C500		Host Link
Siemens	S7 300/400 PLCs, MPI Adapter		3964R protocol
DirectLOGIC	DL05 DL06		K-Sequence
			*Direct*Net
			MODBUS (Koyo addressing)
	DL105		K-Sequence
	DL205	D2-230	K-Sequence
		D2-240	K-Sequence
			*Direct*Net
		D2-250-1 D2-260	K-Sequence
			*Direct*Net
			MODBUS (Koyo addressing)
		D2-240/250/260 DCM	*Direct*Net
	DL305	D3-330/330P*	*Direct*Net
		D3-340	*Direct*Net
		D3-350	K-Sequence
			*Direct*Net
			MODBUS (Koyo addressing)
		D3-350 DCM	*Direct*Net
	DL405	D4-430	K-Sequence
			*Direct*Net
		D4-440	K-Sequence
			*Direct*Net
		D4-450	K-Sequence
			*Direct*Net
			MODBUS (Koyo addressing)
		All with DCM	*Direct*Net
	H2- WinPLC		MODBUS RTU (serial port)
	H2/H4 EBC (Think-N-Do Studio Version 6.5 or later required)		K-Sequence (serial port)

Requires Data Communications Unit

High Press Limit

EZTEXT DIMENSIONS AND INSTALLATION

All EZText panels are designed to be inserted into a rectangular cutout in some type of mounting surface and secured with screws or DIN clips. The four screws that protrude through the mounting surface secure the panel to the mounting surface. A rubber gasket provides a seal between the bezel and mounting surface. When properly mounted, all of the EZText panels comply with the NEMA 4/4X rating for indoor use.

The optional DIN clips are metal brackets that attach to the panel and secure the front panel to a mounting surface with a screw. This provides an alternative mounting solution to a panel or enclosure cutout.

Dimensions in inches (mm)		
Legend	EZ220/420	EZ220L/220P/SP
A	7.418 (188.419)	10.018 (254.458)
B	5.000 (126.998)	5.000 (126.998)
C	0.625 (15.875)	0.625 (15.875)
D	3.50 (88.9)	3.50 (88.9)
E	.750 (19.05)	.750 (19.05)
F	.450 (11.430)	.450 (11.430)
G	1.154 (29.312)	1.154 (29.312)
H	5.750 (146.050)	8.350 (212.090)
I	.834 (21.184)	.834 (21.184)
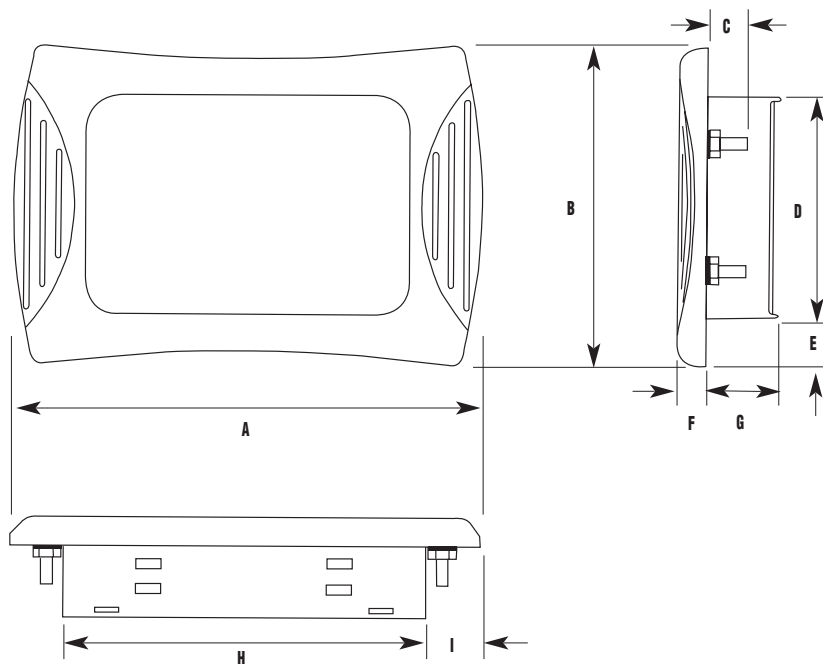
Note: *Panels use same mounting dimensions as comparable Optimate panels.*

Mounting Accessories		
Part Number	Description	Price
EZ-TEXT-S-GSK	Standard replacement gasket (small) for EZ-220 and EZ-420	<--->
EZ-TEXT-L-GSK	Standard replacement gasket (large) for EZ-220L, EZ-220P and EZ-SP	<--->
EZ-BRK-2	DIN clips (pk. of 4)	<--->
EZ-TEXT-STUDS	Mounting studs (pk. of 4)	<--->
EZ-COMCON3	15-pin male D-sub connector with terminal blocks, for connecting RS422 network cable from EZTouch or EZText panels	<--->
EZ-COMCON4	9-pin female D-sub connector with terminal blocks	<--->
EZ-TEXT-CORE	EZText replacement ferrite cores	<--->
EZ-TEXT-PWRTERM	EZText replacement power terminal strip	<--->