LCD Indicating Display Controller

for Frequency Inputs

measuring • monitoring • analyzing

ZED

- 2 x 8-digit LCD Backlit Display
- Frequency Input: 0.2 - 2000 Hz
- 2 SPDT Relay Outputs
- Scaleable Analog Output
- Sensor Supply
- Selectable Units of Measure
- MIN/MAX Memory
- Panel Mount or Field Housing Options

Order from: C A Briggs Company
622 Mary Street; Suite 101; Warminster, PA 18974
Phone: 267-673-8117 - Fax: 267-673-8118
Sales@cabriggs.com - www.cabriggs.com

KOBOLD Instruments, Inc.
1801 Parkway View Drive
Pittsburgh, PA 15205

02/09-2015

ZED-K Description

The ZED-K LCD display converts a frequency input signal into a 3 or 4-digit flow rate reading displayed in user selectable measuring units. The display also comes with a scalable analog output signal.
Two SPDT limit relays continuously monitor the flow to verify if the adjustable limits are met. Within the switch adjustments, it is possible to select either single value monitoring or window monitoring. The switching point, the hysteresis, the window points, and the switch on or off delay can be adjusted separately for each relay. The switching points can also be set directly using the control keys without having to switch over into the menu. A red LED indicates the switching status.

The bottom line of the display shows a bar graph of the flow rate. The analog output is available as current output with 4...20 mA or as voltage output with 0...10 V. The parameters within the menu can be shown in English or German. If used where the flow readings change rapidly, the display can be dampened and the analog reading averaged by parameters within the software.

A MIN/MAX reading memory stores the extreme values of the flow. Display and reset of these values are achieved by using the keys without having to enter into the programming menu. Adjustment of the switches by using the keys can also be blocked.

If the maximum set flow range is exceeded, it will be shown on the display. The set parameters can be protected against unauthorized alteration by using a password function.

Range of Functions

Flow Rate with Digital Bar Graph Display, Switching and Scaleable Analog Output:

- Display of the Flow Rate
- Free Scaling using the Frequency and Measured Value
- 2 Switching Outputs, User Programmable
- Scaleable Analog Output 4 ... 20 mA or 0 ... 10 V
- MIN/MAX Memory

Technical Details

Display:	2 x 8-digit Alphanumeric LCD, Illuminated 3- or 4-Digit (XX.X, X.XX, or XXXX) Bar Graph on the Second Line
Display Rate:	1 s^{-1}
Flow Units:	ml/s, ml/m, l/s, l/m, l/h, m^3/m, m^3/h, GPM, GPH, or User Unit per h/min/s User Selectable
Measurement Input:	0.2 ... 2000 Hz (5 ... 24 V_{DC}), TTL, PNP, NPN, or NAMUR
Parameter Input:	Menu Controlled, English or German
Parameter Protection:	4-digit Password
Control Elements:	3 Keys
Custom Comparison:	by Entering the Frequency and Measured Value
Relay Outputs:	2 x SPDT Max. 250 $V_{AC/DC}$ / 2 A
Voltage Supply:	24 V_{DC} ±20%, Approx. 80 mA or 90 ... 250 V_{AC} / Max. 3 VA
Analog Output:	4 ... 20 mA Load: Max. 500 Ω, (at AC-supply: 300) or 0 ... 10 V (Load: >100 k)
Sensor Supply:	23 V (at 24 V_{DC}) / Max. 50 mA 24 V (AC-supply) / Max. 50 mA NAMUR-Supply: 8.2 V_{DC}
Ambient Temp:	-4 ... 158 °F
Dimensions:	3.8" x 3.8" x 4.3" (L x W x D) Incl. Screw Clamp (Panel Mount Installation) 4.6" x 4.6" x 5.00" (L x W x D) (Field Housing)
Panel Cut-out:	3.52" x 3.52" (Panel Mount Installation)

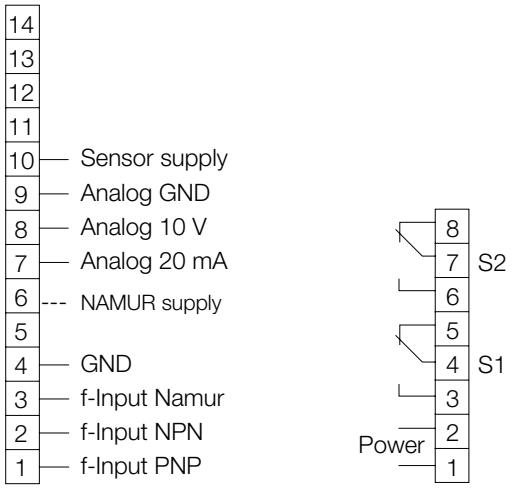
www.cabriggs.com

No responsibility taken for errors;
subject to change without prior notice.

Technical Details (continued)

Casing Material:	Fiberglass Reinforced PPO (Panel Mount Installation)
	Powder Coated Aluminum/PA 66 (Field Housing)
Protection:	IP 40 Front, IP 00 Terminal Block (Panel Mount Installation)
	IP 65 (Field Housing)
Mounting:	Mounting Clip Form B (DIN 43 835) (Panel Mount Installation)
	Wall and Pipe Mounting (Field Housing)
Connection:	Plug-in Terminal Strip (Panel Mount Installation)
	Cable Connection (Field Housing)
Weight:	Approx. 0.8 lb
	(Panel Mount Installation)
	Approx. 2.75 lbs (Field Housing)

Electrical Connection

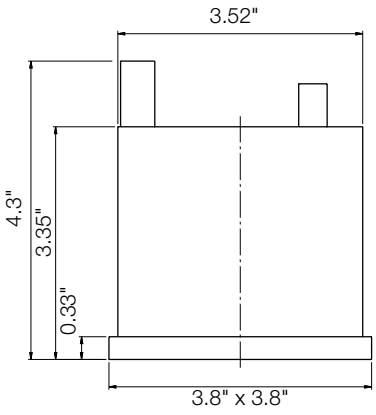


Order Details (Example: **ZED-K F10 KS 4R P**)

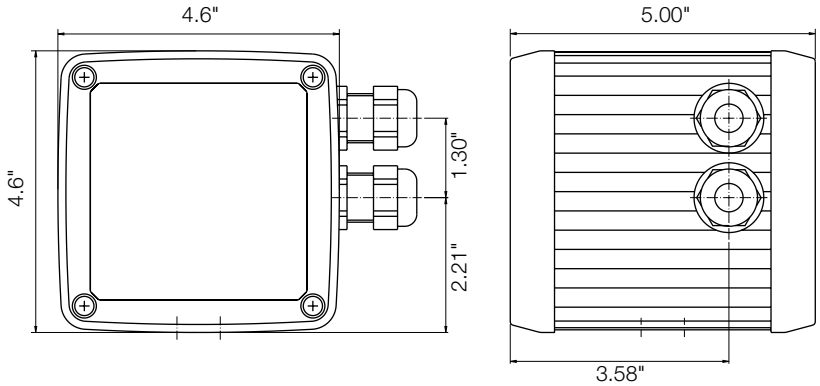
Model	Supply	Electrical Connection	Analog Output	Housing
ZED-K..	**..F10..** = 90 ... 250 VAC **..F13..** = 24 VDC	**..KS..** = Terminal Strip (Panel Mount) **..MS..** = Cable Connection M18 (Field Housing)	**..4R..** = 4 ... 20 mA **..1R..** = 0 ... 10 V	**..P** = Panel Mount Installation 3.8" x 3.8" **..F** = Field Housing 4.6" x 4.6" **..S** = Field Housing with Wall Mount and Adjustable Pivot **.R** = Field Housing with 2" Pipe Mounting

Dimensions

Panel Mount Installation



Field Housing



ZED-Z Description

The ZED-Z LCD display converts a frequency input signal into a 3 or 4-digit flow rate reading displayed in user selectable measuring units (top display line). The display also comes with a scalable analog output signal.
Total flow is registered with either a resetable total flow display or a non-resettable grand total flow and is displayed on the bottom line of the screen. The totalizer units of measurement are also user selectable.

Two SPDT relays continuously monitor if the adjustable limits are exceeded. Here, it is possible to choose between single value or window monitoring.

Switching point, hysteresis, a window point, and switch on or off delay can be set separately for each relay. The switching points can also be set directly by using the control keys without having to change over into the menu. Alternatively, it is also possible to monitor the quantity meter to see if it is exceeded. A red LED indicates the switching status.

The analog output is optionally available as current output with 4...20 mA or as voltage output with 0...10 V. The parameter names can be shown in the menu in English or German. If used where the flow readings change rapidly, the display can be dampened and the analog reading averaged by switching on a software parameter.

A MIN/MAX reading memory determines the extreme readings of the flow. The display of the readings and the resetting are achieved by using the keys without having to change into the menu. Resetting by using the keys can also be blocked. If the maximum set flow range is exceeded, it will be shown on the display.

The set parameters can be protected against unauthorized alteration by using a password function.

Range of Functions

Flow Total and Flow Rate with Digital Display, Switching, and Scaleable Analog Output:

- Measurement and Display Flow Rate, Total, and Grand Total
- Scaling Using Input of Frequency and Measured Value
- Control Input for Totalizer Reset
- 2 Switching Outputs, User Programmable as a Flowrate Alarm or for Switching the Total and/or Grand Total Quantity
- Scaleable Analog Output 4 ... 20 mA or 0 ... 10 V
- MIN/MAX Memory

Technical Details

Display:	2 x 8-digit Alphanumeric LCD, Illuminated
Display Rate:	1 s^{-1}
Flow Display:	3- or 4-digit (XX.X, X.XX, or XXXX)
Flow Units:	ml/s, ml/m, l/s, l/m, l/h, m^3/m, m^3/h, GPM, GPH, or User Unit per h/min/s User Selectable
Quantity Meter:	8-digit
Quantity Units:	ml, l, m^3, gal, User Unit Selectable
Measurement Input:	0.2 ... 2000 Hz (5 ... 24 V_{DC}), TTL, PNP, NPN, or NAMUR
Parameter Input:	Menu Controlled, English or German
Parameter Protection:	4-digit Password
Control Elements:	4 Keys
Custom Comparison:	by Entering the Frequency and Measured Value
Control Inputs:	Reset Function
Relay Outputs:	2 x SPDT Max. 250 $V_{AC/DC}$ Max. 5 A / 1000 VA
Voltage Supply:	24 V_{DC} ±20%, approx. 80 mA or 90 ... 250 V_{AC} / Max. 3 VA
Analog Output:	4 ... 20 mA Load: Max. 500 Ω, (at AC-Supply: 300) or 0 ... 10 V (Load: >100 k)
Sensor Supply:	23 V (at 24 V_{DC}) / Max. 50 mA 24 V (AC-supply) / Max. 50 mA NAMUR-Supply: 8.2 V_{DC}
Ambient Temp:	-4 ... 158 °F
Dimensions:	3.8" x 3.8" x 4.3" (L x W x D) Incl. Screw Clamp (Panel Mount Installation) 4.6" x 4.6" x 5.00" (L x W x D) (Field Housing)
Panel Cut-out:	3.52" x 3.52" (Panel Mount Installation)

www.cabriggs.com

No responsibility taken for errors;
subject to change without prior notice.

Technical Details (continued)

Casing Material: Fiberglass Reinforced PPO (Panel Mount Installation)
Powder Coated Aluminum/PA 66 (Field Housing)

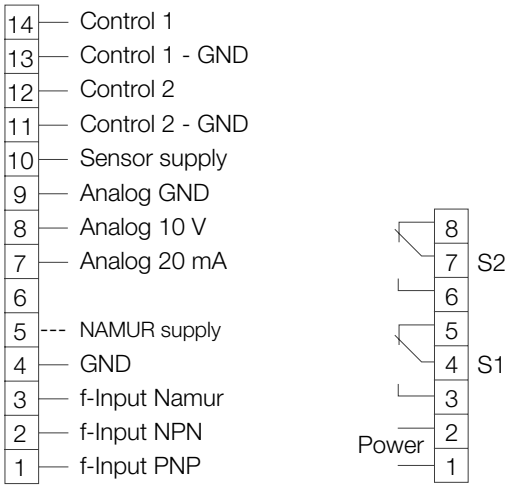
Protection: IP 40 on Front, IP 00 Terminal Block (Panel Mount Installation)
IP 65 (Field Housing)

Mounting: Mounting Clip Form B (DIN 43 835) (Panel Mount Installation)
Wall and Pipe Mounting (Field Housing)

Connection: Plug-in Terminal Strip (Panel Mount Installation)
Cable Connection (Field Housing)

Weight: Approx. 0.8 lb (Panel Mount Installation)
Approx. 2.75 lbs (Field Housing)

Electrical Connection

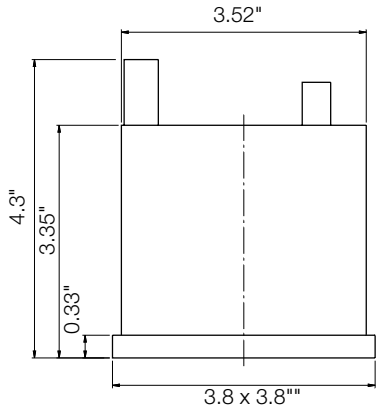


Order Details (Example: **ZED-Z F10 KS 4R P**)

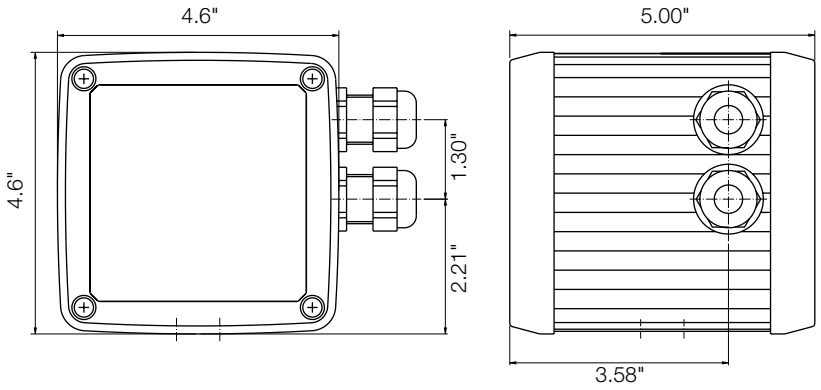
Model	Supply	Electrical Connection	Analog Output	Housing
ZED-Z..	**..F10..** = 90 ... 250 VAC **..F13..** = 24 VDC	**..KS..** = Terminal Strip (Panel Mount) **..MS..** = Cable Connection M18 (Field Housing)	**..4R..** = 4 ... 20 mA **..1R..** = 0 ... 10 V	**..P** = Panel Mount Installation 3.8" x 3.8" **..F** = Field Housing 4.6" x 4.6" **..S** = Field Housing with Wall Mount and Adjustable Pivot **..R** = Field Housing with 2" Pipe Mounting

Dimensions

Panel Mount Installation



Field Housing



ZED-D Description

The ZED-D LCD display converts a frequency input signal into a 3 or 4-digit flow rate reading featured on the top line of display. The batch total is displayed in the bottom line of the display. The units of measure are user selectable and the display comes with a scalable analog output signal.

Included are two SPDT output relays which can be used for various functions. The relay (S1) can be used to for flow rate monitoring, total volume monitoring, fine batching, or pump control.

As the flow is being continuously monitored, adjustable output relay values are checked. A choice can be made between single value or window monitoring. Switching point, hysteresis, window point, and switch-on or switch-off delay can be set as desired. If monitoring of the total volume is selected, a check is made to see if the adjustable quantity limit is exceeded.

The batch relay (S2) switches on when the batching process starts, and then switches off again, once the batch has flowed through. The process can be interrupted using the Start/Stop switch. By taking a correction quantity into account, it is possible to take any special features or conditions of the system into account. By entering a fine dosage, the bypass valve can be controlled with the relay (S1). A red LED indicates the relay's switching status.

The scaleable analog output is available as a current output with 4...20 mA or a voltage output with 0...10 V. The parameters in the menu can be displayed in either English or German. If used where the flow readings change rapidly, the analog reading can be averaged by switching on some software. If the maximum set flow amount is exceeded, it will be shown on the display. The set parameters can be protected against unauthorized alteration using a password function.

Range of Functions

Batching and Flow Meter with Digital Display, Switch and Analog Output:

- Measurement and Display of Flow Rate, Total, and Batch Total
- Scaleable using Input of Frequency and Measured Value
- Interval Counter (Number of Batch Process)
- 2 Control Inputs
- 1 Batching Output
- 1 Switching Output, Programmable as Flow Switch or for Switching at the Total Quantity
- Scaleable Analog Output 4 ... 20 mA or 0 ... 10 V

Technical Details

Display:	2 x 8-digit Alphanumeric LCD, Illuminated
Display Rate:	1 s^{-1}
Flow Display:	3 or 4-digit (XX.X, X.XX, or XXXX)
Flow Rate Units:	ml/s, ml/m, l/s, l/m, l/h, m^3/m, m^3/h, GPM, GPH, or User Unit per h/min/s User Selectable
Totalizer:	8-digit
Batch:	5-digit
Totalizer Units:	ml, l, m^3, gal, User Unit Selectable
Measurement Input:	0.2 ... 2000 Hz (5 ... 24 V_{DC}), TTL, PNP, NPN, or NAMUR
Parameter Input:	Menu Controlled, English or German
Protection:	4-digit Password
Control Elements:	4 Keys
Custom Comparison:	by Entering the Frequency and Measured Value
Control Inputs:	Start, Stop, & Reset
Relay Outputs:	2 x SPDT Max. 250 $V_{AC/DC}$ Max. 5 A / 1000 VA
Voltage Supply:	24 V_{DC} ±20%, Approx. 80 mA or 90 ... 250 V_{AC} / Max. 3 VA
Analog Output:	4 ... 20 mA Load: Max. 500 Ω, (at AC-supply: 300) or 0 ... 10 V (Load: >100 k)
Sensor Supply:	23 V (at 24 V_{DC}) / Max. 50 mA 24 V (AC-supply) / Max. 50 mA NAMUR-Supply: 8.2 V_{DC}
Ambient Temp:	-4...158 °F
Dimensions:	3.8" x 3.8" x 4.3" mm, Incl. Screw Clamp (Panel Mount Installat.) 4.6" x 4.6" x 5.00" (L x W x D) (Field Housing)
Panel Cut-out:	3.52" x 3.52" (Panel Mount Installation)

www.cabriggs.com

No responsibility taken for errors;
subject to change without prior notice.

Technical Details (continued)

Casing Material: Fiberglass Reinforced PPO (Panel Mount Installation)
Powder Coated Aluminum/PA 66 (Field Housing)

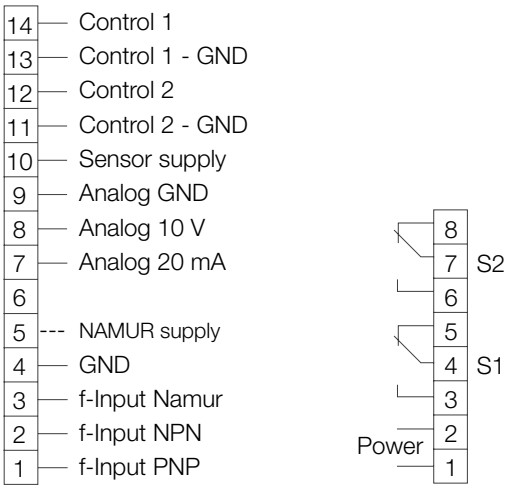
Protection: IP 40 Front, IP 00 Terminal Block (Panel Mount Installation)
IP 65 (Field Housing)

Mounting: Mounting Clip Form B (DIN 43 835) (Panel Mount Installation)
Wall and Pipe Mounting (Field Housing)

Connection: Plug-in Terminal Strip (Panel Mount Installation)
Cable Connection (Field Housing)

Weight: Approx. 0.8 lbs (Panel Mount Installation)
Approx. 2.75 lbs (Field Housing)

Electrical Connection

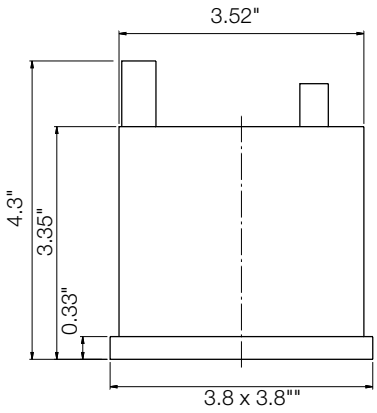
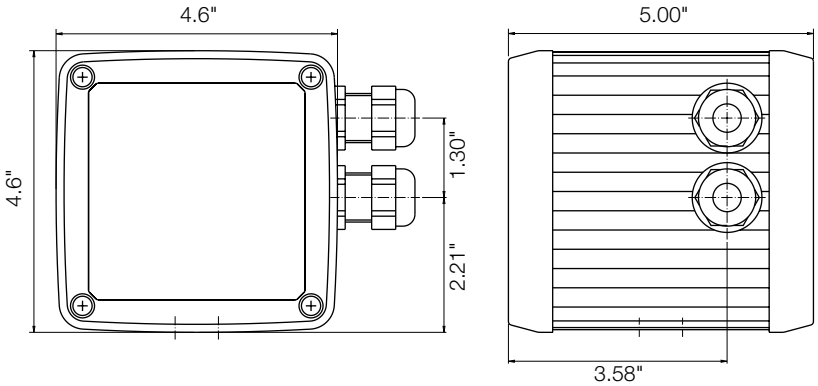


Order Details (Example: **ZED-D F10 KS 4R P**)

Model	Supply	Electrical Connection	Analog Output	Housing
ZED-D..	**..F10..** = 90 ... 250 VAC **..F13..** = 24 VDC	**..KS..** = Terminal Strip (Panel Mount) **..MS..** = Cable Connection M18 (Field Housing)	**..4R..** = 4 ... 20 mA **..1R..** = 0 ... 10 V	**..P** = Panel Mount Installation 3.8" x 3.8" **..F** = Field Housing 4.6" x 4.6" **..S** = Field Housing with Wall Mount and Adjustable Pivot **..R** = Field Housing with 2" Pipe Mounting

Dimensions

Panel Mount Installation



Field Housing