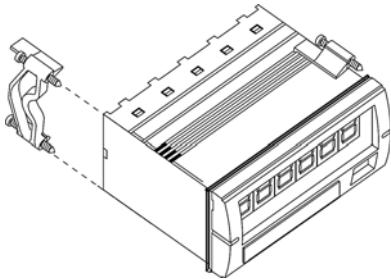




- 1/8 DIN Indicator
  - 3-1/2 or 4-1/2 digit bright red LED display
  - Front panel pops off for easy decimal point setting and display scaling
  - Only 3.12" (79mm) required behind panel
  - Optional excitation output
  - NEMA 4X enclosure optional
  - Din Rail Adapter available
- (page C1)

#### Mounting Requirements

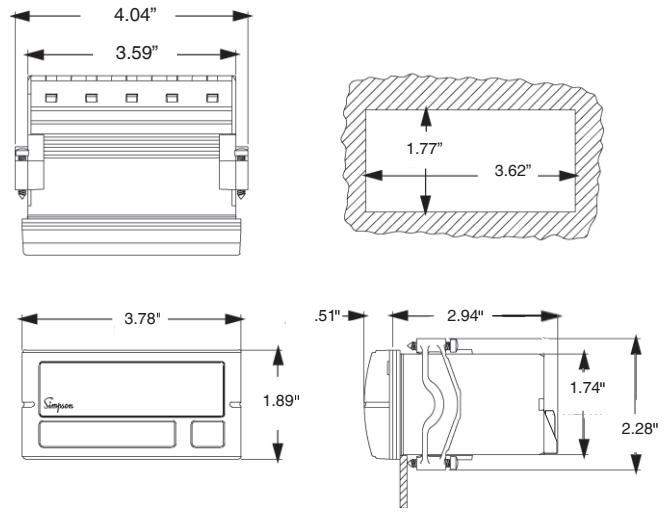
The Falcon series 1/8 DIN indicators require a panel cutout of 1.77" (45mm) high by 3.62" (92mm) wide. To install the Falcon into a panel cutout, remove the clips from the side of the meter. Slide the meter through your panel cutout, then slide the mounting clips back on the meter. Press evenly to ensure a proper fit. Tighten screws.



#### Specifications

<b>DISPLAY</b>	7-segment, red LED
<b>Type</b>	0.56" (14.2mm)
<b>Height</b>	user-programmable,
<b>Decimal Point</b>	internally or on the terminal block
<b>OVERRANGE INDICATION</b>	most significant digit = "1"; other digits blank
<b>POLARITY</b>	Automatic, with "-" indication, "+" indication implied
<b>POWER REQUIREMENTS</b>	
<b>AC Voltages</b>	120 or 220VAC, ±10% 50/60Hz
<b>DC Voltages</b>	9-32DCV, ±1%
<b>Power Consumption</b>	F35: 3VA, F45: 2VA
<b>ISOLATION</b>	250V RMS MAX
<b>ACCURACY @25°C</b>	±0.02% of reading ± 1 count
<b>F45 DC Process/Voltage</b>	±0.1% of reading ± 1 count
<b>F35 DC Process/Voltage</b>	±0.05% of reading ± 1 count
<b>F45 DC Current</b>	2A ± 5 counts 5A ± 5 counts
<b>F35 DC Current</b>	±0.1% of reading ± 1 count
<b>F45 AC Voltage/Current</b>	2A ± 5 counts, 5A ± 5 counts
<b>F35 AC Voltage/Current</b>	±0.5% of reading ± 35 counts
<b>ENVIRONMENTAL</b>	±1% of reading ± 5 counts (45Hz-1KHz)
<b>Operating Temperature</b>	0 to 55°C
<b>Storage Temperature</b>	-10 to 60°C
<b>Relative Humidity</b>	0 to 85% non-condensing
<b>Warm-up Time</b>	Less than 15 minutes
<b>NOISE REJECTION</b>	
<b>NMRR</b>	F35=50dB, 50/60Hz; F45=60dB, 50/60Hz
<b>CMRR</b>	(w/1KΩ unbalanced @ 60Hz) 90dB min.
<b>A TO D CONVERSION</b>	Dual slope integration
<b>Technique</b>	F35=3 samples per second, nominal;
<b>Rate</b>	F45=2.5 samples per second, nominal
<b>MECHANICAL</b>	
<b>Bezel</b>	3.78" x 1.89" x .51"
<b>Depth</b>	2.94"
<b>Panel Cutout</b>	3.62" X 1.77"
<b>Case Material</b>	94V-1, UL rated Noryl®
<b>Weight</b>	9.0oz (255.1g)
<b>Temperature Coefficient</b>	
<b>F35 AC/TRMS (Voltage/Current)</b>	(±0.1% ± 0.5 count)°C
<b>F35 DC (Voltage/Current/Process)</b>	(±0.01% ± 0.05 count)°C
<b>F45 AC (Voltage/Current)</b>	(±0.05% ± 0.5 count)°C
<b>F45 DC Current</b>	(±0.01% ± 0.1 count)°C
<b>F45 DC (Voltage/Process)</b>	(±0.05% ± 0.1 count)°C

#### Dimensions


[more >>](#)

## Specifications for F35 Frequency Meters

### DISPLAY

Type 7-segment, red LED  
Height 0.56" (14.2mm)

### OVERRANGE INDICATION

Most significant digit = "1"; other digits blank

### POWER REQUIREMENTS

AC Voltages 120 or 220VAC, ±10% 50/60Hz  
Power Consumption 2.5VA min./4VA max.

### ACCURACY @ 25°C

200 Hz: ±0.2% of input ±0.2 Hz  
2 KHz: ±0.2% of input ± 2Hz

### INPUT LEVEL

500mV to 250V RMS at 1.0MΩ impedance OR 5V to 24V Square Wave (DC offset 2V maximum)

### RESOLUTION:

200Hz = 0.1Hz  
2kHz = 1Hz

### ENVIRONMENTAL

Operating Temperature 0 to 55°C  
Storage Temperature -10 to 60°C  
Relative Humidity 0 to 85% non-condensing @ 40°C  
Temperature Coefficient (±0.05% of input ± 0.5 count)/°C  
Warm-up Time Less than 15 minutes

### CONVERSION

Technique Frequency-to-voltage  
Rate 3 samples per second, nominal

## Specifications for F45 Temperature Meters

### DISPLAY

Type 7-segment, red LED  
Height 0.56" (14.2mm)  
Decimal Point Jumper-selectable 2-position (corresponding to resolution desired)

### OVERRANGE INDICATION

Most significant digit = "1"; other digits blank

### POLARITY

Automatic, with "-" indication,  
"+" indication implied

### POWER REQUIREMENTS

AC Voltages 120 or 220 ACV, ±10% 50/60Hz  
DC Voltages 9-32 DCV, ±1%  
Power Consumption 3VA

### ENVIRONMENTAL

Operating Temperature 0 to 55°C  
Storage Temperature -10 to 60°C  
Relative Humidity 0 to 85% non-condensing  
Warm-up Time Less than 20 minutes

### INPUTS

Thermocouple J, K, E, T, R, and S  
RTD Platinum 100 (.00385 alpha), 2, 3 or 4 wire  
Millivolt ±84mV reading of uncompensated mV  
Input Impedance 7MΩ(typical)  
Conversion Rate 2-1/2 times per second  
Open Thermocouple Detection -1 on display, -40nA bias on thermocouple

Temperature			
Sensor Type	Temperature Range	Accuracy	Resolution
E	-200 to 1000°C	±0.1% of rdg ± 1°C	0.1 or 1 Degree User Selectable
	-328 to 1832°F		
J	-200 to 1200°C	±0.1% of rdg ± 1.8°F	1 Degree Automatic
	-328 to 2192°F		
K	-200 to 1372°C	±0.1% of rdg ± 1°C	0.01 mV
	-328 to 2501°F		
T	-200 to 400°C	±0.2% of rdg ± 1 count	0.001mV
	-328 to 752°F		
RTD Pt 100	-200 to 850°C	±0.2% of rdg ± 1 count	10mA
	-328 to 1562°F		
R, S	-50 to 1768°C	±0.2% of rdg ± 1 count	40mA
	-58 to 3214°F		
mV	Voltage Range	±0.2% of rdg ± 1 count	100mA
	±84.00mV		
mV	Voltage Range	±0.2% of rdg ± 1 count	500mA
	-19.999mV to +84.000mV		

## Inputs

DC Voltage					
Range	F35		F45		Max Input (Unfused)
	Resolution	Input Impedance	Resolution	Input Impedance	
200mV	100uV	>100MEG	10uV	>100MEG	100V
2V	1mV	>10MEG	100uV	>10MEG	250V
20V	10mV	>10MEG	1mV	>9.9MEG	250V
200V	100mV	>9.9MEG	10mV	>9.8MEG	250V

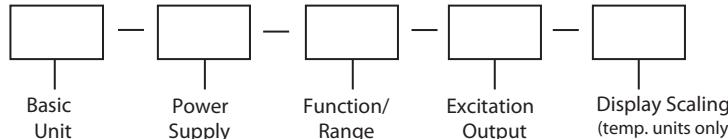
AC TRMS Voltage					
Range	F35		F45		Max Input (Unfused)
	Resolution	Input Impedance	Resolution	Input Impedance	
200mV	100uV	>100MEG	10uV	>100MEG	100V
2V	1mV	>1MEG	100uV	>1MEG	250V
20V	10mV	>10MEG	1mV	>1MEG	250V
200V	100mV	>9.9MEG	10mV	>1MEG	250V

DC / AC TRMS Current				
Range	Resolution		Voltage Drop	Max Input (Unfused)
	F35	F45		
200uA	100nA	10nA	200mV	10mA
2mA	1uA	100nA		40mA
20mA	10uA	1uA		100mA
200mA	100uA	10uA		500mA
2A	1mA	100uA		2.2A
5A	10mA	1mA		5.2A

DC Process			
Range	F35		Max Input (Unfused)
	Resolution	Input Impedance	
4 to 20mA	10uA	NA	200mV
1 to 5Vdc	10mV	>10MEG	NA
0 to 10Vdc	10mV	>10MEG	NA

## Ordering Information

Falcon Indicators can be configured by making an entry in each section. Example: F35-1-52-0.



Selection	Description	Selection	Description
Basic Unit			Function/Range cont'd
F35 F45	3 1/2 digit LED 4 1/2 digit LED	61 62 63 64 65 66	200 AC $\mu$ A TRMS • 2 ACmA TRMS • 20 ACmA TRMS • 200 ACmA TRMS • 2 ACA TRMS • 5 ACA TRMS •
1 2 3	Power Supply 120 ACV 220 ACV 9-32 DCV†	71 72 73	4-20 DCmA Process 1-5 DCV Process 0-10 DCV Process
Function/Range			
11 12 13 14	200 DCmV 2 DCV 20 DCV 200 DCV	80 (F45) 81 (F45) 82 (F45) 83 (F45) 84 (F45) 85 (F45) 86 (F45) 90 (F45)	J T/C K T/C S T/C T T/C E T/C R T/C DCmV RTD Pt100 Ohm
21 22 23 24 25 26	200 DC $\mu$ A 2 DCmA 20 DCmA 200 DCmA 2 DCA 5 DCA	91 (F35) 92 (F35) 93 (F35) 94 (F35)	20-199.9 Hz RMS 20-1999 Hz RMS 20-199.9 Hz Sq. Wave 20-1999 Hz Sq. Wave
31 32 33 34	200 ACmV 2 ACV 20 ACV 200 ACV	0 1 2	Excitation Output (not available with AC, temperature, or frequency inputs)
41 42 43 44 45 46	200 AC $\mu$ A 2 ACmA 20 ACmA 200 AC mA 2 ACA 5 ACA	C F	None 12 DCV @ 25mA max. current 24 DCV @ 25mA max. current
51 52 53 54	200 ACmV TRMS • 2 ACV TRMS • 20 ACV TRMS • 200 ACV TRMS •		Display Scaling (Temperature units only)

† Not available for use with frequency meters

• Only available with F35