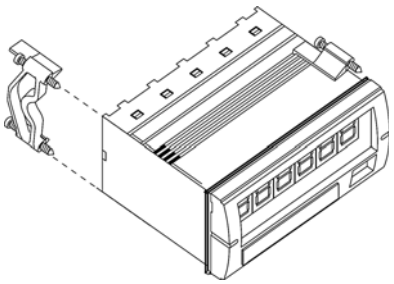
Falcon F35 & F45 Digital Panel Meters

- 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

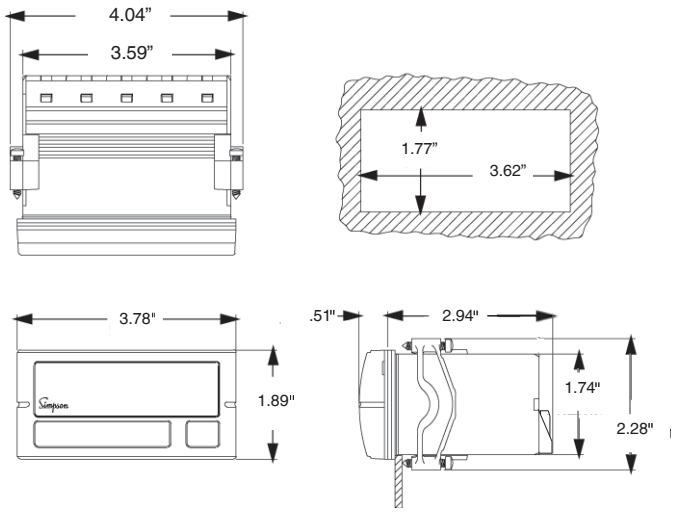
The Falcon series 1/8 DIN indicators require a panel cutout of 1.77" (45mm) high by 3.62" (92mm) wide. To install the Falcon into a panel cutout, remove the clips from the side of the meter. Slide the meter through your panel cutout, then slide the mounting clips back on the meter. Press evenly to ensure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



Specifications

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

Dimensions



more >>

Falcon F35 & F45 Digital Panel Meters

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 -328 to 1832°F	±0.1% of rdg ± 1°C ±0.1% of rdg ± 1.8°F	0.1 or 1 Degree User Selectable
J	-200 to 1200°C -328 to 2192°F		
K	-200 to 1372°C -328 to 2501°F		
T	-200 to 400°C -328 to 752°F		
RTD Pt 100	-200 to 850°C -328 to 1562°F		
R, S	-50 to 1768°C -58 to 3214°F		1 Degree Automatic
mV	Voltage Range ±84.00mV	±.02% of rdg ± 1 count	0.01 mV
mV	Voltage Range -19.999mV to +84.000mV	±.02% of rdg ± 1 count	0.001mV

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

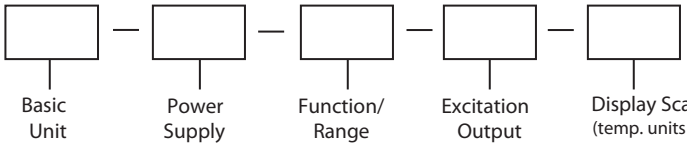
AC TRMS Voltage					
Range	**F35**		**F45**		**Max Input (Unfused)**
	Resolution	**Input Impedance**	**Resolution**	**Input Impedance**	
200mV	100uV	>100MEG	10uV	>100MEG	100V
2V	1mV	>1MEG	100uV	>1MEG	250V
20V	10mV	>10MEG	1mV	>1MEG	250V
200V	100mV	>9.9MEG	10mV	>1MEG	250V

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**		**F45**		**Max Input (Unfused)**
	Resolution	**Input Impedance**	**Resolution**	**Input Impedance**	
4 to 20mA	10uA	NA	1uA	NA	200mV
1 to 5Vdc	10mV	>10MEG	1mV	>9.9MEG	NA
0 to 10Vdc	10mV	>10MEG	1mV	>9.9MEG	NA

Ordering Information

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



Selection	Description
Basic Unit	
F35	3 1/2 digit LED
F45	4 1/2 digit LED
Power Supply	
1	120 ACV
2	220 ACV
3	9-32 DCV†
Function/Range	
11	200 DCmV
12	2 DCV
13	20 DCV
14	200 DCV
21	200 DCµA
22	2 DCmA
23	20 DCmA
24	200 DCmA
25	2 DCA
26	5 DCA
31	200 ACmV
32	2 ACV
33	20 ACV
34	200 ACV
41	200 ACµA
42	2 ACmA
43	20 ACmA
44	200 AC mA
45	2 ACA
46	5 ACA
51	200 ACmV TRMS •
52	2 ACV TRMS •
53	20 ACV TRMS •
54	200 ACV TRMS •

Selection	Description
Function/Range cont'd	
61	200 ACµA TRMS •
62	2 ACmA TRMS •
63	20 ACmA TRMS •
64	200 ACmA TRMS •
65	2 ACA TRMS •
66	5 ACA TRMS •
71	4-20 DCmA Process
72	1-5 DCV Process
73	0-10 DCV Process
80 (F45)	J T/C
81 (F45)	K T/C
82 (F45)	S T/C
83 (F45)	T T/C
84 (F45)	E T/C
85 (F45)	R T/C
86 (F45)	DCmV
90 (F45)	RTD Pt100 Ohm
91 (F35)	20-199.9 Hz RMS
92 (F35)	20-1999 Hz RMS
93 (F35)	20-199.9 Hz Sq. Wave
94 (F35)	20-1999 Hz Sq. Wave
Excitation Output (not available with AC, temperature, or frequency inputs)	
0	None
1	12 DCV @ 25mA max. current
2	24 DCV @ 25mA max. current
Display Scaling (Temperature units only)	
C	°C
F	°F

† Not available for use with frequency meters

• Only available with F35

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