



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	±0.1% of rdg ± 1°C ±0.1% of rdg ± 1.8°F	0.1 or 1 Degree User Selectable
	-328 to 1832°F		
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	1 Degree Automatic	
	-58 to 3214°F		
mV	Voltage Range	±0.02% of rdg ± 1 count	0.01 mV
	±84.00mV		
mV	Voltage Range	±0.02% of rdg ± 1 count	0.001mV
	-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		F45		Max Input (Unfused)
	Resolution	Input Impedance	Resolution	Input Impedance	
4 to 20mA	0.1 %	NA	.01 %	NA	200mV
1 to 5Vdc	0.1 %	>10MEG	.01 %	>9.9MEG	NA
0 to 10Vdc	0.1 %	>10MEG	.01 %	>9.9MEG	NA