

Hawk 3 Digital Panel Meter/Controller



- All parameters set from easy to understand front panel access
- One, two or four 5-amp relays optional
- Five user-selectable brightness levels
- 1/8 DIN, shallow depth case, 3.24"
- RS485 digital communications optional (H345)
- 12 or 24 DCV power supply output optional
- 4-20mA or 0-10 DCV analog transmission optional
- NEMA 4X rated front panel

Specifications

DISPLAY	
Type	7-segment, red LED
Quantity	4 or 5
Brightness	5 user-selectable levels
Height	0.56" (14.2mm)
Decimal point	4 or 5 position, user programmable
Overrange indication	Display flashes "EEEE" indicating Maximum Value Exceeded
Underrange indication	Display flashes "-EEEE" indicating Minimum Value Exceeded
Alarm Indicators	4 LED indicators for up to four independent setpoints

POWER REQUIREMENTS

AC	120, 85-250 VAC @ 10VA
DC	9-36 DCV @ 10VA
ISOLATION	250V RMS MAX

	4-1/2 digit	3-1/2 digit
ACCURACY @ 25°C as % of rdg		
DC Current		
High (5A, 2A)	0.2% ± 1 count	0.3% ± 1 count
All Others	0.05% ± 1 count	0.1% ± 1 count
DC Volts		
High (600 V)	0.1% ± 1 count	0.2% ± 1 count
All others	0.05% ± 1 count	0.1% ± 1 count
Resistance		
All ranges	0.1% ± 2 counts	0.1% ± 2 counts
*AC Current		
High (2A, 5A)	0.2% ± 2 counts	0.3% ± 2 counts
All others	0.1% ± 2 counts	0.2% ± 2 counts
*AC Volts		
High (600V)	0.1% ± 1 count	0.2% ± 1 count
All others	0.05% ± 1 count	0.1% ± 1 count

* AC functions measured at 50 Hz, include ± 1 count for each additional 100 Hz above 50 Hz

ENVIRONMENTAL

Operating Temperature	0 to 50°C
Storage Temperature	-10 to +60°C
Relative Humidity	<80%
Ambient Temperature	25°C
Temperature Drift	100 ppm/°C
Warmup Time	10 minutes
Noise Rejection	
NMRR	60 dB @ 50-60 Hz
CMRR	70 dB @ 50-60 Hz

A TO D CONVERSION

Technique	Successive approximation with oversampling
Sample Rate	10 conversions per second
Display Rate	User programmable 1-420 updates/min (240 default)

MECHANICAL

Bezel	3.9" x 2.0" x 0.52" (99.8mm x 51.9mm x 13.2 mm)
Depth	3.24" (82.3 mm)
Panel Cutout	3.62" x 1.77" (92 mm x 45mm)
Weight	10 oz (283.5g)
Cover	NEMA 4X Rated front panel

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Ordering Information

Hawk 3 Indicators can be configured by making an entry into each section. Example: H335-3-71-0-4-1

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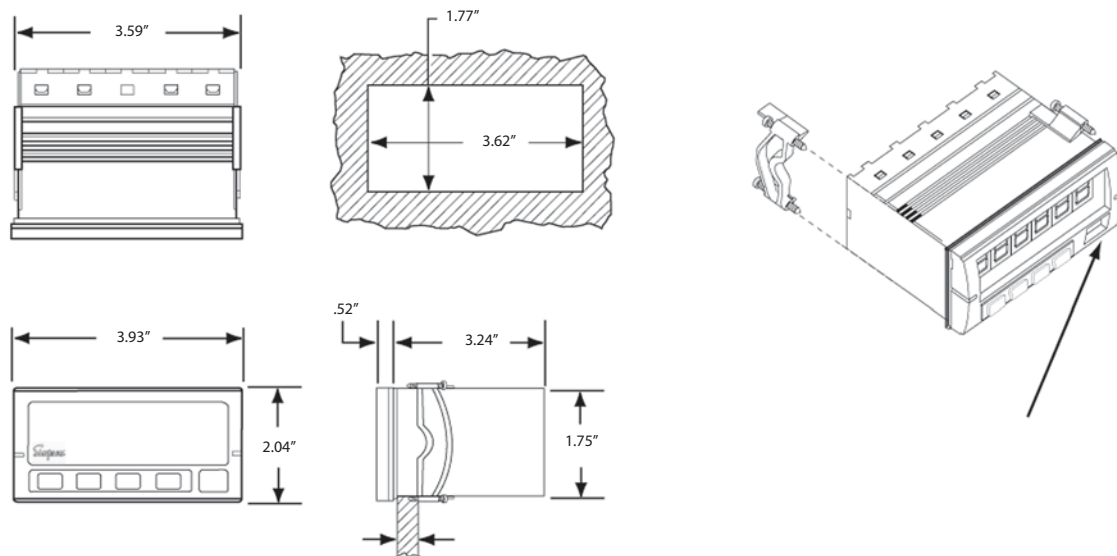
Basic Unit Power Supply Function/Range Output Signal 5A Relay Excitation

Selection	Description	Selection	Description
Basic Unit		Function/Range continued	
H335	3-1/2 digit, Red LED	51	200 ACmV TRMS
H345	4-1/2 digit, Red LED	52	2 ACV TRMS
Power Supply		53	20 ACV TRMS
1	120 ACV (3-1/2 only)	54	200 ACV TRMS
2	85-250 ACV (4-1/2 only)	55	600 ACV* TRMS
3	9-36 DCV	5A Relays	
4	85-250 ACV (3-1/2 only)	0	None
Function/Range		1	One
11	200 DCmv	2	Two
12	2 DCV	4	Four
13	20 DCV	Excitation	
14	200 DCV	0	None
15	600 DCV*	1	12 DCV
21	200 DCμA	2	24 DCV
22	2 DCmA	Continued on next column	
23	20 DCmA	* Awaiting UL approval	
24	200 DCmA		
25	2 DCA		
26	5 DCA		
31	200 ACmV		
32	2 ACV		
33	20 ACV		
34	200 ACV		
35	600 ACV*		
41	200 ACμA		
42	2 ACmA		
43	20 ACmA		
44	200 ACmA		
45	2 ACA		
46	5 ACA		



Hawk 3 Installation Instructions

Installation and Panel Cutout - H335, H340, H345



Mounting Requirements

The Hawk 3 Advanced Digital Controller 1/8 DIN meters require a panel cutout of 1.77" (45mm) high and 3.62" (92 mm wide). To install the Hawk 3 meter into the panel cutout, remove the clips from the side of the meter. Slide the meter through the panel cutout, then slide the mounting clips back on the meter. Press evenly to ensure a proper fit. Tighten screws.

Engineering Label Placement

To replace the engineering unit label, place the tip of a ballpoint pen into the small hole at the base of the engineering label in the bezel. Slide the label up until it pops out. Grasp and remove. Slide the new label half the distance in, then use the ballpoint pen to slide it into place.

Inputs

DC Voltage

Range	Resolution 4.5	Resolution 3.5	Input Impedance	Overload
200mV	10µV	.1mV	1MΩ	5DCV
2V	.1mV	1mV	1MΩ	5DCV
20V	1mV	10mV	1MΩ	300DCV
200V	10mV	.1V	1MΩ	300DCV
600V	.1V	1V	1MΩ	1KDCV

DC Current

Range	Resolution 4.5	Resolution 3.5	Input Impedance	Overload
200µA	10nA	.1µA	1KΩ	45mADC
2mA	.1µA	1µA	100Ω	45mADC
20mA	1µA	10µA	10Ω	200mADC
200mA	10µA	.1mA	1Ω	600mADC
2A	.1mA	1mA	.013Ω	5.5ADC
5A	.1mA	1mA	.013Ω	5.5ADC

AC Current

Range	Resolution 4.5	Resolution 3.5	Input Impedance	Overload
200µA	10nA	.1µA	1KΩ	45mA DC
2mA	.1µA	1µA	100Ω	45mA DC
20mA	1µA	10µA	10Ω	200mA DC
200mA	10µA	.1mA	1Ω	600mA DC
2A	.1mA	1mA	.013Ω	5.5ADC
5A	.1mA	1mA	.013Ω	5.5ADC

AC Voltage

Range	Resolution 4.5	Resolution 3.5	Input Impedance	Overload
200mV	10µV	.1mV	200KΩ	5DCV
2V	.1mV	1mV	200KΩ	5DCV
20V	1mV	10mV	1MΩ	300DCV
200V	10mV	.1V	1MΩ	300DCV
600V	.1V	1V	1MΩ	1KDCV

Resistance

Range	Resolution 4.5	Resolution 3.5	Input Impedance	Overload
200Ω	10mΩ	.1Ω	1.2KΩ	± 5DCV
2KΩ	.1Ω	1Ω	12KΩ	± 5DCV
20KΩ	1Ω	10Ω	121KΩ	± 5DCV
200KΩ	10Ω	100Ω	1.2MΩ	± 5DCV

Mouser Electronics

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