

Hour Meters Line Guide



Universal Application. Singular Performance. You'll find Honeywell Sensing and Control (S&C) hour meters where quality, performance and rugged construction are needed. So track and record elapsed time more effectively and efficiently, whether in hours or tenths of hours. Log running time of your equipment, designed to assure proper maintenance of expensive machines or systems, or track warranty programs. Often eliminate the guesswork with elapsed hours for better machine resale value, or logging actual time on your rental products.

Hour meters differ by power, display, shape and data. And while there are many factors to consider — from panel profile, to analog or LCD, shock and vibration resistance to noiseless performance — Honeywell S&C is your one-stop shop. No matter the terminal specification, the shape or configuration, we're up-to-the-minute on hour meter technology and applications.

FEATURES

AC HOUR METERS 20000 Series.

Features: Polycarbonate, shock resistant, tamper-proof case • Totally sealed • Single phase, synchronous, permanently lubricated motor • Custom logo dials, screw terminal, wire lead or 1/4 in blade terminals, special wire lengths

Benefits: From testing purposes to leasing applications, maintenance and warranty programs, this often accurate, reliable hour meter passes 100% function and timing accuracy tests before shipping. All parts are in process inspected and benefit from an uncommon design — integrating the motor and frame into one substructure.

28100 Series.

Features: Unlike conventional hour meters, this hour meter operates over a full range of voltages and frequencies. Working accurately over a voltage range of 90 Vac to 264 Vac and frequencies of either 50 Hz or 60 Hz, it fits a wide range of applications, anywhere in the world. It offers reduced parts count and inventories. With fewer purchase orders and reduced service parts, the meter often eliminates production line errors.

Benefits: Records time 0 to 99,999.9 hours • Accuracy $\pm 0.02\%$ • UL recognized • CSA (UL) • CE mark • Totally sealed from dirt and moisture • Termination - 1/4 in spade • Options include custom lens and terminal orientation (up, down, straight)

301 Series.

Features: Offering enhanced accuracy and quiet operation in an economical design. The display reads to 1/100 of an hour for greater resolution. Available in standard case configurations that can interchange with virtually all meters on the market.

Benefits: Often ideal for multiple applications: medical, office equipment, electric panels, tanning beds, fans, and furnaces

DC HOUR METERS 98200 Series.

Features: Digital LCD readout • Internal battery • Snap-in case • 50-hour alarm for maintenance (optional) • Terminal designed to accept Packard connector 2973781 • IP66 sealing

Benefits: Keeps LCD readout of elapsed time in hours and tenths visible at all times. Every 50 hours, large digital readout displays a maintenance reminder for service. Snap-in mounting requires no additional hardware. Includes maintenance alarm. Often ideal for commercial lawn care equipment, generators, compressors, panel assemblies, sport vehicles and more.

98000 Series LCD Hour Meters.

Features: Totally sealed from moisture and dirt • Direct replacement for current hour meter • No battery backup needed • Fits in existing panel openings • Custom bezels and dial artwork available • Snap-in retainer mount combines easy installation with rugged design • Compact depth • Rugged design • Pulse counter option • Reset option • Run indicator is standard

Benefits: Combines reliability with a solid-state package, built for rugged, heavy-duty applications. Large LCD display, with shorter overall meter depth, totally silent operation, non-volatile memory and solid-state circuitry. Wide variety of mounting styles for virtually any application.

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Possibilities. That's the most powerful part.

Honeywell Sensing and Control (S&C) offers gold-standard parts, as well as one-stop convenience for engineering excellence — meaning top-notch products or completely customized creations, as well as all the possibilities that lie between. You may have 'impossible' needs and deadlines, but the experts at Honeywell are ready with powerful hour meter options.

From the factory floor to the assembly line, from packaging machinery to construction equipment — from the smallest spaces to any worldwide application or mount, Honeywell delivers enhanced reliability and performance in compact, cost-effective packages.



Diochron Hour Meters

Diochron Series

Hours	0 to 9,999.9
Sealing	IP66
Voltage range/frequency	10 Vdc to 80 Vdc
Accuracy	±0.2 %
Termination	1/4 in blade terminals
Approvals	UL, CSA
Mount/panel cutout opening	2-screw, rectangular, 3-screw and round: 1.45 in x 0.95 in; Round: 2.0 in dia.
Operating temperature	-40 °C to 85 °C [-40 °F to 185 °F]
Number size	3 mm [0.12 in]
Case material	polycarbonate



AC Hour Meters

20000 Series

28100 Series

301 Series

Counting range	records up to 99,999.9 hours with automatic roll over to zero	0 to 99,999.9 hours with automatic roll over to zero	0 to 99,999.90 hours
Sealing	IP65	IP66 front (IP40 rear)	IP40 front (IP00 terminals)
Voltage range/frequency	24 Vac, 120 Vac, 240 Vac/50 Hz, 60 Hz	90 Vac to 264 Vac/50 Hz, 60 Hz	120 Vac, 240 Vac/50 Hz, 60 Hz
Accuracy	±0.02 %	±0.02 %	±0.02 %
Termination	screw, 7 in lead wires	1/4 in spade	1/4 in spade
Approvals	UL, CSA, CE	UL, CSA, CE	UL, CE
Mount/panel cutout opening	2-screw, rectangular and square: 1.45 in x 0.95 in Round: 2.0 in	2-screw and rectangular: 1.45 in x 0.95 in Round: 2.0 in dia.	2-screw and rectangular: 1.45 in x 0.95 in
Operating temperature	-54 °C to 68 °C [-65 °F to 154 °F]	-40 °C to 85 °C [-40 °F to 185 °F]	-25 °C to 70 °C [-13 °F to 158 °F]
Number size	3 mm [0.12 in]	3 mm [0.12 in]	4 mm [0.16 in]
Case material	polycarbonate	polycarbonate	polycarbonate



DC Hour Meters

	98200 Series	98000 Series and Volt Hour Meters	85000 Series
Counting range	0 to 99,999.9 hours, running indicator; optional maintenance alert at 50-hour intervals	display: 0 to 99,999.9 hours counter: 0 to 999,999	10,000 hour version standard, with automatic recycle to zero
Sealing	IP66	IP66	IP66
Voltage range	9 Vdc to 16 Vdc	4.5 Vdc to 16 Vdc; 9 Vdc to 64 Vdc; > 64 Vdc (consult factory)	5 Vdc to 110 Vdc
Accuracy	±0.02 %	±0.02 %	±0.02 %
Termination	1/4 in male blade, suitable for packard connector 2973781	1/4 in blade; 3/16 in blade (optional)	1/4 in male blade, #8-32 stud, Deutsch, Packard terminals
Approvals	—	UL	UL, CSA
Mount/panel cutout opening	snap in case: 1.45 in x 0.95 in.	2-screw, retainer: 1.45 in x 0.95 in. round: 2.0 in dia.	2-screw, stirrup: 1.45 in x 0.95 in round, flush, 3-screw: 2.0 in
Operating temperature	-40 °C to 71 °C [-40 °F to 160 °F]	-40 °C to 85 °C [-40 °F to 185 °F]	-40 °C to 85 °C [-40 °F to 185 °F]
Number size	6 mm [0.24 in]	6 mm [0.24 in]	3 mm [0.12 in]
Case material	makroblend	polycarbonate	polyester



DC Hour Meters

	82400 Series	HB Series Battery Controllers	HMD Series
Counting range	0 to 9999.9; 0 to 99,999.9 (optional)	0 to 99,999.9 (Optional some models)	0 to 999,999.9 hours
Sealing	IP66	IP65	IP40 front (IP20 terminals)
Voltage range	10 Vdc to 80 Vdc (polarity insensitive)	12 Vdc, 24 Vdc, 36 Vdc, 48 Vdc	10 Vdc to 80 Vdc
Accuracy	±0.02 %	±0.02 %	±0.02 %
Termination	1/4 in spade	Round metr 8 pin integral, rectangular meter, 1/4 in blade	0.25 in spade (6,3 mm x 0,8 mm)
Approvals	—	CE	UL, CE
Mount/panel cutout opening	2-screw and rectangular: 1.45 in x 0.95 in 3-screw and round: 2.0 in dia.	rectangular 36.8 x 24.1 mm, and 45 x 22 mm round: 52mm dia.	46 mm x 46 mm, Ø 51 mm [1.81 in x 1.81 in, Ø 2.01 in]
Operating temperature	40 °C to 85 °C [-40 °F to 185 °F]	-30 °C to 70 °C [-22 °F to 158 °F]	-20 °C to 70 °C [-4 °F to 158 °F]
Number size	3 mm [0.12 in]		4 mm [0.16 in]
Case material	polycarbonate	black plastic	polycarbonate

98000 Series Volt Hour Meters.

Benefits: The LCD volt/hour meter monitors the condition of battery electrical systems while simultaneously measuring the total elapsed run time of equipment. During operation, cycles the displays between voltage and hours indication at a rate of fifteen seconds on for voltage and one second on for total hours. High-impact case sealed against dust and moisture.

85000 Series.

Features: Custom CMOS integrated circuit • Indicates operating time in hours and tenths, plus has a running indicator

- Totally sealed • Battery system voltages: 6, 12, 24, 36, 48, 60, 72 and 80 Vdc
- UL recognized (File number AU1774)
- CSA certified (File number LR42455-12)
- Conforms to MIL-M-3971

Benefits: Highly reliable drive mechanism; odometer gear train and accurate quartz crystal timing provides enhanced performance. UL/CSA recognized, with a variety of mounting styles. An improved odometer gear train, plus snap-together integrated chassis fits into a shock proof, totally sealed case often resistant to many acids and solvents. All parts are in-process inspected, and every meter must pass 100% function, burn-in, and timing accuracy test before shipping.

82400 Series.

Features: Non-polarity sensitive design reduces installation time and possibility of reverse polarity harness assembly

- Standard case sizes and mounting for universal fit to most panel openings
- Ultrasonic welded lens prevents moisture and dust intrusion • Terminals sealed to prevent moisture and dust intrusion • Can run off of many types of alternators so meter is only operating when vehicle is running (user must test for compatibility to their alternator output)
- IP66 rated

Benefits: Perfect for aftermarket and service replacements, as well as cleaning equipment, compressors, generators, lawn and garden, mining, sports vehicles and more.

HB Series.

Features: Highly visible multi-LED display

- Reset battery level and optional service time
- Relay lockout
- One-piece terminal standard on some models
- Hour meter option
- Warning signal for low battery
- U-mount bracket, 2-screw, and retainer mount

Benefits: These battery controllers monitor the condition and the remaining capacity of an electric battery for most types of commercial batteries. They are available with or without hour meter, relay lockout and service alert. Perfect for material handling equipment, golf carts, floor sweeping, scissor, man and aerial lifts, utility vehicles and more.

HMD Series.

Features: Counting range to 999,999.9 hours • 1/10 hour resolution • UL recognized • CE mark

Benefits: Enhanced accuracy, quiet operation, and attractive styling in an economical design. Available in standard case configurations that interchange with similar style meters on the market today, with displays reading to 1/10 of an hour. For irrigation panels, generators, cleaning equipment, compressors, panel sub-assemblers and more.

Diochron Series.

Features: Quartz accuracy: $\pm 0.02\%$

- Sealed, shock-resistant case
- Run indicator
- Voltage range: 10 Vdc to 80 Vdc
- Temperature range: -40 °F to 85 °F
- Numeral size: 0.12 in • UL recognized
- CSA certified
- Polycarbonate case and lens
- 1/4 in blade terminals

Benefits: A rugged, cost-effective meter, with economies obtained through case design and sealing of the hour meter (accomplished by ultrasonically welding a polycarbonate lens to the front of the housing, and applying a specially-formulated silicone around the terminals). The perfect choice for lower-priced industries and applications and often ideal for lawn and garden tractors, portable generators, recreational vehicles, utility vehicles, industrial equipment and most other on- or off-highway applications.

Warranty. Honeywell warrants goods of its manufacture as being free of defective materials and faulty workmanship. Honeywell's standard product warranty applies unless agreed to otherwise by Honeywell in writing; please refer to your order acknowledgement or consult your local sales office for specific warranty details. If warranted goods are returned to Honeywell during the period of coverage, Honeywell will repair or replace, at its option, without charge those items it finds defective. **The foregoing is buyer's sole remedy and is in lieu of all warranties, expressed or implied, including those of merchantability and fitness for a particular purpose. In no event shall Honeywell be liable for consequential, special, or indirect damages.**

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For more information about Sensing and Control products, visit www.honeywell.com/sensing or call +1-217-753-7752. Email inquiries to info.sc@honeywell.com

 WARNING
PERSONAL INJURY

- DO NOT USE these products as safety or emergency stop devices or in any other application where failure of the product could result in personal injury.

Failure to comply with these instructions could result in death or serious injury.

 WARNING
MISUSE OF DOCUMENTATION

- The information presented in this catalogue is for reference only. DO NOT USE this document as product installation information.
- Complete installation, operation and maintenance information is provided in the instructions supplied with each product.

Failure to comply with these instructions could result in death or serious injury.

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009573-1-EN IL50 GLO
August 2008
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