

# MARTEL ELECTRONICS QM Series 2-Wire Panel Meters



The QM Single Mounting Hole Series are Nema 4 rated meters for simple commercial and industrial applications. To install, the user needs only to drill a single 7/32" (5.5mm) hole in the panel. A rubber seal is included, providing splashproof protection for the unit when fitted to the meter during installation. Includes: meter, mounting nut, washer and panel seal. All meters have reverse polarity protection.

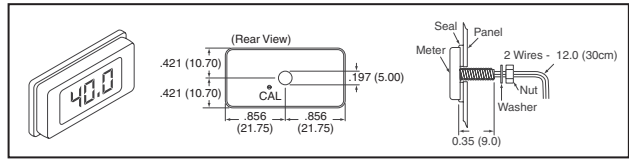
**QM Voltmeter:** 2-wire voltmeter powered from the voltage that it is measuring. The module indicates "LO" at voltages below 4V and "HI" at above 25V (40V for QM100V-40). **Specifications:** • Measured Input Voltage: 4 – 25VDC (QM100V), 4 – 40VDC (QM100V-40) • Supply Voltage: 3 – 50VDC • Sample Rate: 3 samples/second • Operating Range: 0°C – 50°C

**QM Thermometer:** A dual inside (sensor included) and outside (sensor required) digital thermometer that can display temperatures in either Fahrenheit or Celsius. **Specifications:** • Internal Sensor: 14°F – 122°F (-10°C – 50°C) • External Sensor: -4°F – 428°F (-20°C – 220°C) • Operating Range: -10°C – 50°C • Supply Voltage: 4 – 28VDC

**QM Hourmeter:** Automatically blanks the leading zeros for easy reading and display of hours and 1/10 hours. An output is provided that pulses high after every hour. Features trip and total time range. **Specifications:** • Resolution Range: 9,999.9 hour or 99,999 hour • Supply Voltage: 5 – 27VDC • Operating Range: 0°C – 50°C

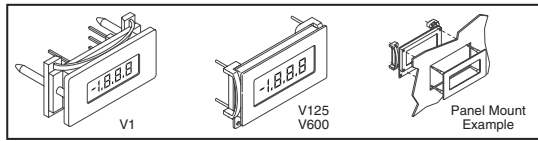
**QM130M Digitalized Analog Gauge:** An LCD analog gauge that looks similar to an analog voltmeter. A moving needle illustrates a quick confirmation of meter levels and changing colors allow quick visuals of meter status. This meter can be scaled for reading voltages or currents. **Specifications:** • Supply Voltage: 5 – 12VDC • Resolution: 125mVDC • Full Scale Reading: 1VDC

**QM140V Scalable Meter:** A universal 0 – 200mV input meter that with scaling resistors is able to measure 200mV/µA, 2V/mV and 20V/MA ranges. Trim pot calibration included on rear of meter. **Specifications:** • Supply Voltage: 7.5V – 15VDC • Sample Rate: 3 samples/second • Operating Range: 0°C – 50°C



Description	Digi-Key Part No.	Price Each	Martel Part No.
Voltmeter 4 – 25VDC, 100mV resolution	227-1042-ND	44.16	QM100V
Voltmeter 4 – 40VDC, 200mV resolution	227-1054-ND	44.16	QM100V-40
Thermometer, Inside/Outside -10°C – 50°C	227-1043-ND	44.16	QM110T
Hourmeter, 9,999.9 hrs trip/totalized time	227-1044-ND	44.16	QM120C
LCD Analog Gauge, moving LCD needle	227-1045-ND	34.84	QM130M
Universal Scalable Meter, Volt/Current	227-1046-ND	53.00	QM140V

## V Series Very Low Cost Voltmeter

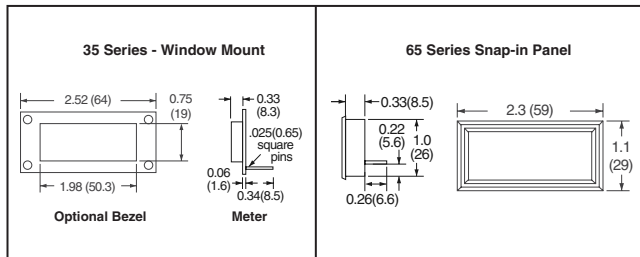


The V Series is a range of low cost LCD, 3 1/2 digit panel instruments. The meters have a ±200mVDC full scale reading with a typical accuracy of 0.25%. These meters use a 9VDC and are designed for high volume OEM applications where lowest possible cost is a major concern. They feature an exceptionally large display in a miniature package and includes auto-zero and user-selectable decimal points. All module's are supplied with a black panel mounting bezel kit.

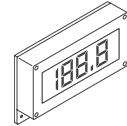


Description	Digi-Key Part No.	Price Each			Martel Part No.
		1	5	10	
Mini LCD Voltmeter, .25" digit height, 200mV Input, Includes Bezel	227-1059-ND	20.94	19.90	18.85	V1
Standard LCD Voltmeter, .50" digit height, 200mV Input, Includes Bezel	227-1060-ND	22.60	21.47	20.34	V125
Large LCD Voltmeter, .60" digit height, 200mV Input, Includes Bezel	227-1061-ND	24.26	23.05	21.84	V600

## 35/65 Series Digital Panel Meters



This low cost range of meters is the solution for a wide range of OEMs and Panel Builders. The DPM35 is available with either red or green LEDs and has an optional mounting bezel (BEZ35). The DPM65 has a reflective LCD display and comes with a snap-in bezel. **Inputs:** • Ranges: ±200.0mV, ±2,000V, ±20,00V • Single-ended; (INLO internally referenced to supply GND) **Power Supply:** • Voltage: 5VDC (±5%) **Mounting:** • 35 Series: Window mount or bezel mount with optional bezel • 65 Series: Snap-in bezel mount • Connection: 10 pins, 0.025" (.635mm) square on 0.1" (2.54mm) centers



Description	Digi-Key Part No.	Price Each			Martel Part No.
		1	5	10	
DPM Red LED, 200mV, 35 Series	227-1034-ND	49.60	47.12	44.64	DPM35R
DPM Green LED, 200mV, 35 Series	227-1035-ND	49.60	47.12	44.64	DPM35G
DPM Reflective LCD, Differential, 65 Series	227-1036-ND	49.60	47.12	44.64	DPM65
DPM Reflective LCD, Single-rail, 65 Series	227-1037-ND	49.60	47.12	44.64	DPM65S
Optional Snap-in Bezel for DPM35 Series	227-1038-ND	4.04	3.84	3.64	BEZ35

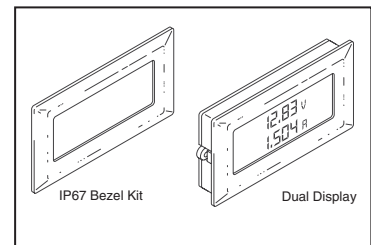
◆ RoHS Compliant

## 700 Series Industrial Voltmeter

The 700 Series Voltmeters are low cost LCD displays for panel instruments and portable equipment. Use the Dual Display meter to display "matched readings" (voltage and current or temperature and humidity) with separate selectable annunciators and calibration adjustments. Use the DPM742 (screw terminal connections) and 750 (with annunciators and low battery indicator) meters for portable equipment or industrial applications. LED backlight standard on 742 and 750. Use optional IP67 silver metallic bezel for watertight, industrial applications. All meters include a standard black bezel kit.

Description	Digi-Key Part No.	Price Each			Martel Part No.
		1	5	10	
IP67 Industrial Bezel Kit, for use with DPM742-BL and DPM750S-BL	227-1058-ND	25.00	23.75	22.50	BEZ700-IP
Dual Display Voltage-Ampere meter, 0-200mV Input	227-1057-ND	129.70	123.22	116.73	DPM702S
Large LCD (.50") 4-20mA Loop Meter, screw terminal connections	227-1056-ND	133.46	126.79	120.12	DPM742-BL
Large LCD (.50") Voltmeter, 20-0mV Input, with Annunciators/Low Battery	227-1055-ND	77.04	73.19	69.34	DPM750S-BL

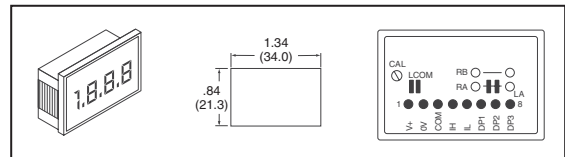
◆ RoHS Compliant



## SP Series 3.5 Digital Voltmeter

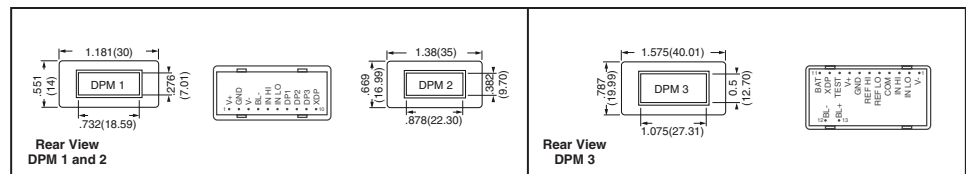
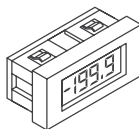
The 12-pin dual-in-line connection version is compatible with competing meters. This lower cost version is more suited to new designs. Includes full-scale reading ±200mVDC with a typical accuracy of 0.1% (±1 count). The module is 1.38" (35.05mm) width x 0.88" (22.35mm) height. Low cost means it will suit high and low volume applications. IP65 splash proof construction.

Description	Digi-Key Part No.	Price Each	Martel Part No.
Large Bright Red LED Voltmeter, 200mV Input	227-1052-ND	59.16	SP300



## Series 10 Universal Volt/Ammeter

The DPM1, 2 and 3AS-BL features 200mVDC measurement with auto-zero and auto-polarity. Decimal points are user selectable. The DPM1, 2 and 3AS-BL feature a negative rail generator which enables the meter to measure a signal referenced to its own power supply GND. LED backlighting ensures excellent readability under low light conditions. The design of the housing allows the module to be easily snapped into a panel. The low cost module will suit high and low volume applications.



Description	Digi-Key Part No.	Price Each			Martel Part No.
		1	5	10	
Mini 5.5mm LCD Universal Meter with Backlight	227-1047-ND	60.84	57.80	54.76	DPM1AS-BL
Mini 8.2mm LCD Universal Meter with Backlight	227-1048-ND	65.84	62.55	59.26	DPM2AS-BL
Mini 11mm LCD Universal Meter with Backlight	227-1049-ND	69.16	65.71	62.25	DPM3AS-BL

◆ RoHS Compliant

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<p><b>Fig. 1</b></p> <p>Panel Cutout: 0.87" x 1.77" 22.10mm x 44.96mm</p> <p><b>DPM125 LCD Legacy Series</b></p> <p>The DPM125 features auto-zero, auto-polarity, 200mV fsr, 12.5mm digit height, low battery indication and selectable decimal points. The meter will plug into a 12-pin SIL socket or can be panel mounted using snap-in bezel provided.</p>	<p><b>Fig. 2</b></p> <p>Panel Cutout: 1.06" x 2.24" 26.92mm x 56.90mm</p> <p><b>DPM500 LCD Legacy Series</b></p> <p>The DPM500 features auto-zero, auto-polarity, 200mV-2V-20V fsr, 12.5mm digit height, low battery indication, selectable decimal points and 10 user-selected annunciators. The meter will plug into a 40-pin DIL socket or can be panel mounted using snap-in bezel provided.</p>	<p><b>Fig. 3</b></p> <p>Panel Cutout: 1.26" x 2.44" 32.00mm x 61.98mm External Bezel</p> <p><b>DPM600 LCD Legacy Series</b></p> <p>The DPM600 features auto-zero, auto-polarity, 200mV-2V-20V fsr, 12.5mm digit height, adjustable low battery indication, selectable decimal points and 12 user-selected annunciators. The meter has 36 pins for PCB mounting or can be panel mounted with optional bezel (p/n MB10).</p>	<p><b>Fig. 4</b></p> <p>Panel Cutout: 1.3" x 2.68" 33.02mm x 68.07mm</p> <p><b>DPM2000 LCD Legacy Series</b></p> <p>The DPM2000 features auto-zero, auto-polarity, 200mV-2V-20V fsr, 15mm digit height, adjustable low battery indication, selectable decimal points and 12 user-selected annunciators. The meter will plug into a 40-pin DIL socket or can be panel mounted using snap-in bezel provided.</p>	<p><b>Fig. 5</b></p> <p>Panel Cutout: 1.3" x 2.68" 33.02mm x 68.07mm</p> <p><b>DPM40 LED Series</b></p> <p>The DPM40 features auto-zero, auto-polarity, 200mV-2V-20V fsr, 11mm LED digit height and selectable decimal points. The meter is supplied with a bezel and filter to give a high contrast display.</p>
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Fig.	Supply	Input	Digi-Key Part No.	Price Each			Martel Part No.
				1	5	10	
1	7.5 - 15	200mV	227-1007-ND	68.94	65.50	62.05	DPM125
	7.5 - 15	200mV	227-1008-ND	82.24	78.13	74.02	DPM125L
2	7.5 - 15	20V	227-1011-ND	94.16	89.46	84.75	DPM500-20
	3.6 - 6.5	2V	227-1016-ND	94.16	89.46	84.75	DPM500S-2
	3.6 - 6.5	20V	227-1017-ND	97.66	92.78	87.90	DPM500S-20
3	5 - 15	20V	227-1023-ND	82.06	77.96	73.86	DPM600-20
	5 - 15	200mV	227-1027-ND	79.96	75.97	71.97	DPM2000
4	5 - 15	2V	227-1028-ND	79.96	75.97	71.97	DPM2000-2
	5 - 15	20V	227-1029-ND	79.96	75.97	71.97	DPM2000-20
5	5	200mV	227-1030-ND	97.66	92.78	87.90	DPM40

◆ RoHS Compliant

**Hour Meters**



The Cramer line of ETIs (Elapsed Time Indicators) are used to record the amount of "on-time" operation for industrial and commercial grade equipment. Resettable and Non-resettable versions are available either in round or square bezel, displayed in tenths of an hour.

**Applications:** • Indicating, monitoring and recording a process where the time used is required • Recording "on-time" usage of machinery for billing purposes • Preventative maintenance for machinery or equipment

**Features:** • Large, easy-to-read numbers • Rugged design • Continuous duty • Tamper proof • Permanently lubricated • Square, round or rectangle bezel  
**Specifications:** • Power Consumption: 2.7 watts • Working Voltage: 110VAC/115VAC • Electrical Connections: 6" leads, 22 gauge wire • Operating Temperature: -20°C - 55°C • Mounting: Front panel • Agency Approval: UL, CSA

Fig.	Description	Dimensions - Inch (mm)		Digi-Key Part No.	Price Each			Cramer Part No.
		A	B		1	10	50	
1	Square Bezel, 0 - 99.9K hours, 110VAC, Non-resettable	2.96 (75.39)	2.25 (57.15)	CRA215-ND	35.93	31.40	28.37	10186
	Square Bezel, 0 - 9.9K hours, 115VAC, Resettable	2.96 (75.39)	2.25 (57.15)	CRA217-ND	75.37	65.86	59.51	10083
2	Round Bezel, 0 - 99.9K hours, 115VAC, Non-resettable	2.96 (75.39)	—	CRA214-ND	35.93	31.40	28.37	10071
	Round Bezel, 0 - 9.9K hours, 115VAC, Resettable	2.96 (75.39)	—	CRA216-ND	75.37	65.86	59.51	10075
	Quartz Style Round Bezel, 0 - 99K hours, 90 - 264VAC	2.799 (71.1)	—	CRA219-ND <b>NEW!</b>	21.38	18.68	16.88	637-04
	Quartz Style Round Bezel, 0 - 99K hours, 10 - 80VDC	2.799 (71.1)	—	CRA220-ND <b>NEW!</b>	21.85	19.09	17.25	638-01
3	Quartz Style Rectangle Bezel, 0 - 99K hours, 90 - 264VAC	1.750 (44.5)	1.031 (26.2)	CRA218-ND <b>NEW!</b>	21.38	18.68	16.88	637-01
	Quartz Style Rectangle Bezel, 0 - 99K hours, 10 - 80VDC	1.750 (44.5)	1.031 (26.2)	CRA221-ND <b>NEW!</b>	21.85	19.09	17.25	638-04

<p><b>Fig. 1</b></p> <p>(Square bezel shown)</p>	<p><b>Fig. 2</b></p>	<p><b>Fig. 3 NEW!</b></p>
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**HOBBS Hour Meters**



**The 9800 Series LCD Hour Meters:** Provides a large easy-to-read display in a conventional size package. Specifications: • Operating Temperature: -40°C - 85°C • Operating Voltage: 9 - 64VDC • 6 digit display • Digit Height: 6mm  
**The 20000 Series Deluxe Hour Meters:** Totally sealed and benefits from an uncommon design which integrates the motor and frame into one substructure. Specifications: • Operating Temperature: -54°C - 68°C • Number Size: 3mm • UL Listed • CSA Certified  
**The 82000 Series Dichron Hour Meters:** Meter must be moisture resistant when submerged in water at 150°F for 3 minutes. Specifications: • Operating Voltage: 10 - 80VDC

Fig.	No. of Terminals	Dimensions Inch (mm)		Digi-Key Part No.	Price Each			Honeywell Part No.
		A	B		1	50	100	
<b>9800 Series - LCD Hour Meters</b>								
1	2	2.1 (52.12)	1.18 (30.07)	700-1003-ND	20.48	14.64	13.90	098203 99
	2			700-1004-ND	19.76	14.12	13.41	098204 99
2	2	1.60 (40.6)	1.08 (27.4)	480-2069-ND	19.23	13.74	13.05	098311 57
	3			480-2070-ND	48.53	37.82	33.26	098321 94
	4			480-2068-ND	46.31	35.28	33.60	098301 94
3	2	1.25 (31.8)	2.13 (54.1)	480-2066-ND	20.72	14.81	14.07	098313 12
	3			480-2067-ND	20.66	14.98	14.46	098323 81
	4			480-2065-ND	20.98	15.21	14.69	098303 92
4	2	2.27 (57.7)	2.00 (50.8)	480-2072-ND	21.89	15.88	15.33	098312 03
	3			480-2073-ND	23.96	17.38	16.78	098322 93
	4			480-2071-ND	23.96	17.38	16.78	098302 93
5	4	1.26 (32.0)	.712 (18.08)	480-2064-ND	13.61	9.22	8.83	098750 100
				700-1000-ND	15.65	10.68	10.32	098755 100
<b>20000 Series - Deluxe Hour Meters</b>								
6	2	1.60 (40.6)	1.08 (27.4)	480-2080-ND	33.33	24.36	23.93	020116 23
7	2	1.398 (35.5)	1.02 (25.9)	480-2078-ND	21.44	15.55	15.01	020001 17
8	2	2.19 (55.6)	2.70 (68.6)	480-2079-ND	23.64	17.14	16.55	020017 14
<b>82000 Series - Dichron Hour Meters</b>								
6	2	1.55 (39.4)	1.03 (26.2)	480-2076-ND	19.23	13.74	13.05	082452 82
7	2	1.41 (35.8)	1.25 (31.8)	480-2074-ND	19.23	13.74	13.05	082450 83
8	2	1.98 (50.3)	2.80 (71.1)	480-2075-ND	19.23	13.74	13.05	082451 84
				480-2077-ND	19.23	13.74	13.05	082453 85

Dimensions in Inches (mm)

<p><b>Fig. 1</b></p> <p>Snap-in Mount: Panel Cut-out: 1.43 x 0.91 Rectangular Opening</p>	<p><b>Fig. 2</b></p> <p>Retainer Mount: Panel Cut-out: 1.45 x 0.95 Rectangular Opening</p>	<p><b>Fig. 3</b></p> <p>Panel Cut-out: 1.45 x 0.95 Rectangular Opening (2) 0.15 holes spaced 1.750</p>
<p><b>Fig. 4</b></p> <p>Retainer Mount 2.27 Panel Cut-out: 2.00 Diameter Opening</p>	<p><b>Fig. 5</b></p> <p>Four-Pin Mount: Panel Cut-out: 3.00 x .583 Rectangular Opening</p>	<p><b>Fig. 6</b></p> <p>Retainer Mount: Panel Cut-out: 1.45 x 0.95 Rectangular Opening</p>
<p><b>Fig. 7</b></p> <p>Two-Screw Mount: Panel Cut-out: 1.45 x 0.95 Rectangular Opening (2) 0.15 holes spaced 1.750</p>	<p><b>Fig. 8</b></p> <p>Three-Screw Mount: Panel Cut-out: 2.00 Diameter Opening (3) 0.125 holes equally spaced on 2.42 bolt circle diameter</p>	



Fig. 1 — 1/8 Din Big Digit Panel Mount

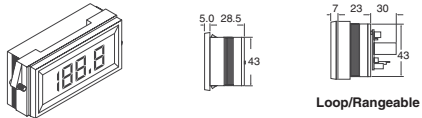


Fig. 2 — Window/Surface Mount LCD

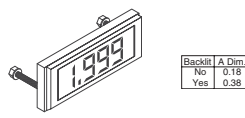


Fig. 3 — Snap-in LCD

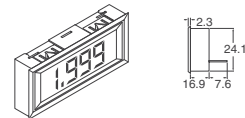


Fig. 4 — Snap-in LCD 1" (25.4mm) CUT-OUT!



Fig. 5 — Mini LCD

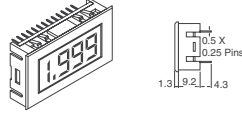


Fig. 6 — Flat Pack LCD

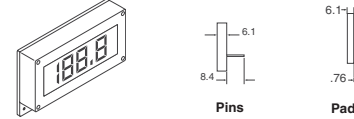


Fig. 7 — LCD Window/Surface Mount

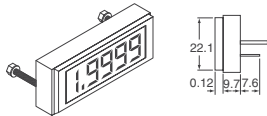


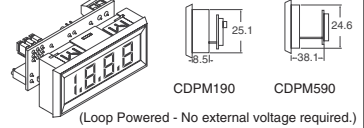
Fig. 8 — Panel Mount LED



Fig. 9 — DIP Panel Meter LED



Fig. 10 — Process Meter



CTON Digital Panel Meters are low cost, professional looking meters for industrial and OEM applications. Voltmeter versions feature autozero on power up and can read both positive and negative DC voltages. Selectable decimal points allow easy voltage readings. LCD versions are available in either non-backlit (std. LCD) or backlit (Red, Green or Blue) for low light viewing. CTON's 4-20mA loop type meters are intended to interface with sensor inputs that require power from the meter to operate.

Sensors such as temperature, pressure, gas, airflow vibration, etc. can be used for loop meter monitoring. Use LCD meters for low power applications and long lifetimes or use LED versions for easier viewing in varying light conditions and different angles.

**3.5 Digit LCD Specifications:** • **Decimal Point:** User selectable 3-position • **Full Scale Ranges:** ±200mVDC, ±2VDC, ±20VDC • **Power:** 9VDC isolated @ 180µA, 5VDC @ 3mA • **Conversion Rate:** 2.5 per second • **Storage Temperature:** -10°C - 50°C • **Type:** Surface Mount • **Pins:** 13 or 10 pins, .64mm square on 2.54mm centers • **Backlit Power Options:** +5 VDC, ±5%, Red 165mA typical (200mA maximum); Green 115mA typical (160mA maximum) • **Backlit Connections:** Standard 2 solder pads • **Styles:** Surface/window or snap-in bezel mount

**Miniature LCD Specifications:** • **Annunciators:** 11 different user selectable annunciators: BAT, °C, °F, -, m, µ, MΩ, KΩ, V, A, HOLD • **Decimal Point:** User selectable 3-position • **Full Scale Range:** Standard ±200mVDC, ±2VDC • **Power:** 9VDC

isolated (7.2-15V) at 150µA, 5VDC @ 5mA • **Conversion Rate:** 2.5 per second • **Storage Temperature:** -20°C - 70°C • **Type:** Snap-in Bezel Mount • **Pins:** Standard 26 pins, .46mm square, DIP style

**4.5 Digit LCD Specifications:** • **Annunciators:** 9VDC powered meters have "BT" when power < 7.2VDC • **Decimal Point:** User selectable 4-position • **Hold:** Standard feature • **Full Scale Range:** ±200mVDC and ±2VDC • **Power:** 9VDC isolated @ 1mA, 5VDC @ 3.5mA • **Conversion Rate:** 2 per second • **Storage Temperature:** -10°C - 60°C • **Types:** Surface/window mount • **Pins:** 13 pins, .64mm square on 2.54mm centers

**3.5 Digit LED Specifications:** • **Type:** 7-segment light emitting diode (LED) • **Digits:** 0.56" (12.7mm) height • **Color:** Green or Red • **Polarity:** Displays (-) automatically • **Decimal Point:** User selectable 3-position • **Over/Under Range:** Over range displays "1" and under-range displays "-1" • **Hold:** Standard feature • **Full Scale Ranges:** ±200mVDC, ±2VDC, ±20VDC • **Configuration:** Bipolar, fully differential • **Power:** +5VDC, ±5% at 200mA • **Conversion Rate:** 3 per second • **Zeroing:** Automatic • **Operating Temperature:** 0°C - 50°C • **Storage Temperature:** -20°C - 70°C • **Relative Humidity:** 0 to 95% non-condensing • **Type:** Bezel Mount • **Pins:** Standard 10 pins, .64mm square on 2.54mm centers • **5-Year Unconditional Warranty**

**Process Meter Specifications:** • Meter and loop powered/controlled PCB in one unit • 3.5 or 4.5 digit • LCD and red or green LED • Fully scalable • 300Ω Impedance, nominal

Fig.	Supply	Input	Digit Color	Digi-Key Part No.	1	10	50	C-Ton Part No.	Use Cable Assy.
<b>1/8 Din Big Digit 3.5 LCD</b>									
1	Loop	4-20mA	(-)Red	CDPM802A-ND†	59.74	56.76	52.28	DK802A	Incl.
				CDPM803A-ND†	59.74	56.76	52.28	DK803A	Incl.
				CDPM807A-ND†	69.72	66.24	61.01	DK807A	—
				CDPM857B-ND	69.72	66.24	61.01	DK857B	—
<b>Range Selectable — RoHS Compliant</b>									
1	12/24V	5/10V/200mV	—	CDPM809-ND†	69.72	66.24	61.01	DK809	—
		5/10V/200mV	(-)Green	CDPM959-ND	69.72	66.24	61.01	DK959	—
<b>1/8 Din Big Digit 3.5 LED</b>									
1	+	200mV	Green	CDPM951A-ND	59.74	56.76	52.28	DK951A	Incl.
				CDPM952A-ND	59.74	56.76	52.28	DK952A	Incl.
				CDPM953A-ND	59.74	56.76	52.28	DK953A	Incl.
				CDPM852A-ND†	59.74	56.76	52.28	DK852A	Incl.
<b>Window/Surface Mount 3.5 Digit LCD</b>									
2	+	200mV	—	CDPM101-ND†	39.80	37.81	34.83	DK101	J4C13
				CDPM102-ND†	39.80	37.81	34.83	DK102	J4C13
				CDPM103-ND†	39.80	37.81	34.83	DK103	J4C13
	+	2V	—	CDPM301-ND†	39.80	37.81	34.83	DK301	J1C13
				CDPM302-ND†	39.80	37.81	34.83	DK302	J1C13
				CDPM303-ND†	39.80	37.81	34.83	DK303	J1C13
	+	200mV	Green	CDPM331-ND	49.78	47.30	43.56	DK331	J1C13
				CDPM332-ND	49.78	47.30	43.56	DK332	J1C13
				CDPM432-ND	49.78	47.30	43.56	DK432	J1C13
				CDPM532-ND	49.78	47.30	43.56	DK532	J1C13
<b>Snap-in 3.5 Digit LCD</b>									
3	+	200mV	—	CDPM500-ND†	39.80	37.81	34.83	DK500	J1C13
				CDPM501-ND†	39.80	37.81	34.83	DK501	J1C13
				CDPM502-ND†	39.80	37.81	34.83	DK502	J1C13
				CDPM504-ND	39.80	37.81	34.83	DK504	J4C13
				CDPM505-ND	39.80	37.81	34.83	DK505	J4C13
<b>Snap-in 3.5 Digit LCD - 25.40mm Cutout — RoHS Compliant</b>									
4	+	200mV	—	CDPM110-ND†	39.80	37.81	34.83	DK110	J1C10
				CDPM111-ND†	39.80	37.81	34.83	DK111	J1C10
				CDPM112-ND†	39.80	37.81	34.83	DK112	J1C10
<b>Miniature 3.5 Digit LCD</b>									
5	+	200mV	—	CDPM201-ND†	39.80	37.81	34.83	DK201	—
				CDPM202-ND†	39.80	37.81	34.83	DK202	—
				CDPM204-ND†	39.80	37.81	34.83	DK204	—
				CDPM203-ND†	39.80	37.81	34.83	DK203	—

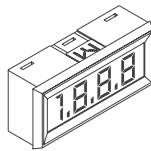
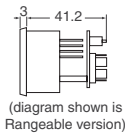
Note: Other ranges and colors are available on our web site. \$ Pad ‡ Pin † Non-Backlit ‡ RoHS Compliant

Fig.	Supply	Input	Digit Color	Digi-Key Part No.	1	10	50	C-Ton Part No.	Use Cable Assy.			
<b>Flat Pack 3.5 Digit LCD</b>												
6	+	200mV	—	CDPM171-ND‡	39.80	37.81	34.83	DK171	—			
				CDPM173-ND‡	39.80	37.81	34.83	DK173	—			
				CDPM174-ND‡	39.80	37.81	34.83	DK174	—			
				CDPM175-ND‡	39.80	37.81	34.83	DK175	—			
+	2V	—	CDPM177-ND‡	39.80	37.81	34.83	DK177	—				
			CDPM178-ND‡	39.80	37.81	34.83	DK178	—				
			CDPM179-ND‡	39.80	37.81	34.83	DK179	—				
<b>Window/Surface Mount 4.5 Digit LCD</b>												
7	+	200mV	—	CDPM702-ND†	49.78	47.30	43.56	DK702	J4C13			
				CDPM703-ND†	49.78	47.30	43.56	DK703	J4C13			
				CDPM704-ND†	49.78	47.30	43.56	DK704	J4C13			
				CDPM705-ND†	49.78	47.30	43.56	DK705	J4C13			
<b>Snap-in 4.5 Digit LCD</b>												
3	+	200mV	—	CDPM710-ND†	49.78	47.30	43.56	DK710	J4C13			
				CDPM711-ND†	49.78	47.30	43.56	DK711	J4C13			
				CDPM712-ND†	49.78	47.30	43.56	DK712	J4C13			
<b>3.5 Digit LED — RoHS Compliant</b>												
8	+	200mV	Green	CDPM601-ND	39.80	37.81	34.83	DK601	J1C10			
				CDPM602-ND	39.80	37.81	34.83	DK602	J1C10			
				CDPM603-ND	39.80	37.81	34.83	DK603	J1C10			
				CDPM604-ND	39.80	37.81	34.83	DK604	J1C10			
				CDPM605-ND	39.80	37.81	34.83	DK605	J1C10			
				CDPM606-ND	39.80	37.81	34.83	DK606	J1C10			
<b>DIP Panel Meter 3.5 Digit LED</b>												
9	+	200mV	Red	CDPM630-ND	45.78	43.50	40.06	DK630	—			
				CDPM631-ND	45.78	43.50	40.06	DK631	—			
				CDPM632-ND	45.78	43.50	40.06	DK632	—			
				CDPM633-ND	55.76	52.98	48.79	DK633	—			
				CDPM634-ND	55.76	52.98	48.79	DK634	—			
				+	20V	Green	CDPM635-ND	55.76	52.98	48.79	DK635	—
							CDPM636-ND	55.76	52.98	48.79	DK636	—
							CDPM637-ND	55.76	52.98	48.79	DK637	—
				+	20V	Blue	CDPM638-ND	55.76	52.98	48.79	DK638	—
CDPM638-ND	55.76	52.98	48.79				DK638	—				
<b>DIP Panel Meter 3.5 Digit LED with Hold Function</b>												
9	+	20V	Red	CDPM642-ND	49.78	47.30	43.56	DK642	—			
				CDPM650-ND	2.10	2.00	1.84	DLA-BEZ	—			
<b>Process Meter — RoHS Compliant</b>												
10	Loop	4-20mA	—	CDPM590-ND†	64.84	61.60	56.74	DK590	—			
				CDPM190-ND†	64.84	61.60	56.74	DK190	—			

More Product Available Online: [www.digkey.com](http://www.digkey.com)

**Voltage and Process Meters**

C-TON's industrial digital meters intended as replacement meters for many popular panel and process meters. Wide range of input voltages, display options and user selectable annunciators make these meters universal for use as voltmeters, temperature readings, pressure readings and percentage displays.



**5 year Unconditional Warranty**

**SPECIFICATIONS:**

- **Display Type:** .45" (11.4mm) 7 segment LCD
- **Annunciators:** °F, °C, PSI, %, user selectable
- **Decimal Points:** User selectable
- **Panel Cutout:** 1" x 2.4"
- **Panel Clearance Required:** 1.25" (31.75mm)
- **Input Ranges:** ±200mVDC, ±2VDC, ±20VDC
- **Over/Under Range Indication:** 1.... / -1....
- **Configuration:** Bipolar Differential
- **Performance Conversion Rate:** 3 per second
- **Operating Temperature:** 0°C - 50°C
- **Power Supply:** 5VDC @ 3.5mA
- **Backlight Power:** 5VDC
- **Mounting:** Snap-in bezel
- **Connection:** 13 pins, 0.025" (.64mm) square on 0.100" (2.54mm) centers

**PROCESS SPECIFICATIONS:**

- Meter and loop powered PCB in one package
- **Panel Clearance Required:** 1.75" (44.45mm)
- **Input Range:** Fully scalable
- **Power Supply:** 4-20mA process loop
- **Optional Backlight Power:** 24VDC or 24VDC
- **Connection:** 2 pin screw terminals (4 pin with optional backlights)

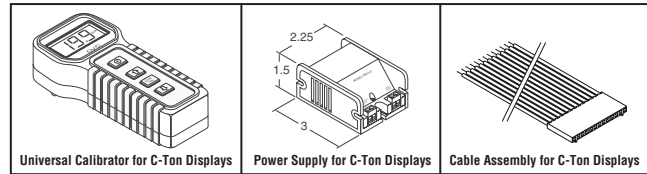
**RANGEABLE VOLTAGE SPECIFICATIONS:**

- 3.5 and 4.5 digit with high-contrast LCD display
- **Input Ranges:** 0-5VDC, 0-10VDC or 0-200mVDC (selectable)
- **Power Supply:** 12VDC or 24VDC regulated (selectable)
- **Optional Backlight Power:** 24VDC @ 24mA
- **Connection:** 6 screw terminal

Power Supply	Input	Digit Color	Backlit Voltage	Digi-Key Part No.	Price Each	1	10	50	C-Ton Part No.	Use Cable Assembly
<b>3.5 Digit LCD</b>										
+5	200mV	—	—	CDPM541-ND	39.80	37.81	34.83	DK541	J4C13	—
	2V	—	—	CDPM542-ND	39.80	37.81	34.83	DK542	J4C13	—
	20V	—	—	CDPM543-ND	39.80	37.81	34.83	DK543	J4C13	—
	20V	(-) Amber	5VDC	CDPM553-ND	49.78	47.30	43.56	DK553	J4C13	—
	2V	(-) Green	5VDC	CDPM562-ND	49.78	47.30	43.56	DK562	J4C13	—
	20V	(-) Green	5VDC	CDPM563-ND	49.78	47.30	43.56	DK563	J4C13	—
Loop	4-20mA	(-) Amber	24VDC	CDPM572-ND	49.78	47.30	43.56	DK572	J4C13	—
	4-20mA	(-) Red	24VDC	CDPM573-ND	49.78	47.30	43.56	DK573	J4C13	—
<b>3.5 Digit Process</b>										
Loop	4-20mA	—	—	CDPM191-ND	71.82	68.23	62.85	DK191	—	—
		(-) Amber	24VDC	CDPM192-ND	81.80	77.71	71.58	DK192	—	—
		(-) Green	24VDC	CDPM193-ND	81.80	77.71	71.58	DK193	—	—
		(-) Red	24VDC	CDPM194-ND	81.80	77.71	71.58	DK194	—	—
<b>3.5 Rangeable</b>										
12/24V	5/10V/200mV	(-) Green	24VDC	CDPM197-ND	81.80	77.71	71.58	DK197	—	—
		(-) Red	24VDC	CDPM198-ND	81.80	77.71	71.58	DK198	—	—
		—	—	CDPM199-ND	71.82	68.23	62.85	DK199	—	—
<b>4.5 Digit LCD</b>										
+5	200mV	—	—	CDPM741-ND	49.78	47.30	43.56	DK741	J4C13	—
	2V	—	—	CDPM742-ND	49.78	47.30	43.56	DK742	J4C13	—
	20V	—	—	CDPM743-ND	49.78	47.30	43.56	DK743	J4C13	—
	2V	(-) Amber	5VDC	CDPM752-ND	59.74	56.76	52.28	DK752	J4C13	—
	20V	(-) Amber	5VDC	CDPM753-ND	59.74	56.76	52.28	DK753	J4C13	—
	2V	(-) Green	5VDC	CDPM762-ND	59.74	56.76	52.28	DK762	J4C13	—
Loop	4-20mA	(-) Green	24VDC	CDPM790-ND	89.78	85.30	78.56	DK790	—	—
	4-20mA	(-) Red	24VDC	CDPM793-ND	98.76	93.83	86.42	DK793	—	—
<b>4.5 Digit Process</b>										
Loop	4-20mA	—	—	CDPM790-ND	89.78	85.30	78.56	DK790	—	—
		(-) Green	24VDC	CDPM793-ND	98.76	93.83	86.42	DK793	—	—
		(-) Red	24VDC	CDPM794-ND	98.76	93.83	86.42	DK794	—	—
<b>4.5 Rangeable</b>										
12/24V	5/10V/200mV	(-) Green	24VDC	CDPM797-ND	98.76	93.83	86.42	DK797	—	—
		(-) Red	24VDC	CDPM798-ND	98.76	93.83	86.42	DK798	—	—
		—	—	CDPM799-ND	89.78	85.30	78.56	DK799	—	—

◆ RoHS Compliant

**Optional Accessories for all CTON Displays**



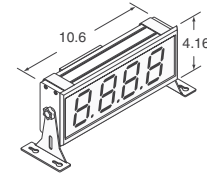
Description	Digi-Key Part No.	Price Each	1	10	50	C-Ton Part No.
<b>Current and Voltage Calibrator — RoHS Compliant</b>						
Programmable Current and Voltage Calibration Unit	CDPM1009-ND	149.00	—	—	—	CVC
<b>Power Supplies</b>						
5VDC Out, 300mA	CDPM1000-ND	20.90	19.86	18.29	—	PW2-5
12VDC Out, 200mA	CDPM1001-ND	20.90	19.86	18.29	—	PW2-12
24VDC Out, 100mA	CDPM1002-ND	20.90	19.86	18.29	—	PW2-24
<b>Cable Assemblies — RoHS Compliant</b>						
10 Pin Connector with 12" Wires, 26AWG	CDPM1003-ND	3.16	3.01	2.77	—	J1C10
13 Pin Connector with 12" Wires, 26AWG	CDPM1004-ND	3.16	3.01	2.77	—	J1C13
13 Pin Connector with 12" Wires, 26AWG	CDPM1005-ND	3.16	3.01	2.77	—	J4C13

◆ RoHS Compliant

**Large Digit Voltage Meters**

**SPECIFICATIONS:**

- **Display Digits:** 3.5 digits (±1999)
- **Set Voltage Ranges:** ±200mVDC, ±2VDC, ±20VDC
- **Adjustable Voltage Ranges:** 200mVDC, 5VDC, 10VDC
- **Offset Range:** -1999 - 1999
- **Gain Range:** 1 - 1000
- **4-20mA Loop Ranges:** 4 - 20mADC
- **Operating Temperature:** -10°C - 50°C
- **Power Supply:** 90 - 250VAC @ 12VA
- **Mounting:** 180° gimbal mounting with 30° stops, or bezel mount
- **Connection:** Screw terminals



Description	LED Color	Digi-Key Part No.	Price Each	10	50	C-Ton Part No.
2.3" Universal Current and Voltage Meter with Mounting Hardware	Red	CDPM1006-ND	349.00	—	—	BDR-999R
	Green	CDPM1007-ND	349.00	—	—	BDR-999G
	Blue	CDPM1008-ND	349.00	—	—	BDR-999B

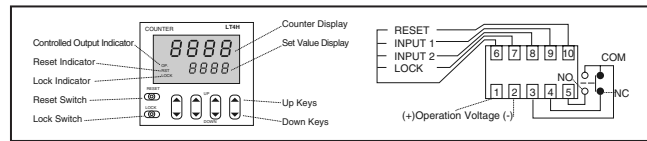
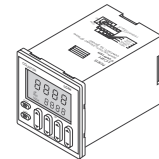
**Panasonic Counters and Timers**

**Panasonic Electric Works**

**LC4H Digital Counters**

Panasonic/Aromat's LC4H Digital Counters are presettable counters that will count up or count down until your preset count is reached, then trigger the internal relay to switch in one of seven output modes.

Features such as 2 color back-lit display and waterproof front panel display allow this counter to be used in extreme environments.



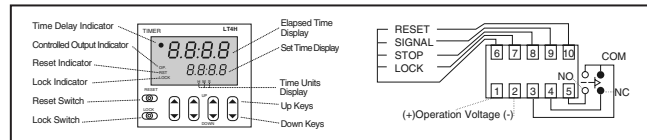
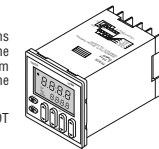
Operating Voltage	Terminal	Digi-Key Part No.	Price Each	1	25	50	Panasonic Part No.
100-240VAC	11 pin octal	255-1218-ND	113.42	102.08	96.41	—	LC4H-RA-AC240V
100-240VAC	Screw	255-1219-ND	118.24	106.42	100.51	—	LC4H-RA-AC240VS
12-24VDC	11 pin octal	255-1220-ND	108.08	97.28	91.87	—	LC4H-RA-DC24V
12-24VDC	Screw	255-1221-ND	105.50	94.95	89.68	—	LC4H-RA-DC24VS

◆ RoHS Compliant

**LT4H Digital Timers**

Panasonic/Aromat's LT4H Digital Timer is intended for process control for applications requiring duration time control such as delay-on/off, repeat cycle and start/stop time accumulation. The LT4H has features such as a bright 2 color back-lit display and EE-Prom memory, keeping your program settings without the need of an internal battery. The waterproof front panel keeps out dirt and water under poor operating conditions.

Timing from .001 second to 999.9 hours, with 8 modes of operation and built-in timed SPDT relay (5A 250VAC).



Operating Voltage	Terminal	Digi-Key Part No.	Price Each	1	25	50	Panasonic Part No.
100-240VAC	11 pin octal	255-1214-ND	111.28	100.16	94.59	—	LT4H-AC240V
100-240VAC	Screw	255-1215-ND	111.28	100.16	94.59	—	LT4H-AC240VS
12-24VDC	11 pin octal	255-1216-ND	104.00	93.60	88.40	—	LT4H-DC24V
12-24VDC	Screw	255-1217-ND	111.28	100.16	94.59	—	LT4H-DC24VS

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**More Product Available Online: [www.digkey.com](http://www.digkey.com)**

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