

The Digitec Series **D3800 Panel Meters** offer many features and performance capabilities to suit a wide range of industrial applications.

The **D3820** and **D3830** are available in the ranges of 4-20mA, 0-10 VDC, or 0-5VDC. 10 VDC and 24 VDC excitation is available as an option. These controllers include a 30 point linearization capability for compensation of non-linear processes.

The **D3820** and **D3830** provide two programmable, (PEAK, VAL), reading memory.

The **D3830 Totalizer** can be used to compute a time-input product. This can be used to provide readout in totalized flow, batch or weighing operations.

The units can have up to 4 setpoint alarms assignable to Rate, Totalizer (3830), or both Rate and Totalizer.

Four front keys are easily programmed for special functions allowing quick access to alarms, view Peaks, reset totals or switch scaling from gallons to barrels.

The 3820/30 comes standard with (1) Form A relay 240 VAC @ 1A that can be used as an alarm output.

**PRODUCTION RATE:** Units per second/minute/hour computed and displayed in the time of one input period. Also computed in dozens, gross, or other packaging units.

**ROTATION:** Speed indicated as RPS, RPH, RPM, or as linear motion (feet/second, meters/hours, etc).

**PUMP UP/DOWN:** The alternating relay option allows the 3820 to control a Duplex pumping application. The unit has a user programmable time delay to allow a delay of both pumps coming on after a power outage, The 3820 also can provide additional low and High Alarms.

**TOTALIZER:** Totalizer mode displays accumulated total of units or events (ie, gallons, pounds, etc.) since power-up or last reset a low flow cutoff setting is available.

Exponent mode is available to totalize up to 999E99.

An optional Totalizer SSR 20 msec. pulse output with selectable automatic reset of total value allows batching operations.

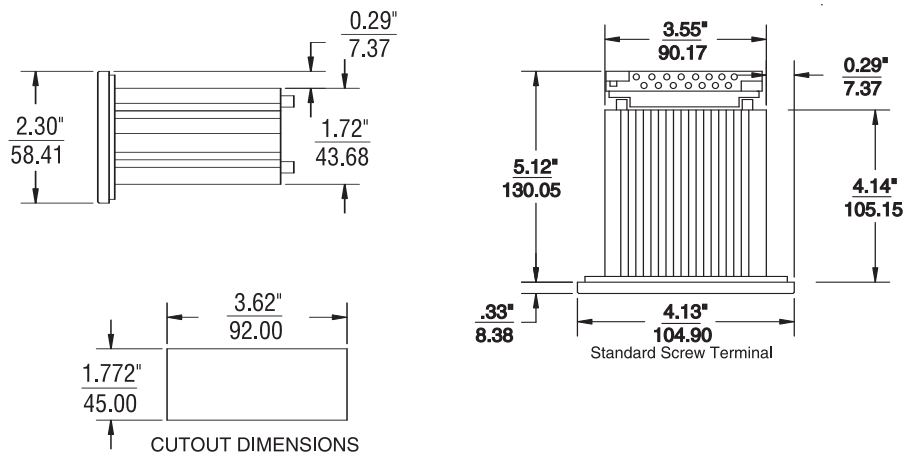
**FLOW:** Sensor input scaled to gallons/ minute, liters/hour, pounds/ minute, ACFM, etc.



## Process Meter with Totalizer

- 6-Digit Red LED Display
- 1/8 DIN extruded aluminum case
- D3830 Totalizer Optional with a Exponent Mode
- NEMA 4X (IP65) Front Panel
- Four programmable alarm setpoints, up to 4 relay outputs
- Selectable update rate of .1, 2, 10, 20/SEC
- Four programmable function keys
- Alternating Relay Function (Alarm 1 and Alarm 2)
- Square Root, Flume, Weir readings
- 30 point linearization

### \\ \\ DIMENSIONS (INCHES/MILLIMETERS)



**SPECIFICATIONS**

DISPLAY	6 digits, 7 segment, red LED, 0.5. high, with overflow and over-range displays.	
DISPLAY UPDATE	0.1, 2, 10, and 20 per second	
RANGE	User programmable decimal, scaling allowing a display range of -99999 to 999999.	
	Totalizers have an expanded display mode that allows a Scientific Notation mode that totals to over 1 billion.	
POWER	115 or 230 VAC	
INPUT	38x0-27 0-20mA	
	38x0-23 0-5 VDC	
	38x0-25 0-10 VDC	
TEMPERATURE RATING	Operating	32° to 131°F (0° to 55°C)
	Storage	-40° to 185°F (-40° to 85°C)
RELATIVE HUMIDITY	20 to 80%, non-condensing	
INTERNAL CLOCK	22.1184 MHz crystal oscillator. Aging rate: 5 ppm/year.	
OPTIONAL EXCITATION SUPPLY	10 VDC @ 250mA	
	24 VDC @ 150mA	
DISPLAY SCALING	Operator simply enters the input low and high values plus the display low and high values. The 3820 / 3830 calculates the proper scaling and offset values automatically. Decimal point: user selectable	
EXTERNAL HOLD	A contact closure will freeze the display. The unit is fully functional while contact is maintained, the display holds last value.	
MEASUREMENT	Range	-9999 to 99999 units/second.
	Accuracy	.05% ±1 digit of F.S.
TERMINATION	Screw Terminal connector	
CASE	Anodized Aluminum 1/8 DIN cutout, NEMA 4X front panel sealed gasket.	
WEIGHT	0.84 lbs.	

MODEL NUMBER >>>>>>	D38		
Basic Model			
	Basic	20	
	With Totalizer	30	
Range			
	0-5 VDC	23	
	0-10 VDC	25	
	0-20 mA	27	
Output Options			
3 Form "C" 5 amp relays activate when high and low limits are exceeded. Permits On-off control of external circuitry, or alarm status communications with other equipment			C
1, 2, or 4-Analog output channels, 0 to 10VDC, 0 to +5VDC, ± 5VDC, 4 to 20mA. Accuracy is .35%. Output signals proportionate to meter display, with individual selection of offset and scale settings. (Includes Option P)			H
Excitation Supply 10VDC and 24VDC Isolated up to 1,500V peak from input circuits			P
RS232C serial data bi-directional communication 9600 baud			T
Solid State Relay Pulse Contact output for batching applications			V

Single-Channel Process Controllers & Temp. Displays // D3820/30

Microprocessor technology makes **DigiTec's 2800B** series of digital panel meters the ideal solution for the meeting the measurement, display and control requirements of industrial applications, OEM's and system designers.

Models are available for voltage, and current with 3-1/2, 4, 4-1/2 digit displays. Each unit has field selectable 115/230VAC input power via internal jumper selection.

**Four Separate Setpoint Limits:** Four separate setpoints may be operator programmed to indicate "out of limit" conditions based on display value. Each limit can be assigned a single relay output with option "C" installed. The setpoints can be programmed also to make the display flash when in the alarm condition.

**Lockout Code for Security:** To eliminate unauthorized changes by the operating personnel, any alteration of the instrument setup data requires entry of user security code for access.

**SECOND SCALE:** This function allows the user to set a second scaling to the input. The input will then be displayed in two engineering units (typically for English/Metric displays).

**PEAK 1 AND PEAK 2:** Peak 1 and peak 2 are both assignable to capture the maximum or minimum display value. They are assignable to any channel and the net or gross value. It can be reset through a front panel key or remote input. Capture rate is 20/SEC.

DigiTec recognizes the importance of customer support. One aspect of this support is customized engineering to meet our customer specific market requirements.



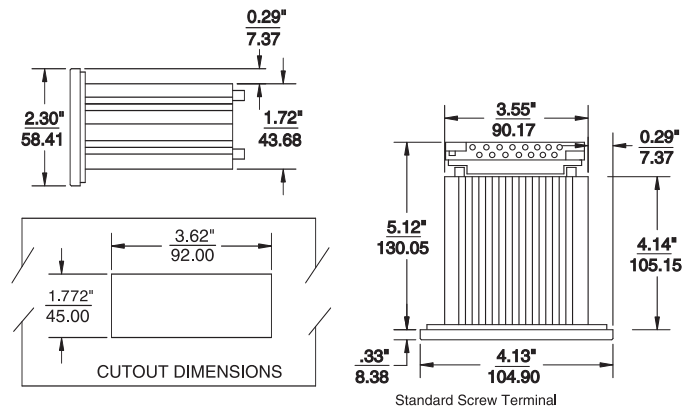
Single Channel Panel Meter

- Fail Safe Alarm Ready Operation
- No Flash of Display on Alarms
- Optional Excitation Supplies 10, 24, or 5VDC
- Customized Fast Entry for Alarm Setup
- U-Plot Linearization
- NEMA 4X Front Frame

### SPECIFICATIONS

DISPLAY	0.50" Red Led
NMR	63dB, 50/60 Hz
CMV	130dB, 50/60 Hz
POWER REQUIREMENTS	115/230 VAC
DISPLAY UPDATE RATE	10 per second
RESPONSE TIME	100 mSecond Max. To display
TERMINATION	Scre Terminal Connector
SELF CAL	1 time every 500 mSeconds
ENVIRONMENT	-20° to 60°C
CASE	Anodized Aluminum
WEIGHT	0.84 lbs

### DIMENSIONS (INCHES/MILLIMETERS)



FUNCTIONAL REPLACEMENT  
FOR THE 2800A

<i>MODEL NUMBER &gt;&gt;&gt;&gt;&gt;&gt;</i>	D28		B	
Display				
3-1/2 Digit	10			
4 Digit	11			
4-1/2 Digit	12			
Process 4-1/2 Digit	20			
Input Rates				
See Range Chart				
Options				
Use any combination of Options.	Option C		C	
	Option F		F	
	Option H		H	
	Option P		P	
	Option T		T	

OPTIONS	
OPTION C	3 form C (single pole double throw) relays rated at 5 amp @ 240VAC, 5amps @ 30VDC. Located on the option/top printed circuit board
OPTION F	Factory calibration (user provides input range and display range)
OPTION H	Analog output with menu selection of 0-20mA, 4-20mA, 0-5VDC, 0-10VDC and +5/-5VDC
	Update rate of 25/second
	Resolution - 16 bit D/A Located on the option/top printed circuit board
OPTION P	24VDC @ 150mA Accuracy: .5%
	10VDC @ 250mA supply
OPTION T	Serial RS-232C Communication.
	Configuration of 9600 baud, NO Parity Check, 8 DATA Bits.

RANGE CHART	
Model Number	Input Ranges
3-1/2 Digit Display	
D2810B-01	±199.9mV DC
D2810B-02	±1.999V DC
D2810B-03	±19.99V DC
D2810B-04	±199.9V DC
D2810B-08	±199.9uA DC
D2810B-09	±1.999mA DC
D2810B-10	±19.99mA DC
D2810B-11	±199.9mA DC
D2810B-12	±1.999A DC
4 Digit Display	
D2811B-00	±99.99mV DC
D2811B-01	±999.9mV DC
D2811B-02	±9.999V DC
D2811B-03	±99.99V DC
D2811B-04	±999.9V DC
D2811B-08	±999.9uA DC
D2811B-09	±9.999mA DC
D2811B-10	±99.99mA DC
D2811B-11	±999.9mA DC
4-1/2 Digit Display	
D2812B-01	±199.99mV DC
D2812B-02	±1.9999V DC
D2812B-03	±19.999V DC
D2812B-04	±199.99V DC
Process 4-1/2 Digit Display	
D2820B-23	±5 and 1-5V DC
D2820B-25	±10 and 0-10V DC
D2820B-27	0-20 and 4-20mA DC
D2820B-29	0-50 and 10-50mA DC

The versatile **Digitec D3200** series of digital process indicators can be used with a wide range of process sensors and signal inputs.

**ALARMS:** Up to 4 open collector or 2 x SPST alarms are available: high or low; low with disable during start-up; on/off controller with direct or reverse action; high or low deviation. Alarm features include: adjustable on/off delay in seconds; adjustable hysteresis; latching; non/manual reset/full-scale. Operator adjustable set-point.

**PEAK/VALLEY DETECTION:** Configurable functions allow detection of peak and/or valley. Operator access to view and reset.

**DUAL SCALING:** Measurement can be displayed in either of two scale units (e.g. bar and psi). Each scale can have different formats and resolution. Toggle between the two scales by assigning an operator function key.

**TARE AND GROSS/NET FUNCTIONS:** Tare off the current displayed reading and toggle between the gross and net measurement values by assigning operator function key.

**ANALOG OUTPUT:** Available as 0/4-20mA; 0-2V; 0/1-5V or 0-10V. Output is proportional to display reading. Net and peak/Valley or unlinearized input.

**SERIAL COMMUNICATIONS:** Optional, isolated, serial communications interface for full access to all instrument functions and features. Dual port RS 232 (for multi-drop connection) or twisted pair RS 485 (for distributed multi-drop operation).

**PASSWORD PROTECTION AND CALIBRATION LOCKING:** Instrument configuration can be protected by a 4 digit password.

**LINEARIZATION:** The D3200 has 17 calibration correction points. This provides a powerful scaling facility for sensor inearity improvements and non-linear scaling for applications such as flow and tank volume measurement.

## SPECIFICATIONS

ACCURACY	Voltage Input	0.01% FS
	Current Input	0.02% FS
	Pressure Input (Typical)	0.1% FS (0.05% FS linearized)
DISPLAY	Display Count Range	-19999 to +20999
	Display Height	0.56" (14.2mm)
	A/D Resolution	18 bit (1 part in 200,000)
	Display Update	10 per second
POWER SUPPLIES	VAC Input	90-132/200-264 VAC
	Frequency Power	47-70Hz, 4 VA
	AC Isolation (Input/Output)	>2500 Vrms
	VDC Input	10-40V. 300mA @ 10 V
ENVIRONMENTAL	DC Isolation (Input/Output)	>500 Vrms
	Operating Temperature	-140°F (-10°C to 60°C)
	Humidity	0 to 90% RH non-Condensing
PHYSICAL DIMENSIONS CUTOUT	1/8 DIN cutout 3.62" x 1.77" (92.0mm x 45.0mm) 3.62"W x 1.73"H x 4.5"D (92 x 44 x 114.5mm)	
APPROVALS	CE marked	
WEIGHT	NET: 14 oz	Shipping: 20 oz



Universal Input Digital Panel Meter

- High Accuracy  $\pm 0.01\%$  F.S.
- Wide Range of Process Measurements
- Extensive Range of Programmable Features
- NEMA 12 Front Panel
- Optional RS 232/485 or Analog Interfaces
- Excitation Power Supply

## APPLICATIONS

- Temperature
- Humidity Monitoring
- Liquid Level
- Load Cell/Weighing
- Pressure

### UNIVERSAL INPUT MODELS

Model 3220 with 4 Open Collector Outputs  
 Model 3221 with SPST Relay Outputs

- 3220's open collectors are rated 48VDC @ .5A maximum
- 3221's relays are rated 250VAC @ 5A, 24VDC @ 1A maximum

No jumper setting or recalibration required when different sensor type is selected.

### UNIVERSAL INPUT SELECTIONS VIA KEYPAD ARE:

- DC voltage ranges of  $\pm 20\text{mV}$  to  $\pm 20\text{V}$  (Accuracy of 0.01%)
- $\pm 20\text{mA}$  DC (Accuracy of 0.02%)
- Temperature selection of:
  1. Thermocouple selections of prelinearized J, K, N, T, R, S (Accuracy of .2°C for J, K, T; 0.5°C for N, R, S)
  2. RTD of PT100 (Accuracy of .2° C)
  3. The following are also programmable under temperature:
  4. °C or °F
  5. Resolution of 1, 0.1 and 0.02 (RTD only) °C; 1 and 0.2°F
  6. Automatic or manual ice point compensation
  7. Internal excitation supply of 24VDC @ 35mA

### STRAIN GAUGE VERSIONS

4 Open Collector Outputs (3240)  
 2 SPST Relay Outputs (3241)

- 3240's open collectors are rated 48 VDC @ .5A
- 3241's relays are rated 250 VAC @ 5A, 24 VDC @ 1A maximum
- Inputs from  $\pm 20\text{mV}$ , 200 MV, 2V (Accuracy of 0.02%)
- Calibration is by no calculation scaling and offset or by "load calibration"
- Internal excitation supply of 10VDC @ 120mA will power 4 each 350 ohm load cells on Model 3240. 10 VDC @ 35mA on Model 3241

MODEL NUMBER >>>>>>	D32		
Basic Model			
Universal Input	2		
Strain Gauge	4		
Input			
Open Collector	0		
Relay Outputs	1		
Options			
Black case			B
Isolated 4-20mA output scalable to desired display range via front panel menu. Programmable to follow display, net, peak 1 or peak 2. Consult factory for 0-10 VDC or 1-5 VDC output.			H
NEMA 4X cover			N
2 Volt @ 20mA excitation supply (consult factory for supplies from 2 to 15 VDC)			P
Bidirectional RS232 serial interface. All functions and programming from keypads can be programmed via serial input. Multi-drop capabilities. 300 to 9600 baud. Includes programming disk.			T
Bidirectional RS485 serial interface. All functions and programming from keypads can be programmed via serial input. Multi-drop capabilities. 300 to 9600 baud. Includes programming disk			U
NOTE: Only one option card "H", "T" or "U" may be installed at a time.			

The **Digitec D3600** series is a 3/64 DIN universal meter. It offers a standard two alarm relay output, digital filtering and has a 5/SEC display update rate. There is also menu selection of J, K, T, R and S thermocouples or Pt100, Ni100 RTD's, 0.1 degree resolution, C or F. It has front panel adjustable zero and span and automatic fixed cold junction.

3 Versions Available:

- Process Input
- Temperature Input
- Strain Gauge / Load Cell

**PRESSURE CONTROLLER (D3620):** Meter can be set up with calibrated load inputs. 24V @ 30mA excitation supply for transmitters and transducers.

**TEMPERATURE METER (D3630):** Menu selection of J, K, T, R & S Thermocouples or Pt100, Ni100 RTD's. 0.1 Degree resolution, °C or °F. Front panel adjustable zero and span. Automatic or fixed cold junction compensation.

**STRAIN GAUGE/LOAD CELL METER (D3640):** Input selection from ±120 mVDC. No calculation scaling to display in engineering units. Simply enter Low and High input values and corresponding Low and High reading. Meter can also be set up with calibrated load inputs. Isolated 10VDC @ 30mA excitation supply.



3/64 DIN Slim Digital Meter

MODEL NUMBER >>>>>	D36		0	
Basic Model				
Process Signals	2			
T/C, RTD	3			
Strain Gauge	4			
Options				
Analog Output Current	0/4-20mA Source			H
Load Resistance	0 to 550 Ω			
Voltage	0-10V; output impedance 10 Ω			
Accuracy	±0.1%			
Isolation	500 Vrms			
IR Probe and Setup Software				I
1/8 DIN Adapter				K
RS232 Printer Output Voltage Level	V.24 compatible			T
Baud Rate	300, 600, 1200, 2400, 4800, 9600			
Isolation	200 Vrms			

NOTE: Only one option card "H", "T" or "U" may be installed at a time.

- 3/64 DIN Case
- -1999 to 9999 Digit, 0.56" LED Display
- IP65/NEMA 4 Front Panel
- Tare
- Two Alarm Relay Outputs
- Excitation Supplies

OPTIONAL OUTPUTS:

- Analog Output
- RS232
- Infrared Remote Setup

## MEASURING RANGES

### D3620 PROCESS SIGNALS INPUT MEASURING RANGE

Input	Measuring Range	Display Range	Accuracy
Current	0-20 mA	-1999 to 9999	±0.05%
Voltage	0-10V	-1999 to 9999	±0.04%

### 3630 T/C, RTD INPUT MEASURING RANGE

Input	Measuring Range	Display Resolution	Accuracy
T/C J	-200 to +750°C (-328 to 1382°F)	0.1°C	±0.5°C
T/C K	-200 to +1300°C (-328 to 2372°F)	0.1°C	±0.6°C
T/C T	-200 to +400°C (-328 to 752°F)	0.1°C	±0.3°C
T/C R	-50 to +1750°C (-58 to 3182°F)	1°C	±1°C
T/C S	-50 to +1750°C (-58 to 3182°F)	1°C	±1°C
Pt 100 DIN 43760 RTD	-200 to +850°C (-328 to 1562°F)	0.1°C	±0.5°C
Ni100 DIN 43760 RTD	60 to +180°C (-76 to 356°F)	0.1°C	±0.5°C

### D3640 LOAD CELLS & STRAIN GAUGE INPUT MEASURING RANGE

Input	Measuring Range	Display Resolution	Accuracy
Voltage	±30.00 to ±120mV f.s.	-1999 to 9999	±0.04%

## SPECIFICATIONS-D3620

VOLTAGE INPUT	Input Range	0-10 V, 1-5 V settable from ±1.000 V to ±10.500V ranges
	Accuracy	±0.4% f.s.
	Input Resistance	>1 M Ω
CURRENT INPUT	Input Range	0/4-20 settable from ±1 mA to ±20 mA ranges
	Accuracy	0.05% f.s.
	Input Resistance	<20 Ω
DISPLAY UPDATE	5/SEC	
ENVIRONMENTAL PROTECTION	IP65/NEMA4X	
CASE MATERIAL	Polycarbonate UL94V.2	
CUT OUT DIMENSIONS	22H x 68W mm	
WEIGHT	0.4 pound - 200 g	

## SPECIFICATIONS-D3630

T/C INPUT	Input Range & Accuracy	See Measuring Ranges table
	Linearization	ANSI
RTD INPUT	Input Range & Accuracy	See Measuring Ranges table
	Sensor Connection	2 or 3-wire
	linearization	Pt100: DIN 43760/IEC751 (100 Ω @ 0°C - 138.5 Ω @ 100°C) Ni100: DIN 43760 (100 Ω @ 0°C - 161.8 Ω @ 100°C)
SENSOR EXCITATION CURRENT	500µA	
MAXIMUM LINE RESISTANCE	10 Ω with 3 wire connection	
DISPLAY UPDATE	5/SEC	
ENVIRONMENTAL PROTECTION	IP65/NEMA4X	
CASE MATERIAL	Polycarbonate UL94V.2	
CUT OUT DIMENSIONS	22H x 68W mm	
WEIGHT	0.4 pound - 200 g	

## SPECIFICATIONS-D3640

STRAIN GAUGE INPUT RANGE	Settable range from ±30mV to ±120mV	
ACCURACY	±0.04% @ 100 mV	
INPUT IMPEDANCE	>1000M Ω	
EXCITATION SUPPLY	10v ±0.1% @ 30mA max short circuit protected and internal voltage trimming	
DISPLAY UPDATE	5/SEC	
ENVIRONMENTAL PROTECTION	IP65/NEMA4X	
CASE MATERIAL	Polycarbonate UL94V.2	
CUT OUT DIMENSIONS	22H x 68W mm	
WEIGHT	0.4 pound - 200 g	

**VOLTAGE/CURRENT MODELS (D3110/D3112 SERIES):** These models include standard voltage and current input types with full scale ranges of  $\pm 1,999$  and  $\pm 19,999$ . Standard with scaling, relays and analog output. Accuracy .05% of FS  $\pm 1$  ct.

**PROCESS MODEL(D3120/D3122 SERIES):** This model accepts common 4-20mA signals from standard process transmitters. This meter can also be user configured (via berg jumper) for 0-10V and 1-5V signal inputs. Standard with scaling, 2 relays, excitation and analog output. These models offer 3-1/2 digit (3120) or 4-1/2 digit (D3122) resolution. Accuracy 0.5% FS,  $\pm 1$  ct.

**THERMOCOUPLE TEMPERATURE MODEL (D3130/D3132 SERIES):** Two models are available in this low-cost series, J and K type thermocouples. Standard with 2 relays and analog output. These models offer 1° (D3130) or 0.1° (D3132) temperature resolution. Selectable °C or °F. The temperature ranges for the D3130 models are:

313X-03 J-148° to 1292°F (-100° to +700°C)  
313X-05 K-148° to 1999°F (-100° to +1200°C)

Accuracy is  $\pm 2^\circ\text{C}$  or  $\pm 4^\circ\text{F}$ . The meter will flash all digits if the thermocouple opens.

**STRAIN GAUGE METER (D3140/D3142 SERIES):** These models are designed to operate with 20mV input with a +10 volt excitation supplied by the meter. There are two models available with resolutions of 3-1/2 digit (D3140) or 4-1/2-digit (D3142). The sensitivity of the 3140 is 10 $\mu\text{V}$ /count and the 3142 is 1 $\mu\text{V}$ /count. The 10V @ 120mA excitation supply is capable of powering up to four 350 $\Omega$  load cells which makes these models ideal for scale applications. Accuracy 0.1% of FS  $\pm 1$  ct. Standard with scaling, 2 relays, excitation and analog output.

Note: Refer to D3700 series for more sophisticated features.

**TRUE AC RMS METER (D3150/D3152 SERIES):** These models are designed to measure the root-mean-square value of complex wave forms. There are 10 ranges to choose from covering the most common inputs. All models are provided with internal voltage dividers or shunts. The special 5A current range allows direct connection to a current transformer (CT) with a 5A secondary, without requiring a stepdown transformer. Standard with 2 relays and analog output. Accuracy is  $\pm 0.1\%$  of reading  $\pm 10$  ct.

**RTD TEMPERATURE (D3160/D3162 SERIES):** There are two models available in this series (D3160) 1° resolution and (D3162) .1° resolution. Input is 100  $\Omega$  platinum 0.00385 alpha.

These RTD meters are designed for 2 or 3-wire RTD probes. (Applications requiring a 4-wire connection or non-standard sensor curve refer to the D3200 series).

If the RTD sensor opens or the wiring becomes faulty the display will flash all digits. The meter is factory configured for the Fahrenheit scale but, it can be re-configured easily in the field for Celsius. Temperature range of -148° to 1472° F (-100° to 800° C). Standard with 2 relays and analog output.

**AC AVERAGE SENSING (D3170/D3172 SERIES):** These low-cost models use a precision op-amp rectifier circuit and are calibrated to measure the RMS value of sinusoidal wave forms. There are 10 ranges to choose from covering the most common inputs. All are provided with internal voltage dividers or shunts. Standard with 2 relays and analog output. Accuracy is  $\pm 0.1\%$  of reading  $\pm 10$  ct.



Process Indicator with Outputs

- Bright, long lasting LED display, 0.56" LED
- 2 Relay Outputs
- 4-20mA or 0-10V analog output (user selection)
- Drip-proof and dust tight Front Cover NEMA 12
- Compact 1/8 DIN case
- Plug in screw terminal connectors
- Wide range of engineering units
- Slot on inside of front panel for displaying unit of measure from furnished decal sheet
- Excitation supplies of 10 Volt DC @ 120mA, maximum of +24 Volt @ 50mA (user selectable) standard on Strain Gauge and Process Models.

#### SEVEN MODELS

- Voltage/Current
- Process
- Thermocouple (J & K)
- RTD
- True AC RMS Voltage/Current
- AC Average Voltage/Current
- Strain Gauge

#### OPTIONS

- Black Case
- Custom Calibration
- NEMA 4X Cover

#### COMMON SPECIFICATIONS

A/D	Dual slope A/D with 2.5 reading SEC
POWER	115/230 VAC powered
TEMPERATURE RATING	32° to 122°F (0° to 50°C)
CUTOUT	1/8 DIN (92 x 45mm)
DEPTH	4.04" (102.5mm)
WEIGHT	16 oz.

RANGE CHART		
3-1/2 Digit	4-1/2 Digit	Input Ranges
D3110-01	D3112-01	-199.9(9)mV to +199.9(9)mV
D3110-02	D3112-02	-1.999(9)V to +1.999(9)V
D3110-03	D3112-03	-19.99(9)V to +19.99(9)V
D3110-04	D3112-04	-199.9(9)V to +199.9(9)V
D3110-05	D3112-05	-650(.0)V to +650(.0)V
D3110-11	D3112-11	-199.9(9)uA to +199.9(9)uA
D3110-12	D3112-12	-1.999(9)mA to +1.999(9)mA
D3110-13	D3112-13	-19.99(9)mA to +19.99(9)mA
D3110-14	D3112-14	-199.9(9)mA to +199.9(9)mA
D3110-15	D3112-15	-1.999(9)A to +1.999(9)A
D3120	D3122	4-20 mA or 0-10 VDC Progress
D3140	D3142	Strain Gauge Input
D3130-03	D3132-03	1° resolution, J
D3130-05	D3132-05	0.1° resolution, K
D3150-01	D3152-01	0V to 199.9(9)mV
D3150-02	D3152-02	0V to 1.999(9)V
D3150-03	D3152-03	0V to 19.99(9)V
D3150-04	D3152-04	0V to 199.9(9)V
D3150-05	D3152-05	0V to 650(.0)V
D3150-11	D3152-11	0uA to 199.9(9)uA
D3150-12	D3152-12	0mA to 1.999(9)mA
D3150-13	D3152-13	0mA to 19.99(9)mA
D3150-14	D3152-14	0mA to 199.9(9)mA
D3150-15	D3152-15	0A to 1.999(9)A
D3150-16	D3152-16	0A to 5.00(0)A
D3170-01	D3172-01	0V to 199.9(9)mV
D3170-02	D3172-02	0V to 1.999(9)V
D3170-03	D3172-03	0V to 19.99(9)V
D3170-04	D3172-04	0V to 199.9(9)V
D3170-05	D3172-05	0V to 650(.0)V
D3170-11	D3172-11	0uA to 199.9(9)uA
D3170-12	D3172-12	0mA to 1.999(9)mA
D3170-13	D3172-13	0mA to 19.99(9)mA
D3170-14	D3172-14	0mA to 199.9(9)mA
D3170-15	D3172-15	0A to 1.999(9)A
D3170-16	D3172-16	0A to 5.00(0)A
D3170-17	D3172-17	0-10A AC

MODEL NUMBER >>>>>	D31		
3-1/2 Digit Voltage/Current		10	
4-1/2 Digit Voltage/Current		12	
3-1/2 Digit Process Model		20	
4-1/2 Digit Process Model		22	
3-1/2 Digit Thermocouple Temp.		30	
4-1/2 Digit Thermocouple Temp.		32	
3-1/2 Digit Strain Gage		40	
4-1/2 Digit Strain Gage		42	
3-1/2 Digit True AC RMS Meter		50	
4-1/2 Digit True AC RMS Meter		52	
3-1/2 Digit RTD Temperature		60	
4-1/2 Digit RTD Temperature		62	
3-1/2 Digit AC AVG Sensing		70	
4-1/2 Digit AC AVG Sensing		72	
Input Rates			
*See Range Chart			
Options			
Black Case			B
Prescaled			F
NEMA 4 Cover with Gasket			N
230 VAC Power			S
*D3120, D3122, D3140 & D3142 do not include range option.			

The **D3300 Series** is a compliment to the D3100 Series with the D3300 being a basic display meter without relay or analog outputs. All other features, size, specifications, etc. are the same as the corresponding D3100 meter. See D3100 for specifications, features and options.

**VOLTAGE/CURRENT MODELS:** (D3310/D3314 Series)

Standard with scaling. See Range Chart.

**PROCESS MODEL:** (D3320/D3324 Series)

Model D3320 has 3-1/2 digit resolution. Model D3324 has 4-1/2 digit resolution. Inputs for 4-20mA, 0-10 VDC and 1-5 VDC are selectable. Standard with scaling and selectable 10 VDC or 24 VDC excitation supply.

**THERMOCOUPLE TEMPERATURE:** (D3330/D3334 Series)

Model D3330 has 1° resolution. Model 3334 has .1° resolution. The temperature ranges for the 333X models are:

333x-03	J	-100°C to +700°C	-148°F to 1292°F
333x-05	K	-100°C to +1200°C	-148°F to 1999°F

The meter will flash all digits if the thermocouple opens or the wires become faulty.

**STRAIN GAGE METER:** (D3340/D3344 Series)

Input is 20mV. Model D3340 with 3-1/2 digit display and 10μV resolution. Model D3344 with 4-1/2 digit display and 1μV resolution. Standard with scaling and selectable 10 VDC @ 120mA and 24 VDC @ 50mA excitation supply.

**AC RMS METER:** (D3350/D3354 Series)

Standard with scaling. See Range Chart.

**RTD TEMPERATURE:** (D3360/D3364 Series)

Model D3360 has 1° resolution. Model D3364 has .1° resolution. Temperature range of -148° to +1472°F (-100° to +800°C).

**AC AVERAGE SENSING:** (D3370/D3374 Series)

Standard with scaling. See Range Chart.



Economical Process Indicator

- Bright, long lasting LED display, 0.56" LED
- Drip-proof and dust tight Front Cover NEMA 12
- Compact 1/8 DIN case
- Plug-in screw terminal connectors
- Wide range of engineering units
- Slot on inside of front panel for displaying unit of measure from furnished decal sheet
- Excitation supplies of 70 VDC @ 120mA, maximum of +24 Volt @50mA (user selectable) standard on Strain Gauge and Process Models.

COMMON SPECIFICATIONS

A/D	Dual slope A/D with 2.5 reading SEC
POWER	115/230 VAC powered
OPERATING TEMPERATURE	32° to 122°F (0° to 50°C)
CUTOUT	1/8 DIN (92 x 45mm)
DEPTH	4.04" (102.5mm)
WEIGHT	16 oz.

RANGE CHART		
3-1/2 Digit	4-1/2 Digit	Input Ranges
D3310-01	D3314-01	-199.9(9)mV to +199.9(9)mV
D3310-02	D3314-02	-1.999(9)V to +1.999(9)V
D3310-03	D3314-03	-19.99(9)V to +19.99(9)V
D3310-04	D3314-04	-199.9(9)V to +199.9(9)V
D3310-05	D3314-05	-650(.0)V to +650(.0)V
D3310-11	D3314-11	-199.9(9)μA to +199.9(9)μA
D3310-12	D3314-12	-1.999(9)mA to +1.999(9)mA
D3310-13	D3314-13	-19.99(9)mA to +19.99(9)mA
D3310-14	D3314-14	-199.9(9)mA to +199.9(9)mA
D3310-15	D3314-15	-1.999(9)A to +1.999(9)A
D3320	D3324	4-20mA, 0-10 V Process Display
D3340	D3344	Strain Gauge Meters
D3130-03	D3132-03	1° resolution, J
D3130-05	D3132-05	0.1° resolution, K
D3350-01	D3354-01	0 V to 199.9(9)mV
D3350-02	D3354-02	0 V to 1.999(9)V
D3350-03	D3354-03	0 V to 19.99(9)V
D3350-04	D3354-04	0 V to 199.9(9)V
D3350-05	D3354-05	0 V to 650(.0)V
D3350-11	D3354-11	0μA to 199.9(9)μA
D3350-12	D3354-12	0mA to 1.999(9)mA
D3350-13	D3354-13	0mA to 19.99(9)mA
D3350-14	D3354-14	0mA to 199.9(9)mA
D3350-15	D3354-15	0A to 1.999(9)A
D3350-16	D3354-16	0A to 5.00(0)A
D3370-01	D3374-01	0 V to 199.9(9)mV
D3370-02	D3374-02	0 V to 1.999(9)V
D3370-03	D3374-03	0 V to 19.99(9)V
D3370-04	D3374-04	0 V to 199.9(9)V
D3370-05	D3374-05	0 V to 650(.0)V
D3370-11	D3374-11	0μA to 199.9(9)μA
D3370-12	D3374-12	0mA to 1.999(9)mA
D3370-13	D3374-13	0mA to 19.99(9)mA
D3370-14	D3374-14	0mA to 199.9(9)mA
D3370-15	D3374-15	0A to 1.999(9)A
D3370-16	D3374-16	0A to 5.00(0)A

MODEL NUMBER >>>>>>	D33		
	3-1/2 Digit Voltage/Current	10	
	4-1/2 Digit Voltage/Current	14	
	3-1/2 Digit Process Model	20	
	4-1/2 Digit Process Model	24	
	3-1/2 Digit Thermocouple Temp. Model	30	
	4-1/2 Digit Thermocouple Temp. Model	32	
	3-1/2 Digit Strain Gage	40	
	4-1/2 Digit Strain Gage	44	
	3-1/2 Digit True AC RMS Meter	50	
	4-1/2 Digit True AC RMS Meter	54	
	3-1/2 Digit AC AVG Sensing	70	
	4-1/2 Digit AC AVG Sensing	74	
	Input Ranges		01 thru 16
	See Range Chart		
	Options		
	Black Case		B
	Prescaled		F
	NEMA 4 Cover with Gasket		N
	230 VAC Power		S
*D3320, D3324, D3340 & D3344 do not include range option.			