



The **NEMA Sized Digitec D2430A Series** is a family of 3-1/2 digit LED display, single-range, line-powered panel meters offering a wide selection of standard ranges and functions.

**DC VOLTAGE MEASUREMENT:** (4 ranges) 199.9mV to 199.9V

**DC CURRENT MEASUREMENT:** (6 ranges) 19.99µA to 1.999A

**AC VOLTAGE MEASUREMENT:** Either Average Sensing or True RMS (5 ranges) 199.9mV - 500VAC.

**AC CURRENT MEASUREMENT:** Either Average Sensing or True RMS (6 ranges) 19.99µA - 1.999A.

**PROCESS MONITOR:** 4-20mA, 1-5 volts (Parameters established to customer's requirements).

**BCD OUTPUT:** D2436A Only.

## NEMA Size Panel Meter

- 3-1/2 Digit LED Display
- 0.05% Accuracy
- NEMA Sized
- 0° - 65°C Operation
- Auto-zero
- Universally Powered
- BCD Output Option
- 3 Output Voltages to Power Auxiliary Circuits
- 3 Different Reading-Rate Capabilities

### INPUT CIRCUIT & ACCURACY (Single-ended input)

RANGE	ACCURACY (20°-26°C)	RESOLUTION	INPUT IMPEDANCE	MAX. INPUT VOLTAGE (PEAK)
200mV	0.05% rdg. ± 1 digit (typical)	100µV	>2000MΩ	±50V
2V		1mV	>2000MΩ	±50V
20V		10mV	>5MΩ	±500V
200V	0.05% rdg.	100mV	>5MΩ	±500V
500V		1V	>5MΩ	±500V

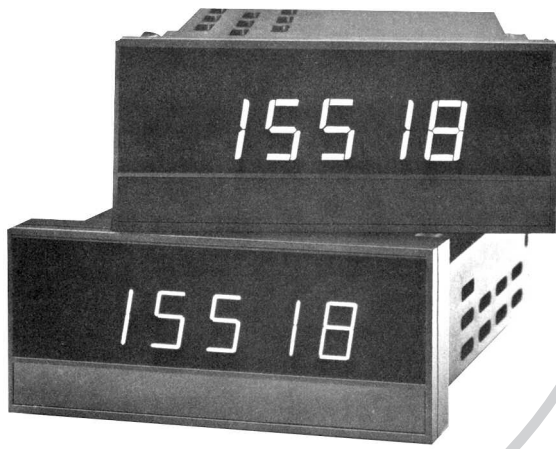
### ORDERING INFORMATION

	MODEL NUMBER				MODEL NUMBER		
	Range	115 VAC	230 VAC		Range	115 VAC	230 VAC
2435A (WO/BCD)	200mV	0285238	0285242	2435A (WO/BCD)	200µA	0286620	0286625
	2V	0285239	0285243		2mA	0286621	0286626
	20V	0285240	0285244		20mA	0286622	0286627
	200V	0285241	0285245		200mA	0286623	0286628
	500V	0284005	0284006		2A	0286624	0286629
2436A (W/BCD)	200mV	0285246	0285250	2436A (W/BCD)	200µA	0286630	0286635
	2V	0285247	0285251		2mA	0286631	0286636
	20V	0285248	0285252		20mA	0286632	0286637
	200V	0285249	0285253		200mA	0286633	0286638
	500V	0284007	0284008		2A	0286634	0286639

Example: 2435A-0285239= 2 VDC input, 115 VAC power

## SPECIFICATIONS

DISPLAY	Scale length	±1999
	Type of display	0.55" high LED.
	Polarity	Negative input: Minus sign at far left
	Positive input	Plus sign at far left 2435A/2436A.
	Overrange Indication	The most significant digit will remain permanently on while all other digits will be blanked. Polarity sign will be preserved.
	Decimal-points	Available at any of the following three positions by connecting the selected terminal to Pin N: 1.XXX 1 X.XX 1 XX.X
RANGES	DC Volts 200mV, 2V, 20V, 200V	
CONVERSION TECHNIQUE	Dual Slope A/D with autozeroing and single reference.	
CONVERSION RATE	3 readings./SEC	
SIGNAL INTEGRATION	Time: 83mS @ 3 rdg/SEC	
RESPONSE TIME	Typically 1 second to within 0.5% of final value	
WARM UP REQUIREMENTS	F.S. Calibration: 5 minutes within 0.1% rdg ± 1digit.	
LONG TERM STABILITY	180 days within rated accuracy	
POWER REQUIREMENTS	115/230 VAC ±15% , 47Hz to 440Hz	
	Models D2435A/D2436A	max. at 115 or 230 VAC, 60Hz with display fully lit.
TEMPERATURE	Operating	32° to 149°F (0°C to 65°C) @ 60Hz operation.
	Storage	-40° to 185°F (-40° to 85°C)
HUMIDITY	85% R.H.	
NMRR	30dB at 60Hz	
CMRR	100dB at 60Hz typical	
MAX. CMV	500 VRMS	
LINEARITY	± 0.05% F.S.	
HYSTERESIS	<0.3 counts	
TEMPERATURE COEFFICIENT	± 0.01% F.S./°C	
TEMPERATURE COEFFICIENT OF ZERO	3µV/°C	
DIMENSIONS	Bezel	4"W x 1.75"H x .56"D (101.6 x 44.45 x 14.22mm)
	Body	3.875"W x 1.67"H x 4.0"D (98.42 x 42.42 x 101.6mm)
PANEL CUTOUT	3.924"W x 1.682"H (99.67 x 42.72mm)	
WEIGHT	Approximate 13 ounces (368 grams)	



NEMA Size Panel Meter

- 4-1/2 Digit LED Display
- Accuracy —  $\pm 0.005\%$  rdg  $\pm 2$  digits
- $\pm 1$  Count Stability at zero over the full operating temperature range.
- High-brightness, 0.56" high LED display.
- Fast Warm Up Time — Temperature controlled zener voltage reference eliminates temperature shifts.
- Direct Readout in Engineering Units — psi, pH, °C, °F, or other options.
- Three Auxiliary Power Supply Outputs —  $\pm 12$  VDC or +5 VDC for driving external circuits.
- Automatic Zero and Polarity — eliminates calibration adjustments and allow direct readings of + and - signal inputs.
- Low Power Consumption — Special circuit design provides cool running operation in industrial environments.
- Low Noise — Dual Slope Integration provides excellent noise rejection.

The **Digitec D2471** Series are 4-1/2 digit, high-accuracy, line-powered, single-range panel meters. The series offers a high-brightness LED displays with five DC ranges from 20mV full scale with 1  $\mu$ V resolution, to 200V full scale with 10mV resolution.

All models provide automatic zero calibration, accuracy of  $\pm 0.005\%$  rdg  $\pm 2$  digits, and an auxiliary power supply output of  $\pm 12$  VDC or + 5VDC. Options include a direct readout in engineering units such as psi, pH, °C, or °F (all models). Any model may be adapted to 4-20mA current-loop and 1-5 V voltage loop data transmitters.

INPUT CIRCUIT & ACCURACY (Single-ended input)

RANGE	ACCURACY @23°C %1°C
20mV	$\pm 0.005\%$ rdg $\pm 3d$
200mV	$\pm 0.005\%$ rdg $\pm 2d$
2V*	
20V*	

\*Accuracy at Zero:  $\pm 1$  count 0°C to 50°C. Typically Zero up to 40°C.

ORDERING INFORMATION

RANGE	115 VAC MODEL	230 VAC MODEL
0-19.999 mV	D2471-0280593	D2471-0280592
0-199.99 mV	D2471-0280561	D2471-0280556
0-1.9999 V	D2471-0280562	D2471-0280557
0-19.999 V	D2471-0280563	D2471-0280558
0-200 $\mu$ A	D2471-0286650	D2471-0286655
0-2mA	D2471-0286651	D2471-0286656
0-20mA	D2471-0286652	D2471-0286657
0-200mA	D2471-0286653	D2471-0286658
0-2A	D2471-0286654	D2471-0286659

## SPECIFICATIONS

DISPLAY	Scale length	±1999
	Type of display	0.56" high brightness LED
	Polarity	Negative inputs: minus sign at far left Positive inputs: blank at far left
	Overrange Indication	Alternating between Indication 0000 and a 1 in the MSD location, with the polarity sign preserved
	Decimal-points	Available at any of the following four positions by connecting a selected terminal to Pin N: 1.XXXX 1X.XXX 1XX.XX 1XXX.X
ANALOG INPUT	Configuration	Bipolar, single ended
	Input Resistance	1000 megohms
	Bias Current	7nA max., 20mV @ 23°C 2nA, 200mV @ 23°C 200pA, 2V @ 23°C 20pA, 200V @ 23°C
	Input Protection	19.999mV: ±20V 199.99mV: ±60V 1.9999V: ±150V 19.999V: ±500V
	NMRR	Filter Single-pole, optimized 65 dB typical, 50 dB min
	Rejection Ratio	50 or 60 Hz
CONVERSION TECHNIQUE	Dual slope (U.S. Patent 3,051,939) A/D conversion with Auto-zero and single reference. Conversion is "true bipolar" for accurate tracking through zero.	
	Conversion Rate	2.5/SEC
	Signal Integration Time	100 mSEC
WARM UP REQUIREMENTS	F.S. Calibration	10 minutes max (within .01% final value)
	Long Term Stability	90 days within rated accuracy
	Long Term Stability	±1 count over full operating at Zero temperature range
COMMON MODE	(CMRR AC)	120 dB typical; 100 dB min. at 60 Hz if unbalanced
	Max. Common	500V RMS
POWER REQUIREMENTS	Power	117/220/240VAC (±10%)
	Frequency	47Hz - 440 Hz
	Power Consumption	3.5W (Full Lit Display)
TEMPERATURE	Operating	0°C -50°C
	Storage	-55°C to + 85°C
HUMIDITY	55 °C at 85% RH non-condensing	
PERFORMANCE	Accuracy	±0.005% of reading ±2 counts
	Resolution	±0.005% for 19999 counts
	Range Tempco	±2 ppm of reading/ °C typical ±10 ppm of reading/ °C max.
	Zero Stability	±1 count of offset at zero from 0° to 50°C
	Step Response	within 1 count final value within 1 conversion for ±F.S. step input
DIMENSIONS	Bezel	4"W x 1.75"H x .56"D (101.6 x 44.45 x 14.22mm)
	Body	3.875"W x 1.67"H x 4.0"D (98.42 x 42.42 x 101.6mm)
PANEL CUTOUT	3.924"W x 1.682"H (99.67 x 42.72)	
WEIGHT	Approximate 13 ounces (364 grams)	