

Eclipse Series — Durant®



Cat. No. 57700400

Features

- 4 Full digits
- 1/8 DIN Size
- Red, LED display
- 0.56" (14 mm) high characters
- Scalable display
- Flashing alarms
- Maximum/minimum data hold
- Optional analog, relay and RS-485 outputs
- NEMA 4X
- Depluggable terminal blocks

Standards and Certifications

- UL and cUL Listed, CE Marked

Technical Data and Specifications

Input Power

- AC Powered Models (57751-4XX)
 - Input Power: 85 – 265V AC, 47 – 63 Hz, 20 VA
 - External Fuse: 0.2A, 250V AC, Time Delay (T200mA, 250V)
 - Isolation Dielectric Strength: 2300V AC
- DC Powered Models (57750-4XX)
 - Input Power: 9-30V DC, 12 VA
 - External Fuse: 2.0A, 50V DC, Time Delay (T2A, 50V)
 - Reverse Voltage Protection: Yes
 - Isolation Dielectric Strength: 2300V AC to signal inputs and relays, 500V AC to RS-485 and analog outputs

Human Interface

- Display: ± 4 full digits
- Type: 0.56" (14 mm) high, seven segment, red LED
- Update Time: 0.4 seconds
- Alarm: Flashing display
- Indicator: One red LED program/calibration indicator with max./min. capture and hold

Data Retention

- Memory Type: EEPROM, no batteries required
- Duration: 100 years

Signal Input

- DC Voltage Models (5770X-40X) —
 - Range: ± 199.9 mV DC, ± 1.999 V DC, ± 19.99 V DC, ± 199.9 V DC, DIP Switch Selectable
 - Impedance: 1 M Ω (ohms)
 - Overrange: 750V DC/530V AC except 220V DC/AC on 199.9 mV range
 - Accuracy: $\pm 0.1\%$ of reading, $\pm 0.03\%$ FS, ± 0.5 digit, and ± 80 PPM/ $^{\circ}$ C
- AC Voltage Models (5770X-41X) —
 - Range: 199.9 mV AC, 1.999V AC, 19.99V AC, 199.9V AC, DIP Switch Selectable, all ranges true RMS
 - Frequency: 40 to 1000 Hz
 - Impedance: 1 M Ω (capacity coupled)
 - Overrange: 750V DC/530V AC except 220V DC/AC on 199.9 mV range
 - Accuracy: $\pm 0.5\%$ of reading, $\pm 0.13\%$ FS, ± 0.5 digit, ± 180 PPM/ $^{\circ}$ C for crest factor = 1; plus $\pm 0.7\%$ for crest factor = 1 to 3; and $\pm 2.5\%$ for crest factor = 5

- DC Current Models (5770X-42X) —
 - Range: ± 199.9 μ A DC, ± 1.999 mA DC, ± 19.99 mA DC, ± 199.9 mA DC, DIP Switch Selectable
 - Impedance: 199.9 mV/selected range
 - Overrange: 30 mA (1 99.9 μ A range), 100 mA (1.999 mA range), 300 mA (19.99 mA range), 1 A (199.9 mA range)
 - Accuracy: $\pm 0.1\%$ of reading, $\pm 0.03\%$ FS, ± 0.5 digit, and ± 120 PPM/ $^{\circ}$ C
- AC Current Models (5770X-43X)
 - Range: 199.9 μ A AC, 1.999 mA AC, 19.99 mA AC, 199.9 mA AC, DIP Switch Selectable, all ranges true RMS
 - Frequency: 40 to 1000 Hz
 - Impedance: 199.9 mV/selected range (shunt output capacitive coupled)
 - Overrange: 30 mA (11 99.9 μ A range), 100 mA (1.999 mA range), 300 mA (19.99 mA range), 1A (199.9 mA range)

- Accuracy: $\pm 0.5\%$ of reading, $\pm 0.13\%$ FS, ± 0.5 digit, and ± 200 PPM/ $^{\circ}$ C for crest factor = 1; plus $\pm 0.7\%$ for crest factor = 1 to 3; and $\pm 2.5\%$ for crest factor = 5

■ 5A AC Models (5770X-44X) —

- Range: 5A AC, true RMS
- Frequency: 40 to 1000 Hz
- Impedance: 0.02 ohms (shunt output capacitive coupled)
- Overrange: 10A Maximum
- Accuracy: $\pm 0.4\%$ of reading, $\pm 0.13\%$ FS, ± 0.5 digit, and ± 200 PPM/ $^{\circ}$ C for crest factor = 1; plus $\pm 0.7\%$ for crest factor = 1 to 3; and $\pm 2.5\%$ for crest factor = 5

■ Process Models (5770X-45X) —

- Range: 4 – 20 mA DC, 0 – 10V DC, 1 – 5V DC; separate input terminals for voltage and current signals
- Impedance: 100 Ω (current input) and 1.27 M Ω (voltage input)
- Overrange: 50 mA maximum (current input) and 100V maximum (voltage input)
- Power Output: 24V DC $\pm 10\%$, 90 mA max, short circuit protected
- Accuracy: $\pm 0.1\%$ of reading, $\pm 0.03\%$ FS, ± 0.5 digit, and ± 80 PPM/ $^{\circ}$ C

Optional Outputs

- Relay Board —
 - Dual relay: 1 set of form C contacts each
 - Contact rating; 5A, 250V AC or 30V DC
 - Isolation dielectric strength: 2300V AC
- Analog Retransmission —
 - Output Signals: 4 – 20 mA ($< 750 \Omega$) and 0 – 10V ($> 2500 \Omega$)
 - Accuracy: 0.13% FS, 100 PPM/ $^{\circ}$ C, 0.07% FS change with 4 – 20 mA load, $\pm 0.3\%$ FS for 4 – 20 mA output, only after exposure to 85% relative humidity
 - Isolation dielectric strength: 2300V AC to signal inputs, relays and AC power input; 500V AC to RS-485 and DC power inputs

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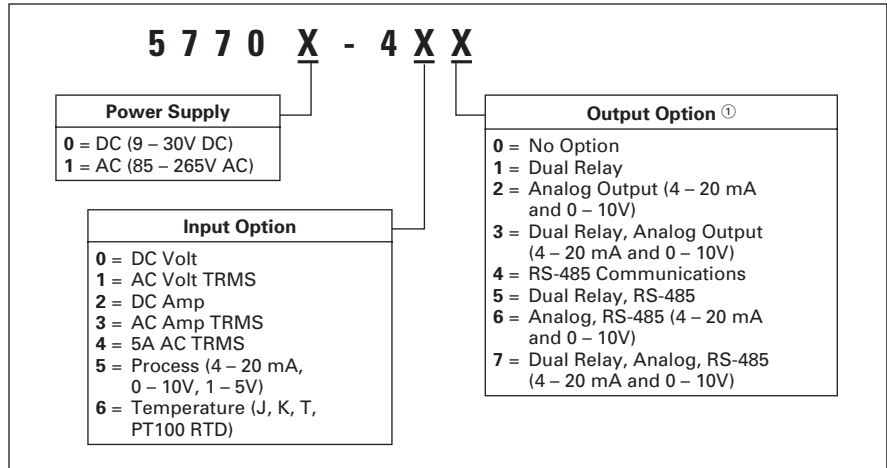
- RS-485 Serial Communication —
 - Baud Rate: 1200, 2400, 4800, 9600 or 19,200, programmable
 - Parity: Even, odd or no parity
 - Address Range: 00 to 99 decimal
 - Protocol: Opto 22® compatible
 - Isolation Dielectric Strength: 2300V AC to signal inputs, relays, and AC power input; 500V AC to analog outputs and DC power inputs

Environmental

- Operating Env.: Indoor use to 2000 meters
- Temperature —
 - Operating: 32 to 122°F (0 to 50°C)
 - Storage: -4 to 158°F (-20 to 70°C)
- Humidity: 0 to 85% RH, non-condensing
- Vibration: 2.5 Gs, 30 to 200 Hz
- Shock: 30 Gs, 11 mS half sinewave
- EMC/EMI: Per EN 61326-1 Industrial
- Front Panel: NEMA 4X when mounted with gasket provided
- Agency Approval:
 - CE EMC immunity and emissions requirements were met using shielded wiring on the RS-485, analog output and signal input lines. The shields were connected to earth ground at the Eclipse end of the shields.
 - Conducted emissions requirements were met assuming that the AC signal input would not be connected directly to the AC Mains.
 - The measurement error during RF immunity testing was less than ±5% of full scale. In addition, models with an AC signal input had measurement error of less than +25% of full scale during RF immunity testing of the RS-485 at frequencies below 1 MHz.
- Pollution Deg. 2: Overvoltage Category II

Catalog Number Selection

Table 54-62. Eclipse Series Digital Panel Meters Numbering System



① Output Options 0, 2, 4 are not available for models -41X and -43X.

Dimensions

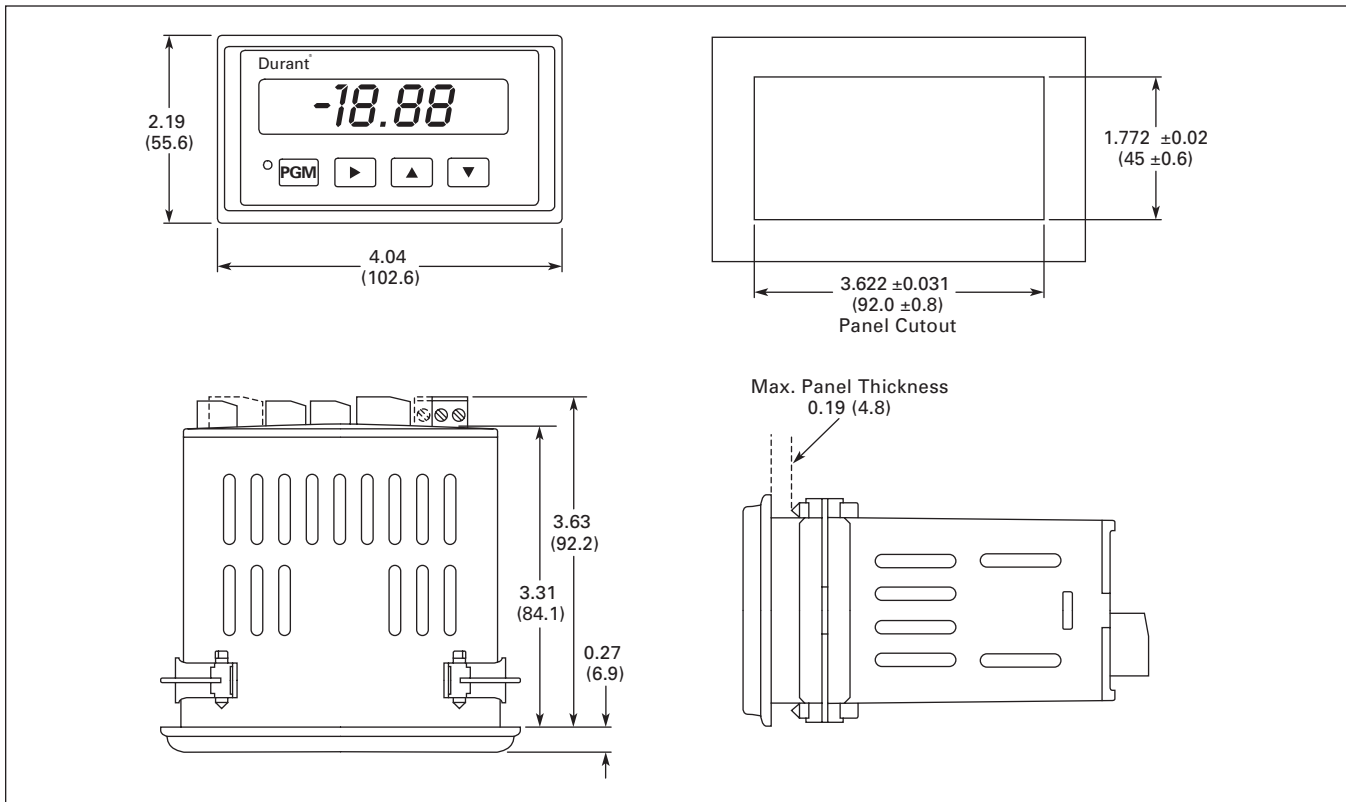


Figure 54-55. Eclipse Series Digital Panel Meters — Approximate Dimensions in Inches (mm)