

Electronic Elapsed Hour Counters

Panel Mounting – Type 231



Connections:
1 Reset
2 Enable
3 Supply L (common)
4 Supply N

H = 24, W = 48, D = 31.5 (overall)
Panel cut-out = 22.2 45

- Elapsed hour meter housed in DIN case sealed to **IP65**
- Finger proof protected to **IP20**
- Supply voltage connection permits permanent display
- Separate start input connection
- Non-volatile memory allows data retention 25yrs minimum
- Remote electrical reset facility
- Wide temperature range, low power consumption, high shock resistance

Supply voltage 80 to 230V ac $\pm 10\%$ 50/60Hz
Display 6 digit LCD, 99999.9hr, 5mm height
Operating temperature -30°C to +65°C

87X

Mfrs. List No.	Order Code	1+	5+	10+	25+	50+	Price Each
MC 322-500	516-259						

Elapsed Hours/Mins/Secs Counter

6 Digit LCD Elapsed Time Indicator



- 6-digit LCD display (7mm high digits)
- Crystal-controlled time base (accuracy ± 50 ppm)
- Start input and zero reset
- Integral module for voltage inputs (5-50V ac/dc, 48-240V ac)
- 4 time ranges: 99,999.9hr, 99,999.9min, 99hr 59min 59sec, 99,999.9sec
- Possibility to load current value
- Lithium battery, 5 year life (with isolation switch)

H = 24, W = 48, D = 67

- Panel or remote reset with inhibit facility
- Front panel protection to **IP66**

Input Type	Mfrs. List No.	Order Code	1+	5+	10+	25+	50+	100+	Price Each
Solid State	87610140	717-0919							
Voltage	87610150	717-0920							

Counter and Elapsed Hour Counter Modules

PCB Mounting Modules



Pin connections
P V+
N V- (common)
I Signal/Pulse input
R Reset*
*At supply voltage for 2s (max)

PCB: H = 19, W = 33, D (above PCB) = 5 Pin spacing = 14 28

Note: For proper mechanical support, all 4 pins should be soldered to the PCB.

- Electronic elapsed hour and pulse counters suitable for PCB mounting
- Supply voltage connection permits permanent display if required
- Non-volatile memory allows data retention for 25yrs
- Remote electrical reset facility, wide temperature and voltage range
- Low power consumption, high shock and vibration resistance

Supply voltage 12-48V dc (nom), .9V dc (min), 60V dc (max)
Display 6 digit LCD, 99999.9hr/999999, 5mm height (Hour glass icon and D.P. on hours meter only)
Count frequency 500Hz (pulse counter)
Operating temperature -40°C to +85°C

Mfrs. List No. CD701-024 = 516-284, CD703-025 = 516-296

89

	Order Code	1+	5+	10+	25+	50+	Price Each
Hours counter	.516-284						
Pulse counter	.516-296						

Electromechanical Counters

7 Digit Non-Reset – F703

Miniature PCB Mounting



- Miniature 7-digit non-reset counters housed in translucent plastic case with magnifier window
- Solder pin connections on base suitable for flow soldering
- Insensitive to external magnetic fields and resistant to shock

H = 14 (excl. pins), W = 25, D = 31, Pin fixing centres = 15.2 25.4, Pins L = 6.5, Dia = 0.6

Max. count speed 10ips Power consumption 12V: 250mW
Min. pulse time 50ms 24V: 460mW
Pulse/pause ratio 1:1 Temperature range -20°C to +70°C
Voltage tolerance $\pm 10\%$

Note: This range replaces range previously offered Order Codes 233-316, 233-328 with opposite polarity.

Mfrs. List No: F703.70BP/12VDC = 472-268, F703.70BP/24VDC = 472-270

78

Voltage	Order Code	1+	25+	100+	250+	Price Each
12V dc	472-268†					
24V dc	472-270†					

†Available until stocks are exhausted

6 Digit Non-Reset – Type 635

Miniature Panel Mounting



- Miniature 6-digit non-reset counters for panel mounting
- Housed in translucent plastic case with magnifier window
- DC types feature high shock resistance with solder pin connections
- 230Vac type has screw terminal connections

dc: H = 20, W = 30, D = 34 (behind bezel, excl. pins)
ac: H = 20, W = 30, D = 43 (behind bezel, excl. tmls)
Panel cut-out = 14.2 27

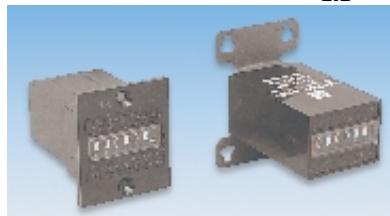
dc Types ac Type
Max. count speed 10 ips 10 ips
Min. pulse time 50ms 50ms
Pulse/pause ratio 1:1 1:1
Voltage tolerance $\pm 10\%$ -10 +6%
Power consumption 5V, 12V: 78mW, 24V: 155mW 665mW
Front face protection **IP66** **IP65**
Temperature range -40°C to +85°C -10°C to +70°C

Mfrs. List No: 0.635.812 = 233-262, 0.635.808 = 233-274, 0.635.810 = 233-286, 0.635.815 = 233-298

76X

Voltage	Order Code	1+	10+	100+	250+	Price Each
5V dc	233-262					
12V dc	233-274					
24V dc	233-286					
230V ac	233-298					

6 Digit Non-Reset – 7790 Series



Panel Mounting: H = 45.7, W = 38.7, D = 54.9
Base Mounting: H = 58.7, W = 39.7, D = 59.6
Panel cut-out: H = 29.4, W = 36.5
Fixing centres = 47.2 30.5
Fixing centres = 35.6

- 6-digit non-resettable counters housed in a black polycarbonate case
- Available in panel or base mounting versions
- Count coil can be continuously energised without adversely affecting life span
- Electrical connections are via two 25cm flying leads
- **UL approved**

Max. Count speed 10ips
Minimum input time 50ms
Minimum pause time 50ms
Power consumption 5VA ac types, 1.5W dc types
Voltage tolerance $\pm 10\%$ or 10V, whichever is limiting
Count life 10 million counts dc version, 2 million counts ac version
Operating temperature range 0°C to +50°C