

Pulse counters, electronic

LCD modules	Adding, 7 digits (DC)	190
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The single-channel count module type 190 for PCB mounting, with 2 voltage ranges (4.75 ... 15 and 9 ... 60 V DC) and large 7-digit LCD display, boasts a very wide temperature range.

This ensures the device is extremely robust and suitable for many application areas, even under the harshest operating conditions.



DC 4.75 ... 60 V Supply voltage	max. 10 kHz Max. count frequency	PNP Input type	000000 High shock resistance	-40°...+80°C Temperature range	PCB mount	123... 7 LCDs LCD display	12345 00000 Electrical reset
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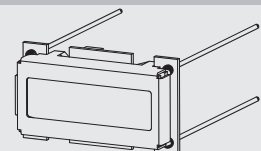
Powerful

- Count frequency up to 10 kHz.
- 7-digit LCD display, 6 mm high.
- Low operating current.
- Wide operating voltage and temperature range.
- Very high shock and vibration resistance.

Simple

- Non-volatile memory (no battery).
- Single channel count input.
- Electrical reset.
- Very high reliability.
- Small size and very competitive price.

Order no.		Delivery specification	
Supply voltage	Order no.	Art. no.	· LCD counter module type 190
4.75 ... 15 V DC	6.190.012.F00	162 135	· Operating instructions
9 ... 60 V DC	6.190.012.G00	162 136	



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Technical data

General technical data	
Display	7 digits, LCD display, figure height 6 mm [0.24"]
Data backup	EEPROM
Memory	CMOS EEPROM non-volatile memory up to 10 years data backup
Operating temperature	-40 °C ... +80 °C [-40 °F ... +176 °F] (non-condensing)
Working temperature	-20 °C ... +80 °C [-4 °F ... +176 °F] (non-condensing)
Storage temperature	-50 °C ... +90 °C [-58 °F ... +194 °F]

Inputs		
Count input	HIGH	4 ... 60 V DC
	LOW	0 ... 0.7 V DC
max. counting frequency		10 kHz, edge triggered (negative edge)
Reset input	HIGH	4 ... 60 V DC
	LOW	0 ... 0.7 V DC
pulse length		1 ms edge triggered (positive edge)

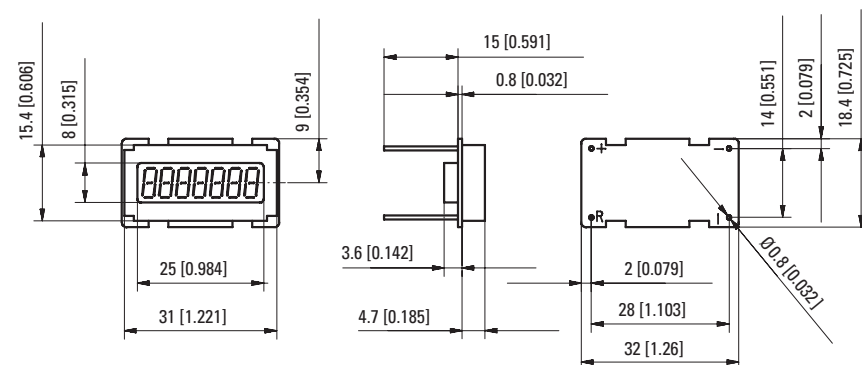
Electrical characteristics	
Supply voltage	4.75 ... 15 V DC with reverse polarity protection 9 ... 60 V DC
Current consumption	8 mA at 4.75 ... 15 V DC 6 mA at 9 ... 60 V DC
EMC standards	EN 55011 class B EN 61000-6-2, EN 61000-6-3, EN 61326-1
The module must be protected against inductive voltage spikes and high energy noise interference.	

Approvals	
CE compliant in accordance with	
EMC Directive	2014/30/EU
RoHS Directive	2011/65/EU

Mechanical characteristics		
Housing	dimensions	18.4 x 32.4 mm [0.72 x 1.28"]
	color	black
Weight		approx. 8 g [0.28 oz]
Shock resistance acc. to EN 60068-2-27		550 m/s ² , 11 ms
Vibration resistance acc. to EN 60068-2-6		50 ... 200 m/s ² , 10 ... 80 Hz

Dimensions

Dimensions in mm [inch]



Terminal assignment

