

# Pulse counters, electronic

**LCD modules**      **Adding, 7 digits (DC)**      **190**



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.



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

### 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.

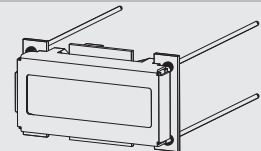
### Order no.

Supply voltage  
4.75 ... 15 V DC  
9 ... 60 V DC

Order no.  
**6.190.012.F00**  
**6.190.012.G00**

Art. no.  
162 135  
162 136

Delivery specification  
· LCD counter module type 190  
· Operating instructions



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## LCD modules Adding, 7 digits (DC) 190

### Technical data

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

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

Electrical characteristics	
<b>Supply voltage</b>	4.75 ... 15 V DC with reverse polarity protection 9 ... 60 V DC
<b>Current consumption</b>	8 mA at 4.75 ... 15 V DC 6 mA at 9 ... 60 V DC
<b>EMC standards</b>	EN 55011 class B EN 61000-6-2, EN 61000-6-3, EN 61326-1

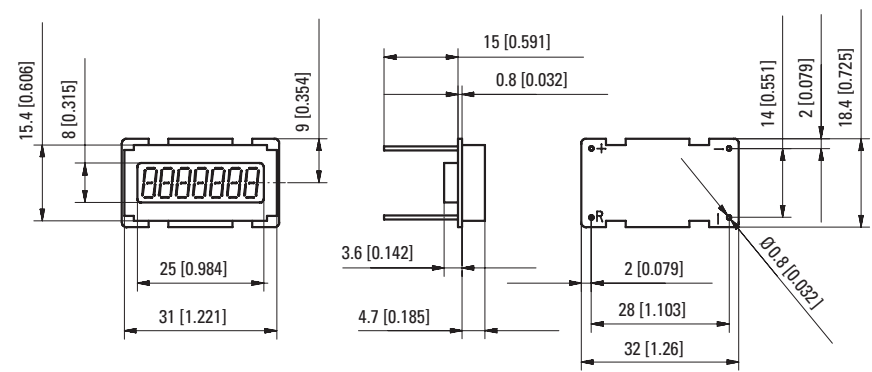
Approvals	
CE compliant in accordance with	
EMC Directive	2014/30/EU
RoHS Directive	2011/65/EU

The module must be protected against inductive voltage spikes and high energy noise interference.

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

### Dimensions

Dimensions in mm [inch]



### Terminal assignment

