

## Universal Programmable Counter CT34



- ◆ Available as totalizer, R.P.M. meter, and combined
- ◆ One or two 6-digit LED displays
- ◆ Pulse- and analog-input versions
- ◆ Programmable divider and multiplier
- ◆ Pulse counting and batch counting
- ◆ Additional inputs CLEAR, GATE, and DIRECTION
- ◆ 6 user-selectable operating modes plus dosing mode
- ◆ Up to 2 programmable relay outputs
- ◆ Optional optical input isolation up to 1500 VAC
- ◆ RS485 serial interface available



CT34 is a sophisticated new-generation counter equipped with a 6-digit display, which can hold up to 999999 count units or batches, and may have up to 2 programmable relay outputs and an analog output for alarm signaling or process controlling. CT34 is available as a counter, as an R.P.M. meter, and as a combination of both. As a counter, this model allows programming of 7 different counting and output-relay-action modes (including dosing mode) as well as counting pulses or pulse batches. The R.P.M.-meter variant has 6 operating modes. Besides its counting input, CT34 has 3 additional inputs – CLEAR, GATE, and DIRECTION – and a user-programmable software input filter. Other useful features include fraction number coefficient prescaler and programmable actual and displayed counting directions. With its various features and flexible programmable internal structure, the CT34 counter is a widely applicable device.

### Technical specifications

#### Inputs

<b>Counting input:</b>	
- pulse, w/ programmable active front	mechanical contact (NO) or electronic (from PNP / NPN sensor)
- analog, programmable <sup>(1,2)</sup>	0(4)...20 mA or 0...5(10) V
<b>Input CLEAR</b>	resets counter to '0' (4 functions)
<b>Input GATE</b>	enables pulse counting
<b>Input DIRECTION <sup>(3)</sup></b>	changes counting direction
<b>Maximum input frequency</b>	5 kHz
<b>Input filter</b>	for suppression of contact bouncing
<b>Prescaler coefficients</b>	1...9999, multiplying and dividing
<b>Input isolation (option) <sup>(3)</sup></b>	optical, 1500 VAC

#### Modes

<b>Operating modes</b>	7 (incl. dosing mode)
<b>Counting modes</b>	pulse counting and batch counting
<b>Counting range</b>	0...2147483647
<b>Programming</b>	through keyboard

<b>Outputs</b>	<i>(up to 2 outputs)</i>		
<b>Relay electromechanical</b>	5A/250V w/ NO/NC <sup>(4)</sup>	contact	
<b>Solid state relay <sup>(5)</sup></b>	1A/250VAC		
<b>MOS gate <sup>(6)</sup></b>	0.1A/60V, optically isolated		
<b>Transistor gate <sup>(6)</sup></b>	open collector, 40mA/40V		
<b>Output for external SSR</b>	5...24 V, 30 mA		
<b>Relay action</b>	according to the mode <sup>(7)</sup>		
<b>Output pulse duration</b>	0.1...99.9 s, programmable		
<b>Analog output <sup>(8)</sup></b>	0(4)...20 mA or 0...10 V, isolated		
<b>Serial interface <sup>(1)</sup></b>	RS485, isolated		

#### Indication and controls

<b>PV display</b>	6 LED indicators, 9 mm
<b>SP display <sup>(1)</sup></b>	6 LED indicators, 9 mm
<b>LEDs</b>	2 LEDs for output state
<b>Keyboard</b>	4 membrane keys
<b>Power supply</b>	
<b>Mains supply voltage</b>	230 VAC or 115 VAC
<b>SMPS voltage</b>	90...250 V
<b>Isolated low voltage</b>	12...24 V <sup>(5)</sup> or 24 VAC
<b>Non-isolated low voltage</b>	12...24 V
<b>Consumption</b>	max. 6 VA

#### Operating conditions

<b>Ambient temperature</b>	-10...65 °C
<b>Ambient humidity</b>	0...85 %RH
<b>Storage temperature</b>	-20...65 °C
<b>Storage humidity</b>	0...95 %RH, non-condensing

#### Design and materials

	'L'	'S'	'H'
<b>Dimensions [mm]</b>	76x35x62	48x48x110	96x48x107
<b>Mounting</b>	panel	panel	panel
<b>Panel cutout [mm]</b>	71x29	45x45	90x42
<b>Mounting depth [mm]</b>	56	100	98
<b>Maximum weight [g]</b>	180	200	280
<b>Protection, front/terminals</b>	IP54/20	IP54/20	IP54/20
<b>Increased front IP (option)</b>	IP65	-	IP65
<b>Case material</b>	plastic	plastic	plastic
<b>Wiring (terminals)</b>	screw	screw	plug-in

<sup>(1)</sup> Not available for case 'L'

<sup>(2)</sup> Available ONLY for variant 'CR'!

<sup>(3)</sup> Only with pulse input type!

<sup>(4)</sup> NO for case 'L'

<sup>(5)</sup> Ask for availability!

<sup>(6)</sup> ONLY with isolated power supply!

<sup>(7)</sup> In case of variant 'CR' with pulse input, if not additionally specified, 1<sup>st</sup> relay is linked to counter and 2<sup>nd</sup> – to R.P.M. meter. With analog input, 1<sup>st</sup> relay is firmly linked to counter and 2<sup>nd</sup> relay is user programmable.

<sup>(8)</sup> Instead of 2<sup>nd</sup> relay (\_G5)!

<sup>(9)</sup> Not available for case 'S'

**Ordering code** CT34\* - G0.G1.G3.G5G5.G9"9".G11 - #1.#2

Code	Feature or option	Code values
*	Variant	<b>C</b> - totalizing counter, <b>R</b> - R.P.M. meter, <b>CR</b> - combined
<b>G0</b>	Case (front size)	<b>H</b> - 96x48 mm, <b>S</b> - 48x48 mm, <b>L</b> - 72x36 mm
<b>G1</b>	Power supply	<b>A</b> - 230 VAC, <b>B</b> - 115 VAC, <b>C</b> - 90...250 V, <b>P</b> - 12...24 V, non-isolated, <b>Q</b> - 12...24 V, isolated <sup>(5)</sup> , <b>R</b> - 24 VAC
<b>G3</b>	Counting input	<b>P</b> - pulse, <b>A</b> - analog <sup>(1,2)</sup>
<b>G5</b>	Relay output <sup>(7)</sup>	<b>X</b> - none, <b>C</b> - relay NO/NC <sup>(4)</sup> , <b>D</b> - SSR <sup>(5)</sup> , <b>E</b> - open collector NPN <sup>(6)</sup> , <b>J</b> - for external SSR, <b>M</b> - isolated MOS gate <sup>(5)</sup>
<b>G9'</b>	Serial interface	<b>X</b> - none, <b>B</b> - RS485 <sup>(1)</sup>
<b>G9"</b>	Protocol	<b>A</b> - ASCII, <b>C</b> - ASCII for " PolyMonitor" <sup>(5)</sup>
<b>G11</b>	Analog output <sup>(8)</sup>	<b>X</b> - none, <b>E</b> - 0...20 mA, <b>F</b> - 4...20 mA, <b>K</b> - 0...10 V
<b>#1</b>	Input isolation	<b>X</b> - none, <b>I</b> - input isolation <sup>(3)</sup>
<b>#2</b>	Increased front protection	<b>X</b> - none, <b>P</b> - IP65 front protection <sup>(9)</sup>