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

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

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

Indication and controls	
PV display	6 LED indicators, 9 mm
SP display [1]	6 LED indicators, 9 mm
LEDs	2 LEDs for output state
Keyboard	4 membrane keys

Power supply	
Mains supply voltage [1]	230 VAC or 115 VAC
SMPS voltage	90…250 VAC/DC
Isolated low voltage	12…24 VAC/DC [5] or 24 VAC [1]
Non-isolated low voltage	12…24 VAC/DC
Consumption	max. 6 VA

Operating conditions	
Operating temperature	-10...65 °C
Operating humidity	0...85 %RH
Storage temperature	-20...65 °C
Storage humidity	0...95 %RH, non-condensing

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

[1] Not available for case 'L'
[2] Available ONLY for variant 'CR'!
[3] Only with pulse input type!
[4] NO for case 'L'
[5] Ask for availability!
[6] ONLY with isolated power supply!
[7] In case of variant 'CR' with pulse input, if not additionally specified, 1st relay is linked to counter and 2nd – to R.P.M. meter. With analog input, 1st relay is firmly linked to counter and 2nd relay is user programmable.
[8] Instead of 2nd relay (_G5)!
[9] Not available for case 'S'

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

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