Pulse counters, electronic

LED pulse counters
Adding (AC+DC)


Codix 540

The Codix 540 is a simple voltage powered pulse counter for fast and slow count pulses, with 6-digit LED display for NPN, PNP input signals.


## Powerful

- Fast count input - input frequency max. 60 kHz
- Robust housing - IP65 protected
- Very bright LED display, 14 mm high
- Simple totalizing and quantity counter
- single channel count input and reset input
- programmable for positive (PNP) or OV (NPN) switching input pulses
- fast count input with an input frequency of max. 60 kHz , can be damped to 30 Hz for mechanical contacts
- Short start-up time - detects input pulses just 16 msec after being switched on => no pulses are lost with a simultaneous motor start-up



## User-friendly and universal

- Large keys - can also be operated when wearing gloves
- Simple uniform menu-driven programming and operation - possible to enter the programming also during operation with a confirmation prompt
- Programmable decimal point, can be set from 0.0 to 0.000
- Manual or electrical reset - tamper-proof due to lockable reset function
- AC or DC supply voltage with sensor supply voltage
- As an alternative to the HTL inputs, devices are available with a 4 ... 30 V DC input level, for use as parallel displays to PLCs

| Order code | 6.540 | 012 | $\left.\left\|\begin{array}{l} X \\ \underset{\bigotimes}{X} \end{array}\right\| \underset{\substack{ }}{ } \right\rvert\, 0$ |  |
| :---: | :---: | :---: | :---: | :---: |
| (a Supply voltage |  |  |  | Delivery specification |
| $0=100 . . .240 \mathrm{VAC}, \pm 10 \%{ }^{11}$ |  |  |  | Digital display |
| $3=10 . . .30 \mathrm{~V} \mathrm{DC}{ }^{11}$ |  |  |  | - Mounting clip |
|  |  |  |  | - Gasket |
| (b) Input switching level |  |  |  | - Instruction manual, multilingual |
| $0=$ Standard (HTL) ${ }^{11}$ |  |  |  | - 2 screw terminals |
| $\mathrm{A}=4 \ldots 30 \mathrm{VDC}$ |  |  |  |  |

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Accessories / Mounting examples


|  |  | Type / size | Description |  | Order no. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Gasket counter |  |  | $96 \times 49 \mathrm{~mm}$ [3.78 x $1.93{ }^{\text {" }}$ ] |  | N511031 |  |
| Mounting frame |  | $\begin{aligned} & \text { cut-out } \\ & 92 \times 45 \mathrm{~mm} \\ & \text { [3.62 x } \left.1.77^{\prime \prime}\right] \end{aligned}$ | for snap-on mounting on 35 mm [1.38"] top-hat DIN rail | grey | G300005 | - |
| Screw terminal (Replacement part) |  |  | $\begin{array}{\|l\|l} 1 \ldots . .7 \text {, pitch } 3.81 \\ 1 \ldots . .2 \text {, pitch } 5.08 \end{array}$ | $\begin{aligned} & 7 \mathrm{pin} \\ & 2 \mathrm{pin} \end{aligned}$ | $\begin{array}{l\|} \hline \text { N100387 } \\ \hline \text { N100133 } \\ \hline \end{array}$ |  |

incl. in delivery

Technical data

| General technical data |  |
| :--- | :--- |
| Display | 6 digit, red 7 segment <br> LED display; $14 \mathrm{~mm}\left[0.555^{\prime}\right]$ high |
| Data backup | EEPROM |
| Operating temperature | $-20^{\circ} \mathrm{C} \ldots+65^{\circ} \mathrm{C}\left[-4^{\circ} \mathrm{F} \ldots+149^{\circ} \mathrm{F}\right]$ <br> $($ non-condensing $)$ |
| Storage temperature | $-25^{\circ} \mathrm{C} \ldots+70^{\circ} \mathrm{C}\left[-13^{\circ} \mathrm{F} \ldots+158^{\circ} \mathrm{F}\right]$ |
| Relative humidity <br> at $+30^{\circ} \mathrm{C}\left[+86^{\circ} \mathrm{F}\right]$ | $<85^{\%} \%$ (non-condensing) |
| Altitude | up to $2000 \mathrm{~m}\left[6562^{\prime}\right]$ |


| Electrical characteristics |  |  |
| :--- | :--- | :--- |
| Supply voltage | $10 \ldots 30 \mathrm{VDC}$, with reverse <br> polarity protection <br> $100 \ldots 240 \mathrm{VAC}, \pm 10 \%$ |  |
| Current consumption | max. $50 \mathrm{~mA}, 8 \mathrm{VA}$ |  |
| EMC standards | EN 55011 class B, |  |
|  |  | EN $61000-6-2$, EN 61000-6-3 |


| Mechanical characteristics |  |
| :---: | :---: |
| Housing | front panel mount $96 \times 48 \mathrm{~mm}$ [3.74 x 1.89"] acc. to DIN 43700; RAL 7021, dark grey |
| Protection | IP65 (front side) |
| Weight | approx. $150 \mathrm{~g}[5.29 \mathrm{oz}]$ |
| Inputs |  |
| Polarity of inputs | programmable, NPN or PNP for all inputs |
| Input resistance | approx. $5 \mathrm{k} \Omega$ |
| Counting frequency ${ }^{1 /}$ | max. 60 kHz , can be damped to 30 Hz |
| Minimum pulse duration of the reset input | 5 ms |
| Input switching level standard version (HTL) |  |
| DC supply voltage LOW | $0 \ldots 0.2 \times \mathrm{U}_{\mathrm{B}}(\mathrm{V}$ DC) |
| HIGH | $0.6 \times \mathrm{U}_{\mathrm{B}} \ldots 30 \mathrm{~V}$ DC |
| AC supply voltage LOW | 0... 4 V DC |
| HIGH | $12 . . .30 \mathrm{~V}$ DC |
| Input switching level at $4 . . .30 \mathrm{~V}$ DC |  |
| LOW | 0 ... 2 V DC |
| HIGH | 4 ... 30 V DC |

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## Applications for pulse counters / totalizers

- Simple count tasks such as quantity and piece counting
- Accessories, OEM equipment or retrofitting to production machines
- Piece counting on die cutters, presses, extruders, woodworking machines, drilling machines, pick-and-place machines, guillotines, special-purpose vehicles etc.


Piece-counting


Number of cuts


Piece-counting on conveyor

## Block diagram



## Terminal assignment


Connection X1

| PIN | AC version | DC version |
| :--- | :--- | :--- |
| 1 | n.c |  |
| 2 | n.c |  |
| 3 | Reset |  |
| 4 | n.c |  |
| 5 | INP |  |
| 6 | GND out | n.c. |
| 7 | +24 V DC out | n.c. |

Connection X2

| PIN | AC version | DC version |
| :--- | :--- | :--- |
| 1 | $100 \ldots 240 \mathrm{VAC}, \pm 10 \%$ | OVDC (GND) |
| 2 | $100 \ldots 240 \mathrm{VAC}, \pm 10 \%$ | $10 \ldots 30 \mathrm{VDC}$ |

## Dimensions

Dimensions in mm [inch]



[^0]:    Outputs
    Voltage output for sensors (AC version) 24 V DC $\pm 15 \% / 100 \mathrm{~mA}$

