

## High-speed counter with automatic detection of rotation direction

These counter modules detect signals with a frequency which cannot be detected by normal input modules. For example, simple positioning tasks or frequency measurements can be realized.

## Special features:

- Input for incremental shaft encoder with automatic forward and reverse detection
- Preset count via external signals or the PLC program with the aid of the PRESET function
- Ring counter function for counting up to a predefined value with automatic resetting to the starting value
- Functions such as speed measurement, definition of switching points or periodic counting are available.
- The modules QD62 $\square$ are provided with a 40-pin connector interface (for suitable connectors, please refer to the chapter "Accessories").
- The module QD60P8-G is provided with a removable terminal block fastened with screws.

| Specifications |  |  | QD62E | QD62 | QD62D | QD60P8-G | QD63P6 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Counter inputs |  |  | 2 | 2 | 2 | 8 | 6 |
| Signal levels |  |  | $5 / 12 / 24 \mathrm{VDC}(2-5 \mathrm{~mA})$ | 5/12/24V DC (2-5 mA) | $\begin{aligned} & 5 / 122 / 24 \mathrm{~V} D C(2-5 \mathrm{~mA}) \\ & (\mathrm{RS} 422 \mathrm{~A}) \end{aligned}$ | 5/12/24V DC | 5 V DC ( $6.4-11.5 \mathrm{~mA})$ |
| Max. counting frequency |  | kHz | 200 | 200 | 500 (differential) | 30 | 200 |
| Max. counting speed | 1-phase-input | kHz | 200 or 100 | 200 or 100 | 500 or 200 | 30 | 200,100 or 10 |
|  | 2-phase-input | kHz | 200 or 100 | 200 or 100 | 500 or 200 | - | 200,100 or 10 |
| Counting range |  |  | $\begin{aligned} & 32 \text { bits + sign (binary), } \\ & -2147483648- \\ & +2147483647 \end{aligned}$ | $\begin{aligned} & 32 \text { bits + sign (binary), } \\ & -214743648- \\ & +2147483647 \end{aligned}$ | $\begin{aligned} & 32 \text { bits }+\operatorname{sign} \text { (binary), } \\ & -2147483648- \\ & +2147483647 \end{aligned}$ | 16 bits binary: 0-32767 <br> 32 bits binary: 0-99999999 <br> 32 bits binary: <br> 0-2147483647 | $\begin{aligned} & 32 \text { bits + sign (binary), } \\ & -2147483648- \\ & +2147483647 \end{aligned}$ |
| Counter type |  |  | All modules are equipped with UP/DOWN preset counter and ring counter function. |  |  | Moving average function, alarm output and pre-scale function | UP/DOWN preset counter and ring counter function |
| Comparison range |  |  | 32 bits + sign (binary) | 32 bits + sign (binary) | 32 bits + sign (binary) | 32 bits + sign (binary) | 32 bits + sign (binary) |
| External digital input points | Nominal values |  | Preset, function start |  |  |  | - |
|  |  |  | $5 / 12 / 24 \mathrm{~V}$ DC ( $2-5 \mathrm{~mA}$ ) | 5/12/24V DC (2-5 mA) | $\underset{(\mathrm{RS} 422 \mathrm{~A})}{5 / 12 / 24 \mathrm{~V} C(2-5 \mathrm{~mA})}$ | 5/12/24VDC | $4.5-5.5 \mathrm{~V} / 6.4-11.5 \mathrm{~mA}$ |
| External digital output points (coincidence signal) |  |  | 2 points/channel $12 / 24 \mathrm{~V}$ DC 0.1 A/point, <br> $0.4 \mathrm{~A} /$ common (source) | 2 points/channel $12 / 24 \mathrm{~V}$ DC $0.5 \mathrm{~A} / \mathrm{point}$, <br> $2.0 \mathrm{~A} /$ common (sink) | 2 points/channel $12 / 24 \mathrm{~V}$ DC <br> $0.5 \mathrm{~A} / \mathrm{point}$, <br> $2.0 \mathrm{~A} /$ common (sink) | - | - |
| 1/0 points |  |  | 16 | 16 | 16 | 32 | 32 |
| Connection terminal |  |  | 40-pin connector at the front | 40-pin connector at the front | 40-pin connector at the front | 18-point removable terminal block with screws | 40-pin connector |
| Applicable wire size |  | $\mathrm{mm}^{2}$ | 0.3 | 0.3 | 0.3 | $0.3-0.75$ | 0.3 |
| Internal power consumption (5V DC) |  | mA | 330 | 300 | 380 | 580 | 590 |
| Weight |  | kg | 0.12 | 0.11 | 0.12 | 0.17 | 0.15 |
| Dimensions (WxHxD) |  | mm | 27.4x98x90 | 27.4x98x90 | 27.4×98×90 | $27.4 \times 98 \times 90$ | 27.4×98×90 |
| Order information |  | Art. no. | 128949 | 132579 | 132580 | 145038 | 213229 |
| Accessories |  |  | 40-pin connector and ready to use connection cables (refer to pages 57-58) |  |  |  |  |

