## High Speed Counter Modules

## DC Input Sink Output Type and DC Input Source Output Type

| Model Number |  |  | RD62P2 |  | RD62P2E |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Stocked Item |  |  | S |  | S |  |
| Certification |  |  | UL •cUL • CE |  |  |  |
| Counting Speed Switch Setting (*1) |  |  | 200kpps (100k to 200kpps) $\quad 100 \mathrm{kpps}$ (10k to 100kpps) |  |  | 10kpps |
| Number of Channels |  |  | 2 channels |  |  |  |
| Count Input Signal | Phase |  | 1-phase input (multiple of 1/multiple of 2), 2-phase input (multiple of 1/multiple of 2/multiple of 4), CW/CCW input |  |  |  |
|  | Signal Level (øA, øB) |  | 2 to 5mA at 5/12/24 VDC |  |  |  |
| Counter | Counting Speed (Max.) (*2) |  | 200kpps | 100kpps |  | 10kpps |
|  | Counting Range |  | 32-bit signed binary value (-2147483648 to 2147483647 ) |  |  |  |
|  | Type |  | UP/DOWN preset counter + Ring counter functions |  |  |  |
| Coincidence Output | Comparison Range |  | 32-bit signed binary value |  |  |  |
|  | Comparison Result |  | Set value < Count value, Set value = Count value, Set value > Count value |  |  |  |
| External Input | Preset |  | 7 to 10 mA at $5 / 12 / 24 \mathrm{VDC}$ |  |  |  |
|  | Function - Start |  |  |  |  |  |
|  | Digital Filter |  | $0 \mathrm{~ms}, 0.1 \mathrm{~ms}, 1 \mathrm{~ms}, 10 \mathrm{~ms}$ |  |  |  |
| Pulse <br> Measurement | Measurement Item |  | Pulse width (ON width/OFF width/rise to rise/fall to fall) |  |  |  |
|  | Measurement Resolution |  | 100ns |  |  |  |
|  | Number of Measurement Points |  | 1 point/channel |  |  |  |
| External Output | Coincidence Output | RD62P2 | Transistor (sink type) output, 2 points/channel 12/24 VDC, 0.5A/point, 2A/common |  |  |  |
|  |  | RD62P2E | Transistor (source type) output, 2 points/channel 12/24 VDC, 0.1A/point, 0.4A/common |  |  |  |
| PWM Output | Output Frequency Range |  | DC to 200kHz maximum |  |  |  |
|  | Duty Ratio |  | Arbitrary value (can be set at $0.1 \mu \mathrm{~s}$ ) |  |  |  |
|  | Number of Output Points |  | 2 points/channel |  |  |  |
| Number of Occupied I/O Points |  |  | 16 points (I/O assignment: Intelligent 16 points) |  |  |  |
| Internal Current Consumption (5 VDC) |  |  | 0.11 A |  | 0.20A |  |
| External Dimensions (H x W x D) mm |  |  | $106 \times 27.8 \times 110$ |  |  |  |
| Weight (kg) |  |  | 0.11 |  | 0.12 |  |

## Notes

1. Set the counting speed in the counting speed setting of Basic setting.
2. The counting speed is affected by the pulse rise/fall time. A count can be performed with the following counting speed. Note: Counting pulses of which the rise/fall time is long may result in an incorrect count.

## Differential Input Sink Output Type

| Model Number |  | RD62D2 |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Stocked Item |  | S |  |  |  |  |  |  |  |
| Certification |  | UL •CUL•CE |  |  |  |  |  |  |  |
| Counting Speed Switch Setting (*1) | In Multiple of 1 | - |  | 2Mpps <br> (1M to 2Mpps) | 1Mpps (500k to 1Mpps) | 500kpps (200k to 500kpps) | 200kpps (100k to 200kpps) | $\begin{array}{\|l} \text { 100kpps } \\ \text { (10k to } \\ \text { 100kpps) } \end{array}$ | 10kpps (10kpps or less) |
|  | In Multiple of 2 | - | 4Mpps <br> (2M to 4Mpps) |  |  |  |  |  |  |
|  | In Multiple of 4 | 8Mpps <br> (4M to 8Mpps) |  |  |  |  |  |  |  |
| Number of Channels |  | 2 channels |  |  |  |  |  |  |  |
| Count Input Signal | Phase | 1-phase input (multiple of 1 /multiple of 2), 2-phase input (multiple of 1 /multiple of 2 /multiple of 4), CW/CCW input |  |  |  |  |  |  |  |
|  | Signal Level ( $\varnothing$ A, øB) | EIA Standards RS-422-A, differential line driver level (AM26LS31 [manufactured by Texas Instruments] or equivalent) |  |  |  |  |  |  |  |
| Counter | Counting Speed (Max) (*2) | 8Mpps | 4Mpps | 2Mpps | 1Mpps | 500kpps | 200kpps | 100kpps | 10kpps |
|  | Counting Range | 32-bit signed binary value (-2147483648 to 2147483647) |  |  |  |  |  |  |  |
|  | Type | UP/DOWN preset counter + Ring counter functions |  |  |  |  |  |  |  |
| Coincidence Output | Comparison Range | 32-bit signed binary value |  |  |  |  |  |  |  |
|  | Comparison Result | Set value < Count value, Set value = Count value, Set value > Count value |  |  |  |  |  |  |  |
| External Input | Preset | 7 to 10 mA at 5/12/24 VDC (EIA Standard RS-422-A differential line driver can be connected) |  |  |  |  |  |  |  |
|  | Function • Start |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Digital Filter | $0 \mathrm{~ms}, 0.1 \mathrm{~ms}, 1 \mathrm{~ms}, 10 \mathrm{~ms}$ |  |  |  |  |  |  |  |
| Pulse <br> Measurement | Measurement Item | Pulse width (ON width/OFF width/rise to rise/fall to fall) |  |  |  |  |  |  |  |
|  | Measurement Resolution | 100ns |  |  |  |  |  |  |  |
|  | Number of Measurement Points | 1 point/channel |  |  |  |  |  |  |  |
| External Output | Coincidence Output | Transistor (sink type) output, 2 points/channel 12/24 VDC, 0.5A/point, 2A/common |  |  |  |  |  |  |  |
| PWM Output | Output Frequency Range | DC to 200kHz maximum |  |  |  |  |  |  |  |
|  | Duty Ratio | Arbitrary value (can be set at $0.1 \mu \mathrm{~s}$ ) |  |  |  |  |  |  |  |
|  | Number of Output Points | 2 points/channel |  |  |  |  |  |  |  |
| Number of Occupied I/O Points |  | 16 points (I/O assignment: Intelligent 16 points) |  |  |  |  |  |  |  |
| Internal Current Consumption (5 VDC) |  | 0.17A |  |  |  |  |  |  |  |
| External Dimensions (H x W x D) mm |  | $106 \times 27.8 \times 110$ |  |  |  |  |  |  |  |
| Weight (kg) |  | 0.12 |  |  |  |  |  |  |  |

## Notes:

1. Set the counting speed in the counting speed setting of Basic setting.
2. The counting speed is affected by the pulse rise/fall time. A count can be performed with the following counting speed. Note: Counting pulses of which the rise/fall time is long may result in an incorrect count.
