



Features

- ✓ 32-bit counter
- ✓ Up to 500 KHz (4-fold evaluation)
- ✓ Accommodates 24 V incremental encoders and proximity sensors
- ✓ Filters: 10 kHz | 50 kHz | 100 kHz | 500 kHz
- ✓ All inputs can be inverted
- ✓ Limits for counter and measured readings
- ✓ Hysteresis for input
- ✓ Pulse duration for output
- ✓ Refresh rate / averaging time for measuring mode
- ✓ 8 bytes of input data (count and status)
- ✓ 8 bytes of output data (preset count and commands)

Counter, 32 Bit

Counters are used to detect pulses that are faster than a controller's cycles, i.e., signals that the controller will be unable to detect properly and that therefore need to be pre-processed.

The counter module detects the edges of 24 V signals as pulses. The impulses can be counted or converted into a frequency, rotational speed, or period. The counter module features an additional 24 V input and a 24 V output for a direct response to start pulses and to quick system state changes.

Capturing modes

Pulse & direction
Rotary encoder with single evaluation
Rotary encoder with double evaluation
Rotary encoder with quadruple evaluation

Counting methods

Continuous counting
Once-only counting
Periodic counting

Measuring mode

Frequency measurement
Rotational speed measurement
Period measurement

Programmable input

PLC input
Approval (HW gate)
Synchronization
Periodic synchronization
Latch
Latch & retrigger
Can be inverted

Programmable output

PLC output
Count $\geq$ Reference value
Count $\leq$ Reference value
Count = Reference value
Can apply a substitute value at STOP

Note: Individual modules cannot be combined with the IO systems of other manufacturers.

General information

Order number	600-300-7AA01
Article name	1x Counter 24 V, 500 KHz, 32 bit
Scope of delivery	1x Counter 24 V, 500 KHz, 32 bit
Dimensions (DxWxH)	110 x 14 x 73 mm
Weight	Approx. 70 g
Input voltage	24 V DC
Power dissipation	0.8 W
Input characteristic curve	Type 2, EN 61131-2
Short-circuit protection	Electronic
Parameter configuration length	16 bytes
Number of counters	1
Counter bit depth	32 bits
Counting frequency per channel	Max. 500 kHz (for 4x evaluation)
Hot-swap capable	Yes

Electrical isolation

from the backplane bus	Yes
Between the channels	No

Current draw

External	Max. 10 mA + load
Internal	Max. 86 mA

Output current

Rated value	500 mA
Leakage current	Max. 0.5 A

Ambient conditions

Ambient temperature	0 °C ... +60 °C
Transport and storage temperature	-20 °C ... +80 °C
Relative air humidity	95 % r H without condensation
Protection rating	IP 20
Certifications	CE, UL

UL

Surrounding Air Temperature	0 °C ... +60°C
Pollution degree	2

CE

Noise immunity	DIN EN 61000-6-2 "EMC Immunity"
Interference emission	DIN EN 61000-6-4 "EMC Emission"
Vibration and shock resistance	DIN EN 60068-2-6:2008 „Vibration“, DIN EN 60068-2-27:2010 „Shock“

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