

# FLEXEDGE® High Speed Rate Counter Module



## FLEXEDGE® Intelligent Edge Automation Platform

The High Speed Rate Counter Module features three counters designed for use with the DA70 controllers. Counting modes include quadrature/direction encoders, count events on one input, sum events on two inputs, count with direction, count SSR output activations, etc. This module is the ideal choice to monitor quadrature/direction encoders, count events, measure pulse width and measure rates.

- Adds three counters to the DA70 products
- Four count inputs, four user inputs, four setpoint outputs, and four digital outputs
- Offers complete isolation; inputs, outputs, power, and communication
- Dual channel counter inputs configurable for count, rate, or quadrature counting modes
- Outputs are sinking with max of 1 A per channel
- Configured using Crimson® software (version 3.2 or later)



## Ordering Guide

### Main Unit

Part Number	Description
DAM00102C0000000	DA Series I/O Module High-Speed Rate Counter

# DA High Speed Rate Counter Module Specifications

## Specifications

### Power Requirements

Power is supplied by the DA host controller.

**Max Power:** 2.0 W

### LEDs

One LED indicator for each I/O point and a status LED.

### Memory

Non-volatile memory retains all programmable parameters. The Controller also stores the parameters in order to reprogram any modules that need updates.

### Counter Inputs

2 dual channel inputs, individual screw terminals for channel-to-channel isolation and independent Sink/Source hardware configuration

Maximum input voltage: 30 VDC, reverse polarity protected

Guaranteed ON voltage: 2.5 V

Guaranteed OFF voltage: 1.5 V

TTL compatible

Current draw: 10.5 mA @ 30 VDC, 4.5 mA @ 2.5 VDC, nominal spec: 8 mA

Range: -2,147,483,648 to 2,147,483,647

Maximum Count Rate Modes: Count X1, Count X1 with Direction, Dual Input X1 Add/Add, Dual Input X1 Add/Subtract, Quad X1, Quad X2, Quad X4, Count X2, Count X2 with Direction, Pulse Width Fall/Fall, Pulse Width Fall/Rise, Pulse Width Rise/Fall, Pulse Width Rise/Rise

Software debounce filtering modes: None or Debounce.

Debounce limits input frequency to 50 Hz and input pulse widths to 10 msec min.

Input isolation: 500 Vrms

### Rate Inputs

Range: 0 to 999,999

Maximum Frequency: 500 KHz

Minimum Frequency: 0.001 Hz

Display Update Time: 0.1 to 999.9 seconds

Accuracy:  $\pm 0.01\%$

### Digital Output

8 solid state N-channel open drain MOSFETs

Load Type: General purpose, resistive and Pilot Duty

All outputs share the same common

Rating: 1 ADC max

$V_{DS}$  ON: < 0.2 V @ 1 A

$V_{DS}$  MAX: 30 VDC

Offstate leakage current: 0.5  $\mu$ A max

### Signal Inputs (Input A And Input B)

Selectable inputs accept pulses from a variety of sources including switch contacts, TTL outputs, and standard RLC sensors. Inputs accept current sinking or current sourcing outputs and provide software selectable input filtering for low frequency signals or switch contact debounce.

### User Inputs

Four programmable user inputs

Max. Continuous Input: 30 VDC

Channel-to-channel isolation

Response Time: 12 msec. max.

Independent Sink/Source hardware configuration

Guaranteed ON voltage: 2.5 V

Guaranteed OFF voltage: 1.5 V

TTL compatible

Current draw: 10.5 mA @ 30 VDC, 4.5 mA @ 2.5 VDC, nominal spec: 8 mA

### Communications

Provided by the DA70 Controller

### Environmental

Operating Temperature Range: -40 to 75 °C  $T_{AMB}$

Storage Temperature Range: -40 to 80 °C  $T_{AMB}$

Operating and Storage Humidity: 0 to 95% max. RH non-condensing

Vibration to IEC 60068-2-6: Operational 5-500 Hz, 2 g

Shock to IEC 60068-2-27: Operational 15 g

Altitude: Up to 2000 meters

Installation Category II, Pollution Degree 2 as defined in IEC/EN 60664-1.

### Certification & Compliance

#### CE Approved

EN 61326-1 Immunity to Industrial Locations

Emission CISPR 11 Class A

IEC/EN 61010-1

RoHS Compliant

#### ATEX Approved

Ⓜ II 3 G Ex ec IIC T4 Gc

DEMKO 20 ATEX 2268X

#### IECEx Approved

IECEx UL 20.0007X

#### UKEX Approved

UL22UKEX2576X

**UL Hazardous:** File # E317425

Rugged IP30 enclosure

# DA High Speed Rate Counter Module Specs Cont. and Dimensions

## Connections

Wire Strip Length: 0.3" (7.5 mm)

Wire Gauge Capacity: 14 to 24 AWG (2.08 to 0.20 mm<sup>2</sup>) copper wire only

## Construction

Plastic enclosure with IP30 rating.

Weight: 10.2 oz (317.25 g)

## Mounting

DIN Rail: Attaches to standard "T" profile DIN rail according to EN50022 - 35 x 7.5 and 35 x 15

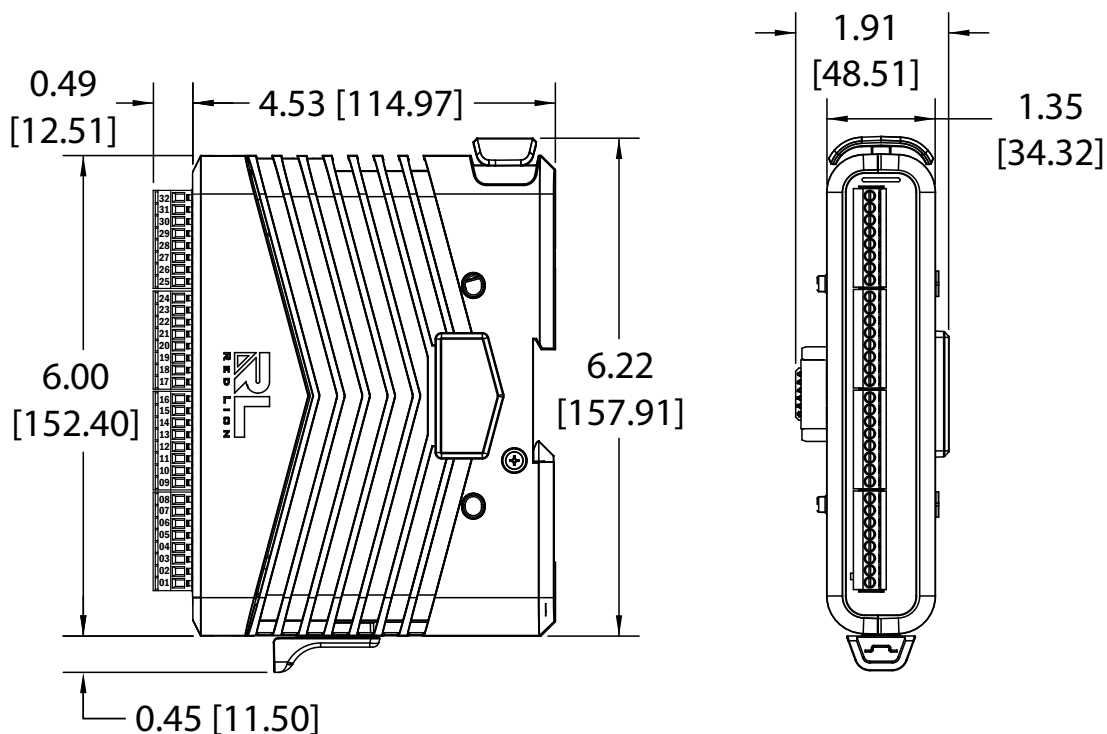
## Warranty

3 years on design and manufacturing defects.

Specifications are subject to change.

Visit [www.redlion.net](http://www.redlion.net) for more information.

## Dimensions In inches [mm]





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