

FLEXEDGE® 4UI / 2UI

Mix I/O Modules



FLEXEDGE® Intelligent Edge Automation Platform

One platform. Millions of configurations. Limitless potential.

- Designed for use with the DA70 controller
- Two models offering mix of inputs and outputs
4UI MIX - 4 Univ. Inputs, 3 DI/DO, 2 AO
2UI MIX - 2 Univ. Inputs, 8 DI/DO, 2 AO
- Universal inputs accept TC, RTD, 0-10 V and 0/4-20 mA signals
- Digital inputs and outputs (software selectable)
- Analog outputs capable of multiple ranges
- Configured using Crimson® software (version 3.2 or later)



Ordering Guide

Main Unit

Part Number	Description
DAM0010IN4DA0000	DA Series I/O Mix Module with 4UI
DAM0010IN2DA0000	DA Series I/O Mix Module with 2UI

A listing of the entire DA Series of products and accessories can be found at www.redlion.net.

DA 4UI / 2UI MIX I/O Modules Specifications

Specifications

Power Requirements

Power is supplied by the DA host device.

4UI MIX Max Power: 2.7 W

2UI MIX Max Power: 2.6 W

LEDs

Model dependent

STS - A status LED to show general module status

One alarm LED for each universal input channel

One LED indicator for each Digital I/O point

Memory

Non-volatile memory retains all programmable parameters. The

Controller also stores the parameters in order to reprogram any modules that need updates.

UI - Universal Inputs

GENERAL:

Sample Time: 50 msec nominal; software configurable from 4 msec to 1200 msec

Common Mode Rejection: >110 dB, 50/60 Hz

Normal Mode Rejection: >50 dB, 50/60 Hz

Temperature Coefficient: 0.01%/°C

Step Response Time: 100 msec typ., 200 msec max

THERMOCOUPLE INPUT:

Types: T, E, J, K, R, S, B, N, C W5/W6, mV

Slope & Offset: Provides sensor error correction

Input Impedance: 20 M ohm

Lead Resistance Effect: 0.25 μ V/ohm

Cold Junction Compensation: Less than ± 1 °C typical (± 1.5 °C max) over -40 to 75 °C T_{AMB}

Resolution: 0.1°

Temperature Indication Accuracy: \pm (0.3% of span, +1 °C).

Includes NIST conformity, cold junction effect, A/D conversion errors, temperature coefficient and linearization conformity at 23 °C after 20 minute warm up.

Probe Break Response: Upscale drive, Input Fault Alarm bit set high, ALM LED illuminates.

RTD INPUT:

Type: 385, 392, 672; 2 or 3 wire

Excitation: 150 μ A

Lead Resistance: 15 ohms Max

Resolution: 1 or 0.1°

Slope & Offset: Provides sensor error correction

Temperature Indication Accuracy: Includes NIST conformity, A/D conversion errors, temperature coefficient and linearization conformity at 23 °C after 20 minute warm up.

Probe Break Response: If channel is enabled: upscale drive, Input

Fault Alarm bit set high, ALM LED illuminates

CURRENT INPUT:

Ranges: 0-20 mA or 4-20 mA

Programmable Scaling: $\pm 30,000$

Input Impedance: 10 Ohm

Max. Continuous Overload: 100 mA

Accuracy: $\pm 0.1\%$ of span

Input Fault Response: Upscale Drive, Input Fault Alarm bit set high, ALM LED illuminates below -2 mA, and above 22 mA

for 0-20 mA range; below +2 mA and above 22 mA for 4-20 mA signals.

VOLTAGE INPUT:

Ranges: 0-10 VDC

Programmable Scaling: $\pm 30,000$

Input Impedance: 1 M Ohm

Max. Continuous Overload: 50 V

Accuracy: $\pm 0.1\%$ of span

Input Fault Response: Upscale Drive, Input Fault Alarm bit set high, ALM LED illuminates below -0.5 and above +10.5 VDC.

DI - DIGITAL INPUTS:

8 or 3 channels (model dependent)

Maximum Input Voltage: 30 VDC, reverse polarity protected

Guaranteed ON Voltage: 3.8 V

Guaranteed OFF Voltage: 1.2 V

Sourcing Impedance: 10K Ohm

Sinking Impedance: 20K Ohm

Selectable Hardware Filter: 50 Hz or 500 Hz

DO - DIGITAL OUTPUTS:

8 or 3 (model dependent) solid state N-channel open drain MOSFETs

Rating: 1 ADC max

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

V_{DS} MAX: 30 VDC

Offstate Leakage Current: 0.5 μ A max

Isolation Level: 500 Vrms @ 50/60 Hz for 1 minute

AO - ANALOG OUTPUTS:

Two (2) independently configured. The outputs are not isolated from each other, but are isolated from the power supply and all other I/O.

Software programmable for 0-5 VDC, -10 VDC to 10 VDC, 0-20 mA, and 4-20 mA

Effective Resolution: Full 16-bit (Signed)

Voltage: 500 μ V

Current: 1 μ A

Accuracy: 0.2% of full scale (-40 to 70 °C)

Isolation Level: 500 Vrms @ 50/60 Hz for 1 minute

Communications

Provided by the DA70 Controller

Environmental

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

Storage Temperature Range: -40 to 85 °C T_{AMB}

Operating and Storage Humidity: 0 to 85% 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

DA 4UI / 2UI MIX I/O Modules Specifications Cont. and Dimensions

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

ABS Type Approval for Shipboard Applications

Connections

Wire Strip Length: 0.3" (7.5 mm)

Wire Gauge Capacity: 14 to 24 AWG (2.08 to 0.20 mm²) copper wire only

Construction

Plastic enclosure with IP30 rating.

Weight:

4UI Mix - 11.5 oz (326 g)

2UI Mix - 11.3 oz (320 g)

Mounting

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

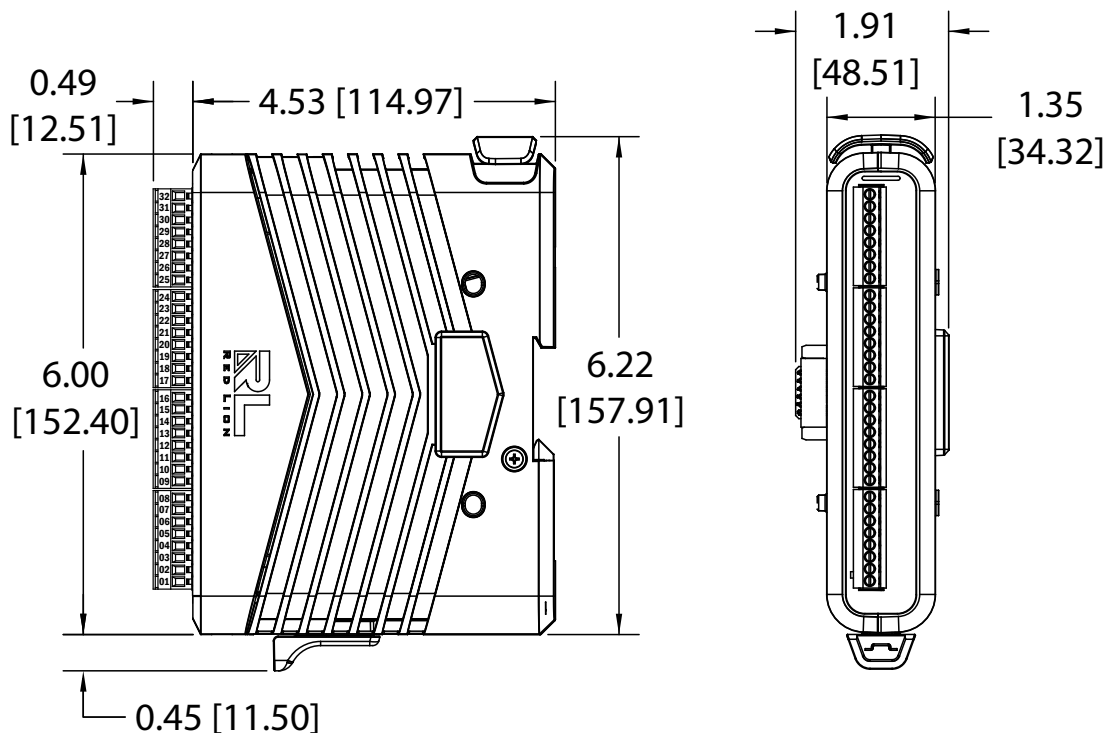
Warranty

3 years on design and manufacturing defects.

Specifications are subject to change.

Visit www.redlion.net for more information.

Dimensions In inches [mm]





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