

## Flex Modules—High Density I/O Specifications

### Four Universal Inputs (Control Loops, Auxiliary Input)

- Thermocouple: grounded or ungrounded sensors, greater than 20MΩ input impedance, 2kΩ source resistance max.
- RTD: 2-wire, platinum, 100Ω and 1000Ω at 32°F (0°C) calibration to DIN curve (0.00385Ω/Ω/°C)
- Process: 0-20mA at 100Ω, or 0-10VDC, 0-50mVDC at 20kΩ input impedance; scalable
- Potentiometer: 0 to 1,200Ω
- Inverse scaling

### Four Thermistor Inputs (Control Loops, Auxiliary Input)

- 0 to 40kΩ, 0 to 20kΩ, 0 to 10kΩ, 0 to 5kΩ
- 2.252kΩ and 10kΩ base at 77°F (25°C)
- Preprogrammed Steinhart-Hart coefficients for Alpha Techniques (A curve 2.252k and 10k, C curve 10k), BetaTHERM (2.2K3A, 10K3A and 10K4A) and YSI (004, 016 and 006)
- User-settable Steinhart-Hart coefficients for other thermistors

### Three Universal Process/Retransmit Outputs

- Output range selectable
- 0 to 10VDC ±15mV into a min. 4,000Ω load with 2.5mV nominal resolution
- 0 to 20mA ±30μA into max. 400Ω load with 5μA nominal resolution
- Temperature stability 100ppm/°C

### Three Mechanical Relays

- 2 Form C relays, 1 Form A relay. Form A relay shares common with 1 Form C relay
- Each relay is 5A, 24 to 240VAC or 30VDC max., resistive load, 100,000 cycles at rated load. Requires a min. load of 20mA at 24V, 125VA pilot duty 120/240VAC, 25VA at 24VAC

### Four Mechanical Relays

- Form A, 5A ea., 24 to 240VAC or 30VDC max., resistive load, 100,000 cycles at rated load. Requires a min. load of 20mA at 24V, 125VA pilot duty

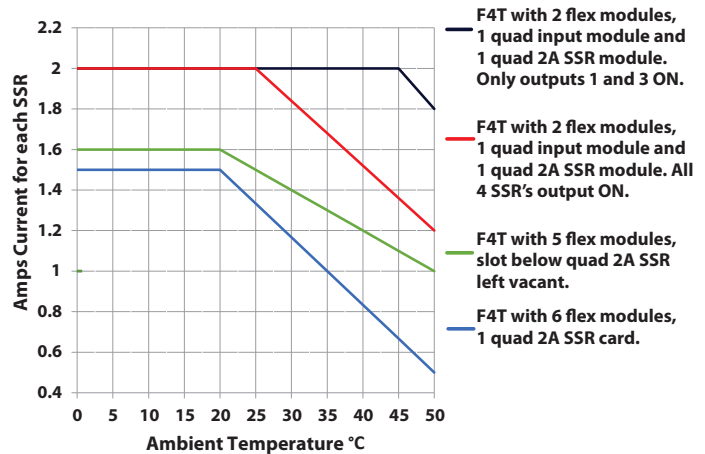
### Two Solid State Relays

- Form A, 10A max. each SSRs combined at 24VAC min., 264VAC max., opto-isolated, without contact suppression, max. resistive load 10A per output at 240VAC, max. 20A per card at 122°F (50°C), max.

### Four Solid State Relays

- Two pairs of SSRs, each pair shares a common
- Form A, 24VAC min., 264VAC max., opto-isolated, without contact suppression, resistive load 2A per output at 240VAC, max. See table for max. current per output

### Quad 2A SSR Card Derating Curves



### Six Digital I/O

- Each independently configurable as input or output
- Dry contact input: update rate 10Hz, min. open resistance 10kΩ, max. closed resistance 50Ω, max. short circuit 13mA
- DC voltage input: update rate 10Hz, max. input 36V at 3mA, min. high state 3V at 0.25mA, max. low state 2V
- Switched dc output: max. 5VDC at 130mA
- Open collector output: 32VDC at 1.5A max., 8A max. per 6 outputs combined

## F4T Flex Module—High Density I/O Ordering Information

### Part Number

① ②	③	④	⑤	⑥ ⑦ ⑧	⑨	⑩	⑪ ⑫
Module ID Type	Future Option	Input and Output Hardware	Future Options	Future Option	Custom Options and Connectors	Custom Options - Firmware, Overlay, Preset Parameters, Locked Code	
FM	H	A	AAA	A			

③	<b>Module ID Type</b>
H =	High Density I/O

④	<b>Future Option</b>
A =	Future Option

⑤	<b>Input and Output Hardware</b>
R =	4 universal inputs (T/C, RTD 2-wire, 0-10VDC, 0-20mA)
P =	4 thermistor inputs
C =	6 digital I/O
F =	3 universal process/retransmit outputs
B =	3 mechanical relay 5A, 2 Form C and 1 Form A (Form A shares a common with one Form C)
J =	4 mechanical relay 5A, Form A
K =	2 SSRs 10A <sup>①</sup>
L =	4 SSRs at 2A each. SSRs grouped in 2 pairs with each pair sharing a common

<sup>①</sup> Notes: Input and Output hardware option K: 2 SSR's 10A. The 2 SSR's 10A FM module requires 2 F4T slots. Valid slot locations are 1, 2, 4 or 5.

The F4T can support a maximum of two total of the K option FM module types (4 total SSR, 10A).

⑥ ⑦ ⑧	<b>Future Options</b>
AAA =	Future Options

⑨	<b>Future Option</b>
A =	Future Option

⑩	<b>Custom Options and Connectors</b>
A =	Right angle screw connector (standard)
F =	Front screw connector

⑪ ⑫	<b>Custom Options - Firmware, Overlay, Preset Parameters, Locked Code</b>
AA =	Standard with quick start guide
AB =	Standard without quick start guide
AC =	Replacement connectors hardware only - for the entered model number
XX =	Custom