

## F4T Flex Module—Mixed I/O Ordering Information

Part Number

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

<b>3</b>	<b>Module ID Type</b>
M =	Mixed I/O

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

<b>5</b>	<b>Input Hardware</b>
A =	None
U =	Universal input - T/C, RTD 2- or 3-wire, 0-10VDC, 0-20mA
T =	Thermistor input
C* =	Current transformer input

\*Note: If option C is ordered than the following options are NOT valid for Outputs 1 & 2: FA, FC, FJ and FK.

<b>6 7</b>	<b>Output Hardware Options</b>	
	<b>Output 1</b>	<b>Output 2</b>
AA =	None	None
AJ =	None	Mechanical relay 5A, Form A
AK =	None	SSR Form A, 0.5A
CA =	Switched dc/open collector	None
CH =	Switched dc/open collector	NO-ARC 12A power control
CC =	Switched dc/open collector	Switched dc
CJ =	Switched dc/open collector	Mechanical relay 5A, Form A
CK =	Switched dc/open collector	SSR Form A, 0.5A
EA =	Mechanical relay 5A, Form C	None
EH =	Mechanical relay 5A, Form C	NO-ARC 12A power control
EC =	Mechanical relay 5A, Form C	Switched dc
EJ =	Mechanical relay 5A, Form C	Mechanical relay 5A, Form A
EK =	Mechanical relay 5A, Form C	SSR Form A, 0.5A
FA =	Universal process/retransmit	None
FC =	Universal process/retransmit	Switched dc
FJ =	Universal process/retransmit	Mechanical relay 5A, Form A
FK =	Universal process/retransmit	SSR Form A, 0.5A
KH =	SSR Form A, 0.5A	NO-ARC 12A power control
KK =	SSR Form A, 0.5A	SSR Form A, 0.5A

<b>8</b>	<b>Future Option</b>
A =	Future Option

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

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

<b>11 12</b>	<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

## Flex Modules—Mixed and Limit I/O Specifications

### Universal Input

- Thermocouple: grounded or ungrounded sensors, greater than 20M $\Omega$  input impedance, 2k $\Omega$  source resistance max.
- RTD: 2- or 3-wire, platinum, 100 $\Omega$  and 1000 $\Omega$  at 32°F (0°C) calibration to DIN curve (0.00385 $\Omega/\Omega/^\circ\text{C}$ )
- Process: 0-20mA at 100 $\Omega$ , or 0-10VDC, 0-50mVDC at 20k $\Omega$  input impedance; scalable
- Potentiometer: 0 to 1,200 $\Omega$
- Inverse scaling

### Thermistor Input

- 0 to 40k $\Omega$ , 0 to 20k $\Omega$ , 0 to 10k $\Omega$ , 0 to 5k $\Omega$   
2.252k $\Omega$  and 10k $\Omega$  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

### Temperature Input

- Thermocouple: grounded or ungrounded sensors, greater than 20M $\Omega$  input impedance, 2k $\Omega$  source resistance max.
- RTD: 2-wire, platinum, 100 $\Omega$  and 1000 $\Omega$  at 32°F (0°C) calibration to DIN curve (0.00385 $\Omega/\Omega/^\circ\text{C}$ )

### Digital Input

- Update rate: 10Hz
- DC voltage: max. input 36V at 3mA, min. high state 3V at 0.25mA, max. low state 2V
- Dry contact input: min. open resistance 10k $\Omega$ , max. closed resistance 50 $\Omega$ , max. short circuit 13mA

### Current Transformer Input

- Accepts 0-50mA signal (user programmable range)
- Displayed operating range and resolution can be scaled and are user programmable
- Current input range: 0 to 50mA ac, 100 $\Omega$  input impedance
- Response time: 1 second max., accuracy  $\pm 1$ mA typical
- Use with current transformer (Watlow part number: 16-0246)

### Switched DC Output

- Max. 32VDC open circuit
- Max. current 30mA per single output
- Max. current 40mA per pair

### Open Collector Output

- Max. 30VDC at 100mA

### Solid State Relay (SSR) Output

- Form A, 1A at 50°F (10°C) to 0.5A at 149°F (65°C), 0.5A at 24VAC min., 264VAC max., opto-isolated, without contact suppression

### Form A Electromechanical Relay Output

- 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

### Form C Electromechanical Relay Output

- 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

### NO-ARC Relay Output

- Form A, 12A at 122°F (50°C), 85 to 264VAC, no VDC, resistive load, 2 million cycles at rated load

### Universal Process/Retransmit Output

- Range selectable
- 0 to 10VDC  $\pm 15$ mV into a min. 1,000 $\Omega$  load with 2.5mV nominal resolution
- 0 to 20mA  $\pm 30$  $\mu$ A into max. 800 $\Omega$  load with 5 $\mu$ A nominal resolution
- Temperature stability 100ppm/ $^\circ\text{C}$