Input modules - voltage/current/NTC

MultiCon



- UI4N8: 4 voltage + 4 current + 8 NTC inputs
- UI8N8: 8 voltage + 8 current + 8 NTC inputs

The MultiCon UIN modules include 16 or 24 voltage / current / NTC inputs, which allows to measure current, voltage, resistance and temperature (using NTC sensors). Inputs are gathered into groups to make connections easier. All ground terminals of a particular module are common, but separated from power supply and other modules. If it is necessary to make measurements with different ground potentials, several UIN modules have to be installed into MultiCon unit.

Voltage / current / NTC (temperature or resistance measurement) inputs parameters are:

- Name read-only input name given by the device ("mA", "V", "°C" or " "),
- Unit read-only field which displays unit of measurement,
- Mode defines measurement range,
- Low limit defines measurement level below which in logical channel "Lo" state will be displayed,
- High limit defines measurement level above which in logical channel "Hi" state will be displayed.

Additionally for temperature mode:

NTC Equation - allows to choose method of entering thermistor characteristic. There are two possibilities equation with Beta parameter and equation based on Steinhart-Hart coefficients.

When NTC inputs are used, it is recommended to use shielded wires and connect shield to GND connector on the module.

MODULE PIN ASSIGNMENT

UI4N8

4 voltage + 4 current + 8 NTC inputs

n01	← □	IN1	
n02	← □•	IN2	ğ
n03	← □•	IN3	7
n04	← □•	IN4	× 0
n05		GND	4
n06	← □	IN5	
n07	← □•	IN6	Š
n08	← □•	IN7	Ţ
n09	← □•	IN8	× 0
n10		GND	4
n11	← @-	IN9	<
n11 n12	← ∅ -	IN9 IN10	0mA
n12 n13	◆ ♦ ♦		0-20mA
n12	◆	IN10	1 x 0-20mA
n12 n13	♦ ♦ ♦ ♦ ♦	IN10 IN11	
n12 n13 n14 n15 n16		IN10 IN11 IN12	
n12 n13 n14 n15 n16 n17		IN10 IN11 IN12 GND IN13 IN14	
n12 n13 n14 n15 n16 n17		IN10 IN11 IN12 GND IN13	
n12 n13 n14 n15 n16 n17		IN10 IN11 IN12 GND IN13 IN14	

UI8N8 8 voltage + 8 current + 8 NTC inputs

n01	◆ □ lN1	
n02	← □→IN2	Š
n03	← □•IN3	7
n04	← □•IN4	0 ×
n05	—— GNI	
n06	◆ □☐∏ IN5	u
n07	← □•IN6	Š
n08	← □•IN7	7
n09	◆ □ • IN8	0 ×
n10	GNI	4
n11	← ∭ _] IN9	⋖
n12	← ∭•IN10	È
n13	4 ∰•IN11	0-7
n14	← ⊕•IN12	- ~
n15	—— GNI	4
n16	← ∭ _] IN13	3 ∢
n17	4- ∭• IN14	Ę
n18	4- ∭• IN15	; <u>7</u>
n19	4- ∭•IN16	
n20	GNI	4
n21	← ⊕ ₇ IN17	,
n22	← • IN18	_
n23	← ⊕•IN19	_
n24	← • IN20	, *
n25	—— GNI)
n26	← ⊕ ₇ IN21	١
n27	← IN22	<u>≥</u>
n28	← IN23	U
n29	← IN24	, , ,
n30	GNI)

TECHNICAL DATA

	111.410	LUCALO
	UI4N8	UI8N8
Number of inputs	4 x voltage + 4 x current + 8 x resistance NTC	8 x voltage + 8 x current + 8 x resistance NTC
Measurement range Hardware limitation	voltage inputs: 0 ÷ 5V, 1 ÷ 5V, 0 ÷ 10V, 2 ÷ 10V current inputs: 0 ÷ 20mA, 4 ÷ 20mA resistance inputs: 0 ÷ 100k voltage: 0 ÷ 12V; current: 0 ÷ 24mA; resistance: 0 ÷ 110k	voltage inputs: 0 ÷ 5V, 1 ÷ 5V, 0 ÷ 10V, 2 ÷ 10V current inputs: 0 ÷ 20 mA, 4 ÷ 20 mA resistance inputs: 0 ÷ 100 k voltage: 0 ÷ 12V; current: 0 ÷ 24mA; resistance: 0 ÷ 110k
Hardware resolution	voltage: 1 mV; current: 1 μA; resistance: 4	voltage: 1 mV; current: 1 µA; resistance: 4
Temp. stability	50 ppm/°C	50ppm/°C
Precision	Q1%@ 25°C	0,1%@ 25°C
Internal impedance	voltage: 61 k ; current: 100 ; resistance: 121 k	voltage: 61 k ; current: 100 ; resistance: 121 k
Protection	voltage/NTC: protection resistor current: 50 mA, auto-reset fuse	voltage/NTC: protection resistor current: 50mA, auto-reset fuse
Sampling period	100 ms	100 ms
Weight	43 g	62g
Part number	M99-UI4N8-001	M141-UI8N8-001

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