THNM16x

16 Channel insulated digital thermocouple conditioner, marine application, CAN bus

THNM16x – Spec V01

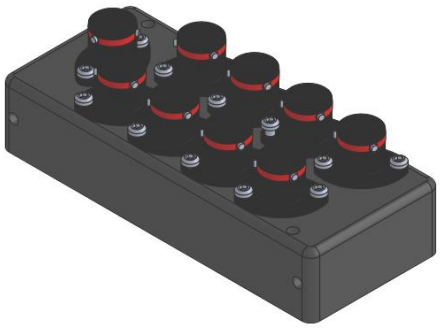
Texys sensors are designed for data recording. If the user wants to include this sensor in a close loop system or active control, he must assume all responsibility.

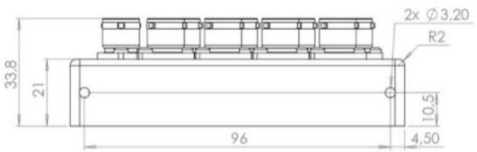
Range		-100 min, 1370 max	°C
Type		K	
Sampling frequency per channel		50	HZ
Cold junction error 0°C < T ambient < 80°C		± 5	°C
CAN bus		2.0A or B	
CAN bus termination		R=120Ω, Switchable via CAN Bus	
Digital output	Data format	2 bytes per cell (signed int)	
	Resolution	0.1	°/bit
	Accuracy	0.2% FS	
Supply voltage		6 to 36	V
Supply current		60mA@12V	
Calibrator		Fluke 714B or 753	
Dimensions		105x44x34	mm
Material		POM	
Weight		130	g
Protection		IP67	
Insulation channel/channel & channel/supply		50Mohm 50V	
Vibration test		20Gpp5'	
shock		500	G
Operating temp		-20 to +100	°C
Storage temp		-40 to +125	°C

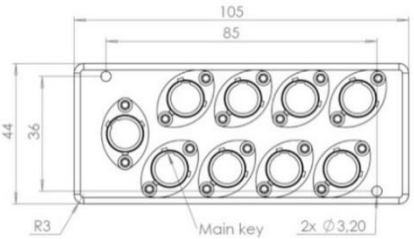
Connector Supply & CAN	
Main connector: 8STA-0X-0635 PN Mating: 8STA-6X-0635 SN	
Pin out	
Pin	Function
1	Supply input
2	0V
3	CAN Low
4	CAN High
5	One wire RX/TX

Connector Input				
Main connector: 8STA-0X-0635 SN Mating: 8STA-6X-0635 PN				
Pin	Channel			
	#1	#2	#3	#4
1	TC1+	TC3+	TC5+	TC7+
2	TC1-	TC3-	TC5-	TC7-
3	TC2+	TC4+	TC6+	TC8+
4	TC2-	TC4-	TC6-	TC8-
5	NC	NC	NC	NC
	#5	#6	#7	#8
1	TC9+	TC11+	TC13+	TC15+
2	TC9-	TC11-	TC13-	TC15-
3	TC10+	TC12+	TC14+	TC16+
4	TC10-	TC12-	TC14-	TC16-
5	NC	NC	NC	NC

Note: Pins are plating gold, User has to keep housing and connector to the same temperature to limit cold junction error.







Ordering ref:

THNM16x- Type/Range

K/-100+400
K/-100+1200
K/-100+1300
K/-40+1370

Ex: THNM16x -K/-0+1200 > type K, 0 to +1200°C

For complete information, contact us at info@texense.com

CAN Data output
16 thermocouple temperatures (Resolution: 0.1°/bit) :

Tx1 ID Default: 0x3F0	Byte 0 MSB	Byte 1 LSB	Byte 2 MSB	Byte 3 LSB	Byte 4 MSB	Byte 5 LSB	Byte 6 MSB	Byte 7 LSB
	Temperature #1		Temperature #2		Temperature #3		Temperature #4	

Tx1 ID+1 Default: 0x3F1	Byte 0 MSB	Byte 1 LSB	Byte 2 MSB	Byte 3 LSB	Byte 4 MSB	Byte 5 LSB	Byte 6 MSB	Byte 7 LSB
	Temperature #5		Temperature #6		Temperature #7		Temperature #8	

Tx1 ID+2 Default: 0x3F2	Byte 0 MSB	Byte 1 LSB	Byte 2 MSB	Byte 3 LSB	Byte 4 MSB	Byte 5 LSB	Byte 6 MSB	Byte 7 LSB
	Temperature #9		Temperature #10		Temperature #11		Temperature #12	

Tx1 ID+3 Default: 0x3F3	Byte 0 MSB	Byte 1 LSB	Byte 2 MSB	Byte 3 LSB	Byte 4 MSB	Byte 5 LSB	Byte 6 MSB	Byte 7 LSB
	Temperature #13		Temperature #14		Temperature #15		Temperature #16	

Tx2 ID* Default: 0x5F0	Byte 0 MSB	Byte 1 LSB	Byte 2 MSB	Byte 3 LSB	Byte 4 MSB	Byte 5 LSB	Byte 6 MSB	Byte 7 LSB
	Ambient #1		Ambient #2		Ambient #3		Ambient #4	

Tx2 ID+1* Default: 0x5F1	Byte 0 MSB	Byte 1 LSB	Byte 2 MSB	Byte 3 LSB	Byte 4 MSB	Byte 5 LSB	Byte 6 MSB	Byte 7 LSB
	Ambient #5		Ambient #6		Ambient #7		Ambient #8	

Changing parameters CAN parameters:

Address	Parameter	Raw values	values	Comments	
0x00	CAN type	0x00	CAN 2.0A (std. 11bits)	Default	
		0x10	CAN 2.0B (ext. 29bits)		
0x01	Baudrate	0x00	CAN2.0A 1Mbps	Default	
		0x01	CAN2.0A 500 Kbps		
		0x02	CAN2.0A 250 Kbps		
		0x03	CAN2.0A 125 Kbps		
0x02	Emission frequency	0x00	Rx frame trig	Triggering mode - 10Hz max. Integration time = 100ms	
		0x01	1 Hz	Integration time = 1s	
		0x02	5 Hz	Integration time = 200ms	
		0x03	10 Hz	Integration time = 100ms (Default)	
0x03	RxTrig frame ID	if CAN2.0A: 0x1 to 0x7F0 if CAN2.0B: 0x1 to 0xFFFF (except 0x7F1 to 0x7F3)		MSB	Default 0x07F0
0x04				LSB	
0x05	Tx1 frame ID	if CAN2.0A: 0x1 to 0x7F0 if CAN2.0B: 0x1 to 0xFFFF (except 0x7F1 to 0x7F3)		MSB	Default 0x03F0
0x06				LSB	
0x07	Tx2 frame ID*	if CAN2.0A: 0x1 to 0x7F0 if CAN2.0B: 0x1 to 0xFFFF (except 0x7F1 to 0x7F3)		MSB	Default 0x5F0
0x08				LSB	
0x09	CAN Bus Termination Resistor	0	Not connected	Default	
		1	Connected		

For complete information, contact us at info@texense.com