Z-8TC

CONVERTER FOR THERMOCOUPLES WITH 6-POINT INSULATION

General Description
The Z-8TC instrument is a digital converter for thermocouples, with eight measuring channels, which are insulated from the power supply and from the serial communication line up to 1.5 kV. The same 1.5 kV insulation is present among the input channels belonging to different groups of terminals. The instrument is therefore characterized by a six points global insulation. Furthermore, the module has:
• Facilitated wiring of power supply and serial bus by means of the bus housed in the DIN

- Communication can be configured by DIP-switch or software.
 RS485 serial communication with MODBUS-RTU protocol. 32 nodes maximum.
- Inputs protected against ESD discharges up to 4 kV.
- High acquisition speed.
- Measurement of thermocouples: J, K, E, N, S, R, B, T.
- · Measurement of the inputs available in the following formats: floating-point representation, reverse floating-point, fixed dot at 16 bits, in tenths degrees with sign for temperature, tenths of μV for voltage
- Channels independently activable.
- Programmable value in case of fault or freezing of last reading.

For each pair of inputs belonging to the same group of terminals the following common settings are possible:

- · Measurement in temperature or mV.
- Filter programmable at eight levels to stabilise reading.
- Rejection programmable at 50 Hz or 60 Hz.
- Three selectable acquisition speeds (two at 14 bits, one at 15 bits).
- Cold Junction Compensation.

recnnical Specifications	
Power Supply:	1040 Vdc or 1928 Vac (5060 Hz).
Consumption :	max 0,6 W.
Serial Communication Ports :	-RS485, 1200115200 Baud. -RS232, 2400 Baud, Address: 1, Parity: NO, Data

10 MO

bits: 8; Stop bits: 1. MODBUS-RTU.

Protocol Inputs

Inputs Tables

Temperature Range

Span mV: Impedance

Total Error:

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EN60584-1 (ITS-90).

Thermocouples Range table). -10,1..81,4 mV.

Thermocouple types: J, K, E, N, S, R, B, T.

Dependent on the thermocouple type (see

14 bits ADC and 50 Hz Rejection: "(0,040 % + 13 μ V). 15 bits ADC and 50 Hz Rejection: "(0,035 % + 10 µV). 14 bits ADC and 60 Hz Rejection: "(0,045 % + 16 μV). 15 bits ADC and 60 Hz Rejection: "(0,040 % + 12 μV).

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Test Current:	<50 nA.
CMRR (1):	>155 dB (tested port towards all the other ones at GND).
DMRR (1)(2):	>60 dB.
DIVIRK .	>00 ub.

		THERMOCOU	PLES RANG	GE	
TC TYPE	Allowed	Linearization	TC TYPE	Allowed	Linearization
ICTIFE	Range	Error	10 THE	Range	Error
J	-2101200 °C		S	-501768 °C	0,02 °C
K	-2001372 °C	0.05 °C	R	-501768 °C	0.02 °C
E	-2001000 °C	0,02 °C	В	2501820 °C (3)	0,03 °C
N	-2001300 °C	0.04 °C	T	-200400 °C	0.04 °C

N	-2001300 °C	0,04 °C	T	-200400 °C	0,04 °C
Other Fea	atures				
ADC :		Settable	to 14 or 15	bits.	
Thermal I	Drift:	< 100 pp			
Disturban	nce Rejection :		to 50 Hz or	60 Hz.	
	ction Error :	<1 °C.			
Insulation	· Voltage :		ac amono		er supply and
			ication ports		
				channels belong	ging to different
D			fterminals.		
	n Degree :	IP20.	40	05.00.0	.
Environm	ental conditions :			ed in range: 050	of parameters in
					U.
			up to 2000 r	ot-condensing.	
Storage to	emperature :	-20+85		11 d.5.1.	
	by LED :			RS485 Communi	cation
Connection				screw terminals	
00111100110		3.5 mm p		SUCW COMMINGS	,, max 1.0 mm,
				tor for DIN rail.	
		-3.5 mm	stereopho	nic front lack fo	r RS232 (COM)
		connecti			(/
Box :		PBT, bla	ck.		
	ns and weight:		2 x 17,5 mr		
Standards	s :				etic emission,
			I environme		
					etic immunity,
			I environme		
1 4			0-1/2001 (sa		
1 4	$C \in \mathcal{C}$				he other circuits
, T					e insulation. The
1					t comply with
1		EN6074	∠. insula	ieu iranstorme	rs and safety

transformers". (1) The values are valid at the set rejection frequency, with the filter ON. (2) For disturbance values such as the input signal peak does not exceed the limit of acceptability (3) Up to 250 °C: the input is considered equivalent to a null temperature.

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Installation rules

The module is designed to be installed in vertical position on a DIN 46277 rail. In order to ensure optimum performance and the longest working life, the module(s) must be supplied adequate ventilation and no raceways or other objects that obstruct the

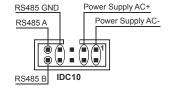
Never install modules above sources of heat: we recommend installation in the lower part of the control panel.

Flectric Connections

POWER SUPPLY AND RS485 COMMUNICATION PORT

The electric connections for power supply and RS485 bus can be made only by using the bus for the Seneca DIN rail.

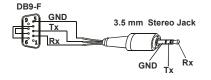
The connections of the bus connector are described on the following figure.



RS232 SERIAL PORT

Connection cable DB9 with a 3.5 mm stereo Jack, can be assembled as indicated in the following figure, or can be bought as an accessory.

We advise you that the GND of the RS232 is the same of RS485.



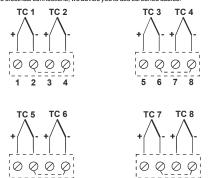
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INPUTS

The module accepts, at input, the following types of thermocouples: J, K, E, N, S, R, B, T. For the electrical connections, we advise you to use screened cables.



The pairs of channels belonging to the same group of terminals, have the GND terminal internally connected and are not insulated each other.

Instead a 1.5 kV insulation is present among the input channels belonging to different

Indications by LED on the frontal panel

9 10 11 12

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PWR LED (GREEN)	Meaning		
Steady	Power Supply is present.		
ERR LED (YELLOW)	Mooning		
	Fault: insufficient power supply, faulty channel, faulty TC, internal		
	communication error (signalled if the channel has been activated).		
RX LED (RED)	Meaning		
Steady	Data are being received through the RS485 communication port.		

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13 14 15 16

TX LED (RED)	Meaning
Steady	Data are being transmitted through the RS485 communication
	port

Serial interface

For detailed information on RS485 serial interface, consult the documentation provided by the website www.seneca.it. in the section Prodotti/Serie Z-PC/MODBUS TUTORIAL.

DIP-SWITCH SETTING

9600 Baud

The instrument leaves the factory with all DIP-switches configured in position 0. The settings of the DIP-switches defines the module's communication parameters: address

In all the following tables, the indication • corresponds to a DIP-switch set in 1 (ON); no indication is provided when the DIP-switch is set in 0 (OFF).

	ш	•		92	UU	Di	lud	
	•	П	3	84	00	Ва	iud	
	•	•	5	76	00	Ва	iud	
	_							
ADDRESS								
SW1 3 4 5 6 7 8								
		Г	Г	Г		Г	Communication Parameters from EEPROM (4)	
	Г	П	Г	П	Г	•	Fixed Address: 01	
	Г	Г	Γ	Г	•	Г	Fixed Address: 02	
	Г	Г	Γ	Г		•	Fixed Address: 03	
	Г	Г	Γ	•	Г	Г	Fixed Address: 04	
	X	Х	Х	Х	Х	Х	Fixed Address, as from binary representation.	
	•		•	•	•	•	Fixed Address: 63	

SW1	9	Not used.			
	П	Leave to OFF position.			
RS485 TERMINATOR					
SW1	10				
	Γ	Terminator OFF.			
		Terminator ON.			

The default configuration is the following: Address 1, 38400, no parity, 1 stop bit.



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DEFAULT SETTING OF INPUT CHANNELS

The default configuration, valid for each pair of channels, belogging to the same group of terminals is the following

Enabling Both channels are enabled. Type of returned Data :

Cold junction Compensation Active Rejection: ADC / Filter

ADC: 15 bit, Filter: average, Thermocouple Type: J for both channels

FILTER SETTING

The filtering methods can be set for each pair of channels. The filter consists of two independent low-pass filters:

-FIR Filter, in running average, able to increase the rejection of disturbances to the mains power line frequency and to reduce measuring noise.

-IIR exponential Filter, with programmable time constant, able to dampen fluctuations.

If an input variation higher than the threshold T is detected, both filters are forced to adapt rapidly to the new value, stabilising it only later on. The value of the threshold in voltage is fixed and equal to 0,75 mV. The filter is set with the three least significant bits of registers MODBUS 40054..57 (refer to section MODBUS REGISTERS).

The following is a table containing all settable filter types. The propagation time (90%) is indicated for each filter, i.e. the maximum time between the step variation of the input and the variation of the number which represents it in the Modbus register, including the interrogation time of the single register (at 115 kbaud). The times indicated are valid if both the following conditions are respected:

- Rejection set to 50 Hz. For, 60 Hz rejection divide the times by 1.2
- Only one of the two thermocouples of the same group is enabled. If both thermocouples are enabled, the propagation times approximately are doubled.

SET	SAME	PLING	FILTER	PROP. TIME 90%		
SEI	Bits ADC	Hz	TYPE	<t< th=""><th>>T</th></t<>	>T	
000	14	48	Not present	45 ms	45 ms	
001	14	20	Average	236 ms	103 ms	
010 (5)	15	11	Average	405 ms	179 ms	
011	15	11	Average + exp	1 s	179 ms	
100	15	11	Average + exp	3 s	179 ms	
101	15	11	Average + exp	8 s	179 ms	
110	15	11	Average + exp	24 s	179 ms	
111	15	11	Average + exp	72 s	179 ms	

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⁽⁵⁾ Default Value.



Programming

For the product's programming and/or configuration tools, consult the website www.seneca.it.

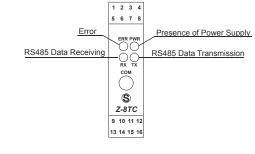
During initial programming, the EEPROM (SW3 .. 8 in OFF position) default setting values originally programmed as follows can be used:

Address = 1, SPEED = 38400 baud, PARITY = none, BIT NUMBER = 8, STOP BIT = 1.

The module can also be programmed through the front connector (COM) while paying attention to set the following connection parameters:
Address = 1. Speed = 2400 Baud. PARITY = none. STOP BIT = 1.

The COM communication port behaves in the same way as the RS485 bus port except for the communication parameters described above. It also has priority over the RS485 serial port and closes after 3 seconds of inactivity.

Frontal Panel and Led Position

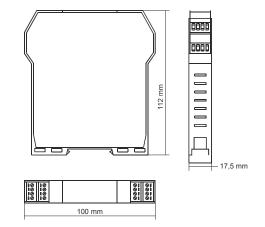




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Dimensions and Overall dimensions



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MODBUS REGISTERS

Z-8TC has MODBUS 16 bits (words) registers, accessible by RS485 or RS232 serial communication. In the next paragraphs, we shall describe the supported MODBUS commands, and the functions of the registers.

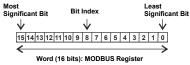
Supported MODBUS Commands

Code	Function	Description
03 (*)	Read Holding Registers	Reading of word registers up to 32 at a time.
04 (*)	Read Input Registers	Reading of word registers up to 32 at a time.
06	Write Single Register	Writing of a word register.
16	Write Multiple Registers	Writing of word registers up to 32 at a time.

(*) The two functions have the same effect.

Holding Registers

The 16-bit Holding Registers have the following structure:



In the table the notation Bit [x:y] indicates all bits from x to y. For example Bit [2:1] indicates bit 2 and bit 1, and serves to illustrate the meaning of the various united combinations of the values of the two bits. Remember that MODBUS functions 3, 4, 6 and 16, of single or multiple writing and reading, can be executed in the following registers. Default values are indicated with the * symbol.

REGISTER	Description	ADD.	R/W
MACHINE ID	Bit [15:8]: contain the module's ID: 24. Bit [7:0]: contain the firmware's revision.	40001	R
STATUS_INP	Status of input channels.	40002	R
Bit 15	1: Fault on channels 1 and 2.		
Bit 14	1: Fault on channels 3 and 4.		
Bit 13	1: Fault on channels 5 and 6.		
Bit 12	1: Fault on channels 7 and 8.		
Bit 11	1: Fault on the TC connected to channel 1.	\dashv	



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Bit 10	1: Fault on the TC connected to channel 2.		
Bit 9	1: Fault on the TC connected to channel 3.		
Bit 8	1: Fault on the TC connected to channel 4.		
Bit 7	1: Fault on the TC connected to channel 5.		
Bit 6	1: Fault on the TC connected to channel 6.		
Bit 5	1: Fault on the TC connected to channel 7.		
Bit 4	1: Fault on the TC connected to channel 8.		
Bit 3	1: Communication Error with channels 1 and 2.		
Bit 2	1: Communication Error with channels 3 and 4.		
Bit 1	1: Communication Error with channels 5 and 6.		
Bit 0	1: Communication Error with channels 7 and 8.		
CHAN1_TEN	Channel 1 measurement (tenths of °C or tenths of μV).	40003	R
Bit [15:0]	Temperature of channel 1 in tenths of $^{\circ}$ C (or voltage in tenths of $_{\mu}$ V).		
CHAN2_TEN	Channel 2 measurement (tenths of °C or tenths of μV).	40004	R
Bit [15:0]	Temperature of channel 2 in tenths of $^{\circ}\text{C}$ (or voltage in tenths of μV).		
CHAN3_TEN	Channel 3 measurement (tenths of °C or tenths of µV).	40005	R
Bit [15:0]	Temperature of channel 3 in tenths of $^{\circ}$ C (or voltage in tenths of μ V).		
CHAN4_TEN	Channel 4 measurement (tenths of °C or tenths of µV).	40006	R
Bit [15:0]	Temperature of channel 4 in tenths of $^{\circ}$ C (or voltage in tenths of $_{\mu}$ V).		
CHAN5_TEN	Channel 5 measurement (tenths of °C or	40007	R
	tenths of μV).		
Bit [15:0]	Temperature of channel 5 in tenths of $^{\circ}$ C (or voltage in tenths of $_{\mu}$ V).		
CHAN6_TEN	Channel 6 measurement (tenths of °C or tenths of μV).	40008	R
Bit [15:0]	Temperature of channel 6 in tenths of $^{\circ}\text{C}$ (or voltage in tenths of μV).		
CHAN7_TEN	Channel 7 measurement (tenths of °C or	40009	R
	tenths of μV).		
Bit [15:0]	Temperature of channel 7 in tenths of $^{\circ}$ C (or voltage in tenths of μ V).		

CHAN8_TEN	Channel 8 measurement (tenths of °C or tenths of μV).	40010	R
Bit [15:0]	Temperature of channel 8 in tenths of °C (or voltage in tenths of μV).		
CHAN1_FLOAT_H	Measurement of channel 1 in floating point (see bit 15 of "AUX_SETTINGS" register: 40058).	40011	R
Bit [15:0]	Temperature of channel 1 in °C or voltage in mV (MSW of the float).		
CHAN1_FLOAT_L	Measurement of channel 1 in floating point (see bit 15 of "AUX_SETTINGS" register: 40058).	40012	R
Bit [15:0]	Temperature of channel 1 in °C or voltage in mV (LSW of the float).		
CHAN2_FLOAT_H	Measurement of channel 2 in floating point (see bit 15 of "AUX_SETTINGS" register: 40058).	40013	R
Bit [15:0]	Temperature of channel 2 in °C or voltage in mV (MSW of the float).		
CHAN2_FLOAT_L	Measurement of channel 2 in floating point (see bit 15 of "AUX_SETTINGS" register: 40058).	40014	R
Bit [15:0]	Temperature of channel 2 in °C or voltage in mV (LSW of the float).		
CHAN3_FLOAT_H	Measurement of channel 3 in floating point (see bit 15 of "AUX_SETTINGS" register: 40058).	40015	R
Bit [15:0]	Temperature of channel 3 in °C or voltage in mV (MSW of the float).		
CHAN3_FLOAT_L	Measurement of channel 3 in floating point (see bit 15 of "AUX_SETTINGS" register: 40058).	40016	R
Bit [15:0]	Temperature of channel 3 in °C or voltage in mV (LSW of the float).		
CHAN4_FLOAT_H	Measurement of channel 4 in floating point (see bit 15 of "AUX_SETTINGS" register: 40058).	40017	R
Bit [15:0]	Temperature of channel 4 in °C or voltage in mV (MSW of the float).		
CHAN4_FLOAT_L	Measurement of channel 4 in floating point (see bit 15 of "AUX_SETTINGS" register: 40058).	40018	R
Bit [15:0]	Temperature of channel 4 in °C or voltage in mV (LSW of the float).		
CHAN5_FLOAT_H	Measurement of channel 5 in floating point (see bit 15 of "AUX_SETTINGS" register: 40058).	40019	R
Bit [15:0]	Temperature of channel 5 in °C or voltage in mV (MSW of the float).		

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CHAN5_FLOAT_L	Measurement of channel 5 in floating point (see bit 15 of "AUX_SETTINGS" register: 40058).	40020	R
Bit [15:0]	Temperature of channel 5 in °C or voltage in mV (LSW of the float).		
CHAN6_FLOAT_H	Measurement of channel 6 in floating point (see bit 15 of "AUX_SETTINGS" register: 40058).	40021	R
Bit [15:0]	Temperature of channel 6 in °C or voltage in mV (MSW of the float).		
CHAN6_FLOAT_L	Measurement of channel 6 in floating point (see bit 15 of "AUX_SETTINGS" register: 40058).	40022	R
Bit [15:0]	Temperature of channel 6 in °C or voltage in mV (LSW of the float).		
CHAN7_FLOAT_H	Measurement of channel 7 in floating point (see bit 15 of "AUX_SETTINGS" register: 40058).	40023	R
Bit [15:0]	Temperature of channel 7 in °C or voltage in mV (MSW of the float).		
CHAN7_FLOAT_L	Measurement of channel 7 in floating point (see bit 15 of "AUX_SETTINGS" register: 40058).	40024	R
Bit [15:0]	Temperature of channel 7 in °C or voltage in mV (LSW of the float).		
CHAN8_FLOAT_H	Measurement of channel 8 in floating point (see bit 15 of "AUX_SETTINGS" register: 40058).	40025	R
Bit [15:0]	Temperature of channel 8 in °C or voltage in mV (MSW of the float).		
CHAN8_FLOAT_L	Measurement of channel 8 in floating point (see bit 15 of "AUX_SETTINGS" register: 40058).	40026	R
Bit [15:0]	Temperature of channel 8 in °C or voltage in mV (LSW of the float).		
STATUS_INP	Copy of register 40002 containing the status of the input channels.	40027	R
JUNCT_TEN_IN1_2	Cold Junction Temperature of channels 1 and 2.	40028	R
Bit [15:0]	Cold junction temperature of channels 1 and 2, in tenths of °C.		
JUNCT_TEN_IN3_4	Cold Junction Temperature of channels 3 and 4.	40029	R
Bit [15:0]	Cold junction temperature of channels 3 and 4, in tenths of °C.	·	
JUNCT_TEN_IN5_6	Cold Junction Temperature of channels 5 and 6.	40030	R
Bit [15:0]	Cold junction temperature of channels 5 and 6, in tenths of °C.		

JUNCT_TEN_IN7_8	Cold Junction Temperature of channels 7 and 8.	40031	R
Bit [15:0]	Cold junction temperature of channels 7 and 8, in tenths of °C.		
ERR_CH1-2_CH3-4	Errors: Channels 1, 2 (MSB), Channels 3, 4 (LSB).	40037	R
Bit 15	1: Power supply voltage error (channels 1 and 2).		
Bit 14	1: Reception Error (channels 1 and 2).		
Bit 13	1: EEPROM saving Error (channels 1 and 2).		
Bit 12	1: EEPROM saving blocked (channels 1 and 2).		
Bit [11:9]	Reserved.		
Bit 8	1: Reading Error CRC EEPROM (chan. 1 and 2).		
Bit 7	1: Power supply voltage error (channels 3 and 4).		
Bit 6	1: Reception Error (channels 3 and 4).		
Bit 5	1: EEPROM saving Error (channels 3 and 4).		
Bit 4	1: EEPROM saving blocked (channels 3 and 4).		
Bit [3:1]	Reserved.		
Bit 0	1: Reading Error CRC EEPROM (chan. 3 and 4).		
ERR_CH5-6_CH7-8	Errors: Channels 5, 6 (MSB), Channels 7, 8 (LSB).	40038	R
Bit 15	1: Power supply voltage error (channels 5 and 6).		
Bit 14	1: Reception Error (channels 5 and 6).		
Bit 13	1: EEPROM saving Error (channels 5 and 6).		
Bit 12	1: EEPROM saving blocked (channels 5 and 6).		
Bit [11:9]	Reserved.		
Bit 8	1: Reading Error CRC EEPROM (chan. 5 and 6).		
Bit 7	1: Power supply voltage error (channels 7 and 8).		
Bit 6	1: Reception Error (channels 7and 8).		
Bit 5	1: EEPROM saving Error (channels 7 and 8).		
Bit 4	1: EEPROM saving blocked (channels 7 and 8).		
Bit [3:1]	Reserved.		
Bit 0	1: Reading Error CRC EEPROM (chan. 7 and 8).		
RESET	Module Reset.	40041	R/W
Bit [15:0]	Write value 0xCCCC to reset the module.		

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VAL FAULT 4 (6) Value loaded in case of fault on channel 1 40059 P/W

Filter of channels 1 and 2 (for details, refer to the

Thermocouple Type of Channel 1 (see THERMOCOUPLE TYPE Table). Default: Type J.

Thermocouple Type of Channel 2 (see THERMOCOUPLE TYPE Table), Default: Type J.

Register for the configuration of channels 3 and 4. See Register 40054, refering to channels 3 and 4 instead of channels 1 and 2.

Register for the configuration of channels 5 and 6.

See Register 40054, refering to channels 5 and 6

Register for the configuration of channels 7 and 8 See Register 40054, refering to channels 7 and 8

1 : The low word of floating point is transmitted

Action in case of fault on channel 2 (As Bit 7).

Action in case of fault on channel 3 (As Bit 7).

Action in case of fault on channel 4 (As Bit 7).

Action in case of fault on channel 5 (As Bit 7).

Action in case of fault on channel 6 (As Bit 7).

Action in case of fault on channel 7 (As Bit 7).

Action in case of fault on channel 8 (As Bit 7).

001: Average filter

FILTER SETTING section).

Other settings in FILTER SETTING.

Configuration of Channels 3 and 4.

Configuration of Channels 5 and 6.

Configuration of Channels 7 and 8.

Additional Configuration Register. Floating point interpretation:

0 *: The high word of floating point is transmitte

instead of channels 1 and 2.

instead of channels 1 and 2.

first, then the low word.

first, then the high word.

Reserved and not modifiable

Action in case of fault on channel 1. 0 *: The temperature/voltage value is forced to the programmed fault value.

1: The temperature/voltage value is frozen at the last acquired value before fault is signalled.

000: Not present

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40055 R/W

40056 R/W

40057 R/W

40058 R/W

ADDR (6) (7)	Register for the setting of the module's address and parity control.	40052	R/W
Bit [15:8]	Set the module's address. Permissible values from 0x00 to 0xFF (decimal values in the interval of 0-255). Default address: 1.		
Bit [7:0]	Set the type of parity control: 00000000*: No parity (NONE)(Default) 00000001: Even parity (EVEN) 00000010: Odd parity (ODD)		
BAUDR (6) (7)	Register for the setting of the baudrate and of the response delay time.	40053	R/W
Bit [15:8]	Set the value of the serial communicati speed (baudrate): 00000000 (0x00): 4800 Baud 00000001 (0x01): 9600 Baud 00000001 (0x02): 19200 Baud 00000011 (0x02): 19200 Baud 00000101 (0x04): 57600 Baud 00000110 (0x04): 57600 Baud 00000110 (0x06): 115200 Baud 00000111 (0x06): 1200 Baud 00000111 (0x07): 2400 Baud 00000111 (0x07): 2400 Baud 00000111 (0x07): 2400 Baud 0000111 (0x07): 2400 Baud 00000111 (0x07): 2400 Baud 0000111 (0x07): 2400 Baud 000011 (0x0		
(2)	value: 0.		
CONF_CH1_CH2 (6)	Configuration of Channels 1 and 2.	40054	R/W
Bit 15	Channel 1 Activation: 0: Channel 1 is not active. 1*: Channel 1 is active.		
Bit 14	Channel 2 Activation: 0: Channel 2 is not active. 1*: Channel 2 is active.		
Bit 13	Type of returned Data Item (Channels 1 and 2): 0*: Measurement in °C . 1: Measurement in mV.		
Bit 12	Cold junction Compensation Channels 1 and 2: 0:not active 1*: active		
Bit 11	Rejection to mains frequency (Channels 1 and 2): 0*: 50 Hz 1: 60 Hz		

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Bit [10:8]

Bit [7:4]

Bit [3:0]

Bit [15:0]

Bit [15:0]

Bit [15:0]

Bit [14:8]

Bit 7

Rit 6

Bit 5

Bit 4

Bit 3

Bit 2

Bit 1

Bit 0

CONF CH3 CH4 (6)

CONF_CH5_CH6 (6

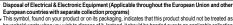
CONF_CH7_CH8 (6)

AUX_SETTINGS (6)

	VAL_FAULI_1``	(expressed as 40003). ⁽⁸⁾ Default: 2000,0.	40059	R/W
	VAL_FAULT_2 (6)	Value loaded in case of fault on channel 2 (expressed as 40004). ⁽⁸⁾ Default: 2000,0.	40060	R/W
	VAL_FAULT_3 (6)	Value loaded in case of fault on channel 3 (expressed as 40005). ⁽⁸⁾ Default: 2000,0.	40061	R/W
	VAL_FAULT_4 (6)	Value loaded in case of fault on channel 4 (expressed as 40006). Default: 2000,0.	40062	R/W
	VAL_FAULT_5 (6)	Value loaded in case of fault on channel 5 (expressed as 40007). Default: 2000,0.	40063	R/W
ĺ	VAL_FAULT_6 (6)	Value loaded in case of fault on channel 6 (expressed as 40008). Default: 2000,0.	40064	R/W
ĺ	VAL_FAULT_7 (6)	Value loaded in case of fault on channel 7 (expressed as 40009). Default: 2000,0.	40065	R/W
	VAL_FAULT_8 (6)	Value loaded in case of fault on channel 8 (expressed as 40010). Default: 2000,0.	40066	R/W

TABLE: THERMOCOUPLE TYPE FOR THE SETTING OF REGISTERS 40054..40057 THERMOCOUPLE TYPE RIT THERMOCOUPLE TYPE 7 6 5 4 TC for Channels 1, 3, 5 or 7 TC for Channels 2, 4, 6 or 8 0 0 0 1 TC K 0 1 1 0 0 1 1 0 1 x x x Not implemente 1 x x x

⁽⁸⁾ The value in registers 40059..40066 is copied respectively in registers 40003..40010, when the corresponding bit in register 40058 is 0. The same value is converted in floating-point, and copied on the corresponding floating register.



This symbol, found on your product or on its packaging, indicates that this product should not be treated as household waste when you wish to dispose of it. Instead, it should be handed over to an applicable collection point for the recycling of electrical and electronic equipment. By ensuring this product is disposed of correctly, you will help prevent potential negative consequences to the environment and human health, which could otherwise be caused by inappropriate disposal of this product. The recycling of materials will help to conserve natural resources. For more detailed information about the recycling of this product, please contact your local city office, waste disposal service or the retail store where you purchased this product.



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MI001231-E

The value is memorized in EEPROM memory.

⁽⁷⁾ The effect is at the reset (hardware or software) of the module.