

THERMO12 - Thermocouple Expansion Module



THERMO12 - 12 channel thermocouple module for temperature measurements

- 12 channels for separate thermocouple inputs
- Available for K, J, E or T type thermocouples
- Serial data connection for data output and configuration
- Configurable CAN data output
- 4 status LEDs for Power, Status, CAN and Serial communication
- Stacking case, connects neatly with other Race Technology system components
- Integration with Race Technology components, aligned connectors, single power supply connector
- Reverse polarity protection with resettable fuses for all inputs



Supplied with complete software suite, including unit configuration software, live data monitoring and comprehensive data analysis program.

Input	Smoother filter time [s]	Map channel to	Change name	Comment	Serial output rate [Hz]	CAN output rate [Hz]	CAN address (use 0x for Hex)	CAN RTR	Enabled / Disabled
01	0	Ambient air temp (Temperature 1)	E:di	Ambient air temp -20Hz	20Hz	Disabled	0x010129	Disabled	<input checked="" type="checkbox"/>
02	0	Inlet pre turbo 1 temp (Temperature 2)	E:di	Inlet pre turbo 1 temp -20Hz	20Hz	Disabled	0x010229	Disabled	<input checked="" type="checkbox"/>
03	0	Inlet pre turbo 2 temp (Temperature 3)	E:di	Inlet pre turbo 2 temp -20Hz	20Hz	Disabled	0x010329	Disabled	<input checked="" type="checkbox"/>
04	0	Inlet post turbo 1 temp (Temperature 4)	E:di	Inlet post turbo 1 temp -20Hz	20Hz	Disabled	0x010429	Disabled	<input checked="" type="checkbox"/>
05	0	Inlet post turbo 2 temp (Temperature 5)	E:di	Inlet post turbo 2 temp -20Hz	20Hz	Disabled	0x010529	Disabled	<input checked="" type="checkbox"/>
06	0	Inlet post intercooler 1 temp (Temperature 6)	E:di	Inlet post intercooler 1 temp -20Hz	20Hz	Disabled	0x010629	Disabled	<input checked="" type="checkbox"/>
07	0	Inlet post intercooler 2 temp (Temperature 7)	E:di	Inlet post intercooler 2 temp -20Hz	20Hz	Disabled	0x010729	Disabled	<input checked="" type="checkbox"/>
08	0	Water temp (Temperature 8)	E:di	Water temp -20Hz	20Hz	Disabled	0x010829	Disabled	<input checked="" type="checkbox"/>
09	0	Oil temp (Temperature 9)	E:di	Oil temp -20Hz	20Hz	Disabled	0x010929	Disabled	<input checked="" type="checkbox"/>
10	0	Gearbox temp (Temperature 10)	E:di	Gearbox temp -20Hz	20Hz	Disabled	0x010A29	Disabled	<input checked="" type="checkbox"/>
11	0	Gearbox post cooler temp (Temperature 11)	E:di	Gearbox post cooler temp -20Hz	20Hz	Disabled	0x010B29	Disabled	<input checked="" type="checkbox"/>
12	0	Type 1 temp (Temperature 12)	E:di	Type 1 temp -20Hz	20Hz	Disabled	0x010C29	Disabled	<input checked="" type="checkbox"/>

Serial settings: Use high speed serial output (4608) Pass through RT format serial messages

CAN settings: CAN baud rate [115200] Change CAN ID length [25 bit] Change Use default RT CAN addresses Generate DBC file

Communications: Serial Port 1 [COM1] Send Configuration Read Configuration

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GENERAL	
Supply voltage	+5.5V to 24V
Power consumption	1W
Case construction	Die-cast aluminium
Dimensions	164 x 63 x 34mm
Mass	300g
IP rating	IP50
Operating temperature range	-40 to 70 °C
Humidity	5 to 95% non-condensing
Mounting method	Cases stack to other RT products / Velcro / tie wraps
Outputs	RS232, CAN
CAN OUTPUT	
Maximum baud rate	1 Mbit/s
Data rate	Configurable up to 20Hz per channel
Identifiers	Configurable addresses, 11 or 29 bit
RS232	
Baud rate	115200 baud
Data rate	Configurable up to 20Hz per channel
RS232 data format	Race Technology temperature channels
THERMOCOUPLE INPUTS	
Sample rate	Variable up to 20Hz per channel
Type	K, J, E or T type (grounded tip or floating)
Internal resolution	2mK
Resolution	24 bits
Typical accuracy at 25 °C ambient	0.5 degrees C
Hardware filter	RC digital low-pass
Maximum input range	K type: -200 to +1350 degrees C J type: -200 - +1200 degrees C E type: -200 - +1000 degrees C T type: -200 - +400 degrees C
ORDER CODES	
K type	THERMO12-K
J type	THERMO12-J
E type	THERMO12-E
T type	THERMO12-T

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