

UTx00 Modbus table
Outdoor temperature sensor



- **max 11 words may be read out as a whole (i.e. 22 bytes)**
- **first 176 bits can be addressed bitwise (i.e. the whole map)**

Name	Address	Type	Description	Note
module ID LSB	1 LSB	R	module identification lower byte	module ID is UT100 000E hex UT200 000F hex
module ID MSB	1 MSB	R	module identification upper byte	
firmware LSB	2 LSB	R	firmware version lower byte	11hex
firmware MSB	2 MSB	R	firmware version upper byte	
status LSB	3 LSB	R, W RAM	module status lower byte bit 0 – EEPROM write enable bit 4 – EEPROM init bit 5 – calibration offset bit 6 – calibration span bit 7 – calibration enable	EEPROM init is enabled when the INIT switch was ON at power-up, and switched OFF before bit 4 was set to 1 (indicated by bit 2 in status MSB) calibration is enabled when the INIT switch was ON at power-up, and switched OFF before bit 7 was set to 1 (indicated by bit 3 in status MSB) calibration offset change bit 7 from 1 to 0 and set bit 5 to 1 calibration span change bit 7 from 1 to 0 and set bit 6 to 1
status MSB	3 MSB	R	module status upper byte bit 0 - 0 normal mode - 1 init mode bit 1 - 1 at the next EEPROM write attempt all data will be saved to EEPROM - 0 at the next write attempt received data will be written to RAM only bit 2 – 1 – EPROM initialised bit 3 – 1 – calibration enabled bit 4 - 0 bit 5 - 1 bit 6 - 0 bit 7 - 1	
address	4 LSB	R,W EEPROM	module address (0x01)	!!! The changes will become active only after

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				module restart (the register is written immediately, but the new address is effective after restart)
baud rate (comm speed)	4 MSB	R,W EEPROM	no parity 10dec ... 1200 bps 11dec ... 2400 bps 12dec ... 4800 bps 13dec ... 9600 bps 14dec ... 19200 bps	!!! The changes will become active only after module restart (the register is written immediately, the new baud rate is effective after restart)
input temperature range	5 LSB	R,W EEPROM	1 ... Pt 1000 (range -50 °C ÷ +150°C)	bit 0 – bit 3 ... channel 1
reserved	5 MSB	R,W		
measured analogue value – channel 1	6 LSB	R	0000 hex = 0 dec ... -50.00 °C	temperature = (measured value / 100) - 50 °C
	6 MSB	R	3A98 hex = 15000 dec ... 100.00 °C 4E20 hex = 20000 dec ... 150.00 °C	
up time 1	7 LSB	R	time in seconds since module power-up or reset	LSB
up time 2	7 MSB	R		
up time 3	8 LSB	R		
up time 4	8 MSB	R		MSB
number of EE write cycles 1	9 LSB	R	number of EEPROM writing cycles (address, baud rate, range...), just for information	counter 0...FFFE; no overflow. When FFFE is reached, the counter stops.
number of EE write cycles 2	9 MSB	R		
number of EE calibration 1	10 LSB	R	number of EEPROM writing cycles-calibration, just for information	counter 0...FFFE; no overflow. When FFFE is reached, the counter stops.
number of EE calibration 2	10 MSB	R		
correction 1	11 LSB	R,W EEPROM	temperature correction number / 100 maximal correction range: -10.00 (-1000) ...+10.00 (1000)	bit 15 0(default)... final value = (measured value – correction)/100 1 ... final value = (measured value + correction)/100
correction 2	11 MSB			