

Technical Information

thermokon asia pacific

TRW9- Series (T)

Room Temperature Sensor with BACnet / Modbus RTU communication

The TRW9- Series (T) is designed to measure temperature in rooms or areas

The sensor operates with low power supply

BACnet MSTP and MODBUS RTU on board



The sensor output is either BACnet MSTP or Modbus RTU communication

USE	Compatible to all common HVAC DDC and Analog Controls systems, with Building Automation System			
	Temperature measurement in Rooms and Areas			
	In Building Automation System where BACnet MSTP or MODBUS RTU communication protocols are used			
	Used in all common HVAC applications			
	Used in Commercial and Industrial Buildings			
Features	BACnet / MODBUS address setting over BUS protocol			
	Modern and practical product design			
	Easy to use, install and maintain			
Features	Used in Commercial and Industrial Buildings BACnet / MODBUS address setting over BUS protocol Modern and practical product design			

Product Range

Order Codes	Power Supply	Communication system	Temperature Measuring Range	IP Rating
TRW9.AA	AC/DC 24V (±10%)	BACnet MSTP	-40120°C	IP20 to IEC60529
TRW9.AG		Modbus RTU		

tion	Sensor Specification	Measured	Temperature
Sensor Specification		Sensor Characteristics	Active
or Spe		Outputs	BACnet MSTP or Modbus RTU communication, RS485
Sens		Measuring Range (T)	-40°C+120°C
	Electrical Information	Power Supply	AC/DC 24V (±10%)
		Frequency	50 / 60 Hz at AC 24V
		Terminal Clamp	Screw terminal, max. 1.5mm²
		Power Consumption	≤ 1W @ AC 24V / DC 24V
	Mechanical Information	Cable Entry	30x15mm, on the backside of the housing
		Sensing Element Position	Inside the housing, bottom of the housing
	Color and Materials	Housing Cover	White ABS, RAL9001 (Cream White)
		Housing Bottom	White ABS, RAL9001 (Cream White)
	Environmental Conditions	Operation Temperature	-25°C+70°C
		Operation Humidity	<85% r.h., no condensation
		Transport Temperature	-35°C+70°C
		Transport Humidity	< 90% r.h.
ation		Storage Temperature	-10°C+70°C
Inform		Storage Humidity	< 85% r.h., no condensation
Technical Information	Norms and Directives	IP- Rating	IP20 to IEC60529
Tech		Safety Class	III to EN 60 730
		Product Standard 1	Automatic Electric. Controls for household and similar use
		Product Standard 2	2009/EN 60 730-1
		CE Conformities to	2004/108/EG Electromagnetic Compatibility EMV
		CE Electromagnetic Compatibility Emitted Interference	2000/EN60730-1 Emitted Interference
		CE Electromagnetic Compatibility Interference resistance	2000/EN60730-1 Interference Resistance
		RoHS Compatibility	RoHS 2011/65/EC
		Operation Climatic Condition	IEC 60 721-3-3
		Operation Mechanical Condition	IEC 60 721-3-2 to class2M2
		Transport to Climatic Condition	IEC 60 721-3-2
		Transport Mechanical Condition	IEC 60 721-3-2 to class2M2
		Storage Climatic Condition	IEC 60 721-3-1
		Storage Mechanical Condition	IEC 60 721-3-1 to class2M2
v	Accessories	Accessory not included in delivery	TRA0.A (106mmx106mm backplate)
Miscellaneous	Shipping & Handling	Minimum Order	1 box with 1 piece
Miscel		Package Material	Rigid Cardboards
	Order Notes	Order Code	TRW9.AE
Thermokon	Asia Pacific	All Information and technical data are subject to alteration TRW9- Series (T) V20.1	Page 2

	Address Number		Register Description		
Modbus Parameters		03	Serial Number	actual version	
		4	Software Version	actual version	
		6	Modbus Address	Default 254, selectable 1254	
		8	Hardware Version	actual version	
Modbu		10	Protocol	0= MODBUS RTU; 1= BACnet MSTP	
		11	Baud Rate autodetection	0= OFF; 1= On	
		15	Baud Rate, (if autodetection is OFF)	0= 9600 ; 1= 19.200 ; 2= 38.400 ; 3= 57.600 ; 4= 115.200	
		34	Temperature, digital	actual value	
	Supported BACnet Obje	ects Types			
		analog-value			
		device			
	Supported BACnet Services				
		who-is			
		i-am			
	object-identifier, object-name, object-type, present-value, units, object-list, vendor-name, system-status, confirmed-service, unconfirmed-services				
rameters	MSTP Objects				
BACnet Parameters		analog-value			
BA			BACnet Address	Default 127, selectable 0127	
		AV0	Baud rate autodetection	default 0, 0= OFF; 1= ON	
		AV1	Baud Rate, (if autodetection is OFF)	0= 9600 ; 1= 19.200 ; 2= 38.400 ; 3= 57.600 ; 4= 115.200	
		AV3	Protocol	0= Modbus ; 1= BACnet	
		AV4	Temperature	actual value (-40120°C)	
		Device			
			device-identifier		
			device-name		

The function "Baud Rate autodetection" can only be used during the product is been setup. When the product is working with the BAS, the "Baud Rate autodetection" has to be set to 0= OFF and the actual Baud Rate has to be set.

Installation Notes



Observe the following general regulation for engineering and implementation:

All relevant national and heavy power regulation

Other country specific regulations

Country-specific regulations

Local electrical supply authority regulation

Schematics, cable listings, dispositions, specification and arrangements from the customer or engineering office in charge

Third party specifications, e.g. general contractors or constructors

Mounting Advices



Advices

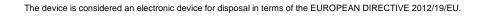








Disposal Notes



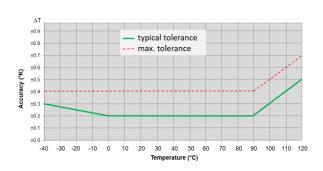


The device may not be disposed as domestic garbage.

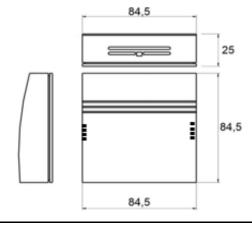
The device must be disposed through channels provided for this purpose.

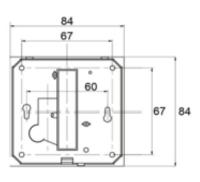
It is mandatory to comply with local currently applying laws and regulations.

Accuracy Curves



Dimensional Drawing





Connections & Settings

Terminals						
Т	1	T2	Т3	T4	T5	Т6
NB+	24V AC/DC	GND	RS485 C-	RS485 C+	n.A.	n.A.