



Advanced Thermal Dispersion Communications for TDP05K Air Measuring Probes

- **BACnet Protocol Implementation
Conformance Statement**

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Protocol Implementation Conformance Statement – PICS

General information	Date:	21 December 2021
	Vendor Name:	Ruskin
	Vendor ID:	692
	Product Name:	TDP05k Thermal Dispersion Probe Airflow Measuring System
	Product Model Number:	TDP05k
	Firmware Revision:	1.5.3
	Application Software Version:	1.1.0
	BACnet Protocol Revision:	14
	Product Description:	Thermal Dispersion Electronic Airflow Measuring System
	BACnet Standard Device Profile:	BACnet Application Specific Controller (B-ASC)
	BACnet Interoperability Building Blocks supported:	
	Data Sharing - ReadProperty-B (DS-RP-B)	
	Data Sharing - WriteProperty-B (DS-WP-B)	
	Device Management - DynamicDeviceBinding-A (DM-DDB-A)	
	Device Management - DynamicDeviceBinding-B (DM-DDB-B)	
	Device Management - DynamicObjectBinding-B (DM-DOB-B)	
	Device Management - DeviceCommunicationControl-B (DM-DCC-B)	
	Alarm and Event Management - Notification - Internal-B (AE-N-I-B)	
	Alarm and Event Management - Information-B (AE-INFO-B)	
	Alarm and Event Management - Alarm Summary-A (AE-ASUM-B)	
	Segmentation Capability:	No
	Data Link Layer Options:	MS/TP master baud rates: 9600, 19200, 38400, 76800
	Device Address Binding:	No static device binding supported
	Networking Options:	None
	Character Sets Supported:	ISO 10646 (UTF-8)

Standard objects	The device supports the following standard object types: <ul style="list-style-type: none"> • Device • Analog Value • Notification Class
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Advanced Thermal Dispersion Air Measuring Station BACnet objects

Object Name	Description	Type	Inst	Units
TDP05K ¹	The Device object	DEV	XXXX ²	See Property Table 1
Notification Class	Handles where to send events and notifications	NC	1	See Property Table 2
Airflow Temperature	Average Temperature in SI or Imperial Units	AV	1	See Property Table 3
Actual Airflow Velocity ³	Average station airflow velocity or volume in SI or Imperial Units	AV	2	See Property Table 3

AV – Analog Value

NC – Notification Class

1 - Name is dependent on line 2 display settings configured on the device. With line 2 parameter set to custom, the device name appends the line 2 test to the BACnet device name.

2 - Configured in the device settings menu.

3 - Name is dependent on display settings configured on the device. Prefixed by “Actual” or “Standard” and suffixed by “Velocity” or “Volume” based on settings in the display menu.



Advanced Thermal Dispersion Air Measuring Station BACnet property types

Property Table 1: Device Object			
Property	Type	Access	Description
Object_Identifier ¹	BACnetObjectIdentifier	R	The object number (instance) for the DEV object
Object_Type	BACnetObjectType	R	The DEV object type – DEVICE
Object_Name	CharacterString	R	The DEV object name
System_Status	BACnetDeviceStatus	R	Reflects the current status of the device
Vendor_Name	CharacterString	R	Manufacturer of the device
Vendor_Identifier	Unsigned16	R	The unique vendor identification code
Model_Name	CharacterString	R	Model of the device
Firmware_Revision	CharacterString	R	Level of firmware installed on the device
Application_Software_Version	CharacterString	R	Version of the application software installed on the device
Protocol_Version	Unsigned	R	Indicates the BACnet protocol version
Protocol_Revision	Unsigned	R	Indicates the BACnet protocol revision
Max_APDU_Length_Accepted	Unsigned	R	Maximum number of octets that may be contained in a single APDU
Segmentation_Supported	BACnetSegmentation	R	Indicates if the device supports segmentation
APDU_Timeout	Unsigned	R	The time in milliseconds between retransmission of an APDU requiring acknowledgment
Number_Of_APDU_Retries	Unsigned	R	Maximum number of times an APDU shall be transmitted
Protocol_Services_Supported	BACnetServicesSupported	R	Indicates which standardized protocol services are executed by the device
Protocol_Object_Types_Supported	BACnetObjectTypesSupported	R	Indicates which standardized object types can be present in the device
Object_List	BACnetARRAY[N] of BACnetObjectIdentifier	R	Indicates the list of objects accessible on the device
Max_Master	Unsigned(0..127)	R	The Max Master of the device
Max_Info_Frames	Unsigned	R	The Max Info Frames of the device
Device_Address_Binding	BACnetLIST of BACnetAddressBinding	R	List of Address Bindings
Database_Revision	Unsigned	R	Revision number for the device's database
Property_List	BACnetARRAY[N] of BACnetPropertyIdentifier	R	Array of the supported object properties

Property Table 2: Notification Class Object			
Property	Type	Access	Description
Object_Identifier ¹	BACnetObjectIdentifier	R	The object number (instance) for the NC object
Object_Type	BACnetObjectType	R	The NC object type – NOTIFICATION_CLASS
Object_Name	CharacterString	R	The NC object name
Notification_Class	Unsigned	R	Indicates the Instance of the Notification_Class
Priority	BACnetARRAY[3] of Unsigned	R	Conveys the priority to be used for event notifications for TO_OFFNORMAL, TO_FAULT, and TO_NORMAL
Ack_Required	BACnetEventTransitionBits	R	Conveys whether acknowledgment shall be required for notification generated for TO_OFFNORMAL, TO_FAULTS, and TO_NORMAL event transitions.
Recipient_List	BACnetLIST of BACnetDestination	R/W	Conveys a list of up to 1 recipient destinations to which destinations shall be sent. * Limited to 1 recipient with valid days set to all days, from time as 00:00:00.00, to time as 23:59:59.99 and transitions as (TRUE,TRUE,TRUE)
Property_List	BACnetARRAY[N] of BACnetPropertyIdentifier	R	Array of the supported object properties

