TAD
Touch Advanced Display

Product Bulletin

The Touch Advanced Display (TAD) is a comprehensive series of freely programmable operator interfaces featuring both IP and MSTP BACnet® communication and colorful, graphic displays with touch-screen interface.

TAD Displays feature bright TFT widescreen (16:9) displays of different sizes 4.3", 7" and 10" with a fully dimmable LED backlight and resistive touch interface.

The integrated HTML 5.0 web server grants remote access whenever the units are connected to an accessible IP network.

TAD Series offers an unprecedented price / performance ratio to meet challenging applications requirements from offices to control rooms.

They combines state-of-the-art features and top performance with an outstanding design.

TAD Series is the ideal choice for User Interface applications enabling an intuitive and easy interaction with the building automation controls and equipment.

Features

- **Standard BACnet Interfaces (IP / MSTP)**

  The TAD Series fulfill the standard BACnet Operator Display (B-OD) profile enriching its minimum requirements with Alarms, Time Schedules and Calendars support, enabling users to take full advantage of the features included in the connected devices.

- **Freely Programmable**

  The Touch-Screen Tailoring Tool (T^3) suite allows customizing the TAD user experience tailoring it to the effective User requirements. Thanks to the extensive library of symbols and widgets, building data and operations are presented in a consistent way across different applications.

- **Web-Browser Widget**

  Embedded web browser devices are becoming a common demand in the marketplace. TAD features a web-browser widget that can be included in the User Interface project empowering the end user to connect to simple web pages and interact with remote systems.

- **Embedded Web-Server**

  The web server capabilities natively included in TAD devices allow users to remotely connect and interact with the device thought standard internet browsers. The web pages user interface will reflect the same UX of the local application therefore maintaining a consistent look across different interfaces.

- **Simple and Elegant but Robust Design**

  Its simplicity of design does not preclude the immediate impression of beauty and the IP66 protection rate for the front of the unit.

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General Features

Freely Programmable with T³

The Touchscreen Tailoring Tool (T³) is the most complete software platform that currently exists. Such sophistication is needed to power and simplify the complex connectivity both on the software and firmware level.

The T³ graphical interface natively supports vectorial SVG graphic objects, transparency and alpha blending. It allows easily creating, installing and maintaining applications in multiple languages to meet global requirements.

T³ empower programmers with off-line and on-line simulation. It features a powerful scripting language for automating HMI applications.

T³ include a rich gallery of objects and symbols respecting the company UX feeling.

Colorful touch-screen display

TAD series feature different dimensions of bright TFT widescreen (16:9) display with a fully dimmable LED backlight. Thanks to a versatile resistive touchscreen interface, any panel can be operated with a finger, a fingernail, a stylus or any other object. This widens even more the applicability a TAD display can fulfill.

Communication Ports

TAD devices offers multiple communication options.

The Ethernet Port supports applications upload / download, remote internet connection through embedded web server and BACnet IP communication.

The DB-9 connector, set as RS485 serial port can run BACnet MS/TP protocol.

A USB port is also available for application download and trend-logs buffer upload.

BACnet Communication

BACnet communication is available on both IP and MSTP level of any TAD communication ports.

The TAD series fulfill the standard BACnet Operator Display (B-OD) profile enriching its minimum requirements with Alarms, Time Schedules and Calendars support, allowing users to take full advantage of the features included in the connected devices.

Use Cases

Room User Interface
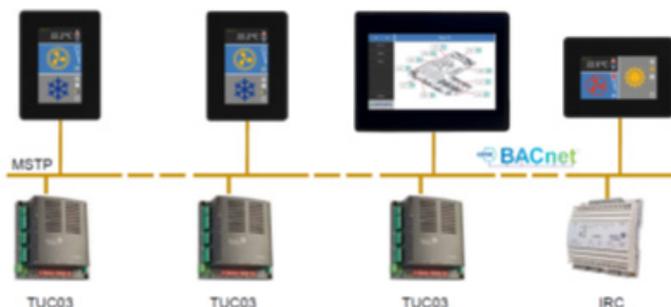
TAD devices can be easily tailored to interact with terminal unit or room automation controllers through BACnet protocol. The 4.3" horizontal mounting perfectly fit this use.

Equipment / Technical Room User Interface
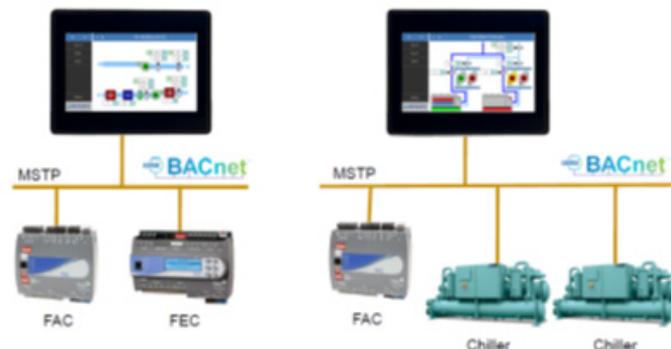
Thanks to their panel mounting options, TAD devices easily adopt to interface with HVAC/R equipment or technical rooms mechanical and electrical apparatus.

Building / Floor User Interface
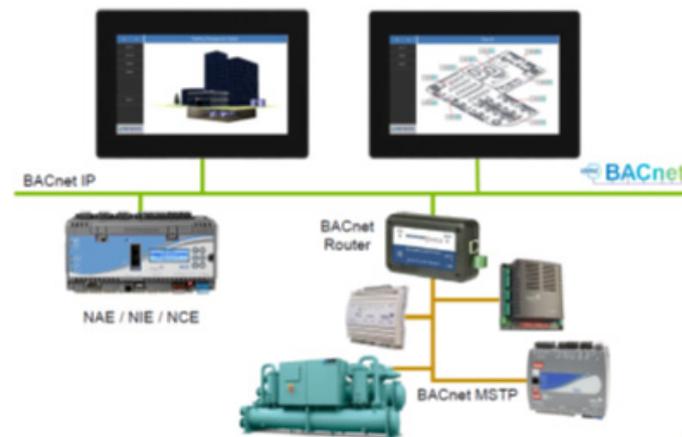
The use of touch-screen displays to manage entire floors and even small buildings is getting a common requirement in technical specifications. TAD panels perfectly fulfill these needs.

Mounting

TAD series are designed for multiple mounting options including panel front and flush mounting on a wall thanks to the BOX0x-01 accessories.

The front IP66 protection rate and simple thus elegant design allows TAD series display to be installed in potentially every environment.

In order to meet the front panel protection classifications, proper installation procedure must be followed.

The equipment is not intended for continuous exposure to direct sunlight. It might accelerate the aging process of the front panel film.

The equipment is not intended for installation in contact with corrosive chemical compounds. Check the resistance of the front panel film to a specific compound before installation.

Do not use tools of any kind (screwdrivers, etc.) to operate the touch screen of the panel.

Dimensions *(in mm)*
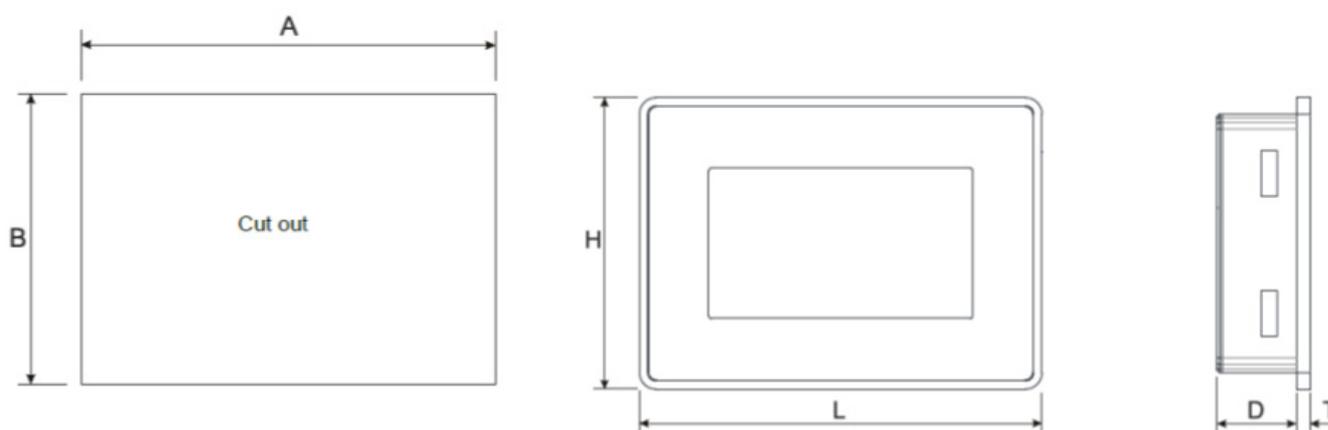
Codes	A	B	D	H	L	T
TAD0471	136	96	29	107	147	5
TAD0701	176	136	29	147	187	5
TAD1001	271	186	29	197	282	6

Connectivity
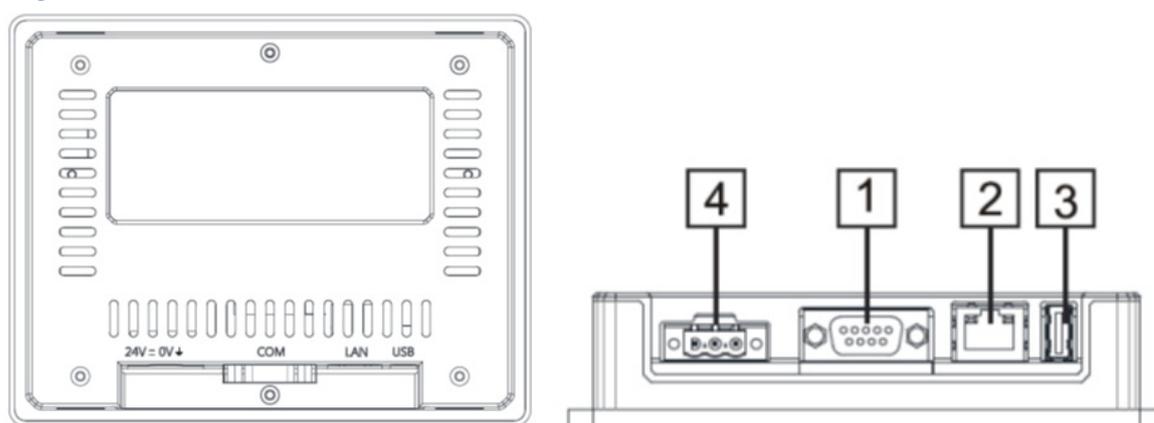
1	Serial port (5v 100mA max.)
2	Ethernet port
3	USB Port (v.2.0, 5V 500mA max.
4	Power Supply (18-32VDC)

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Wiring

The TAD units are powered through the following shown connector with 18 to 32 VDC supply voltage. Please check the technical specifications and make sure the power supply has enough power capacity for the operation of the equipment.
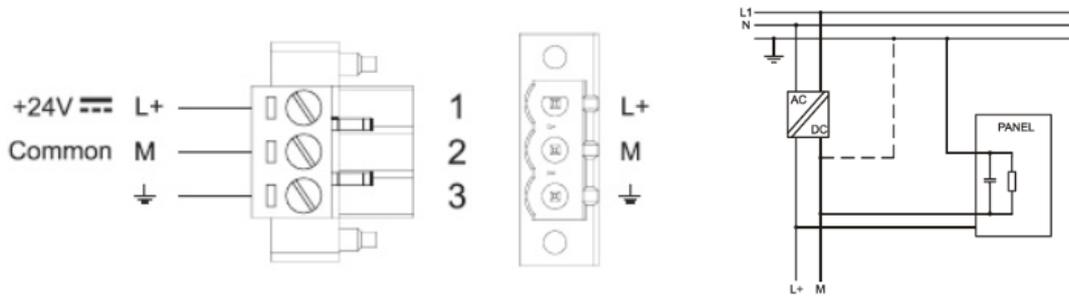

The unit must always be grounded to earth. Grounding helps limit the effects of noise due to electro¬magnetic interference on the control system. Use terminal 3 on the power supply terminal block earth connection.

Serial Port

The TAD serial port is used to communicate with other field devices.

The serial port standard is software programmable and for BACnet MS/TP the RS485 has to be selected. Make sure you select the appropriate interface in the T^3 programming utility.

RS-485

DB-9 Female	
1	GND
2	
3	CHA-
4	CHB-
5	
6	+5V
7	CHB+
8	CHA+
9	
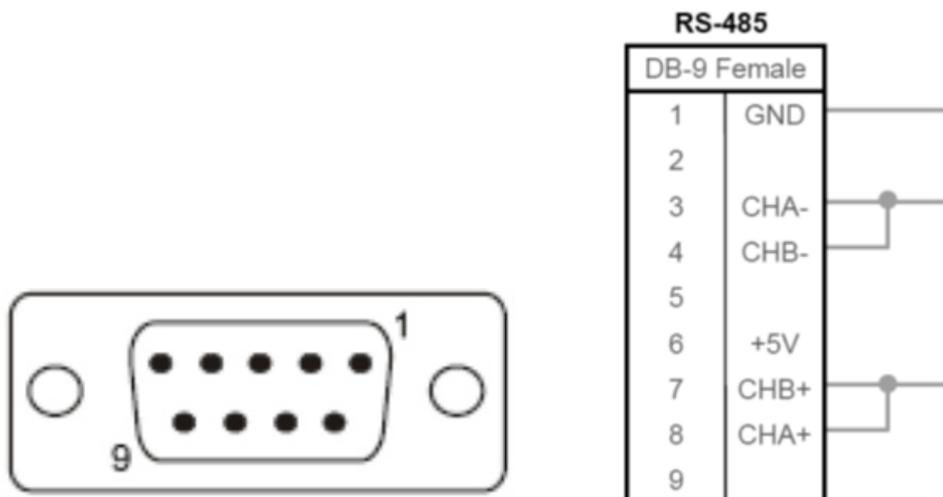
1	GND
2	
3	CHA-
4	CHB-
5	
6	+5V
7	CHB+
8	CHA+
9	

Note: To operate RS485, pins 3-4 and 7-8 must be connected externally.

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Ordering codes

Codes	Description
TAD0471-0	4.3" Touchscreen Advanced Display
TAD0701-0	7.0" Touchscreen Advanced Display
TAD1001-0	10.0" Touchscreen Advanced Display
Accessories (to be ordered separately)	
BOX04-01	Wall mount box for TAD04
BOX07-01	Wall mount box for TAD07
BOX10-01	Wall mount box for TAD10
DEMO-STAND07	Counter display structure for TAD07
Programming Tool License (to be ordered separately from SIS Europe)	
TTT0103	Touchscreen Tailoring Tool, 1 Key for 3 activations
TTT0110	Touchscreen Tailoring Tool, 1 Key for 10 activations
TTT0130	Touchscreen Tailoring Tool, 1 Key for 30 activations

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Technical specification

Product codes	**TAD0471-0:** 4.3" Freely programmable Touchscreen Advanced Display **TAD0701-0:** 7.0" Freely programmable Touchscreen Advanced Display **TAD1001-0:** 10.0" Freely programmable Touchscreen Advanced Display
Display	
TAD0471	4.3" Widescreen TFT 64k Colors, 480 x 272 and LED backlight
TAD0701	7.0" Widescreen TFT 64k Colors, 800 x 480 and LED backlight
TAD1001	10.1" Widescreen TFT 64k Colors, 1024 x 600 and LED backlight
Brightness	200 cd/m^2
Touch-screen	Resistive
Supply voltage	18-32VDC
Real-time clock	Yes
Ethernet Port	1 – Port 0 10/100
Serial Port	1 – RS-232 / RS-422 / RS-485 Software Configurable
USB Port	1 – Host v. 2.0, max. 500 mA
Power consumption	
TAD0471	250 mA max @ 24 VDC
TAD0701	300 mA max @ 24 VDC
TAD1001	380 mA max @ 24 VDC
Ambient conditions	
Operating	0 ÷ 50°C, 5 ÷ 85% RH Noncondensing
Storage	-20 ÷ 70°C, 5 ÷ 85% RH Noncondensing
Dimensions (H x W x D)	
TAD0471	107 x 147 x 24 mm
TAD0701	147 x 187 x 24 mm
TAD1001	197 x 282 x 25 mm
Weight	
TAD0471	0.4 Kg
TAD0701	0.6 Kg
TAD1001	1.0 Kg
Memory	
TAD0471	RAM, 256MB Flash, 2GB
TAD0701	RAM, 256MB Flash, 2GB
TAD1001	RAM, 512MB Flash, 4GB
Protection Class	IP66 Front*, IP20 Back *IP66 rating is achieved strictly respecting the instructions provided.
CE **Compliance**	Johnson Controls declares that these products are in compliance with the essential requirements and other relevant provisions of the EMC Directive and Low Voltage Directive. Emission EN 61000-6-4, Immunity EN 61000-6-2 for installation in industrial environments Emission EN 61000-6-3, Immunity EN 61000-6-1 for installation in residential environments

The performance specifications are nominal and conform to acceptable industry standards. For application at conditions beyond these specifications, consult the local Johnson Controls office. Johnson Controls shall not be liable for damages resulting from misapplication or misuse of its products.