

ABB MEASUREMENT & ANALYTICS | DATA SHEET

Aztec AWT440

Multi-input transmitter



Measurement made easy

Universal transmitter for up to 4 digital sensors

Easy to use

- plug-and-play digital sensor connection using EZLink technology
- automatic sensor recognition and set-up
- intuitive software with full-color display

Cost effective

- connect up to 4 digital sensors
- field upgradeable enabling additional sensors to be added
- advanced predictive maintenance diagnostics

Improved reporting

- full audit trail capability for improved regulatory compliance
- secure data archiving to SD card or USB stick
- archived data can be analyzed using ABB's DataManager Pro data review software

Flexible communications

- **optional digital communications including Ethernet, Profibus DP or MODBUS**

The Aztec 400 range

The Aztec AWT440 multi-input transmitter is designed for use with ABB's Aztec 400 range of advanced digital sensors for monitoring the key parameters in municipal and industrial water / wastewater treatment.

The transmitter and sensors feature ABB's EZLink technology, a plug-and-play connection and configuration method that makes the Aztec 400 the easiest-to-use and maintain monitoring system on the market today.

The AWT440 utilizes the latest technology to provide a highly reliable yet flexible monitoring system that meets the demands of today's users.

The Aztec AWT440 transmitter featuring EZLink technology offers:

- Plug-and-play multiple sensor connection
- Automatic sensor recognition and set-up
- Advanced predictive maintenance diagnostics
- Enhanced measurement accuracy due to the lowest electrical noise interference
- Data logging and graphical process trending
- Full audit trail capability
- SD card / USB stick data download capability
- Flexible communications including Ethernet, Profibus and MODBUS protocols

The AWT440 multi-input transmitter

The AWT440 is a multi-input transmitter for use with up to 4 ABB digital sensors.

Featuring ABB's EZLink technology, users of this system benefit from plug-and-play connectivity, automatic sensor recognition / set-up and predictive diagnostics.

Analysis and signal conditioning is conducted within the robust sensor housing and transmitted digitally to the AWT440 transmitter where measurement data and diagnostic information is recorded and clearly viewed on the full color graphical display. Process data can be securely archived via the inbuilt SD card reader or USB port.

Users can operate the system easily thanks to the AWT440's powerful, yet intuitive software with a number of user-selectable communication options including Ethernet, Profibus DP V1.0 or Modbus RS485; enabling simple device integration.

The robust IP66 corrosion-resistant enclosure is suitable for either wall- or pipe-mounting within non-hazardous areas.

Easy to use

Operation simplicity is a key feature of the AWT440. The powerful, yet user-friendly software enables easy, intuitive device interaction. Common operation is straightforward, with clear menus presenting options for setting parameters and viewing diagnostic information.

Easy sensor connect with EZLink

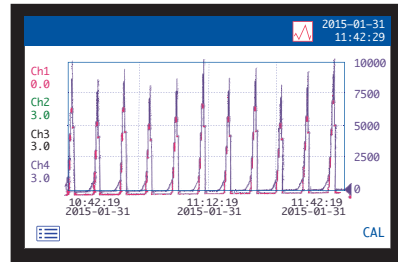
Up to 4 digital sensors can be connected to the AWT440 transmitter using ABB's EZLink technology. Installation and commissioning is simplified with plug-and-play digital sensor connections and automatic sensor recognition and set-up.



Fig. 1 EZLink sensor connections

Graphical trending

Measurement trends of each sensor can be easily and clearly viewed locally on the graphical color display.



Full audit trail capability

The AWT440 transmitter records all data continuously to its internal memory. This includes both event log / configuration data in addition to measurement data. The transmitter's event log files contain audit log, alarm log, diagnostic log and calibration log data that is time- and date-stamped, providing the operator with full audit trail capability.

01			
02			
03			
04			

Fig. 2 Audit log

Secure data archiving to SD card or USB stick

Process data and historical logs can be securely archived to a either an SD card or USB stick for record keeping or analysis using ABB's DataManager Pro data analysis software.



Fig. 3 SD card / USB stick access

Flexible communications

The AWT440 transmitter features a number of user-selectable communication options, enabling simple device integration.

Digital communications

The AWT440 can be equipped with PROFIBUS DP V1.0 or Modbus RS485 to enable full communications and control integration with distributed control systems. These options can be configured when purchased or retrofitted in the field to expand existing functionality due to the simple plug-in design.

Ethernet

The AWT440 can provide 10BaseT Ethernet communications via a standard RJ45 connector and uses industry-standard protocols TCP/IP and HTTP. The use of standard protocols enables easy connection into existing PC networks.

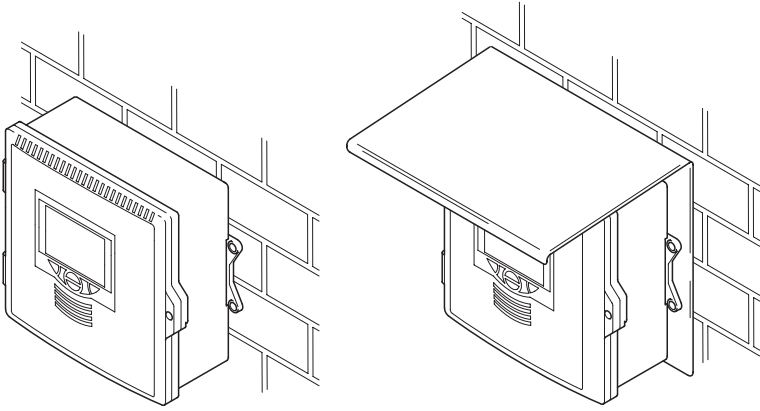
Embedded web server

The AWT440 has an embedded web-server that provides access to measurement readings and active diagnostics. The use of HTTP enables standard web browsers to view the data.

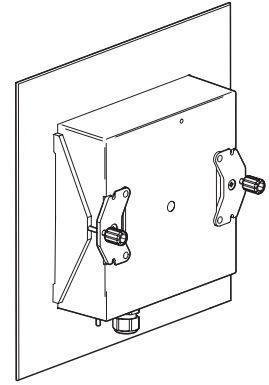
Email notification

Via the AWT440's built-in SMTP client, the transmitter is able to email notification of important events. Emails triggered from alarms or other critical events can be sent to multiple recipients.

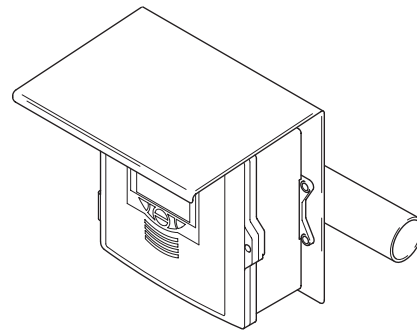
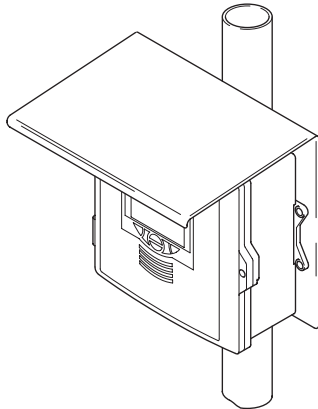
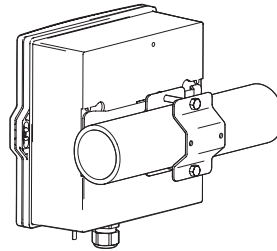
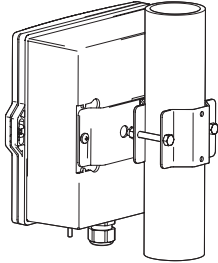
Mounting options



Wall-mounting



Panel-mounting



Pipe-mounting

Specification

Operation

Display

89 mm (3.5 in.) color 1/4 VGA TFT, liquid crystal display (LCD) with built-in backlight and brightness / contrast adjustment

Language

English, German, French, Italian, Spanish

Keypad

- 6 tactile membrane keys:
- Group select / left cursor, view select / right cursor, menu key, up, down, enter key

No. of inputs

Up to 4 sensors

Mechanical data

Protection

IP66 / NEMA 4X

Dimensions

- Height – 194 mm (7.64 in.) minimum (excluding glands)
- Width – 214 mm (8.42 in.) door closed – minimum
- Depth – 98 mm (3.85 in.) door closed – minimum (excluding fixing brackets)
- Weight – 1.5 kg (3.3 lb)

Panel dimensions

- Cut-out height – 186 +1.1 –0 mm (7.32 +0.04 –0 in.)
- Cut-out width – 186 +1.1 –0 mm (7.32 +0.04 –0 in.)
- Thickness – 6 mm (0.236 in.) maximum
- Distance between cut-outs – 40 mm (1.57 in.) minimum

Materials of construction

Glass-filled polycarbonate

Security

Password protection

- Calibrate and Advanced – user-assigned
- Service level access – factory-set

Electrical

Power supply ranges

100 to 240 V AC $\pm 10\%$, 50 / 60 Hz
(90 min. to 264 V max. AC, 45/65 Hz)

Optional

24 V DC (18 min. to 36 V max. DC)

Power consumption

<30W

Terminal connections rating

AWG 26 to 16 (0.14 to 1.5 mm²)

Analog outputs

- 2 standard
- 2 optional
- Galvanically isolated from the rest of the circuitry, 500 V for 1 minute. Range-programmable source and range 0 to 22 mA, maximum load 750 W @ 20 mA

Relay outputs

- 4 standard
- 2 optional
- Fully-programmable
Contacts rated at 2A @ 110 / 240 V
Standard relays are changeover
Optional relays are normally closed (NC)

Digital inputs / outputs

- 6 standard, user-programmable as input or output
- Minimum input pulse duration: 125 ms
- Input – volt-free or 24 V DC (conforms to IEC 61131-2)
- Output – open-collector, 30 V, 100 mA max. (conforms to IEC 61131-2)

Connectivity / communications (optional)

Ethernet

TCP/IP, HTTP

Profibus

DPV1

MODBUS

RTU RS485

...Specification

Data logging

Storage

- Measurement value storage (programmable sample rate)
- Audit log*, Alarm log*, Calibration log, Diagnostics log

Chart view

On local display

Historical review

Of data

Data transfer

SD card interface / USB stick – Windows-compatible FAT file system, data and log files in Excel and DataManager Pro compatible formats

Environmental data

Ambient operating temperature:

-10 to 55 °C (14 to 131 °F)

Ambient operating humidity:

Up to 95 % RH non-condensing

Storage temperature:

-20 to 85°C (-4 to 185 °F)

Approvals, certification and safety

Safety approval

cULus

CE mark

Covers EMC & LV Directives (including latest version EN 61010)

General safety

- EN61010-1
- Pollution degree 2
- Insulation class 1

EMC

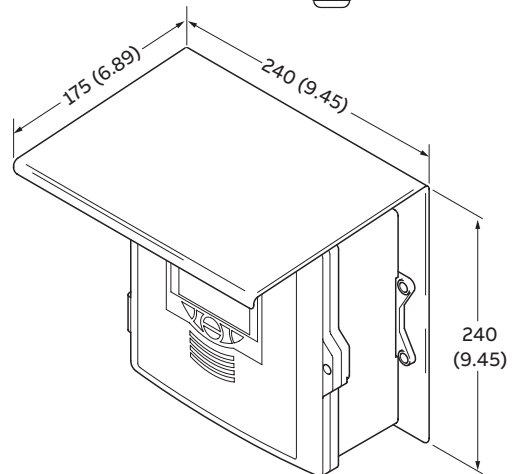
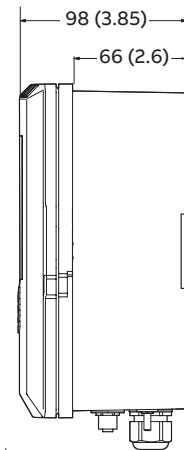
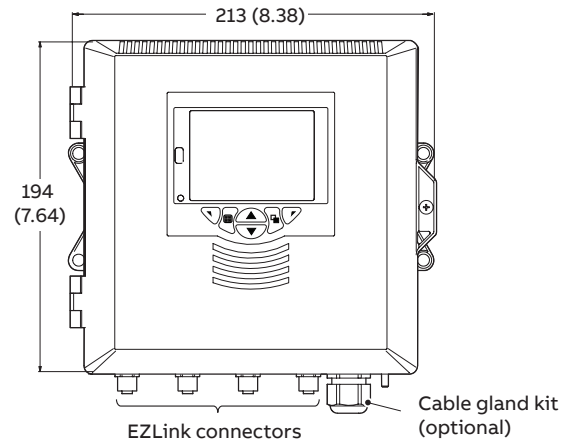
Emissions & immunity

Meets requirements of IEC61326 for an industrial environment and domestic emissions

*Audit log and Alarm log data are stored in the same log file.

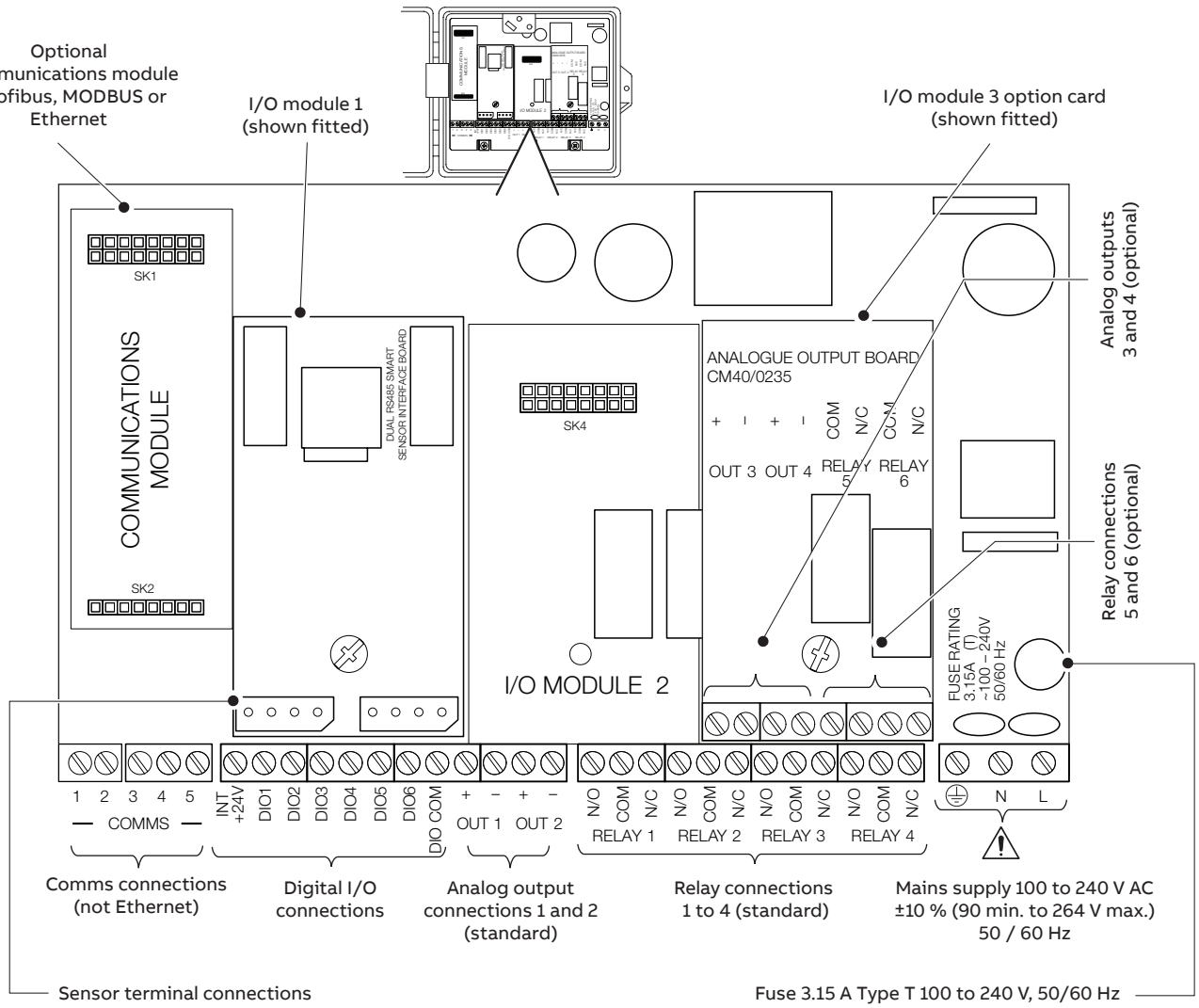
Dimensions

Dimensions in mm (in.)

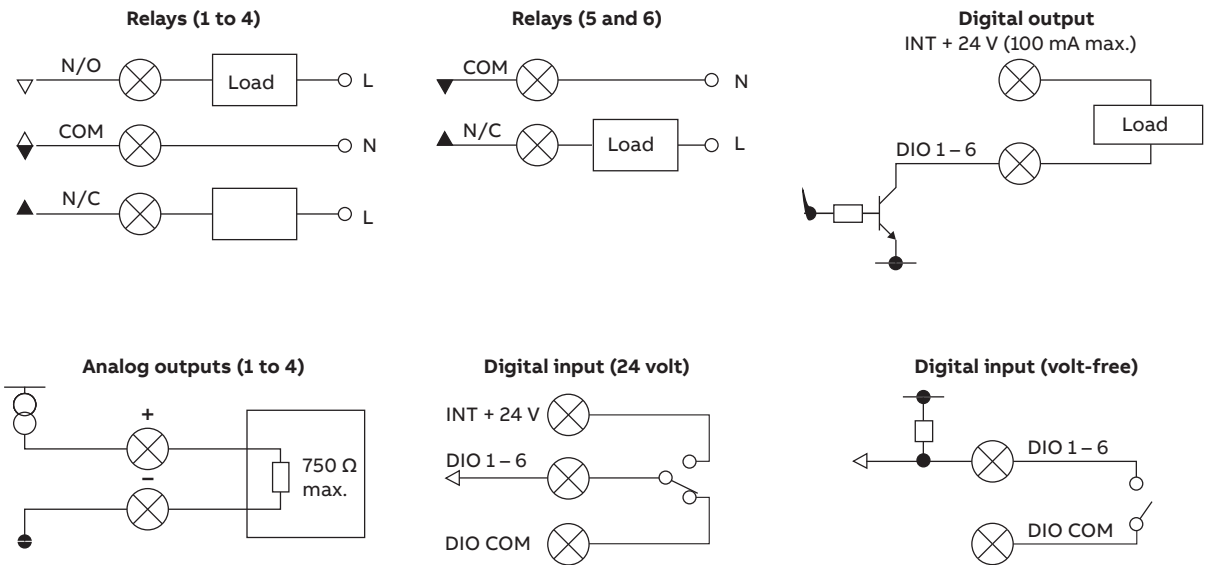


Weather shield dimensions

Electrical connections



Relays and analog outputs



Ordering information

Aztec AWT440 multi-input transmitter	Main code										Options				
	AWT440/	X	X	X	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX
Build revision															
Reserved		A													
Enclosure type															
Wall mount			1												
Display type															
Color (standard)		A													
Power supply															
90 to 260 V AC, 50 / 60 Hz					1										
18 to 36 V DC					2										
Channel 1															
2 digital sensor inputs (EZLink)						D2									
Channel 2															
Additional 2 digital sensor inputs (EZLink)							D2								
Without							Y0								
Output signal															
Standard (2 current outputs + 4 relays)								Y0							
Additional output card (provides 2 additional current outputs + 2 relays)								Y2							
Communications															
Without									Y0						
Ethernet									E1						
Profibus DPV1									D1						
MODBUS									M1						
Data storage															
Without										Y0					
SD card function										D1					
SD card function with SD card										D2					
USB function										D8					
Optional ordering code	Add one or more of the following codes after the standard ordering information to select any additional options if required.														
Accessories															
Pipe-mount kit														A1	
Panel-mount kit														A2	
Weather shield														A3	
Pipe-mount + weather shield														A4	
Test certificate															
Test certificate														CD	
Documentation language (supplied as standard in English)															
German															M1
Italian															M2
Spanish															M3
French															M4
English															M5
Cable entry options															
Metric gland pack (9 glands)															U1

Acknowledgements

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