Data sheet DS/AWT440–EN Rev. B

Aztec AWT440
Multi-input transmitter

Universal transmitter for up to 4 digital sensors

Measurement made easy

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

Aztec AWT440
Multi-input transmitter

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.

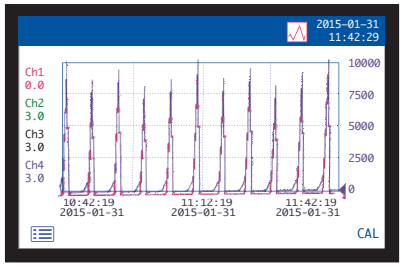
Easy sensor connect with EZLink

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.

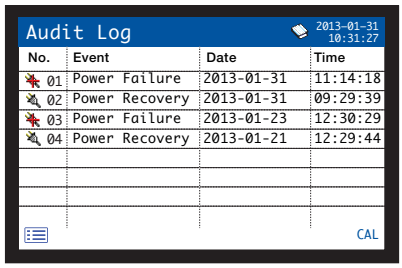


Fig. 2: Audit log

Aztec AWT440
Multi-input transmitter

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.

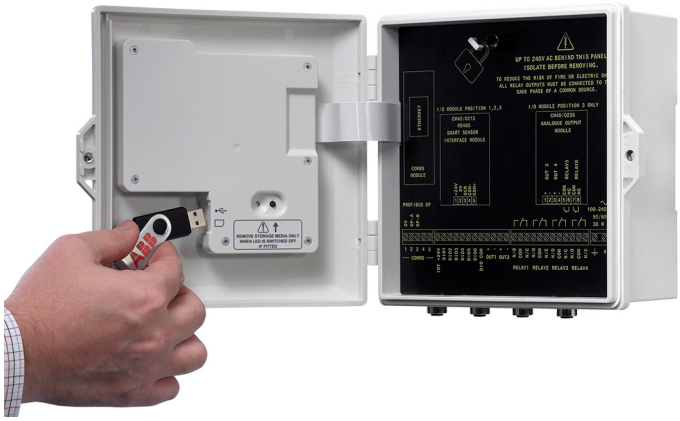


Fig. 3: SD card / USB stick access

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.

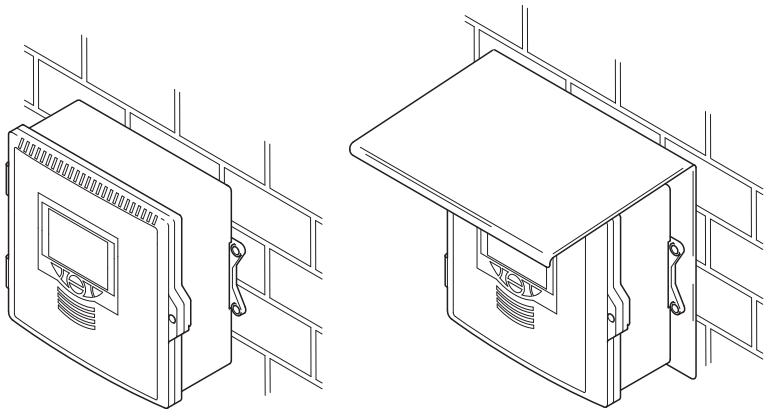
Embedded web server

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.

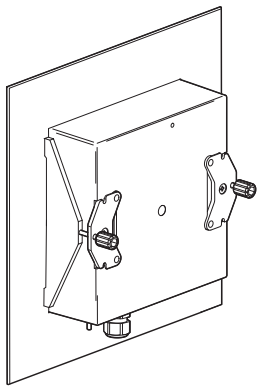
Email notification

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.

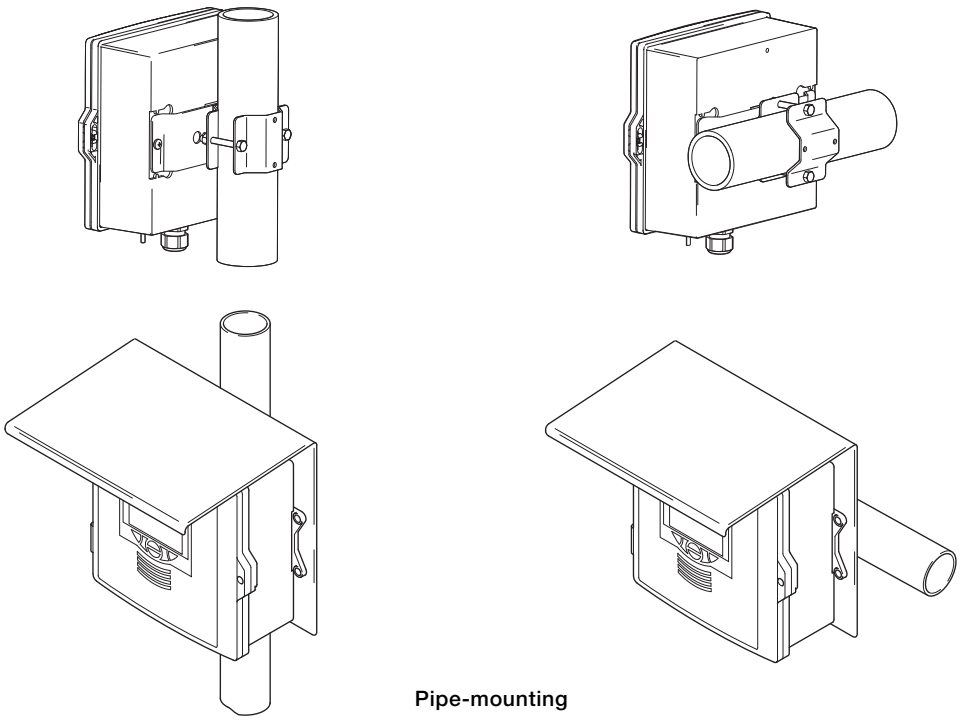
Mounting options



Wall-mounting



Panel-mounting



Pipe-mounting

Aztec AWT440
Multi-input transmitter

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 ±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 mm^2)

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 Ω @ 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

Data logging

Storage

Measurement value storage (programmable sample rate)
Audit log*, Alarms 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 ºC (14 to 131 ºF)

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

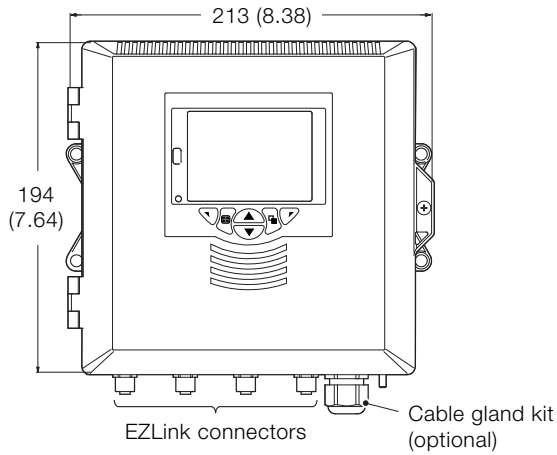
Emissions & immunity

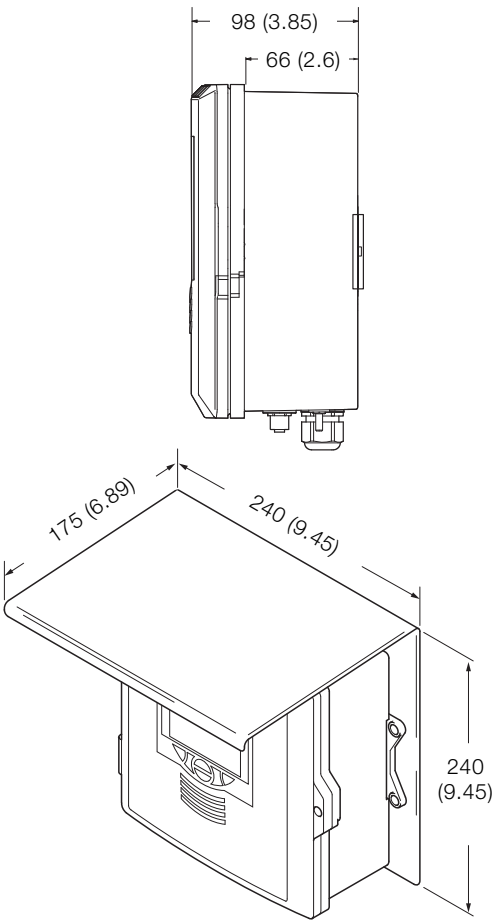
Meets requirements of IEC61326 for an industrial environment and domestic emissions

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

Dimensions

Dimensions in mm (in.)

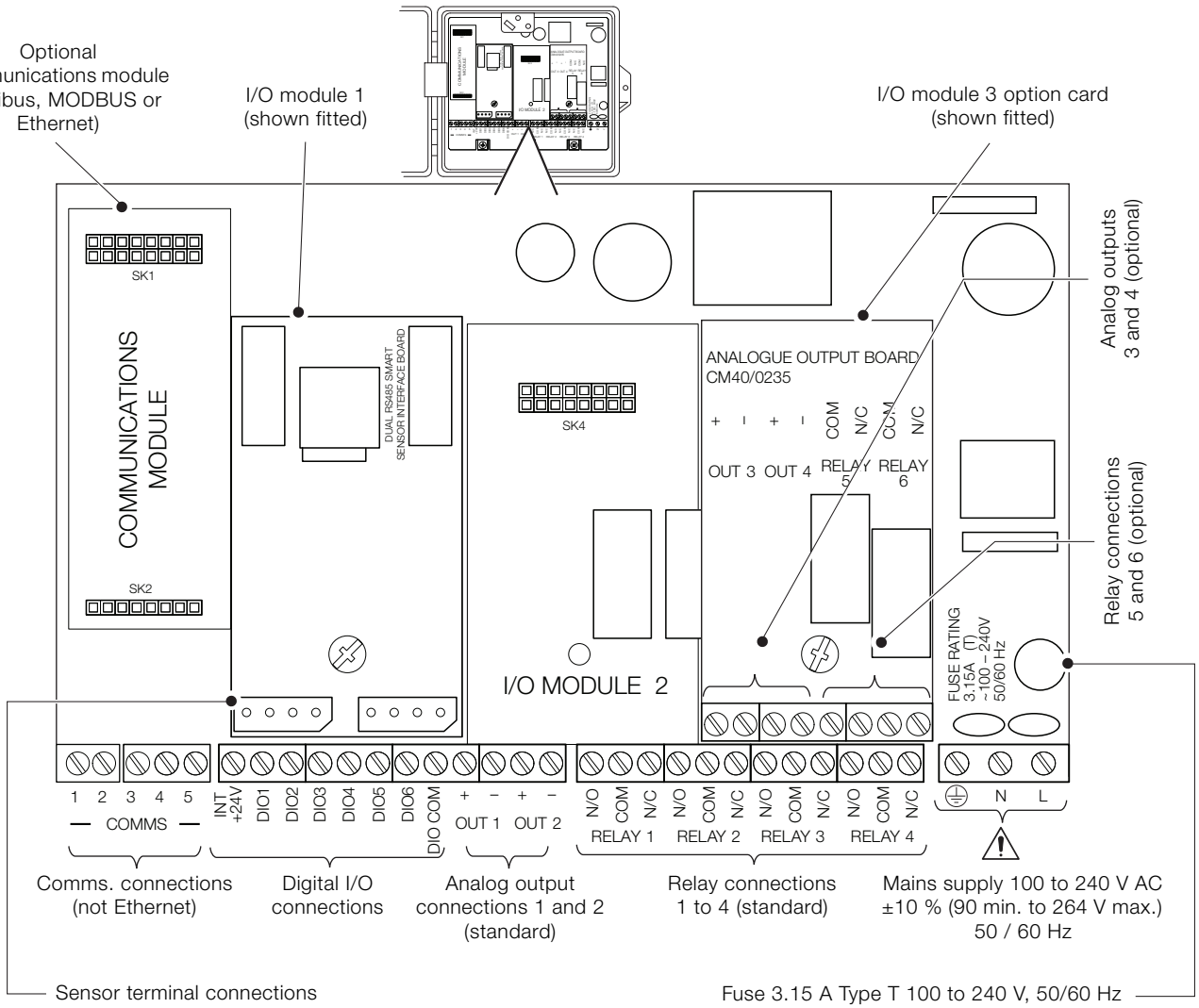




Weather shield dimensions

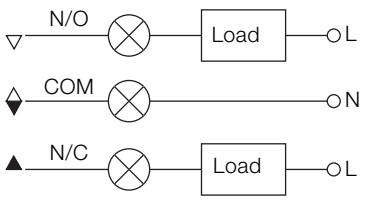
Aztec AWT440
Multi-input transmitter

Electrical connections

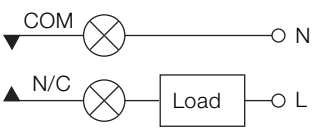


Relays and analog outputs

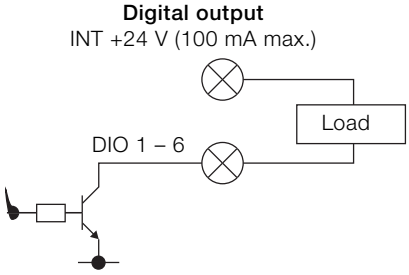
Relays (1 to 4)



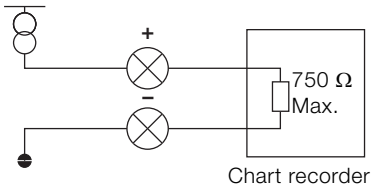
Relays (5 and 6)



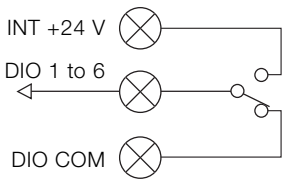
Digital output



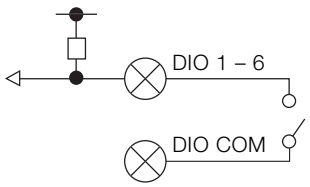
Analog outputs (1 to 4)



Digital input (24 volt)



Digital input (volt-free)



Aztec AWT440
Multi-input transmitter

Ordering information

		Main code									Options			
Aztec AWT440 multi-input transmitter	**AWT440/**	**X**	**X**	**X**	**X**	**XX**	**XX**	**XX**	**XXX**	**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				

Continued on next page

		Main code									Options			
Aztec AWT440 multi-input transmitter	**AWT440/**	**X**	**X**	**X**	**X**	**XX**	**XX**	**XX**	**XXX**	**XX**	**XX**	**XX**	**XX**	**XX**
		See previous page												
Optional ordering code														
Add 1 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

Windows and Excel are registered trademarks of Microsoft Corporation in the United States and/or other countries.

Contact us

ABB Limited
Process Automation
Howard Road, St. Neots
Cambridgeshire, PE19 8EU
UK
Tel: +44 (0)870 600 6122
Fax: +44 (0)1480 213 339
Mail: enquiries.mp.uk@gb.abb.com

ABB Inc.
Process Automation
125 E. County Line Road
Warminster, PA 18974
USA
Tel: +1 215 674 6000
Fax: +1 215 674 7183

www.abb.com

Note
We reserve the right to make technical changes or modify the contents of this document without prior notice. With regard to purchase orders, the agreed particulars shall prevail. ABB does not accept any responsibility whatsoever for potential errors or possible lack of information in this document.

3KXA877440R1001

Sales Service Software

DS/AWT440–EN Rev. B 07.2016

Power and productivity
for a better world™