Specifications

Smart HART Modem model AZ-1SHM

Item		Description
Communication interface (AZ-1SHM and host)	USB	USB 2.0, Type-C connector
	Bluetooth	Bluetooth Classic v.4.2
	Wi-Fi	IEEE 802.11 b/g/n (AP/STA mode switching)
Communication interface (AZ-1SHM and field device)	HART	HART physical layer-compliant FSK modem, 2 mm banana plugs (with crocodile clips and test clips)
	SFN (DE)	SFN (DE) communication, 2 mm banana plugs (with crocodile clips and test clips)
Dimensions/weight	Dimensions (W × H × D)	49.2 × 106.9 × 27.3 mm
	Weight	90 g
Power (AZ-1SHM)	USB	Supplied via the USB port
	Battery	AAA batteries (3), alkaline or nickel metal hydride batteries recommended
	Continuous operation time (when batteries are used)	Alkaline batteries: approx. 3 hours* Nickel metal hydride batteries (750 mAh): approx. 4 hours 30 minutes*
Power from the AZ-1SHM to the field device	Supplied voltage	Maximum rating: 25.2 V DC (24 V + 5 %)
	Supplied current	Maximum rating: 30 mA
Environmental conditions	Operating temperature range	0 to 50 °C
	Transport/storage temperature range	−40 to +70 °C
	Operating humidity range	5 to 95 % RH
Other	Function to supply power to the field device	24 V max. for transmitter, 4 to 20 mA for actuator

* If model AZ-1SH uses Bluetooth connection and is not supplying power to the field device

Included products

Item	Description
Smart HART Modem	Cable for connecting field device: 3.1 mm dia. 2-core round cable, 1 m long. Banana plugs (2) (for connecting the cable attachment described below)
Cable attachment	Crocodile clips (2) and test clips (2) with a 50 cm lead wire
USB 2.0 Type C-A cable	1 m, black
Battery (for operation check)	AAA alkaline batteries (3)
Silicone jacket	Orange
Pouch	For carrying (all accessories except the silicone jacket are in the pouch at the time of shipment)
Quick Start Guide	–
License certificate	The utility software download site is shown on the certificate.

Please read "Terms and Conditions" from the following URL before ordering and use.
https://www.azbil.com/products/factory/order.html

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azbil

Smart HART® Modem
Model AZ-1SHM

reddot winner 2021
industrial design

Necessary functions for installation and maintenance work of HART devices are integrated into one unit.

CE | 211-161007 | FC

Azbil Corporation

Wireless connection for safer setup and adjustment of HART devices.
More efficient, thanks to its power supply function.

Smart HART Modem
Model AZ-1SHM

Bluetooth & USB connection to host PCs of various suppliers. Wireless connection makes it safer, especially in environments with poor footing.

Model AZ-1SHM can be connected to a host PC via a wired USB connection or a wireless Bluetooth (Classic) connection. The wireless connection allows for safer parameter setting and adjustment of field devices during daily inspections and shutdown maintenance without the restriction of cables.

* Wireless communication may have restrictions depending on the country. Refer to: https://www.azbil.com/products/factory/ solution/equipment-asset-management/hart-foundation-fieldbus/hdfs-system/smart-hmodem/certification.html.

Built-in loop power feed function. Even during shutdown maintenance and startup, it's more efficient to use just the AZ-1SHM and the host PC.

Model AZ-1SHM also has a built-in loop power supply function, allowing you to make settings and adjustments without waiting for the DCS to connect to the equipment or for a device to be removed for maintenance.

Supports Azbil's SFN (DE) cmmunication protocol.

In addition to HART, model AZ-1SHM also supports SFN/DE, Azbil's proprietary digital communication protocol.* The communication protocol is automatically switched depending on the connected device, so you can enjoy stress-free operation.

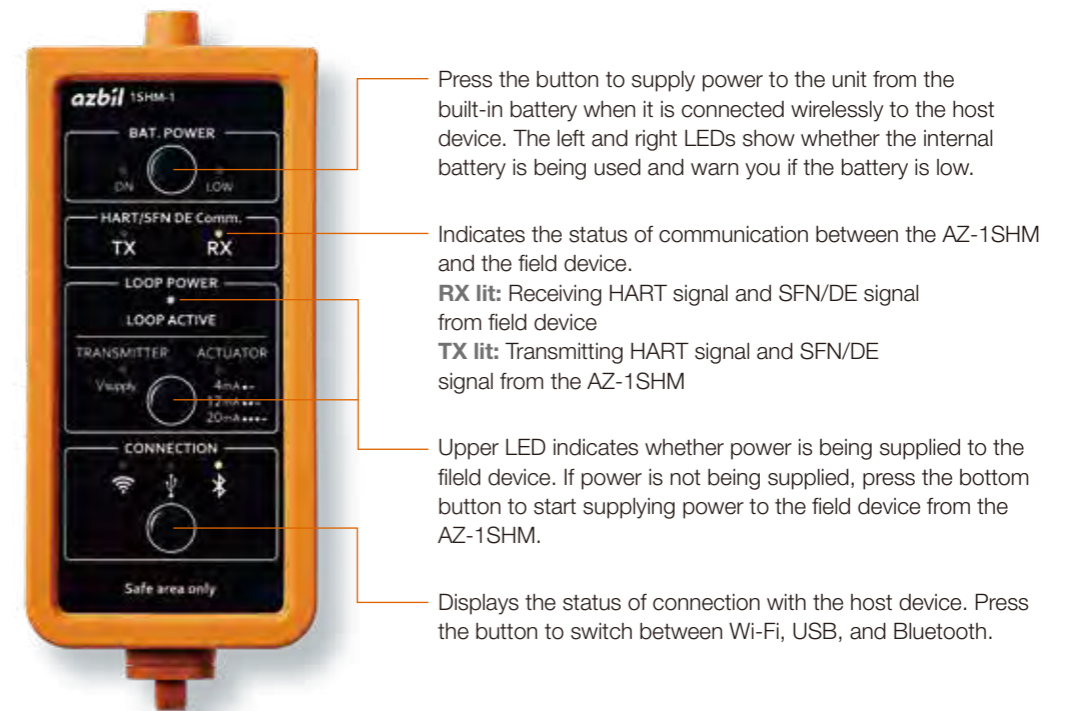* To use SFN/DE communication, Azbil's Commstaff model CFS100 is required.

Hand tool design for ease of use in field work

Process interface and push button for quick and reliable identification and operation.

Model AZ-1SHM has a compact shape that fits in the palm of your hand. The operation panel is also ergonomically designed to be easy to understand and highly visible. (Winner: 2020 Japan Good Design Award, 2021 Germany Red Dot Design Award)

Press the button to supply power to the unit from the built-in battery when it is connected wirelessly to the host device. The left and right LEDs show whether the internal battery is being used and warn you if the battery is low.

Indicates the status of communication between the AZ-1SHM and the field device.
RX lit: Receiving HART signal and SFN/DE signal from field device
TX lit: Transmitting HART signal and SFN/DE signal from the AZ-1SHM

Upper LED indicates whether power is being supplied to the fileld device. If power is not being supplied, press the bottom button to start supplying power to the field device from the AZ-1SHM.

Displays the status of connection with the host device. Press the button to switch between Wi-Fi, USB, and Bluetooth.

Finger grip to prevent dropping.
Silicone jacket for better grip and shock resistance.

To prevent damage from dropping the product when working in high places, model AZ-1SHM has a shape that is easy to hold. Silicone jacket is provided for even safer use.
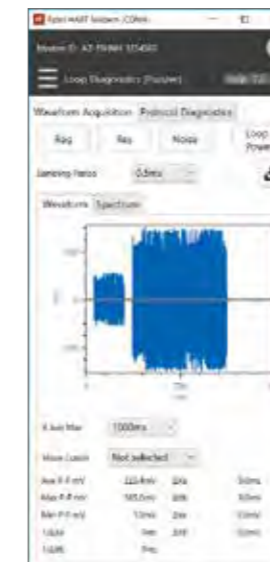
Real-time response to communication problems.

Built-in communication diagnostic function that can be used with wireless connection. No need to take out an oscilloscope or professional monitor tools.
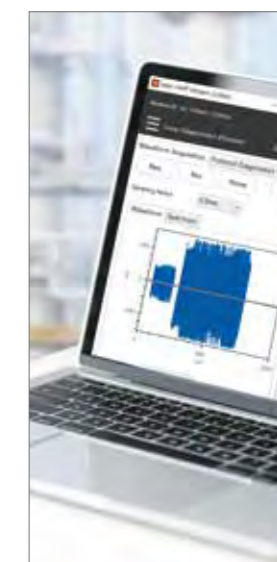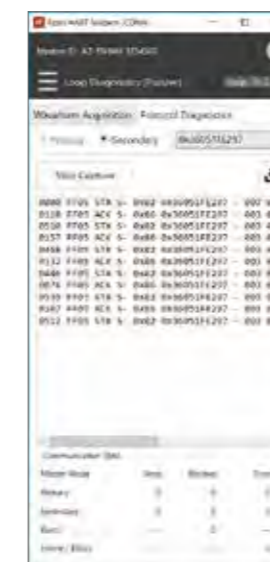
Model AZ-1SHM has a built-in communication diagnostic function, and by setting up the supplied support tool on the host device, the HART communication waveform, the presence of noise, and the HART protocol status can be monitored, even when HART communication is not available in the field.

* Support tool can be downloaded from the Azbil Corporation website.

HART communication waveform can be monitored. Automatic acquisition of communication waveforms by request/response commands and the noise level can also be monitored.

Spectrum analysis: Spectrum analysis for each frequency of communication signal can be monitored to identify the cause of noise.

Protocol diagnosis: Details of HART communication protocols, such as command and response, can be monitored in real time.

Support tool can be installed on a Windows PC for paramater check and settings in the office.