Sub-GHz Ex d Wireless Bridges

Smart Energy, Smart Facility, Smart Factory

daviteq

SKU: WS433EX-BL

○ Safe Zone   ○ Hazardous Zones

ZONE 1/2 EXPLOSION-PROOF WIRELESS BRIDGES WS433-BLEX

6000m LOS

WS433-BLEX-H1.PNG

CE FC ARIB Ⓔx ATEX

WS433EX-BL is a range of Sub-GHz wireless bridges to replace the RS485 cable or network. It has Ex d approval for installation in Zone 1, Zone 2 or Safe Zone. LOS Distance is up to 500m at baud rate 38400 with standard installation. This wireless technology will save time, labor cost & cable cost as well.

Optional integrated IoT gateway (iConnector) allows easily configure & diagnose remotely or monitoring/ controls via any IoT Platform as welll. The deployment of these wireless devices can be done in just 15 minutes!
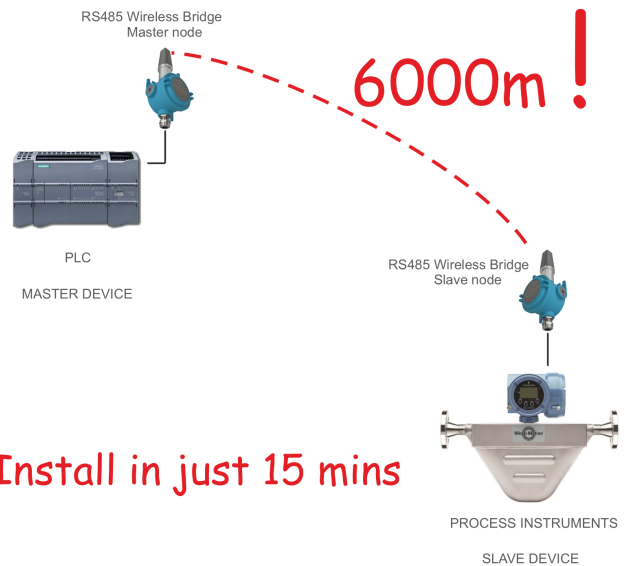
Applications
To replace RS485 Cable Network

Notes For Applications

✓ **ROBUST WIRELESS CONNECTION**
Sub-GHz technology from Texas Instruments delivers a Robust Wireless connection

✓ **500-2000M LOS DISTANCE**
High performance engineered RF circuit to deliver the long range distance

✓ **ANY PROTOCOL! NOT only MODBUS**
Transparent connection allows the network nodes can talk in any protocol

✓ **SIMPLE CONFIGURATION**
Wireless Bridges are easily configured by an offline tool or remotely by online tool (Globiots)

SIMPLY REPLACE RS485 CABLE

RS485 Wireless Bridge Master node

6000m !

PLC

MASTER DEVICE

RS485 Wireless Bridge Slave node

Install in just 15 mins

PROCESS INSTRUMENTS

SLAVE DEVICE

WS433-BLEX-H2.PNG

DAVITEQ TECHNOLOGIES INC

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Specification

Communication	RS485, RS232 (optional)
Wireless data rate	50kbps (support baud rate 38400)
Tranmission distance	LOS 500m @ 50 kpbs (lowest Antenna height is 4m)
Antenna	Standard external antenna 2.0 dbi
Power supply	7~48VDC @ 500mA max
Electrical connection	01 x 1/2" NPT conduit as standard (cable gland is not included)
RF frequency band	Free license ISM 433.92MHz (for others 868, 915, 920MHz, refer related datasheets)
Ready to comply	ETSI EN 300 220, EN 303 204 (Europe) FCC CFR47 Part15 (US), ARIB STD-T108 (Japan)**
Vietnam Type Approval Certification	QCVN 73:2013/BTTTT, QCVN 96:2015/BTTTT (DAVITEQ B00122019)
ATEX Certificates	IMQ 14 ATEX 005 X and TÜV CY 18 ATEX 0206158 X
Makring	ATEX II 2G Ex db IIC T5/T6 Gb and ATEX II 2D Ex tb IIIC T100/T85℃ Db
Directive	ATEX 2014/34/EU
Standards	IEC-EN60079-0 IEC-EN60079-1 IEC-EN60079-31
Applicable zones	Zone 1 - 21 (gas) and Zone 2 - 22 (dust)
Ambient working temperature	-40~85℃
Housing	Cast aluminium, powder coated, IP66
Mounting	wall mounting holes
Product dimensions	H100xW100xD80 (excluded antenna)
Net weight	1.3kg
Packaging dimension	W160 x D150 x H100 mm
Gross weight	< 1.5kg

A WIRELESS RS485 NETWORK

RS485 Wireless Bridge
Master node

MASTER DEVICE

RS485 Wireless Bridge
Slave node

POWER METER   PLC

Install in just 15 mins

AC DRIVE   FLOW METER

RS485 Wireless Bridge
Slave node

WS433-BLEX-H3.PNG

TO EXTEND WIRELESS SENSOR NETWORK

RS485 Wireless Bridge
Master node

6000m !

MASTER DEVICE

WIRELESS SENSOR NETWORK

6000m !

RS485 Wireless Bridge
Slave node

Total 12000m!

WS433-BLEX-H4.PNG

DIMENSION DRAWING WIRELESS BRIDGES MASTER & SLAVE

STANDARD ANTENNA FOR SLAVE

79.45
40.00
85.04
246.15
78.00
94.00
71.00

WIRELESS BRIDGE SLAVE WITH -1.1 DBI ANTENNA
WIRELESS BRIDGE MASTER HAS THE SAME DIMENSION, EXCEPT THE ANTENNA LENGTH IS 523MM

WS433-BLEX-H5.PNG

DIMENSION DRAWING WIRELESS BRIDGES MASTER WITH INTEGRATED IOT GATEWAY (iConnector)

537.25
732.17
79.45
120.72
103.00
136.00
121.00

WS433-BLEX-H6.PNG
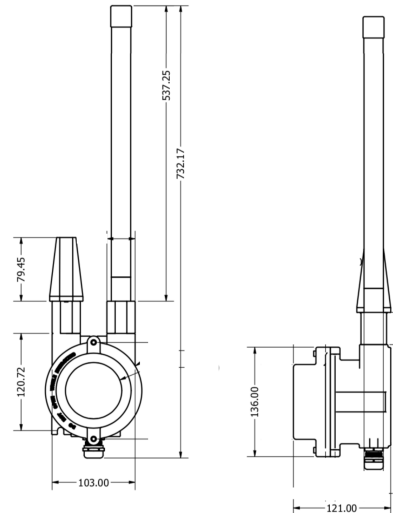
HIGH GAIN OMNI ANTENNA 3DBI & 6DBI

U-BOLT FOR PIPE 60MM DIA.

Front View   Side View

Ø26±1.2
Ø24±1
523±5.5
70±3.5

P/N CAB.953   5m Antenna cable

P/N ADAPT/N-TYPEM/SMAF
Adapter convert
N-male to SMA-female

LENGTH = 523MM FOR 3 dbi Type P/N OMB.433.B03F21
LENGTH = 1094MM FOR 6 dbi Type P/N OMB.433.B06F21

WS433-BLEX-H7.PNG
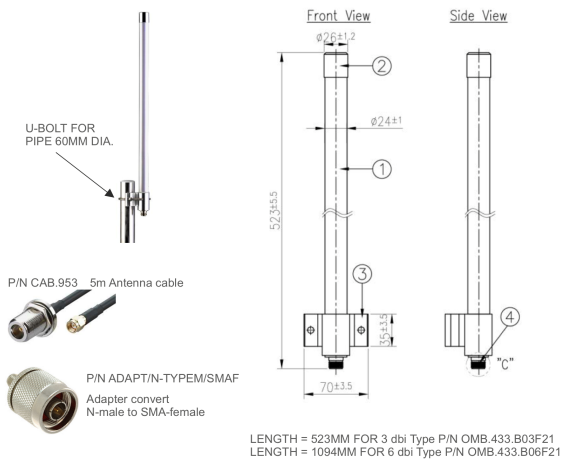
USB-RS485 CONFIGURATION CABLE

WS433-BLEX-H8.PNG

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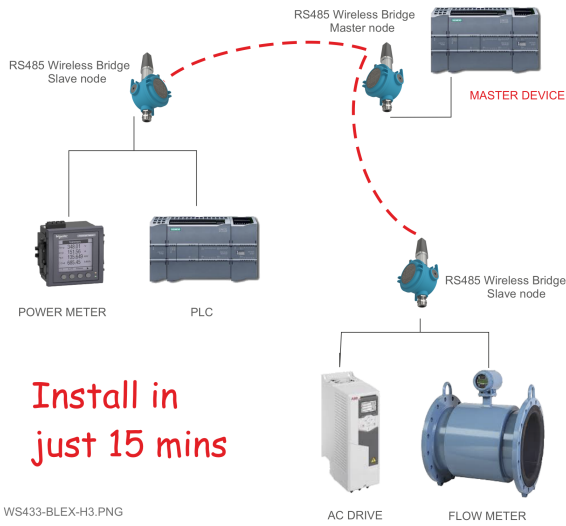
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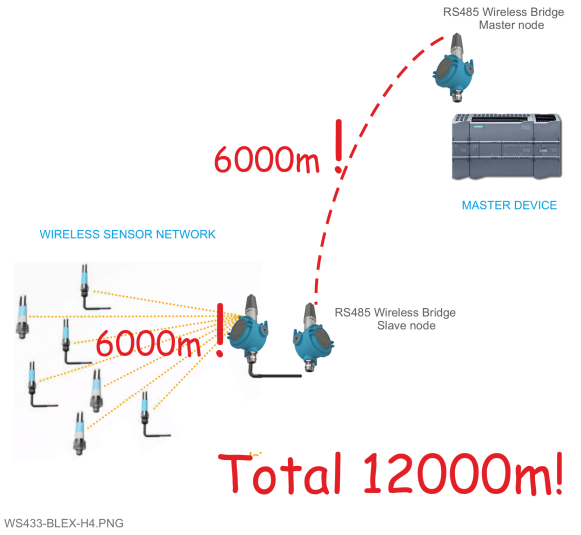info@daviteq.com   **www.iot.daviteq.com**   Created date: Jul-08-2024 | Updated date: Aug-27-2024
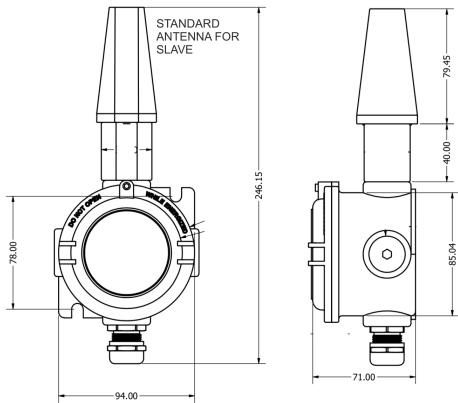
Ordering Information

ITEM CODES	DESCRIPTIONS
WS433EX-BL-RS485-M-1/2NPT	Ex d approved Sub-GHz Bridge, Master, RS485, external antenna 2.0 dbi
WS433EX-BL-RS485-S-1/2NPT	Ex d approved Sub-GHz Bridge, Slave, RS485, external antenna 2.0 dbi
	OPTIONAL HIGH GAIN ANTENNA FOR LONGER DISTANCE AND ACCESSORIES
OMB.433.B03F21	433MHz 3dBi OMNI antenna, IP65, N-female, L=523mm, c/w Male-Male N-Adapter P/N 26-8009 (excluded cable)
OMB.433.B06F21	433MHz 6dBi OMNI antenna, IP65, N-female, L=1094mm, c/w Male-Male N-Adapter P/N 26-8009 (excluded cable)
	** Order below cable and adapter to use with above high gain antennas
CAB.953	Low lost antenna cable, 5m, N-female and SMA-male
ADAPT/N-TYPEM/SMAF	N-male to SMA-Female adapter
	** Order RS485-FM12-USB-1 to configure wireless bridge
RS485-FM12-USB-1	RS485/USB multi-purpose Configuration cable** with connector m12 male, female and flying leads, with Power adapter 12VDC/2.0A