Long Range Wireless Bridges

Smart Agriculture, Smart Building, Smart City, Smart Energy, Smart Facility, Smart Factory, Smart Farm, Smart Healthcare, Smart Retail, Smart Transportation, Smart Utilitites

SKU: WS433-BL

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Safe Zone

Hazardous Zones

WS433-BL is a range of Sub-Ghz wireless bridges to replace the RS485 cable or network. This wireless technology will save time, labor cost & cable cost as well. LOS Distance is up to 6000m at baud rate 38400. 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

RS485 Wireless Network

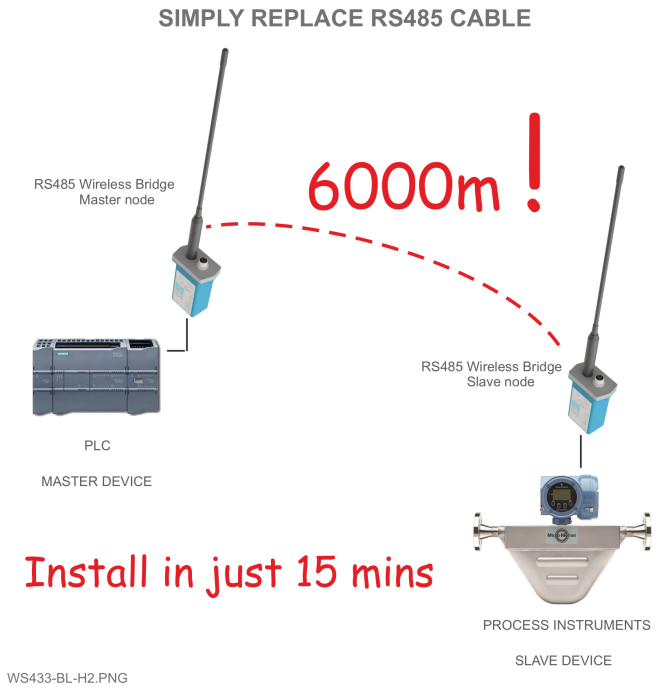
Notes For Applications

ROBUST WIRELESS CONNECTION
Sub-Ghz technology from Texas Instruments delivers a Robust Wireless connection with AES-128 Security

6000M 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)



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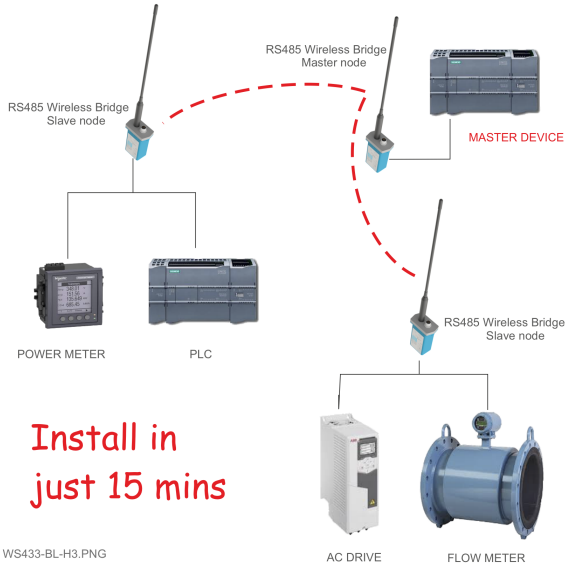
Created date: Jul-03-2024 | Updated date: Aug-28-2024

Specification

COMMUNICATION	RS485, RS232 (optional)
Wireless data rate	50kbps (support baud rate 38400)
Tranmission distance	LOS 6000m @ 50 kpbs (lowest Antenna height is 4m)
Antenna	Standard external antenna -1.1 dBi for slave node, 3.0 dbi for master node (option 6 & 9 dbi)
Power supply	7~48VDC @ 500mA max
Electrical connection	M12-female, 4-pin A-coding
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)
Data encryption	AES-128
Ambient working temperature	-40~85℃
Housing	Aluminum + Polycarbonate, IP67
Mounting	Wall mounting holes
Product dimensions	H106xW73xD42 (excluded antenna)
Net weight	190g
Packaging dimension	W160 x D150 x H100 mm
Gross weight	< 300g

A WIRELESS RS485 NETWORK



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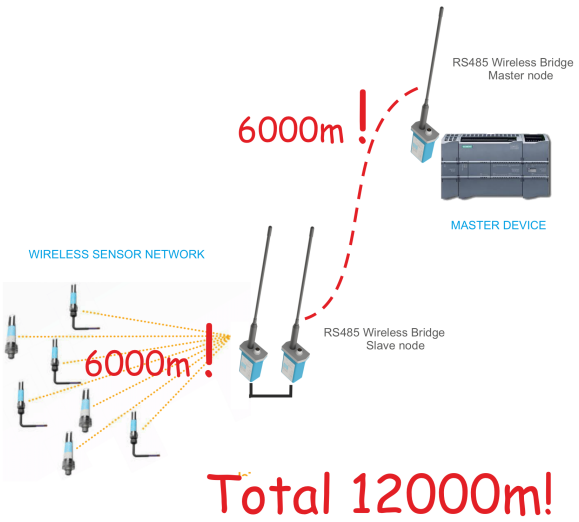
TO EXTEND WIRELESS SENSOR NETWORK



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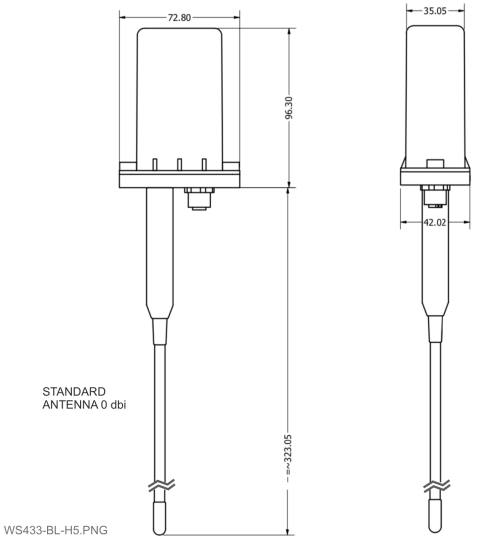
DIMENSION DRAWING WIRELESS BRIDGES MASTER & SLAVE



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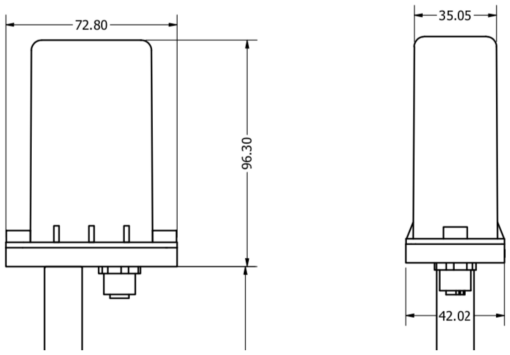
DIMENSION DRAWING WIRELESS BRIDGES MASTER & SLAVE



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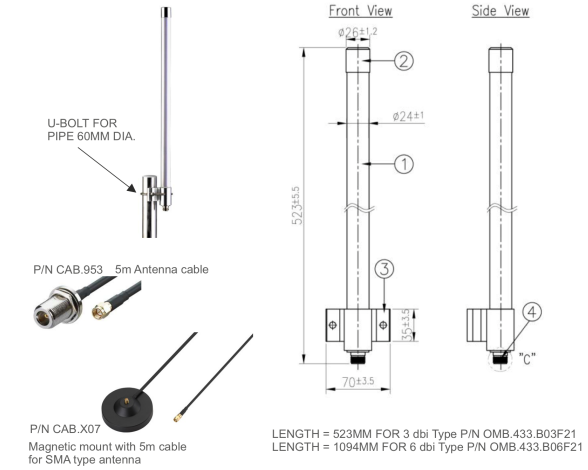
HIGH GAIN OMNI ANTENNA 3DBI & 6DBI



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USB-RS485 CONFIGURATION CABLE

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Ordering Information

ITEM CODES	DESCRIPTIONS
WS433-BL-RS485-M2	Long Range Wireless Bridge, Master, RS485, external antenna 0 dbi, M12-Female connector, 4-pin, coding A
WS433-BL-RS485-S2	Long Range Wireless Bridge, Slave, RS485, external antenna 0 dbi, M12-Female connector, 4-pin, coding A
WS433-BL-RS485-S1	Compact Wireless Bridge, Slave, RS485, internal antenna, M12-Female connector, 4-pin, coding A
STHC-ISG02DB-WS433-BL-RS485-M2	iConnector 3G Dual Band*, internal GSM antenna, RS485/ModbusRTU with built-in wireless co-ordinator, external antenna 0 dbi with M12-Female connector
STHC-ISG02-WS433-BL-RS485-M2	iConnector 3G Penta Band*, internal GSM antenna, RS485/ModbusRTU with built-in wireless co-ordinator, external antenna 0 dbi with M12-Female connector
STHC-ISGWF-WS433-BL-RS485-M2	iConnector WiFi*, internal WiFi antenna, RS485/ModbusRTU with built-in wireless co-ordinator, external antenna 0 dbi with M12-Female connector
ACCESSORIES FOR CELLULAR IOT GATEWAY (ICONNECTOR)	undefined
SIMMOBI-3G	Mobifone DATA sim card, with sms (receive only), sending sms is in additional cost (for Vietnam only)
SIMMOBI-10K-01Y	12-month Data plan of Mobifone sim card, unlimited data, GPRS/EDGE/UMTS/HSPA (Vietnam only)
OPTIONAL ANTENNA & ITS ACCESSORIES	undefined
OMB.433.B03F21	433MHz 3dBi OMNI antenna, IP65, N-female, L=523mm, without Male-Male N-Adapter P/N 26-8009 and cable
OMB.433.B06F21	433MHz 6dBi OMNI antenna, IP65, N-female, L=1094mm, without Male-Male N-Adapter P/N 26-8009 and cable
CAB.953	Low lost antenna cable, 5m, N-female and SMA-male (use for N-type antenna)
CAB.X07	Magnetic mount with 5m cable with SMA-Female on the base and SMA-Male output (used to extend the 0 dbi antenna that comes with the bridge)
26-8009	Connector Adapt Plug-Plug N 50 Ohm, Male-to-Male N Type
OTHER ACCESSORIES	undefined
RS485-FM12-USB-1	RS485/USB multi-purpose Configuration cable** with connector m12 male, female and flying leads, with Power adapter 12VDC/2.0A
2M-MM12CAB4x0.25	M12 4pin Male assembly connector with Soldering terminals and coding A and Control Cable Cu/PVC/OS/PVC 4x0.25mm², L=2m, RoHS, Shield 80%
2M-FM12CAB4x0.25	M12 4pin Female assembly connector with Soldering terminals and coding A and Control Cable Cu/PVC/OS/PVC 4x0.25mm², L=2m, RoHS, Shield 80%
5M-MM12CAB4x0.25	M12 4pin Male assembly connector with Soldering terminals and coding A and Control Cable Cu/PVC/OS/PVC 4x0.25mm², L=5m, RoHS, Shield 80%
5M-FM12CAB4x0.25	M12 4pin Female assembly connector with Soldering terminals and coding A and Control Cable Cu/PVC/OS/PVC 4x0.25mm², L=5m, RoHS, Shield 80%
10M-MM12CAB4x0.25	M12 4pin Male assembly connector with Soldering terminals and coding A and Control Cable Cu/PVC/OS/PVC 4x0.25mm², L=10m, RoHS, Shield 80%
10M-FM12CAB4x0.25	M12 4pin Female assembly connector with Soldering terminals and coding A and Control Cable Cu/PVC/OS/PVC 4x0.25mm², L=10m, RoHS, Shield 80%
Notes	* Refer datasheet of iConnector STHC to find more information
	** Purchase M12 male or female cable to power and RS485 connecting for wireless co-ordinator
	*** Purchase configuration cable RS485-FM12-USB-1 for off-line configuration of iConnector