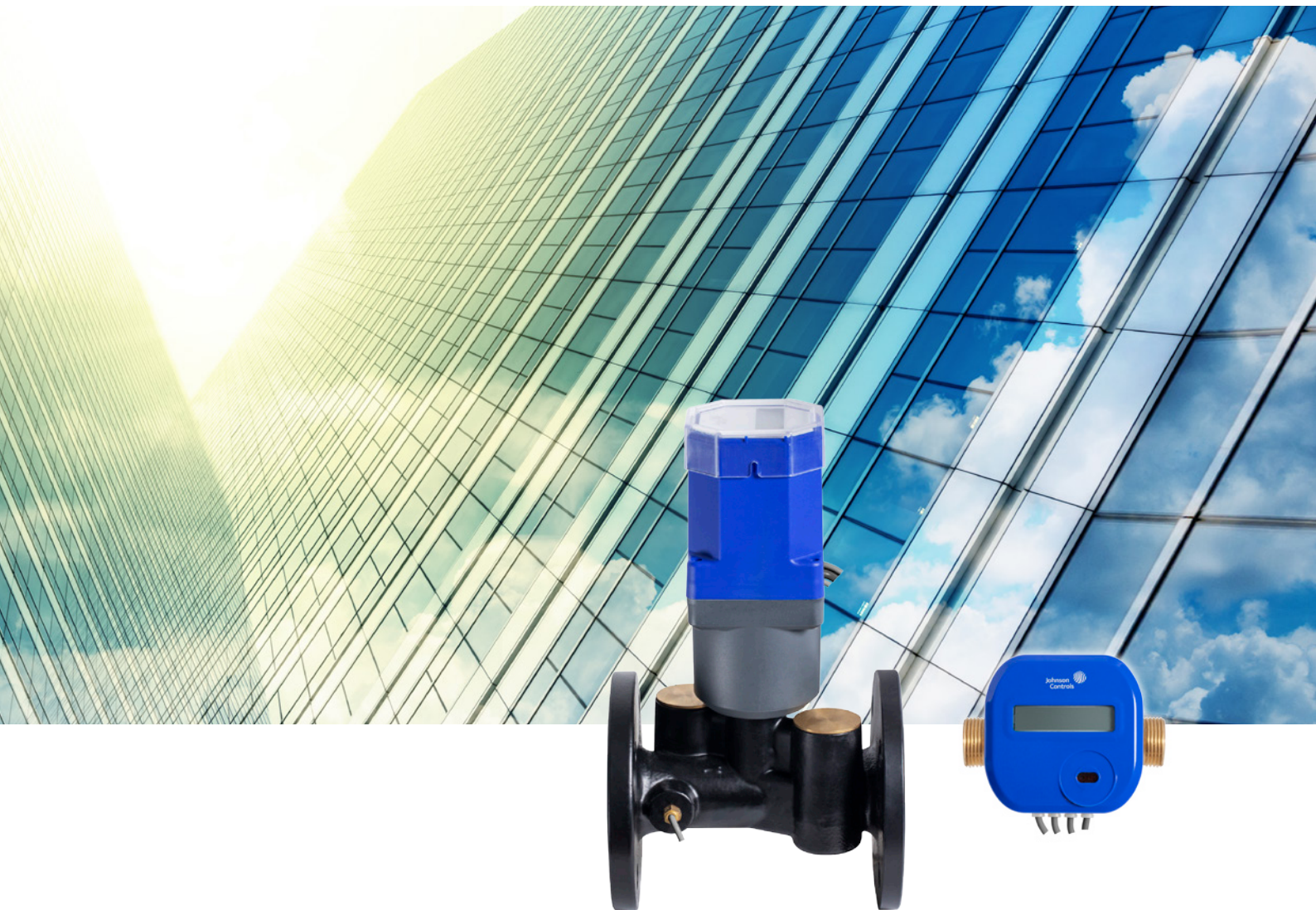


RLBC Series Ultrasonic BTU meter



The power behind **your mission**



Johnson Controls RLBC Series Ultrasonic BTU meter

RLBC Series Ultrasonic BTU Meter is a high performance, low power electronic heat meter developed with reference related standards. It is used to measure and display the heat released (absorbed) by the heat (cold) liquid flowing through the heat-cooled exchange system. It consists of flow sensor, microprocessor and pairing temperature sensor. The microprocessor gets the flow signal through flow sensor and the signal of water temperature at the entrance and exit from the temperature measuring circuit, and then calculates exchanged heat by the heat-carrying liquid according to the standard heat calculation formula. This product can be used in commercial building, apartment for FCU and AHU system to calculate cooling or heating load.

RLBC series BTU meter have the option of RS485 and Modbus interface for user to choose, with related devices can complete remote energy management system, which can achieve real-time data reading and control the user's power consumption conveniently.

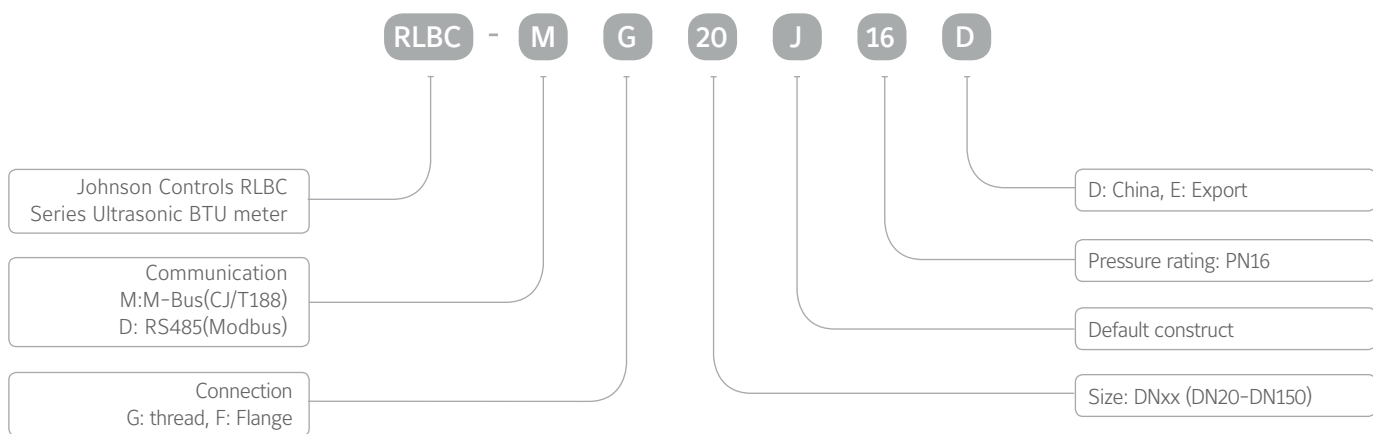


Features:

- Low battery alarming.
- Automatic data correction technology.
- Alarms when the temperature sensor is disconnected or has a short cut.
- High definition and wide temperature LCD display.
- 8 levels of flow rate and separately adjusted, with high precision.
- Ultra-low power consumption.
- Measuring mechanism has no moving parts and no wear and tear forever. The measuring accuracy will not be influenced by using period.
- Easy deployment, horizontal or vertical installation.
- M-Bus/RS485 communication interface, long distance communication.
- Can be used as integrated or remote type



Naming Rule



Selection Table

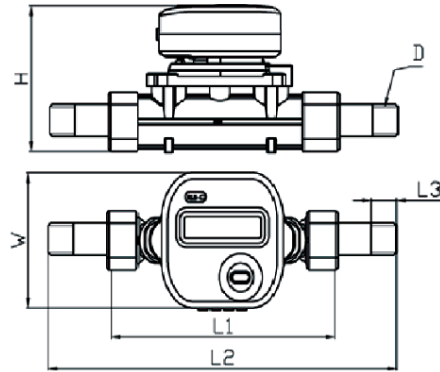
Part Number	Size	Permanent flow rate (m ³ /h)	Range of flow rate (m ³ /h)	Connection	Communication
RLBC-MG20J16E	DN20	2.5	0.05~5.0	Threaded (GB/T7303)	M-Bus(CJ/T188)
RLBC-MG25J16E	DN25	3.5	0.07~7.0	Threaded (GB/T7303)	M-Bus(CJ/T188)
RLBC-MG32J16E	DN32	6.0	0.12~12.0	Threaded (GB/T7303)	M-Bus(CJ/T188)
RLBC-MG40J16E	DN40	10.0	0.20~20.0	Threaded (GB/T7303)	M-Bus(CJ/T188)
RLBC-MF50J16E	DN50	15.0	0.60~30.0	Flanged (ISO7005-2)	M-Bus(CJ/T188)
RLBC-MF65J16E	DN65	25.0	1.00~50.0	Flanged (ISO7005-2)	M-Bus(CJ/T188)
RLBC-MF80J16E	DN80	40.0	1.60~80.0	Flanged (ISO7005-2)	M-Bus(CJ/T188)
RLBC-MF100J16E	DN100	60.0	2.40~120.0	Flanged (ISO7005-2)	M-Bus(CJ/T188)
RLBC-MF125J16E	DN125	100.0	4.00~200.0	Flanged (ISO7005-2)	M-Bus(CJ/T188)
RLBC-MF150J16E	DN150	150.0	6.00~300.0	Flanged (ISO7005-2)	M-Bus(CJ/T188)
RLBC-DF50J16E	DN50	15.0	0.60~30.0	Flanged (ISO7005-2)	RS485(Modbus)
RLBC-DF65J16E	DN65	25.0	1.00~50.0	Flanged (ISO7005-2)	RS485(Modbus)
RLBC-DF80J16E	DN80	40.0	1.60~80.0	Flanged (ISO7005-2)	RS485(Modbus)
RLBC-DF100J16E	DN100	60.0	2.40~120.0	Flanged (ISO7005-2)	RS485(Modbus)
RLBC-DF125J16E	DN125	100.0	4.00~200.0	Flanged (ISO7005-2)	RS485(Modbus)
RLBC-DF150J16E	DN150	150.0	6.00~300.0	Flanged (ISO7005-2)	RS485(Modbus)

Technical Specification

Flow Sensor	Size	Permanent flow rate (m ³ /h)	Minimum flow rate (m ³ /h)	Maximum flow rate (m ³ /h)
	DN20	2.5	0.05	5.0
	DN25	3.5	0.07	7.0
	DN32	6.0	0.12	12.0
	DN40	10.0	0.2	20.0
	DN50	15.0	0.6	30.0
	DN65	25.0	1.0	50.0
	DN80	40.0	1.6	80.0
	DN100	60.0	2.4	120.0
	DN125	100.0	4.0	200.0
DN150	150.0	6.0	300.0	
Temperature sensor	Temperature range		4°C ~ 95°C	
	Temperature difference range		3K ~ 90K	
	Minimum display temperature		0.1°C	
Minimum display of flow rate	0.01 m ³ (DN20-DN40) , 0.1 m ³ (DN50-DN150)			
Minimum display of heat power	1 kW·h (DN20-DN40) , 0.01 MW·h (DN50-DN150)			
Static working current	≤ 7uA			
Battery lifetime	> 6years			
Digit number of display screen	8 digits			
Maximum accumulated heat power	4.2×10 ⁹ kW·h (Only final 8 numbers can be displayed when accumulated heat power is more than 99999999 kW·h) (DN20-DN40)			
	4.2×10 ⁶ MW·h (Only final 8 numbers can be displayed when accumulated heat power is more than 999999.99 MW·h) (DN50-DN150)			
Maximum accumulated flow rate	4.2×10 ⁹ m ³ (Only final 8 numbers can be displayed when accumulated flow rate is more than 999999.99m ³) (DN20-DN40)			
	4.2×10 ⁹ m ³ (Only final 8 numbers can be displayed when accumulated flow rate is more than 9999999.9m ³) (DN50-DN150)			
Working status indicator	Display in cycle			
Accuracy	Class 2			
Pressure rating	1.6MPa			
Loss of pressure	≤ 0.025MPa			
Power supply	DC3.6V lithium battery, DC12V±0.6VDC (Modbus)			
IP Protection	IP68 (DN20-DN40), IP54 (DN50-DN150)			
Connection	Thread (DN20-DN40, GB/T7307), Flange (DN50-DN150, ISO7005-2)			
Valve body material	Brass (DN20-DN40, HPb58—2), Ductile Cast Iron (DN50-DN150, QT450—10)			
Communication	M-Bus (CJ/T188 protocol) (DN20-DN150), RS485 (Modbus protocol) (DN50-DN150)			
Ambient operating temperature	5°C ~ 55°C			
Ambient storage conditions	temperature -25°C ~55°C , relative humidity < 93%RH			

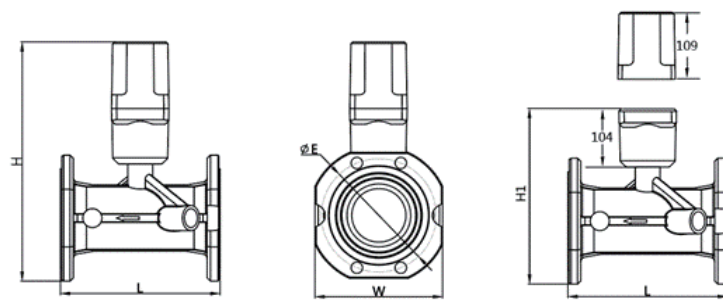
Dimension

DN20-DN40



Size	L1 (mm)	L2 (mm)	L3 (mm)	H (mm)	W (mm)	D (mm)
DN20	130	230	16	100	95	R3/4
DN25	160	276	18	107	95	R1
DN32	180	300	20	114	95	R1-1/4
DN40	200	324	25	121	95	R1-1/2

DN50-DN150



Integrated Type

Remote Type

Size	L (mm)	W (mm)	H (mm)	H1 (mm)	Connection
DN50	200	165	332	232	Flange \varnothing 125-4 \times \varnothing 18
DN65	200	185	354	254	Flange \varnothing 145-4 \times \varnothing 18
DN80	225	200	367	267	Flange \varnothing 160-8 \times \varnothing 18
DN100	250	220	390	290	Flange \varnothing 180-8 \times \varnothing 18
DN125	250	250	406	306	Flange \varnothing 210-8 \times \varnothing 18
DN150	300	285	433	333	Flange \varnothing 240-8 \times \varnothing 22

Note: Ship out with integrated type as default, if need remote type, please refer to user manual

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