

Electromagnetic Flowmeter

Modbus Protocol

1. Modbus Communication Parameters

Settings	Option/Range	Default Value	Note
Communication Protocol	MODBUS, BACNET	Modbus	/
Baud Rate	1200, 2400, 4800, 9600, 19200, 38400	9600	/
Data Bit	8	8	Fixed to 8.
Parity Bit	None, Odd, Even	None	
Stop Bit	1, 2	1	If parity bit is None, select 1 or 2. If parity bit is Odd or Even, select 1.
Modbus Address	1 to 247	1	Decimal number.

2. Modbus Communication Protocol

Data Type	Read	Write	Parameter Name	Register Address	Length	Note
COIL	--	0x05	Zero Calibration	0x0004	0x0001	
COIL	--	0x05	Clear Totalizer Data	0x0002	0x0001	
ASCII	0x03	0x10	Bluetooth Name	0xFF05	0x0007	
INT	0x03	0x06	Communication Protocol	0x0018	0x0001	MODBUS, BACNET
INT	0x03	0x06	Baud Rate	0x0019	0x0001	1200, 2400, 4800, 9600, 19200, 38400
INT	0x03	0x06	Data Bit	0x001A	0x0001	8
INT	0x03	0x06	Parity Bit	0x001B	0x0001	None, Odd, Even
INT	0x03	0x06	Stop Bit	0x001C	0x0001	1, 2
INT	0x03	0x06	Modbus Address	0x0046	0x0001	1 to 247
INT	0x03	0x06	Flow Direction	0x0016	0x0001	0x00 Forward 0x02: Bi-directional
INT	0x03	0x06	Total Units	0x003E	0x0001	0x28: gal 0x29: L 0x2B: m3 0x2A: Impgal 0x2E: bbl 0x3C: g 0x3D: kg 0x3E: t 0x3F: lb0x40: Ston 0x41: Lton 0x70: ft3 0xE8: Mgal 0xE7: ml 0xE9：a-ft
INT	0x03	0x06	Instantaneous Flow Volume Mass Unit	0x0045	0x0001	
INT	0x03	0x06	Instantaneous	0x0042	0x0001	0x00:sec 0x01:min

			Flow Time Unit			0x02: Hour 0x03: Day
INT	0x03	0x06	Pulse Type	0x0008	0x0001	0: Normally Closed 1: Normally Open
INT	0x03	0x06	Pulse Width	0x000A	0x0009	0:200ms 1:100ms 2:50ms 3:20ms 4:10ms 5:50%
INT	0x03	0x06	Pulse Factor Unit	0x0044	0x0043	0: L/P 1: mL/P 2: Hz
INT	0x03	0x06	PIO Function	0x0101	0x0100	0: Passive Pulse 1: Active Pulse 2: Alarm Output 3: Contact Input
INT	0x03	0x06	PIO Input	0x0102	0x0101	0: Clear Totalizer 1: Pending
INT	0x03	0x06	Alarm Function	0x0103	0x0102	0: Upper Limit 1: Lower Limit 2: Flow Direction 3: Batch
INT	0x03	0x06	Bluetooth PIN	0x0106	0x0105	
INT	0x03	0x06	Language	0x1359	0x1358	0:中文 1:English
INT	0x03	--	Alarm Code	0x0419	0x0418	0x4000: Empty Detection Value Incorrect 0x0400: Pulse Width Insignificant 0x0200: Flow Direction Reverse 0x0080: Storage Damaged 0x0020: Output Frequency Exceeds 5kHz 0x0010: Empty Detection Alarm 0x0008: Lower Limit Alarm 0x0004: Upper Limit Alarm 0x0002: Over Flow Range Alarm 0x0001: Flow Range

						Settings Alarm
ULONG	0x03	0x10	Sensor No.	0x0127	0x0126	0 to 9999999
ULONG	0x03	--	High Value of Accumulated Forward Flow	0x0309	0x0308	$*10^7$
ULONG	0x03	--	Low Value of Accumulated Forward Flow	0x030A	0x0002	0 to 9999999
ULONG	0x03	--	High Value of Accumulated Reverse Flow	0x030C	0x0002	$*10^7$
ULONG	0x03	--	Low Value of Accumulated Reverse Flow	0x030E	0x0002	0 to 9999999
Float	0x03	--	Accumulated Forward Flow	0x0258	0x0002	Applicable to devices released after 2023.11.
Float	0x03	--	Accumulated Reverse Flow	0x025A	0x0002	Applicable to devices released after 2023.11.
Float	0x03	--	Output Current	0x0148	0x0002	4 to 20
Float	0x03	0x10	FS Range	0x014A	0x0002	0.0001 to 99999
Float	0x03	0x10	Damping	0x0188	0x0002	0 to 9.9
Float	0x03	0x10	Low Cutoff	0x0196	0x0002	0 to 9.9
Float	0x03	--	Instantaneous Flow	0x0252	0x0002	
Float	0x03	--	Output Frequency	0x0228	0x0002	
Float	0x03	--	Current Flow Rate	0x0254	0x0002	
Float	0x03	--	Flow Percentage	0x0256	0x0002	
Float	0x03	0x10	Alarm Upper Limit	0x014C	0x0002	
Float	0x03	0x10	Alarm Lower	0x014E	0x0002	

			Limit			
Note: Accumulated Flow = High Value of Accumulated Flow * 10^7 + Low Value of Accumulated Flow						