

Overview

The ATL700 communication protocol adopts the standard MODBUS-RTU protocol, the standard asynchronous serial two-wire RS485 communication port, and the time interval for the upper computer to read ATL700 data is not less than 500ms, and the recommended value is 1s.

The ATL700 factory default device address is 01, and the device address can be changed by the host computer command or LEAK-Talk debugging software.

Communication parameters

Data transfer rate:	Baud rate 9600bps
Data transmission format:	N (parity), 8 (data bits), 1 (stop bit)
Device default address:	01
Rs485 wiring port:	Standard two-wire asynchronous communication, RS+, RS- (SHL is cable shielding ground, can not be connected)

ATL700 protocol content

(1) Send the command:

address	function code	Data start bit (high + low)		Number of data (high + low)		CRC16 check
1 byte	1 byte	1 byte	1 byte	1 byte	1 byte	2 byte

(2) Return information

address	function code	Byte length	Data value (high + low)		CRC16 check
1 byte	1 byte	1 byte	1 byte	1 byte	2 byte

(3) Agreement data:

function code	Register bit	Data address	data	Data value definition
04H	30001	0000H	1	Device address code: 01-255
	30002	0001H	1	Equipment status: 00 normal, 01 broken line, 02 leak, 03 broken line + leak
	30003	0002H	1	Leakage positioning value: This value is divided by the resistance of the cable unit, that is, the number of meters in the leak position, no leakage when FFF
	30004	0003H	1	Detecting cable length: This value is divided by the measured cable unit resistance, that is, the total cable length is detected.
	30005	0004H	1	Relay alarm mode: 00 no action, 01 disconnection action, 02 leakage action, 03 leakage and disconnection action
	30006	0005H	1	The value is converted to decimal and divided by 10, that is, the resistance of the cable unit is detected. The default is 13.0 Ω/m.
06H	40001	0000H	1	Modify device address: 01-255
	40005	0004H	1	Set relay mode: 00 no action, 01 disconnection action, 02 leakage action, 03 leakage and disconnection action
	40006	0005H	1	Set the detection unit resistance value, which can be fine-tuned according to the detection error, generally between 12.5~13.5

Instance

content	send command	returned messages	Description
Read device status:	01 04 00 01 00 01 60 0A	01 04 02 00 00 B9 30	Leak alarm status
Read the leak location:	01 04 00 02 00 01 90 0A	01 04 02 00 26 38 EA	Detecting cable leakage at 38 meters
Modify device address:	01 06 00 00 00 C7 C8 58	01 06 00 00 00 C7 C8 58	Device address 01 is changed to 199
Set the relay mode:	01 06 00 04 00 03 88 0A	01 06 00 04 00 03 88 0A	Relays are alarmed when leaking and disconnecting
Set the cable unit resistance:	01 06 00 05 00 85 58 68	01 06 00 05 00 85 58 68	Set the cable unit resistance to 13.3 ohms / meter

Note: The Lectra LEAK-Talk_700 debugging software makes it easy to set up the detection module. Please obtain relevant information from the sales staff.

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Leaksense[®] module is suitable for leak detection of conductive liquids such as water, acids, alkalis and oils.