

# LONGER RS485 Protocol for BT600-2J

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## 1. Data Format: 1start + 8data + 1even parity + 1stop, 1200bps.

This defines the data format: 1 start bit, 8 data bits, one even parity bit, and one stop bit at 1200 bits per second.

## 2. Command Format: flag+ addr + len + pdu + fcs.

**flag:** E9H is the start **flag** of a command string. Every command string is preceded with the start of E9H.

- In one command string, there is no other E9H except start **flag** E9H. When transmitting, E8H is replaced by E8H 00H, and E9H is replaced by E8H 01H except start **flag**. When receiving, E8H 00H is replaced by E8H, and E8H 01H is replaced by E9H.

**addr:** Pump address (i.e. Pump I.D.#.), take up 1 byte.

- The pump address can be set from 1 to 30. 31(1F) is broadcast address.
- In a command string from the control computer, if the **addr** is pump address, the corresponding pump will execute the command and respond. And if the **addr** is broadcast address, all the pumps execute the same command, and pumps don't respond.

**len:** Length of **pdu**, take up 1 byte.

**Fcs:** XOR of **addr**, **len**, **pdu**, take up 1 byte.

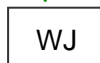
## 3. Pdu Format: application layer code format

### 3.1. Write Running Parameter

Control computer command string:



Pump response:



- In a command string from the control computer, the **addr** can be pump address (1-30) and broadcast address (31). When the **addr** is pump address, the corresponding pump will execute the command and respond. When the **addr** is broadcast address, all the pumps execute the same command, and pumps don't respond.

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## 3.2. Read Running Parameter

Control computer command string:

RJ

Pump response:

RJ

Rotate speed (2 bytes)

State1 (1 byte)

State2 (1 byte)

- In a command string from the control computer, if the **addr** is one pump's address (1-30), the corresponding pump will respond.

## 3.3. Write Pump Address

Control computer command string:

WID

New pump I.D. #. (1 byte)

Pump response:

WID

- In a command string from the control computer, the **addr** can be pump address (1-30) and broadcast address (31).
- Pump address can be set one by one with broadcast address.

## 3.4. Read Pump Address

Control computer command string:

RID

Pump response:

RID

- In a command string from the control computer, if the **addr** is one pump's address (1-30), the corresponding pump will respond.

