

Baudrate:1200
Bytesize:8
Stopbits:1
Parity: N
Address: 0

Write SV (set temperature):

Address + 43H + 00H + Low byte + High byte + Checksum

Address = 0x80 0x80 (Address = 0)

Command = 43H (Write)

Parameter code = 00H (Main set value)

Value = 300 (represents 30.0°C), Low byte = 0x2C, High byte = 0x01

*SV must be sent as an integer value in 0.1°C units (e.g., 30.0°C → 300).

* In communication, the address is represented by two identical bytes.

Example: Address = 0 → 0x80 0x80

Address : 0x80 0x80 (instrument address = 0)
Command : 0x43 (write command)
Parameter code : 0x00 (main set value SV)
Value : 0x012C (decimal 300 → 30.0°C)
Low byte : 0x2C
High byte : 0x01
Checksum : sum(all bytes) % 128
Full packet : 80 80 43 00 2C 01 76

Read SV (get current setpoint):

Address + 52H + 00H + 00H + Checksum

Address = 0x80 0x80 (because instrument address = 0)

Command = 52H (Read)

Parameter code = 00H (Main set value)

Address : 0x80 0x80 (instrument address = 0)
Command : 0x52 (read command)
Parameter code : 0x00 (main set value SV)
Reserved byte : 0x00
Checksum : sum(all bytes) % 128
Full packet : 80 80 52 00 00 54

Response (9 bytes):

Byte 0–1 → PV (Process Value, low byte first, unit = 0.1°C)

Byte 2–3 → SV (Set Value, low byte first, unit = 0.1°C)

Byte 4 → Output percentage (0–100)

Byte 5 → Status code

Byte 6–7 → Parameter value

Byte 8 → Checksum

$PV = (Byte0 + Byte1 \times 256) \div 10$

$SV = (Byte2 + Byte3 \times 256) \div 10$