Turbine flowmeter communication protocol（RTU）

RTU software ModScan32 connection:
Display Option-Floating Pt (data format - Float)
Support command 3: HOLDING REGISTER (time to keep register)
Device id: instrument internal address
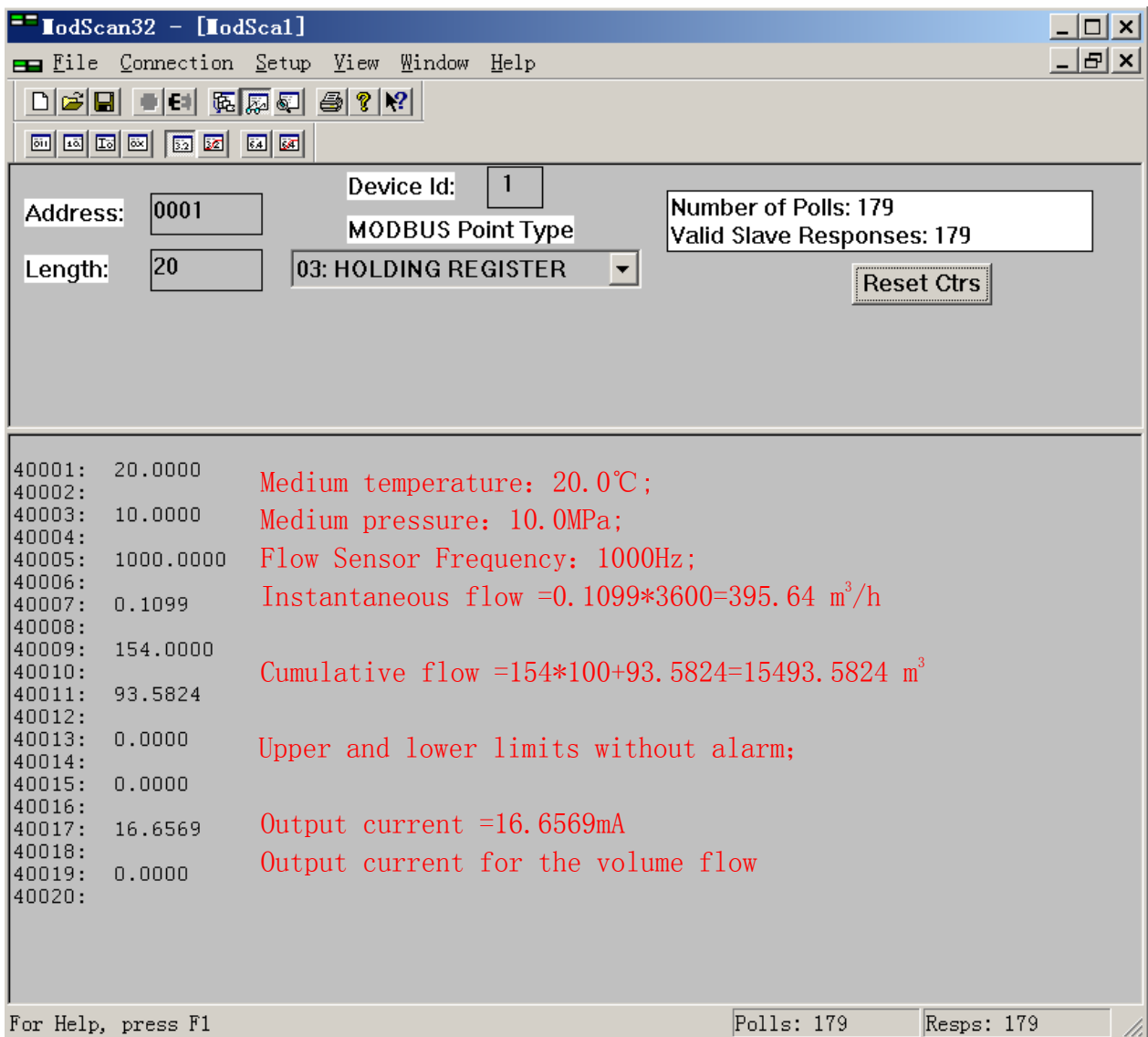Address: Instrument parameters start address, from 1-20
Length: Data length Length + Address <21

Parameter address:

Address	Description
40001－2	Medium temperature（℃）
40003－4	Medium pressure（MPa）;
40005－6	Flow Sensor Frequency（Hz）;
40007－8	Instantaneous flow（m3/s）;
40009－10	A total of more than 100 flow（1234）;
40011－12	Cumulative flow of 100 the following（87.89）;

Cumulative flow ＝ 1234 × 100 ＋ 87.89 ＝ 123487.89

40013－14　Upper limit of alarm status
　　　　　　0001—Flow condition;
　　　　　　0004—Standard Flow;
　　　　　　0010—Pressure;
　　　　　　0040—Temperature;
　　　　　　（Observational data in HEX format）
40015－16　Lower limit of alarm status
　　　　　　0001—Flow condition;
　　　　　　0004—Standard Flow;
　　　　　　0010—Pressure;
　　　　　　0040—Temperature;
　　　　　　（Observational data in HEX format）
40017－18　4—20mA Current output value（mA）;
40019　　　4—20mA Current output variables
　　　　　　0000—Standard the status of current output;
　　　　　　0001—Current output condition
　　　　　　（Observational data in HEX format）
40020　　　Keep

Note: Each address is an 8-bit bytes. Police only use 27 and 31 bytes. Data communications, the

MODSCAN32 communications interface (03 orders):


```
ModScan32 - [ModSca1]                                         _ □ ×
File  Connection  Setup  View  Window  Help                  _ ε ×

            Device Id:    1
Address:  0001                              Number of Polls: 179
            MODBUS Point Type               Valid Slave Responses: 179
Length:   20      03: HOLDING REGISTER ▼
                                                    Reset Ctrs

40001:  20.0000       Medium temperature: 20.0℃;
40002:
40003:  10.0000       Medium pressure: 10.0MPa;
40004:
40005:  1000.0000     Flow Sensor Frequency: 1000Hz;
40006:
40007:  0.1099        Instantaneous flow =0.1099*3600=395.64 m³/h
40008:
40009:  154.0000
40010:                Cumulative flow =154*100+93.5824=15493.5824 m³
40011:  93.5824
40012:
40013:  0.0000        Upper and lower limits without alarm;
40014:
40015:  0.0000
40016:
40017:  16.6569       Output current =16.6569mA
40018:
40019:  0.0000        Output current for the volume flow
40020:

For Help, press F1                    Polls: 179        Resps: 179
```

Temperature: 20 ℃;
Pressure: 10MPa;
Frequency: 1000Hz;
Instantaneous flow per standard conditions: 0.1099 m³ / s;
A total of more than 100 flow: 154 m³
Cumulative flow of 100 the following: 93.5824 m³
4-20mA current output: 16.6569 mA