

COMMUNICATION PROTOCOL

INTERFACE

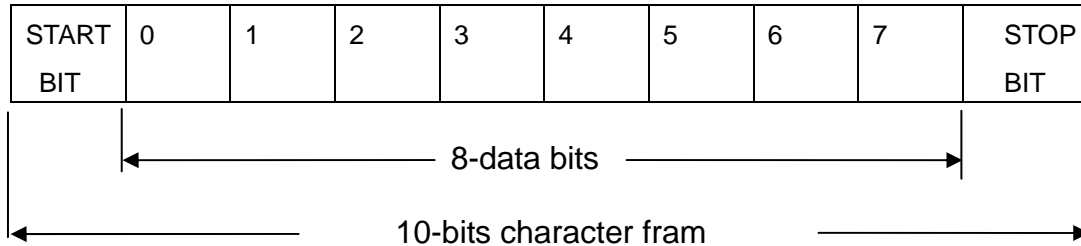
RS-485, RS-232

BAUD RATE

110 , 300 , 1.2K , 2.4K , 4.8K , 9.6K , 19.2K , 38.4K bps

DATA FRAME

Data Bits = 8 , Parity = None , Start bit = 1 , Stop bit = 1



DATA FORMAT

MODBUS Protocol RTU Mode

ID Number (Slave Address)

Range: 1~255.

Master instrument identifies slave controllers by the ID Number of the requested message. ID Number should be configuring in individual slave controller by setting parameter "IDNO" in operation LEVEL 3.

Function Code

03H : Reading multiple registers value from slave controller

06H : Setting 1 register value to slave controller

08H : Setting multiple registers value to slave controller.

ADDRESS INDEX :

NAME	ADDR	DATA RANGE	EX-FACORY	ATTRIBUTION
PV (PV)	0000H	Full range	—	R
5 output status	0001H	1 : yes 0 : non (PS1)	—	R
Output % (Out 1)	0002H	0~100	—	Manual : R/W Auto : R
Manual/automatic condition (A/M)	0003H	0~1	0	R/W
Setting value (SV)	0004H	Full range	0	R/W
Output range (OutI)	0005H	0-100	100	R/W
Auto tuning (AT)	0006H	0-1	0 (nO)	R/W
Alarm 1 (AL1)	0007H	According to function	0	R/W
Alarm 2 (AL2)	0008H	According to function	0	R/W
Alarm 3 (AL3)	0009H	According to function	0	R/W
Program pattern number (PtN)	000AH	0-2	1	R/W
Running pattern and segment	000BH	Pattern : 1-2 Segment : 1-8 Running Status : Start · Stop · Pause · Next (PS2)	—	R/W
Running time (tMEr)	000CH	0 · 0-99 · 59	—	R
First pattern, first segment SV setting (Sv-1)	000DH	Full range	0	R/W
First pattern, first segment Time setting (tM-1)	000EH	0-99 · 59	0 · 00	R/W
First pattern, first segment Output setting (OUT1)	000FH	0-100	0	R/W
First pattern, second segment SV setting (Sv-2)	0010H	Full range	0	R/W
First pattern, second segment Time setting (tM-2)	0011H	0-99 · 59	0 · 00	R/W
First pattern, second s segment Output setting (OUT2)	0012H	0-100	0	R/W
First pattern, third segment SV setting (Sv-3)	0013H	Full range	0	R/W

First pattern, third segment Time setting (tM-3)	0014H	0-99 · 59	0 · 00	R/W
First pattern, third segment Output setting (OUT3)	0015H	0-100	0	R/W
First pattern, fourth segment SV setting (Sv-4)	0016H	Full range	0	R/W
First pattern, fourth segment Time setting (tM-4)	0017H	0-99 · 59	0 · 00	R/W
First pattern, fourth segment Output setting (OUT4)	0018H	0-100	0	R/W
First pattern, fifth segment SV setting (Sv-5)	0019H	Full range	0	R/W
First pattern, fifth segment Time setting (tM-5)	001AH	0-99 · 59	0 · 00	R/W
First pattern, fifth segment Output setting (OUT5)	001BH	0-100	0	R/W
First pattern, sixth segment SV setting (Sv-6)	001CH	Full range	0	R/W
First pattern, sixth segment Time setting (tM-6)	001DH	0-99 · 59	0 · 00	R/W
First pattern, sixth segment Output setting (OUT6)	001EH	0-100	0	R/W
First pattern, seventh segment SV setting (Sv-7)	001FH	Full range	0	R/W
First pattern, seventh segment Time setting (tM-7)	0020H	0-99 · 59	0 · 00	R/W
First pattern, seventh segment Output setting (OUT7)	0021H	0-100	0	R/W
First pattern, eighth segment SV setting (Sv-8)	0022H	Full range	0	R/W
First pattern, eighth segment Time setting (tM-8)	0023H	0-99 · 59	0 · 00	R/W
First pattern, eighth segment Output setting (OUT8)	0024H	0-100	0	R/W

Second pattern, first segment SV setting (Sv-1)	0025H	Full range	0	R/W
Second pattern, first segment Time setting (tM-1)	0026H	0-99 · 59	0 · 00	R/W
Second pattern, first segment Output setting (OUT1)	0027H	0-100	0	R/W
Second pattern, second segment SV setting (Sv-2)	0028H	Full range	0	R/W
Second pattern, second segment time setting (tM-2)	0029H	0-99 · 59	0 · 00	R/W
Second pattern, second segment Output setting (OUT2)	002AH	0-100	0	R/W
Second pattern, third segment SV setting (Sv-3)	002BH	Full range	0	R/W
Second pattern, third segment Time setting (tM-3)	002CH	0-99 · 59	0 · 00	R/W
Second pattern, third segment Output setting (OUT3)	002DH	0-100	0	R/W
Second pattern, fourth segment SV setting (Sv-4)	002EH	Full range	0	R/W
Second pattern, fourth segment Time setting (tM-4)	002FH	0-99 · 59	0 · 00	R/W
Second pattern, fourth segment Output setting (OUT4)	0030H	0-100	0	R/W
Second pattern, fifth segment SV setting (Sv-5)	0031H	Full range	0	R/W
Second pattern , fifth segment Time setting (tM-5)	0032H	0-99 · 59	0 · 00	R/W
Second pattern, fifth segment Output setting (OUT5)	0033H	0-100	0	R/W
Second pattern, sixth segment SV setting (Sv-6)	0034H	Full range	0	R/W
Second pattern, sixth segment Time setting (tM-6)	0035H	0-99 · 59	0 · 00	R/W

Second pattern, sixth segment Output setting (OUT6)	0036H	0-100	0	R/W
Second pattern, seventh segment SV setting (Sv-7)	0037H	Full range	0	R/W
Second pattern, seventh segment Time setting (tM-7)	0038H	0-99 · 59	0 · 00	R/W
Second pattern, seventh segment Output setting (OUT7)	0039H	0-100	0	R/W
Second pattern, eighth segment SV setting (Sv-8)	003AH	Full range	0	R/W
Second pattern, eighth segment Time setting (tM-8)	003BH	0-99 · 59	0 · 00	R/W
Second pattern, eighth segment Output setting (OUT8)	003CH	0-100	0	R/W
Proportional of first output (P1)	003DH	0-Full range	20	R/W
Integral time of first output (I1)	003EH	0-3600	240	R/W
Derivative time of first output (D1)	003FH	0-3600	60	R/W
Dead band (DB1)	0040H	-10.0-10.0	0	R/W
Auto tuning offset (ATVL)	0041H	0-Full range	0	R/W
Cycle time of first output (CYT1)	0042H	1-100	20	R/W
Hysteresis of first output (HYS1)	0043H	0 · 4-100 · 0	0 · 4	R/W
Proportional of second output (P2)	0044H	0-Full range	30	R/W
Integral time of second output (I2)	0045H	0-3600	240	R/W
Derivative time of second output (D2)	0046H	0-3600	60	R/W
Cycle time of second output (CYT2)	0047H	1-100	20	R/W
hysteresis of second output (HYS2)	0048H	0 · 4-100 · 0	0 · 4	R/W
Reset1 (RST1)	0049H	0-100 · 0	0	R/W
Reset2 (RST2)	004AH	0-100 · 0	0	R/W
Anti- Integral (AR)	004BH	0-100	100	R/W

Function lock (LCK)	004CH	0-15	0	R/W
Input selections (Inp1)	004DH	0-20	4(K1)	R/W
Decimal point (dP)	004EH	0-3	0	R/W
Lower set point limit (LSPL)	004FH	From scale	0 · 0	R/W
Upper set point limit (USPL)	0050H	From scale	400 · 0	R/W
Alarm1 mode choice (ALd1)	0051H	0-19	11	R/W
Alarm1 time set (ALt1)	0052H	0.0-99.59	99.59	R/W
Alarm2 mode choice (ALd2)	0053H	0-19	11	R/W
Alarm2 time set (ALt2)	0054H	0.0-99.59	99.59	R/W
Alarm3 mode choice (ALd3)	0055H	0-19	11	R/W
Alarm3 time set (ALt3)	0056H	0.0-99.59	99.59	R/W
Hystersis of alarm (HYSA)	0057H	0.4-100.0	0.4	R/W
Output1 zero set (CLO1)	0058H	0-2000	400	R/W
Output1 span set (CHO1)	0059H	0-2000	2000	R/W
Transmitter zero set (OPrL)	005AH	0-2000	400	R/W
Transmitter span set (OPrH)	005BH	0-2000	2000	R/W
Setting motor operating time (rUCY)	005CH	0-150	5	R/W
Program control waiting temperature (Wait)	005DH	0-Full measurement	0	R/W
Communication Address NO. (idNO)	005EH	1-99	1	R/W
Baud rate setting (bAUd)	005FH	0-7	3(2400)	R/W
Compensate SV (SVOS)	0060H	-100.0-100.0	0	R/W
Compensate PV (PVOS)	0061H	-100.0-100.0	0	R/W
Select temperature Unit (Unit)	0062H	0-2	0 (C)	R/W
Soft filter (SOFT)	0063H	0-255	200	R/W
Cluster control (CASC)	0064H	0-1000	0	R/W
Time for loop open (TOH)	0065H	0-120	120	R/W

Time for loop short (TsH)	0066H	0-120	120	R/W
Administrative parameter 1	0067H	0-15	Need	R/W
Administrative parameter 2	0068H	0-15	Need	R/W
Administrative parameter 3	0069H	0-15	Need	R/W
Administrative parameter 4	006AH	0-15	Need	R/W
Administrative parameter 5	006BH	0-15	Need	R/W
Administrative parameter 6	006CH	0-15	Need	R/W
Administrative parameter 7	006DH	0-15	Need	R/W
Administrative parameter 8	006EH	0-15	Need	R/W
Administrative parameter 9	006FH	0-15	Need	R/W
Administrative parameter 10	0070H	0-15	Need	R/W
Administrative parameter 11	0071H	0-15	Need	R/W
Function parameter 1	0072H	0-15	Need	R/W
Function parameter 2	0073H	0-15	Need	R/W
Function parameter 3	0074H	0-15	Need	R/W
Function parameter 4	0075H	0-15	Need	R/W
Function parameter 5	0076H	0-15	Need	R/W

PS1* : bit0:OUT1 Lamp bit1:OUT2 Lamp bit2:AT Lamp bit3:Alarm 1 Lamp
bit4:Alarm 2 Lamp bit5:Alarm 3 Lamp bit6:MAN Lamp bit7: PRO Lamp

PS2* : Read : bit0-3 Segment , bit4-bit7 Pattern , bit8-bit15 Non
Write : bit0=1:Start ; bit1=1:Stop ; bit2=1:Pause ; bit3=1:Next