

This user's manual describes the explanation for Profile 201. Before reading this Profile 201 Procedure, please read Profile Common Manual (IM 77P01C01-02E). Then check the instrument connection conditions, and check Mode or set Mode if necessary. This user's manual should be kept in safety place.

1. DATA MONITORING MODE

IMPORTANT

When word accessing to Write request flag (RY n4), pay attention to the other bits in (RY n0 to RY nF).

Read-out data from power monitor (WH value, W value)

[PROCEDURE]

- Read out Normal connection of slave flag [RX (n+5)0 to RX (n+5)3] and Receive data valid flag (RX n3). And check that those are both [1].
- Read out the required data from Remote Register (RWn n+0 to RWw n+F).

Data type

Integrated Power (WH)	4 bytes none sign integer
Instantaneous Power (W)	4 bytes floating decimal point (IEEE)

Write in data to power monitor (PT(VT) ratio ,CT ratio)

PT(VT) ratio values and CT ratio values can be changed.

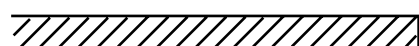
IMPORTANT

In case of writing in PT(VT) ratio and CT ratio, after End of writing flag (RX n4) changes [0] to [1], then write in Re-setting flag [RY (n+1)0 to RY (n+1)3] to [1].

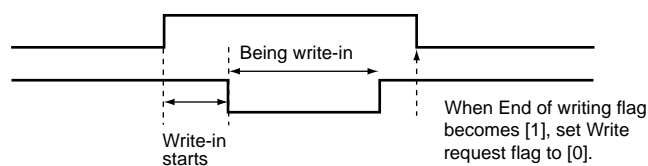
[PROCEDURE]

- Check that End of writing flag (RX n4) is [1].
- Write-in data to the relative address (RWw m+0 to RWw m+F).
- Set Write request flag (RY n4) from [0] to [1].
- Wait until End of writing flag (RX n4) becomes from [0] to [1].
- Write-in [0] to Write request flag (RY n4).
- Set Re-setting flag [RY (n+1)0 to RY (n+1)3] from [0] to [1] during minimum 1 minute, and then write in [0].

Write-in data to Remote Register (RWw m+0 to RWw m+F)

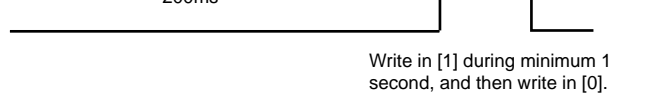


Write request flag (RY n4)



End of writing flag (RX n4)

Re-setting flag [RY (n+1)0 to RY (n+1)3]



Data type

PT(VT) ratio	4 bytes floating decimal point (IEEE)
CT ratio	4 bytes floating decimal point (IEEE)

Contents of SIGNAL NAME used within Profile

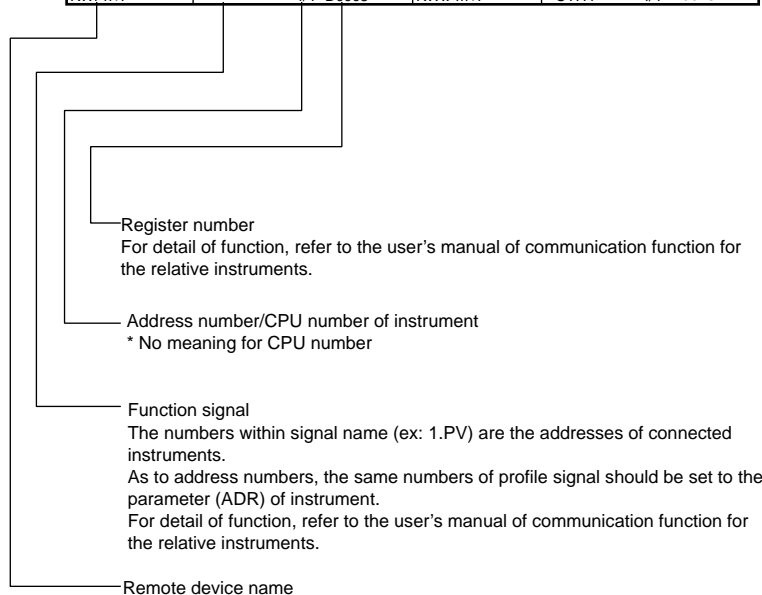
Remote Register

Contents of Remote Register (Read out area)		Contents of Remote Register (Write in area)	
Signal name	Contents	Signal name	Contents
Wh1L	Lower two bytes of Integrated Power of address 1	PTL1	Lower two bytes of PT(VT) ratio of address 1
Wh1H	Upper two bytes of Integrated Power of address 1	PTH1	Upper two bytes of PT(VT) ratio of address 1
W1L	Lower two bytes of Instantaneous Power of address 1	CTL1	Lower two bytes of CT ratio of address 1
W1H	Upper two bytes of Instantaneous Power of address 1	CTH1	Upper two bytes of CT ratio of address 1
Wh2L	Lower two bytes of Integrated Power of address 2	PTL2	Lower two bytes of PT(VT) ratio of address 2
Wh2H	Upper two bytes of Integrated Power of address 2	PTH2	Upper two bytes of PT(VT) ratio of address 2
W2L	Lower two bytes of Instantaneous Power of address 2	CTL2	Lower two bytes of CT ratio of address 2
W2H	Upper two bytes of Instantaneous Power of address 2	CTH2	Upper two bytes of CT ratio of address 2
Wh3L	Lower two bytes of Integrated Power of address 3	PTL3	Lower two bytes of PT(VT) ratio of address 3
Wh3H	Upper two bytes of Integrated Power of address 3	PTH3	Upper two bytes of PT(VT) ratio of address 3
W3L	Lower two bytes of Instantaneous Power of address 3	CTL3	Lower two bytes of CT ratio of address 3
W3H	Upper two bytes of Instantaneous Power of address 3	CTH3	Upper two bytes of CT ratio of address 3
Wh4L	Lower two bytes of Integrated Power of address 4	PTL4	Lower two bytes of PT(VT) ratio of address 4
Wh4H	Upper two bytes of Integrated Power of address 4	PTH4	Upper two bytes of PT(VT) ratio of address 4
W4L	Lower two bytes of Instantaneous Power of address 4	CTL4	Lower two bytes of CT ratio of address 4
W4H	Upper two bytes of Instantaneous Power of address 4	CTH4	Upper two bytes of CT ratio of address 4

<<PROFILE 201 for Data Monitoring Mode>>

Remote Register

Read out area			Write in area		
Remote→Master			Master→Remote		
Address	Signal name	Contents	Address	Signal name	Contents
RWr n+0	Wh1L	1/1 D0001	RWw m+0	PTL1	1/1 D0043
RWr n+1	Wh1H	1/1 D0002	RWw m+1	PTH1	1/1 D0044
RWr n+2	W1L	1/1 D0007	RWw m+2	CTL1	1/1 D0045
RWr n+3	W1H	1/1 D0008	RWw m+3	CTH1	1/1 D0046
RWr n+4	Wh2L	2/1 D0001	RWw m+4	PTL2	2/1 D0043
RWr n+5	Wh2H	2/1 D0002	RWw m+5	PTH2	2/1 D0044
RWr n+6	W2L	2/1 D0007	RWw m+6	CTL2	2/1 D0045
RWr n+7	W2H	2/1 D0008	RWw m+7	CTH2	2/1 D0046
RWr n+8	Wh3L	3/1 D0001	RWw m+8	PTL3	3/1 D0043
RWr n+9	Wh3H	3/1 D0002	RWw m+9	PTH3	3/1 D0044
RWr n+A	W3L	3/1 D0007	RWw m+A	CTL3	3/1 D0045
RWr n+B	W3H	3/1 D0008	RWw m+B	CTH3	3/1 D0046
RWr n+C	Wh4L	4/1 D0001	RWw m+C	PTL4	4/1 D0043
RWr n+D	Wh4H	4/1 D0002	RWw m+D	PTH4	4/1 D0044
RWr n+E	W4L	4/1 D0007	RWw m+E	CTL4	4/1 D0045
RWr n+F	W4H	4/1 D0008	RWw m+F	CTH4	4/1 D0046



Remote Input/Output

Read out area			Write in area		
Remote→Master			Master→Remote		
Address	Signal name	Contents	Address	Signal name	Contents
RX n0	Data monitoring mode		RY n0	Request for data monitoring mode	
RX n1	Parameter setting mode		RY n1	Request for parameter setting mode	
RX n2			RY n2		
RX n3	Receive data valid flag		RY n3		
RX n4	End of writing		RY n4	Write request	
RX n5			RY n5		
RX n6			RY n6		
RX n7			RY n7		
RX n8			RY n8		
RX n9			RY n9		
RX nA			RY nA		
RX nB			RY nB		
RX nC			RY nC		
RX nD			RY nD		
RX nE			RY nE		
RX nF			RY nF		
RX (n+1)0			RY (n+1)0	Re-setting 1/1 D0072	
RX (n+1)1			RY (n+1)1	Re-setting 2/1 D0072	
RX (n+1)2			RY (n+1)2	Re-setting 3/1 D0072	
RX (n+1)3			RY (n+1)3	Re-setting 4/1 D0072	
RX (n+1)4			RY (n+1)4		
RX (n+1)5			RY (n+1)5		
RX (n+1)6			RY (n+1)6		
RX (n+1)7			RY (n+1)7		
RX (n+1)8			RY (n+1)8		
RX (n+1)9			RY (n+1)9		
RX (n+1)A			RY (n+1)A		
RX (n+1)B			RY (n+1)B		
RX (n+1)C			RY (n+1)C		
RX (n+1)D			RY (n+1)D		
RX (n+1)E			RY (n+1)E		
RX (n+1)F			RY (n+1)F		
:	:	:	:	:	:
RX (n+5)0	Normal connection of slave 01		RY (n+5)0		
RX (n+5)1	Normal connection of slave 02		RY (n+5)1		
RX (n+5)2	Normal connection of slave 03		RY (n+5)2		
RX (n+5)3	Normal connection of slave 04		RY (n+5)3		
RX (n+5)4			RY (n+5)4		
RX (n+5)5			RY (n+5)5		
RX (n+5)6			RY (n+5)6		
RX (n+5)7			RY (n+5)7		
RX (n+5)8			RY (n+5)8		
RX (n+5)9			RY (n+5)9		
RX (n+5)A			RY (n+5)A		
RX (n+5)B			RY (n+5)B		
RX (n+5)C			RY (n+5)C		
RX (n+5)D			RY (n+5)D		
RX (n+5)E			RY (n+5)E		
RX (n+5)F			RY (n+5)F	Request for re-scanning	
RX (n+6)0	Reserved		RY (n+6)0	Reserved	
:	Reserved		:	Reserved	
:	Reserved		:	Reserved	
:	Reserved		:	Reserved	
RX (n+7)A	Reserved		RY (n+7)A	Reserved	
RX (n+7)B	Remote READY flag		RY (n+7)B	Reserved	
RX (n+7)C	Reserved		RY (n+7)C	Reserved	
RX (n+7)D	Reserved		RY (n+7)D	Reserved	
RX (n+7)E	Reserved		RY (n+7)E	Reserved	
RX (n+7)F	Reserved		RY (n+7)F	Reserved	

2. PARAMETER SETTING MODE

Parameter Data of power monitor are all stored to D register of power monitor. Accessing to D register, write-in and read-out of parameter can be executed.

IMPORTANT

When word accessing to Read request flag (RY n5) and Write request flag (RY n4), pay attention to the other bits in (RY n0 to RY nF).

● Read-out a lump of power monitor parameter data

Maximum 14 of D registers can be read out at once by designating address (1 to 99) of D register in power monitor. The address of power monitor is the value that is designated in ADR of Set up Parameter. Take care that the addresses of power monitors do not duplicate each other.

[PROCEDURE]

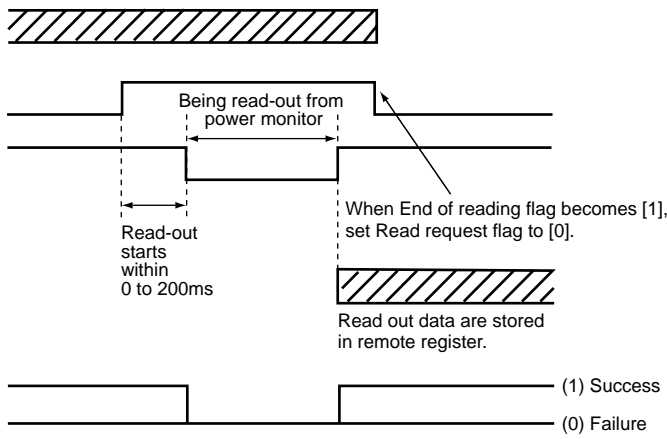
- Check that End of writing flag (RX n4) and End of reading flag (RX n5) are both [1].
 - Write in the first address of the read required sequential parameters to First parameter address (RWw m+E).
 - Write the power monitor address(ADR) in the upper bite of (ADR and number of parameter) (RWw m+F) and the parameter number to be read out in the lower bite.
 - Set Read request flag (RY n5) from [0] to [1].
 - During read out from power monitor, the End of reading flag (RX n5) is [0]. Wait until End of reading flag (RX n5) becomes from [0] to [1].
 - Write-in [0] to Read request flag (RY n5).
 - The required number's data are stored in (RW r n+0 to RW r n+D).
- (Note) When the flags of Read request flag (RY n5) and Write request flag (RY n4) are set [1] at the same time, the Read request flag has priority.

Write address of power monitor, number of read-out parameter and read-in first address of parameter in D register, to Remote Register (RWw m+E, RWw m+F).

Read request flag (RY n5)
End of reading flag (RX n5)

Read out data are stored to Remote Register (RW r n+0 to RW r n+F)

Success flag of write-in/read-out (Receive data valid flag) (RX n3)



● Write-in a lump of parameter data to power monitor

Maximum 14 of D registers can be written in at once by designating address (1 to 99) of D register in power monitor. The address of power monitor is the value that is designated in ADR of Set up parameter. Take care that the addresses of power monitors do not duplicate each other.

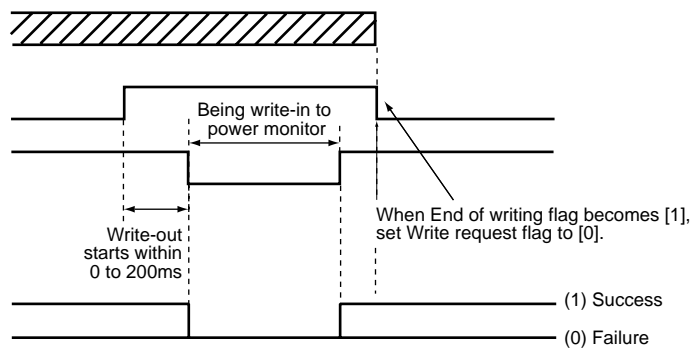
[PROCEDURE]

- Check that End of writing flag (RX n4) and End of reading flag (RX n5) are both [1].
- Write in the first address of the write required sequential parameters to First parameter address (RWw m+E).
- Write the power monitor address in the upper bite of (ADR and number of parameter) (RWw m+F) and the parameter number to be write-in in the lower bite.
- Write in the designed number of data in (RWw m+0 to RWw m+D).
- Set Write request flag (RY n4) from [0] to [1].
- During write in data to power monitor, the End of writing flag (RX n4) is [0]. Wait until End of writing flag (RX n4) becomes from [0] to [1].
- Write-in [0] to Read request flag (RY n4).

Write address of power monitor, number of write-in parameter, write-in first address of parameter in D register and setting data, to Remote register (RWw m+0 to RWw m+F)

Write request flag (RY n4)
End of writing flag (RX n4)

Success flag of write-in/read-out (Receive data valid flag) (RX n3)



<< PROFILE PARAMETER SETTING MODE >>

Remote Register

Read out area			Write in area		
Remote→Master			Master→Remote		
RW r Address	Signal name	Contents	RW w Address	Signal name	Contents
RW r n+0	First parameter +0	Read out data	RW w m+0	First parameter +0	Setting data
RW r n+1	First parameter +1	Read out data	RW w m+1	First parameter +1	Setting data
RW r n+2	First parameter +2	Read out data	RW w m+2	First parameter +2	Setting data
RW r n+3	First parameter +3	Read out data	RW w m+3	First parameter +3	Setting data
RW r n+4	First parameter +4	Read out data	RW w m+4	First parameter +4	Setting data
RW r n+5	First parameter +5	Read out data	RW w m+5	First parameter +5	Setting data
RW r n+6	First parameter +6	Read out data	RW w m+6	First parameter +6	Setting data
RW r n+7	First parameter +7	Read out data	RW w m+7	First parameter +7	Setting data
RW r n+8	First parameter +8	Read out data	RW w m+8	First parameter +8	Setting data
RW r n+9	First parameter +9	Read out data	RW w m+9	First parameter +9	Setting data
RW r n+A	First parameter +10	Read out data	RW w m+A	First parameter +10	Setting data
RW r n+B	First parameter +11	Read out data	RW w m+B	First parameter +11	Setting data
RW r n+C	First parameter +12	Read out data	RW w m+C	First parameter +12	Setting data
RW r n+D	First parameter +13	Read out data	RW w m+D	First parameter +13	Setting data
RW r n+E	First parameter address		RW w m+E	First parameter address	
RW r n+F	ADR and number of parameters		RW w m+F	ADR and number of parameters	

Example

In case of write in data to five registers of D register from D0043 to D0046 of address2 power monitor;
 • First parameter address: Write in [002B](HEX).
 • ADR and number of parameters: Write in [0204](HEX).
 (Upper one byte: Address number, Lower one byte: number of parameter)

Remote Input/Output

Remote→Master			Master→Remote		
Address	Signal name	Contents	Address	Signal name	Contents
RX n0	Data monitoring mode		RY n0	Request for data monitoring mode	
RX n1	Parameter setting mode		RY n1	Request for parameter setting mode	
RX n2			RY n2		
RX n3	Read/Write data valid flag		RY n3		
RX n4	End of writing		RY n4	Write request	
RX n5	End of Reading		RY n5	Read request	
RX n6			RY n6		
RX n7			RY n7		
RX n8			RY n8		
RX n9			RY n9		
RX nA			RY nA		
RX nB			RY nB		
RX nC			RY nC		
RX nD			RY nD		
RX nE			RY nE		
RX nF			RY nF		
RX (n+1)0			RY (n+1)0		
:			:		
RX (n+1)F			RY (n+1)F		
RX (n+2)0			RY (n+2)0		
:			:		
RX (n+2)F			RY (n+2)F		
RX (n+3)0			RY (n+3)0		
:			:		
RX (n+3)F			RY (n+3)F		
RX (n+4)0			RY (n+4)0		
:			:		
RX (n+4)F			RY (n+4)F		
RX (n+5)0	Normal connection of slave 01		RY (n+5)0		
RX (n+5)1	Normal connection of slave 02		RY (n+5)1		
RX (n+5)2	Normal connection of slave 03		RY (n+5)2		
RX (n+5)3	Normal connection of slave 04		RY (n+5)3		
RX (n+5)4			RY (n+5)4		
RX (n+5)5			RY (n+5)5		
RX (n+5)6			RY (n+5)6		
RX (n+5)7			RY (n+5)7		
RX (n+5)8			RY (n+5)8		
RX (n+5)9			RY (n+5)9		
RX (n+5)A			RY (n+5)A		
RX (n+5)B			RY (n+5)B		
RX (n+5)C			RY (n+5)C		
RX (n+5)D			RY (n+5)D		
RX (n+5)E			RY (n+5)E		
RX (n+5)F			RY (n+5)F		
RX (n+6)0	Reserved		RY (n+6)0	Reserved	
:			:		
RX (n+6)F	Reserved		RY (n+6)F	Reserved	
RX (n+7)0	Reserved		RY (n+7)0	Reserved	
:			:		
RX (n+7)8	Reserved		RY (n+7)8	Reserved	
RX (n+7)9	Reserved		RY (n+7)9	Reserved	
RX (n+7)A	Reserved		RY (n+7)A	Reserved	
RX (n+7)B	Remote ready flag		RY (n+7)B	Reserved	
RX (n+7)C	Reserved		RY (n+7)C	Reserved	
RX (n+7)D	Reserved		RY (n+7)D	Reserved	
RX (n+7)E	Reserved		RY (n+7)E	Reserved	
RX (n+7)F	Reserved		RY (n+7)F	Reserved	