



LE-8200A/LE-8200  
Instruction Manual for  
Additional Protocols

<3rd Edition>

## 1. Outline

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Modbus RTU/ASCII and Profibus DP communications are supported by LE-8200 (A) with Version 1.18 or later.

## 2. Modbus RTU/ASCII Communication

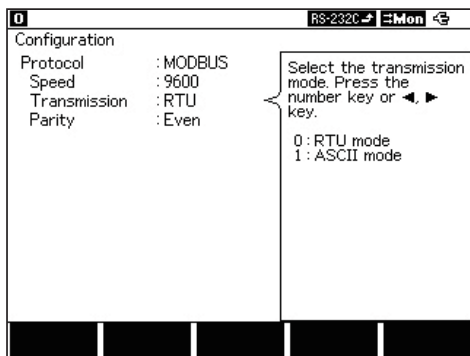
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### 2-1. Configuration

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Select MODBUS at Configuration.

< MODBUS configuration >



■ Protocol

Select "MODBUS".

■ Speed

Set speed up to 2.048Mbps.

■ Transmission

Select transmission type from RTU or ASCII.

■ Parity

Select parity bit from None, Odd or Even.

### 2-2. Connection to the test object

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Connect the test object to RS-232C port or RS-530 (RS-485) port.

Refer to "2.3 Connection Method" in the LE-8200A/LE-8200 instruction manual.

## 2-3. Display

You can select the normal data display or the translated data display by pushing the [Data] key. When the display is the translated data display, you can also change it to the detail display by the [F1] key and to the dump display by the [F3] key.

< Translated data display >

1698 MODBUS RS-530				
	Time	SA	Function/Sub-function	FC Data
SD	16:00:01	3	Read holding registers	00 68 00 01
SD	16:00:01	3	Read holding registers	02 00 04
SD	16:00:02	2	Read holding registers	00 68 00 01
SD	16:00:02	2	Read holding registers	02 00 06
SD	16:00:02	3	Diag/Query data	55 AA
SD	16:00:02	3	Diagnostics	01
SD	16:00:02	3	Read holding registers	00 80 00 02
SD	16:00:02	3	Read holding registers	04 00 00 00 00
SD	16:00:02	2	Read holding registers	00 80 00 02
SD	16:00:02	2	Read holding registers	04 00 00 00 00
SD	16:00:03	3	Read holding registers	00 AA 00 02
SD	16:00:03	3	Read holding registers	04 04 02 00 00
SD	16:00:03	2	Read holding registers	00 AA 00 02
SD	16:00:03	2	Read holding registers	04 04 01 00 00
Detail view Translate view Dump view Change time display				

< Dump display >

1698 MODBUS RS-530				
	Time	FC	Data	
SD	16:00:01	03	03	00 68 00 01
SD	16:00:01	02	03	02 00 04
SD	16:00:02	02	02	00 68 00 01
SD	16:00:02	02	03	02 00 06
SD	16:00:02	03	08	00 00 55 AA
SD	16:00:02	03	88	01
SD	16:00:02	03	03	00 80 00 02
SD	16:00:02	03	03	04 00 00 00 00
SD	16:00:02	02	03	00 80 00 02
SD	16:00:02	02	03	04 00 00 00 00
SD	16:00:03	03	03	00 AA 00 02
SD	16:00:03	03	03	04 04 02 00 00
SD	16:00:03	02	03	00 AA 00 02
SD	16:00:03	02	03	04 04 01 00 00
Detail view Translate view Dump view Change time display				

\* You can change the dump display to translated data display by [F2].

Item	Meaning
SD or RD	Show the position (SD or RD) of received frame.
Time	Show the time of receiving frame.
SA	Show the address in decimal.
Function/Sub-function	Show the detail of function/sub-function codes.
FC	Show the result of CRC (RTU)/LRC (ASCII) acceptance.
Data	Show the data field in HEX.

\* It displays without distinguishing commands from responses

\* Frames with " \* " mean error frames.

By LE-8200 with version V1.17 or above, you can display the detail of the data after measurement. At detail display, it displays the data in conformity to the power meter “KW1M (by Panasonic)”. Detail display translates data in the order of head frame, Request, and Response. You can change the translation of Request/Response by pushing [F1] key.

<Detail display >

Time	SA	Function/Sub-function	FC	Data
sd 16:00:01	3	Read holding registers	03	00 6B 00 01

Request  
 Slave address: KM1W (1)  
 Starting address: R-current (0x006b) (2)  
 Quantity: 1  
 Data  
 000: 03 03 00 6B 00 01 (3)

Display control

1. Slave address display part

Displays a slave address in decimal number. It can also display a character string defined by a user.

2. Translation part

Displays the translated data in accordance with the function codes.

3. Data part

Displays the data field (without CRC) from the slave address. Displays in ASCII by Modbus ASCII, and displays in hex number by Modbus RTU.

#### ■Slave address definition

It can define up to 16 varieties of names for each slave address and display it.

No.	Addr	Name	No.	Addr	Name
0	0	KM1W	8	0	
1	0		9	0	
2	0		A	0	
3	0		B	0	
4	0		C	0	
5	0		D	0	
6	0		E	0	
7	0		F	0	

Display the object address and translated string in the data table.  
 Edit by [01~[F] key. (select by ▲▼ key. Then press [Enter])

Enable Disable

By pressing [Shift]+[F1] keys at detail display, address definition table appears.

To move to configuration, press a number which you want to setup. Then set a slave address and a name at the configuration.

You can set valid/invalid by pressing [F1] (valid) key or [F2] (invalid) key at address definition table. If more than one definitions have been set to a same address, the most small number will be applied.

Modbus definition table0

Slave address : 3  
 Name : KM1W

Set the object slave address in decimal.  
 Press 0~9 key or ▲, ▼ key.  
 Range : 0~255

Exit

## 2-4. Data table edit when using Modbus RTU/ASCII simulation

You can automatically insert LRC/CRC at data table edit of simulation when protocol is set to MODBUS at configuration.

Note: If the data string is not Modbus RTU/ASCII format, this insert cannot be done.

< Modbus RTU >

Enter a data string of RTU frame without LRC.

(The example is a Request frame of Read Coils.)

0x06(Address)

0x01(Function)

0x00 0x13(Starting Address)

0x00 0x13(Quantity of coils)

0		RS-232C		DTE	
<b>Data table 00</b>		<b>Remain Position</b>		<b>16378 byte 6</b>	
06 01 00 13 00 13 ■					
Edit by [01~[F],▲▼◀▶ key. [Del]:Delete [Enter]:select the range [Shift]:change the edit function					
HEX	Input			Edit	
Display	Mode			Option	

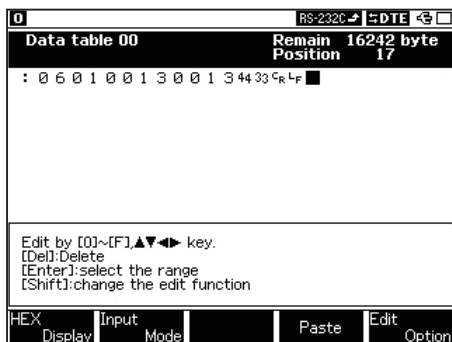
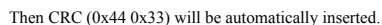
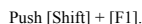
Push [Shift] + [F1].

BCC/FCS	Set/Cancel			
addition	Parity/MP			

Then LRC (0x8D 0xB5) will be automatically inserted.

0		RS-232C		DTE	
<b>Data table 00</b>		<b>Remain Position</b>		<b>16376 byte 8</b>	
06 01 00 13 00 13 8D B5 ■					
Edit by [01~[F],▲▼◀▶ key. [Del]:Delete [Enter]:select the range [Shift]:change the edit function					
HEX	Input			Edit	
Display	Mode			Option	

```
Enter a data string of ASCII frame without CRC.
(The example is a Request frame of Read Coils.)
:(Start(0x3A))
06(Address(0x30 0x36))
01(Function(0x30 0x31))
00 13(Starting Address(0x30 0x30 0x31 0x33))
00 13(Quantity of coils(0x30 0x30 0x31 0x33))
CR LF(End(0x0D 0x0A))
```



## 2-5. Modbus Translation

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### ■ Function code

Code	Display	Description
0x01	Read coils	Read Coils
0x02	Read discrete inputs	Read Discrete inputs
0x03	Read holding registers	Read Holding Registers
0x04	Read input registers	Read Input Registers
0x05	Write single coil	Write Single Coil
0x06	Write single register	Write Single Register
0x07	Read exception status	Read Exception Status
0x08	Diagnostics	Diagnostics
0x0B	Get comm event counter	Get Comm Event Counter
0x0C	Get comm event log	Get Comm Event Log
0x0F	Write multiple coils	Write Multiple Coils
0x10	Write multiple registers	Write Multiple registers
0x11	Report slave ID	Report Slave ID
0x14	Read file record	Read File Record
0x15	Write file record	Write File Record
0x16	Mask write register	Mask Write Register
0x17	R-W multiple registers	Read/Write Multiple registers
0x18	Read FIFO queue	Read FIFO queue
0x2B	Encapsulated	Encapsulated Interface Transport

### ■ Sub-function code

Code	Sub-function (Diagnostics)	Description
0x00	Diag/Query data	Return Query Data
0x01	Diag/Restart comm	Restart Communications Option
0x02	Diag/Diagnostic register	Return Diagnostic Register
0x03	Diag/ASCII delimiter	Change ASCII Input Delimiter
0x04	Diag/Force listen only	Force Listen Only Mode
0x0A	Diag/Clear counters	Clear Counters and Diagnostic Register
0x0B	Diag/Bus msg count	Return Bus Message Count
0x0C	Diag/Bus comm err cnt	Return Bus Communication Error Count
0x0D	Diag/Bus except err cnt	Return Bus Exception Error Count
0x0E	Diag/Slave msg count	Return Slave Message Count
0x0F	Diag/Slave no res count	Return Slave No Response Count
0x10	Diag/Slave NAK count	Return Slave NAK Count
0x11	Diag/Slave busy count	Return Slave Busy Count
0x12	Diag/Bus overrun count	Return Bus Character Overrun Count
0x14	Diag/Clear overrun	Clear Overrun Counter and Flag
Code	Sub-function (Encapsulated)	Description
0x0D	Enca/CANopen general	CANopen General Reference Request and Response PDU
0x0E	Enca/Read device ident	Read Device Identification

■ Detail display (in conformance to KW1M)

It translates the data of the corresponding addresses at frames of the following function codes as KW1M.

- Read Holding Registers(0x03)
- Write Single Register(0x06)
- Write Multiple registers(0x10)

(This function cannot be set to invalid. The function is not perfectly supported because it translates the previous frame as request. And it is impossible to display by converting it to prescale set value.)

Translation displayed	Meaning	Address	Unit
Rate	Rate	0036	
Conversion factor (CO2)	CO2 conversion factor	0037	Kg-CO2
CT type	CT type	003C	
Unit for Pulse output	Unit for pulse output	003D/003E	
Primary side current value	Primary side current value at CT5A	003F	A
Power alarm value	Alarm value (instant effective power)	0040/0041	kW
VT ratio	VT ratio	0042	
Current threshold	Current threshold of time measurement	0043	%
Cutoff current	Cutoff current	0044	%
Current alarm value	Current alarm value (current value)	0045	%
Voltage range	Voltage range	0046	
Current ratio for stan-by alarm	Alarm value (standby current value)	004D	%
Time for stan-by alarm	standby time for alarm	004E	min
Integral electric power	integral power consumption	0064/0065	kWh
R-current	R-current	006B	A
S-current	S-current	006C	A
T-current	T-current	006D	A
Power factor	Power factor	006F	PF
Frequency	Frequency	0070	Hz
Load ON-time	Load-ON time	0096/0097	hr
Load OFF-time	Load-OFF time	0098/0099	hr
Pulse count value	Pulse count value	009A/009B	
Preset value	Preset value	009E/009F	
Prescale value	Prescaling value	00A0/00A1	
Max. counting speed	Max. counting speed	00A2	Hz
Auto-off time	Auto-off time	00A3	min
R(RS)-voltage	R(RS)-voltage	00AA/00AB	V
S(RT)-voltage	S(RT)-voltage	00AC/00AD	V
T(TS)-voltage	T(TS)-voltage	00AE/00AF	V
Instantaneous electric power	Instantaneous electric power	00B0/00B1	kW

For the detail of KW1M, please contact the manufacturer. We cannot support it.



■ Detailed Translation

Function Codes	Request		Response	
	Translation	Value	Translation	Value
Read coils (0x01)	Starting address	HEX	Byte count	Decimal
	Quantity	Decimal	Status	Binary
Read discrete inputs (0x02)	Starting address	HEX	Byte count	Decimal
	Quantity	Decimal	Input status	Binary
Read holding registers (0x03)	Starting address	HEX	Byte count	Decimal
	Quantity	Decimal	Register value	HEX
Read input registers (0x04)	Starting address	HEX	Byte count	Decimal
	Quantity	Decimal	Input registers	HEX
Write single coil (0x05)	Output address	HEX	Output address	HEX
	Output value	ON/OFF/ HEX	Output value	ON/OFF/ HEX
Write single register (0x06)	Register address	HEX	Register address	HEX
	Register value	HEX	Register value	HEX
Read exception status (0x07)			Output data	Binary
Diagnostics (0x08)	Data	HEX	Data	(*1)/HEX
			Count	(*1)/Decimal
Get comm event counter (0x0B)			Status	HEX
			Event count	Decimal
Get comm event log (0x0C)			Byte count	Decimal
			Status	HEX
			Event count	Decimal
			Message count	Decimal
			Event	Binary
Write multiple coils (0x0F)	Starting address	HEX	Starting address	HEX
	Quantity	Decimal	Quantity	Decimal
	Byte count	Decimal		
	Outputs value	Binary		
Write multiple registers (0x10)	Starting address	HEX	Starting address	HEX
	Quantity	Decimal	Quantity	Decimal
	Byte count	Decimal		
	Registers value	HEX		
Report slave ID (0x11)			Byte count	Decimal
			Data	Binary
Read file record (0x14)	Byte count	Decimal	Response data length	Decimal
	Reference type	HEX	File response length	Decimal
	File number	Decimal	Reference type	HEX
	Record number	Decimal	Record data	HEX
	Record length	Decimal		

Write file record (0x15)	Request data length	Decimal	Response data length	Decimal
	Reference type	HEX	Reference type	HEX
	File number	Decimal	File number	Decimal
	Record number	Decimal	Record number	Decimal
	Record length	Decimal	Record length	Decimal
	Record data	HEX	Record data	HEX
Mask write register (0x16)	Reference address	HEX	Reference address	HEX
	And_Mask	HEX	And_Mask	HEX
	Or_Mask	HEX	Or_Mask	HEX
R-W multiple registers (0x17)	Read starting address	HEX	Byte count	Decimal
	Quantity to read	Decimal	Read registers value	HEX
	Write starting address	HEX		
	Quantity to write	Decimal		
	Write byte count	Decimal		
Read FIFO queue (0x18)	Write registers value	HEX		
	FIFO pointer address	HEX	Byte count	Decimal
			FIFO count	Decimal
			FIFO value register	HEX
Encapsulated (0x2B)	MEI type	(*2)/HEX	MEI type	(*2)/HEX
	Read device ID code	(*2)/HEX	Read device ID code	(*2)/HEX
	Object ID	(*2)/HEX	Conformity level	(*2)/HEX
			More follows	(*2)/HEX
			Next object ID	(*2)/HEX
			Number of objects	(*2)/Decimal
			Object ID	(*2)/HEX
			Object length	(*2)/Decimal
			Object value	String (*2/*3)

\*1: Refer to “Sub-function (Detailed translation)” in the appendix.

\*2: Refer to “MEI type (Detailed translation)” in the appendix.

\*3: It could not be displayed all depending on the character length or character type.

■ Sub-function (Detailed translation)

Sub-function	Display	Value
0	Return query data	Data
1	Restart communications option	Data
2	Return diagnostic register	Data
3	Change ASCII input delimiter	Data
4	Force listen only mode	Data
10	Clear counters and diagnostic register	Data
11	Return bus message count	Count
12	Return bus communication error count	Count
13	Return bus exception error count	Count
14	Return server message count	Count
15	Return server no response count	Count
16	Return server NAK count	Count
17	Return server busy count	Count
18	Return bus character overrun count	Count
20	Clear overrun counter and flag	Data
Others	Data	HEX

■ MEI type (Detailed translation)

MEI type	Display	Remarks
0x0D	CANopen general reference command	No translation after MEI type
0x0E	Read device identification	
Others	HEX	

Object Id / Next object Id	Display
0x00	Vendor name
0x01	Product code
0x02	Major Minor revision
0x03	Vendor Url
0x04	Product name
0x05	Model name
0x06	User application name
Others	HEX

■ Exception code (Detailed translation)

Code	Display
0x01	ILLEGAL FUNCTION
0x02	ILLEGAL DATA ADDRESS
0x03	ILLEGAL DATA VALUE
0x04	SLAVE DEVICE FAILURE
0x05	ACKNOWLEDGE
0x06	SLAVE DEVICE BUSY
0x08	MEMORY PARITY ERROR
0x0A	GATEWAY PATH UNAVAILABLE
0x0B	GATEWAY TARGET DEVICE FAILED TO RESPOND
Others	HEX

### 3. PROFIBUS DP Communication

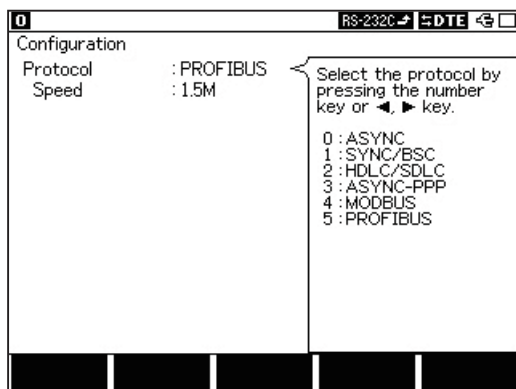
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#### 3-1. Configuration

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Select PROFIBUS for Protocol at Configuration.

< PROFIBUS DP configuration >



■ Speed

Set speed up to 3Mbps.

#### 3-2. Connection to the test object

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Connect the test object to RS-530 (RS-485) port.

Refer to "2.3 Connection Method" in the LE-8200A/LE-8200 instruction manual.

Note: Terminating resistance of RS-530 port (120Ω) should be OFF when monitoring PROFIBUS DP because it differs from that of PROFIBUS DP.

### 3-3. Display

You can select the normal data display or the translated data display by pushing the [Data] key. When the display is the translated data display, you can also change it to the dump display by the [F3] key.

< Translated data display >

0	88789 PROFIBUS					RS-530	DTE	
	Time	DA	DSAP	SA	SSAP	Frm/Func	FCS	Data
SD	001.974.084	1			1	[TOKEN]		
SD	001.974.132	50			1	REQ_FDL	G	
SD	001.974.379	1			1	[TOKEN]		
SD	001.974.427	51			1	REQ_FDL	G	
SD	001.974.673	1			1	[TOKEN]		
SD	001.974.721	127	58		1 62	SDN_HIGH	G	00 00
SD	001.974.918	52			1	REQ_FDL	G	
SD	001.975.165	1			1	[TOKEN]		
SD	001.975.213	53			1	REQ_FDL	G	
SD	001.975.459	1			1	[TOKEN]		
SD	001.975.507	54			1	REQ_FDL	G	
SD	001.975.754	1			1	[TOKEN]		
SD	001.975.802	55			1	REQ_FDL	G	
SD	001.976.049	1			1	[TOKEN]		
					Dump view	Change time display		

< Dump display >

0	88789	PROFIBUS	RS-530	DTE	
Time	FCS	Data			
SD	001.974.084	Dc 01 01			
SD	001.974.132	G 10 32 01 49			
SD	001.974.379	Dc 01 01			
SD	001.974.427	G 10 33 01 49			
SD	001.974.673	Dc 01 01			
SD	001.974.721	G 68 07 07 68 FF 81 46 38 3E 00 00			
SD	001.974.918	G 10 34 01 49			
SD	001.975.165	Dc 01 01			
SD	001.975.213	G 10 35 01 49			
SD	001.975.459	Dc 01 01			
SD	001.975.507	G 10 36 01 49			
SD	001.975.754	Dc 01 01			
SD	001.975.802	G 10 37 01 49			
SD	001.976.049	Dc 01 01			
		Translate view	Change time display		

Note: You can move to the translated data display from the dump display by [F2] key.

■ Contents

Item	Meaning												
(SD or RD)	Shows the position (SD or RD) of received frame.												
Time	Shows the time of receiving frame.												
DA	Shows the destination address in decimal.												
DSAP	Shows the destination service access point in decimal.												
SA	Shows the source address in decimal.												
SSAP	Shows the source service access point address in decimal.												
Frm/Func	<p>Displays the translation of frame type or function code. <sup>(*)1</sup></p> <p>Meanings of the special displays.</p> <table border="1"> <thead> <tr> <th>Display</th><th>Meaning</th></tr> </thead> <tbody> <tr> <td>[TOKEN]</td><td>SD4(0xDC) frame</td></tr> <tr> <td>[SC]</td><td>Single Character (0xE5)</td></tr> <tr> <td>[(XX)]</td><td>A first byte of unknown data string (HEX)</td></tr> <tr> <td>[ILL]</td><td>When the length of SD2 (LE,LEr) is invalid.</td></tr> <tr> <td>(XX)</td><td>Function code not to be translated (HEX).(FCB(b5), FCV(b4) will be displayed by masking)</td></tr> </tbody> </table> <p>Note: XX is displayed by two HEX.</p>	Display	Meaning	[TOKEN]	SD4(0xDC) frame	[SC]	Single Character (0xE5)	[(XX)]	A first byte of unknown data string (HEX)	[ILL]	When the length of SD2 (LE,LEr) is invalid.	(XX)	Function code not to be translated (HEX).(FCB(b5), FCV(b4) will be displayed by masking)
Display	Meaning												
[TOKEN]	SD4(0xDC) frame												
[SC]	Single Character (0xE5)												
[(XX)]	A first byte of unknown data string (HEX)												
[ILL]	When the length of SD2 (LE,LEr) is invalid.												
(XX)	Function code not to be translated (HEX).(FCB(b5), FCV(b4) will be displayed by masking)												
FCS	<p>Displays the check result of FCS (Frame Check Sequence).</p> <table border="1"> <thead> <tr> <th>Display</th><th>Meaning</th></tr> </thead> <tbody> <tr> <td>G</td><td>Valid value</td></tr> <tr> <td>E</td><td>Invalid value</td></tr> <tr> <td>B</td><td>B Break detection (which is not a FCS result)</td></tr> </tbody> </table>	Display	Meaning	G	Valid value	E	Invalid value	B	B Break detection (which is not a FCS result)				
Display	Meaning												
G	Valid value												
E	Invalid value												
B	B Break detection (which is not a FCS result)												
Data	Displays the field data of the protocol data unit (PDU) (which does not include the address expansion) in HEX (max. 5 byte). <sup>(*)2</sup>												

\*1: Please refer to “3-4. PROFIBUS DP translation” for the contents of translation by function codes.

\*2: I displays the second byte and after (it does not displays the first byte) when it cannot recognize the frame as PROFIBUS DP. In dump display, it displays the data from the top of the frame in HEX (max. 18 byte).

### 3-4. PROFIBUS DP translation

#### ■ Function codes

Codes								Content	Display
b7	b6	b5	b4	b3	b2	b1	b0		
								Function Code Request	
1	1	x	x	0	0	0	0	Clock Value	CV
0	1	x	x	0	0	0	0	Time Event	TE
0	1	x	x	0	0	1	1	Send Data Acknowledged - low priority	SDA_LOW
0	1	x	x	0	1	0	0	Send Data Not acknowledged - low priority	SDN_LOW
0	1	x	x	0	1	0	1	Send Data Acknowledged - high priority	SDA_HIGH
0	1	x	x	0	1	1	0	Send Data Not acknowledged	SDN_HIGH
0	1	x	x	0	1	1	1	Send Request Data with Multicast Reply	MSRD
0	1	x	x	1	0	0	1	Request FDL Status	REQ_FDL
0	1	x	x	1	1	0	0	Send and Request Data	SRD_LOW
0	1	x	x	1	1	0	1	Send and Request Data	SRD_HIGH
0	1	x	x	1	1	1	0	Request Ident with reply	REQ_ID
0	1	x	x	1	1	1	1	Request LSAP Status with reply	REQ_LSAP
								Function Code Response	
0	0	x	x	0	0	0	0	OK	OK
0	0	x	x	0	0	0	1	User Error	UE
0	0	x	x	0	0	1	0	No resources	RR
0	0	x	x	0	0	1	1	SAP not enabled	RS
0	0	x	x	1	0	0	0	Data Low (normal case with DP)	DL
0	0	x	x	1	0	0	1	No response data ready	NR
0	0	x	x	1	0	1	0	Data High (DP diagnosis pending)	DH
0	0	x	x	1	1	0	0	Data not received and Data Low	RDL
0	0	x	x	1	1	0	1	Data not received and Data High	RDH

“x” is “don’t care” and will be masked.

### 3-5. Data table edit of PROFIBUS DP simulation

You can automatically insert FCS at data table edit of simulation when protocol is set to PROFIBUS at configuration.

Note: If the data string is not PROFIBUS DP format, this insert cannot be done.

0		RS-530	DTE
Data table 00	Remain Position	16247	byte 12
68 07 07 68 FF 81 46 3A 3E 00 00 16			
Edit by [0]~[F],▲▼◀▶ key. [Del]:Delete [Enter]:select the range [Shift]:change the edit function			
HEX	Input		Edit
Display	Mode		Option

Enter a data string of PROFIBUS DP frame without FCS.

(The example is a SD2 frame.)

0x68(Start Delimiter)

0x07 0x07(Octet Length)

0x68(Start Delimiter)

0xFF(Destination Address)

0x81(Source Address)

0x46(Function code)

0x3A 0x3E 0x00 0x00(PDU)

0x16(End Delimiter)

Octet Length should be valid value and the data length should be the configured length.

SD3 needs 8 byte PDU.

BCC/FCS	Set/Cancel		
addition	Parity/MP		

Push [Shift] + [F1].

0		RS-530	DTE
Data table 00	Remain Position	16246	byte 13
68 07 07 68 FF 81 46 3A 3E 00 00 3E 16			
Edit by [0]~[F],▲▼◀▶ key. [Del]:Delete [Enter]:select the range [Shift]:change the edit function			
HEX	Input		Edit
Display	Mode		Option

Then FCS(0x3E) will be automatically inserted before the End Delimiter(0x16).



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