

BEFORE USE

Thank you for choosing M-System. Before use, check the contents of the package you received as outlined below.

If you have any problems or questions with the product, please contact M-System's Sales Office or representatives.

■ PACKAGE INCLUDES:

Totalized pulse input module..... (1)

■ MODEL NO.

Confirm that the model number described on the product is exactly what you ordered.

■ INSTRUCTION MANUAL

This manual describes necessary points of caution when you use this product, including installation, connection and basic maintenance procedures.

■ EDS FILE

EDS files are downloadable at M-System's web site:
<http://www.m-system.co.jp>

POINTS OF CAUTION**■ CONFORMITY WITH EC DIRECTIVES**

- The equipment must be mounted inside the instrument panel of a metal enclosure.
- The actual installation environments such as panel configurations, connected devices and connected wires may affect the protection level of this unit when it is integrated in a panel system. The user may have to review the CE requirements in regard to the whole system and employ additional protective measures to ensure CE conformity.

■ GENERAL PRECAUTIONS

- Before you remove the unit or mount it, turn off the power supply and input signal for safety.

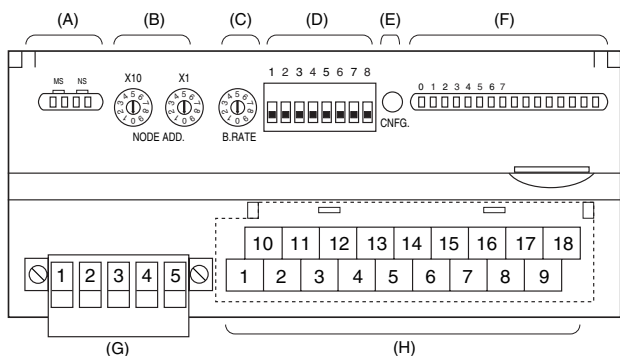
■ ENVIRONMENT

- Indoor use
- When heavy dust or metal particles are present in the air, install the unit inside proper housing with sufficient ventilation.
- Do not install the unit where it is subjected to continuous vibration. Do not apply physical impact to the unit.
- Environmental temperature must be within -10 to +55°C (14 to 131°F) with relative humidity within 30 to 90% RH in order to ensure adequate life span and operation.

■ WIRING

- Do not install cables (power supply, input and output) close to noise sources (relay drive cable, high frequency line, etc.).
- Do not bind these cables together with those in which noises are present. Do not install them in the same duct.

COMPONENT IDENTIFICATION



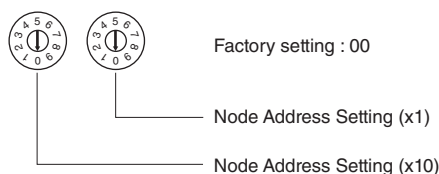
- (A) Status Indicator LED
- (B) Node Address Setting Rotary SW
- (C) Baud Rate Setting Rotary SW
- (D) Operating Mode Setting DIP SW (SW1)
- (E) PC Configurator Jack
- (F) Input Status Indicator LED
- (G) DeviceNet, Power Supply Terminals
- (H) Input Terminals

STATUS INDICATOR LED

ID	STATUS	COLOR	MEANING
MS	ON	Green	Normal
	Blink		Device Not configured
	ON	Red	Critical failure
	Blink		Minor failure
	OFF	-	Power Not supplied
NS	ON	Green	Communication established
	Blink		Communication down
	ON	Red	Critical communication error
	Blink		Minor communication error
	OFF	-	Power Not supplied

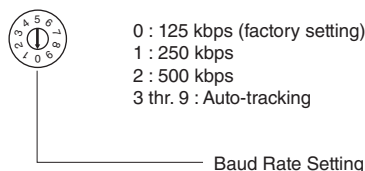
NODE ADDRESS

Node Address is selected between 1 and 63 in decimal. The left switch determines the tenth place digit, while the right switch does the ones place digit of the address.



BAUD RATE

Baud Rate is selected with the rotary switch.



The R7D communicates in the baud rate setting detected at the startup with the switch set to the positions 0 (125 kbps), 1 (250 kbps) or 2 (500 kbps). For the settings 3 through 9, it analyzes the PLC's network to determine the baud rate on the network.

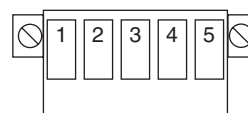
OPERATING MODE

Extension (SW1-1, 1-2)

SW1-1	SW1-2	Extension
OFF	OFF	No extension (*)
ON	OFF	Discrete input 8 or 16 points
OFF	ON	Discrete output 8 or 16 points

Caution ! - SW1-3 through SW1-8 are unused. Be sure to turn off unused ones.

DeviceNet TERMINAL ASSIGNMENT



NO.	ID	FUNCTION, NOTES
1	V+	Network power supply +
2	CAN_H	Network data High
3	Drain	Shield
4	CAN_L	Network data Low
5	V-	Network power supply -

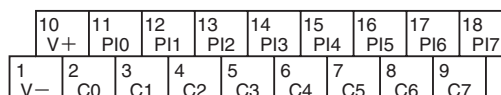
PULSE INPUT STATUS INDICATOR LED

Totalized pulse modules have LED indicators showing input signal status.

ON : LED ON

OFF : LED OFF

INPUT TERMINAL ASSIGNMENT



NO.	ID	FUNCTION	NO.	ID	FUNCTION
1	V -	Power (-)	10	V +	Power (+)
2	C0	Common	11	PI0	Input 0
3	C1	Common	12	PI1	Input 1
4	C2	Common	13	PI2	Input 2
5	C3	Common	14	PI3	Input 3
6	C4	Common	15	PI4	Input 4
7	C5	Common	16	PI5	Input 5
8	C6	Common	17	PI6	Input 6
9	C7	Common	18	PI7	Input 7

MODULE COMBINATIONS

This module can be attached with any 'extension' module.

USER CONFIGURATION ITEMS

With PC configurator software (model: R7CON)

- Count value preset
- Number to reset at overflow
- Maximum count value

DATA ACQUISITION & SETTING

■R7D-PA8

The table below shows data allocation of R7D-PA8. Parameter preset and other settings are available with command setting of R7D-PA8. Set the commands according to the procedure explained next.

Parameter of each channel is two-word integer not signed. Make sure that data is written or read in a two-word unit.

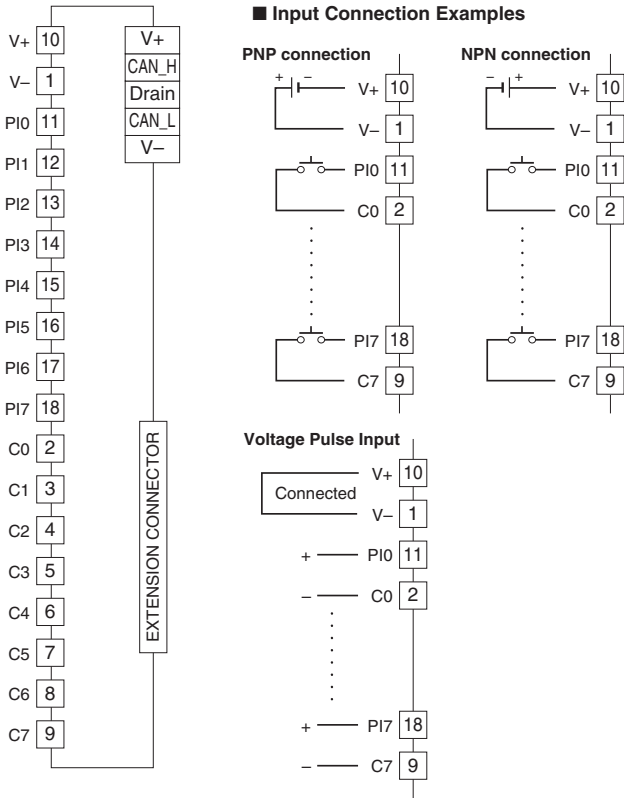
When overflowing, the value to which response can be set is "0" or "1". The maximum range available is 1000 to 4294967295. (Factory setting: 9999999)

Parameters may be preset to a value between the overflow response value and the maximum value.

OUTPUT DATA			INPUT DATA		
	15	0		15	0
Begin +0	Data to write (upper)	CH0	Begin + 0	Data to read (upper)	CH0
+1	Data to write (lower)	CH0	+1	Data to read (lower)	CH0
+2	Data to write (upper)	CH1	+2	Data to read (upper)	CH1
+3	Data to write (lower)	CH1	+3	Data to read (lower)	CH1
+4	Data to write (upper)	CH2	+4	Data to read (upper)	CH2
+5	Data to write (lower)	CH2	+5	Data to read (lower)	CH2
+6	Data to write (upper)	CH3	+6	Data to read (upper)	CH3
+7	Data to write (lower)	CH3	+7	Data to read (lower)	CH3
+8	Data to write (upper)	CH4	+8	Data to read (upper)	CH4
+9	Data to write (lower)	CH4	+9	Data to read (lower)	CH4
+10	Data to write (upper)	CH5	+10	Data to read (upper)	CH5
+11	Data to write (lower)	CH5	+11	Data to read (lower)	CH5
+12	Data to write (upper)	CH6	+12	Data to read (upper)	CH6
+13	Data to write (lower)	CH6	+13	Data to read (lower)	CH6
+14	Data to write (upper)	CH7	+14	Data to read (upper)	CH7
+15	Data to write (lower)	CH7	+15	Data to read (lower)	CH7
+16	Command setting		+16	Command setting	
	• Command address			• Command address	
	CH0: Bit 0, 1			CH0: Bit 0, 1	
	CH1: Bit 2, 3			CH1: Bit 2, 3	
	CH2: Bit 4, 5			CH2: Bit 4, 5	
	CH3: Bit 6, 7			CH3: Bit 6, 7	
	CH4: Bit 8, 9			CH4: Bit 8, 9	
	CH5: Bit 10, 11			CH5: Bit 10, 11	
	CH6: Bit 12, 13			CH6: Bit 12, 13	
	CH7: Bit 14, 15			CH7: Bit 14, 15	
	• Command			• Command	
	00: Read data			00: Read data	
	01: Preset			01: Preset	
	10: Overflow response value			10: Overflow response value	
	11: Maximum value			11: Maximum value	
+17	Extension discrete output data		+17	Extension discrete input data	
+18	—		+18	Status	

CONNECTION DIAGRAM

Connect the unit as in the diagram below.



WIRING INSTRUCTIONS

INPUT

SCREW TERMINAL

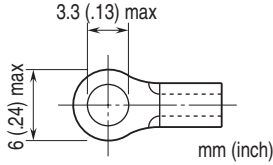
Torque: 0.5 N·m

SOLDERLESS TERMINAL mm (inch)

Refer to the drawing below for recommended ring tongue terminal size. Spade tongue type is also applicable.

Applicable wire size: 0.25 to 1.65 mm² (AWG 22 to 16)

Recommended manufacturer: Japan Solderless Terminal MFG. Co., Ltd., Nichifu Co., Ltd.



COMMUNICATION

- Applicable connector: MSTB 2.5/5-STF

- Applicable wire size: 0.2 – 2.5 mm²

- Stripped length: 8 mm

EXTERNAL DIMENSIONS unit: mm (inch)

