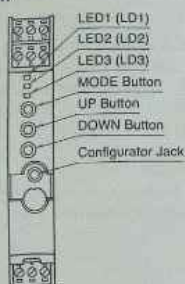
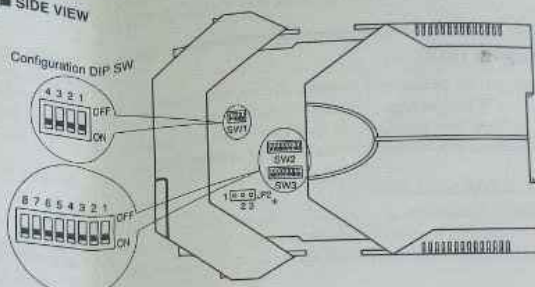


EXTERNAL & INTERNAL VIEWS

■ FRONT VIEW

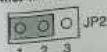


■ SIDE VIEW

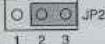


*For Voltage Input (V) range, switch the JP2 jumper to the 2-3 position.

Normal Position
(other than DC Voltage [V] range)



DC Voltage [V] Range Position



CONFIGURATION MODE & DIP SW SETTINGS

When you program the transmitter module, two configuration modes are available: Field Configuration using DIP SW / control buttons, and PC Software. (The Option B type is for the field configuration only.)

The internal DIP switches are used to configure input and output type. Once the module is configured, precise ranges are set up with the front control buttons using a simulator connected to the input terminals and a multimeter connected to the output terminals as a reference.

The calibrated input and output ranges are stored in the internal memory. The module reads the DIP-switch-calibrated configuration only once after the power supply is turned on. Set the switches with the power supply removed.

Selectable I/O type and ranges are listed in Table 12 and 13.

■ DIP SW CONFIGURATION MODE

Turn the SW3-8 OFF to enable the DIP SW (Field Configuration) mode as shown in Table 1.

See Table 3 through 9 to configure the input and Table 10 for the output.

■ PC CONFIGURATION MODE

Turn the SW3-8 ON to enable the PC Configuration mode as shown in Table 1. All programmable features can be set up on a PC regardless of other DIP SW setting except for: (1) JP2 to be switched from 1-2 to 2-3 for DC voltage input (See Notes under Table 3), and (2) the output type must be selected with the DIP SW1-1 through SW1-4 (See Table 11).

For detailed information on the PC configuration, refer to the M3CON instruction manual.

■ CONFIGURATION MODE (SW3)

Table 1

MODE	SW3-8	Configuration mode can be Confirmed with the front LED.
DIP SW	OFF	
PC	ON	

■ FRONT CONTROL BUTTON LOCK (SW2)

Table 2

Table 2 setting is applicable to the firmware ID indicated below or higher versions (marking on the product):
MASTER.2.01/SLAVE.1.05

LOCK	SW2-6	PC Configuration is not disabled when the front control button function is locked.
Unlock	OFF	
Lock	ON	

■ INPUT TYPE (SW3)

Table 3

INPUT	SW3-7	SW3-6	SW3-5	SW3-4...3-1
DC Current	OFF	OFF	OFF	—
DC mV	OFF	OFF	ON	—
DC Voltage ^{*1}	OFF	ON	OFF	—
Thermocouple	OFF	ON	ON	Table 4
RTD	ON	OFF	OFF	Table 5
Potentiometer	ON	OFF	ON	Table 6
Resistance	ON	ON	OFF	—

*1. JP2 position switched from (1-2) to (2-3) for both DIP SW and PC configuration.

■ THERMOCOUPLE TYPE (SW3)

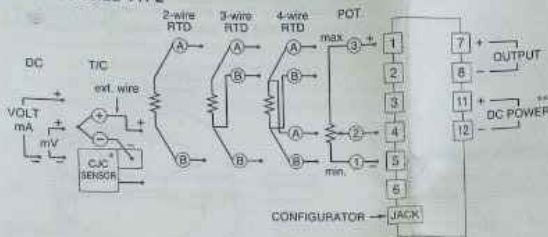
Table 4

T/C	SW3-4	SW3-3	SW3-2	SW3-1
(PR)	OFF	OFF	OFF	OFF
K (CA)	OFF	OFF	OFF	ON
E (CRC)	OFF	OFF	ON	OFF
J (IC)	OFF	ON	OFF	OFF
T (CC)	OFF	ON	OFF	ON
B (RH)	OFF	ON	ON	OFF
R	OFF	ON	ON	ON
S	OFF	ON	OFF	OFF
C (WRe 5-26)	ON	OFF	OFF	ON
N	ON	OFF	ON	OFF
U	ON	OFF	ON	ON
L	ON	ON	OFF	OFF
P (Platinum II)	ON	ON	OFF	OFF

TERMINAL CONNECTIONS

Connect the unit as in the diagram below or refer to the connection diagram on the side of the unit.

DC POWERED TYPE

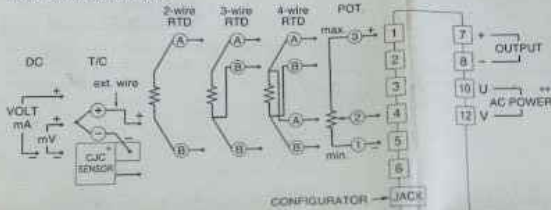


CJC SENSOR TERMINAL BLOCK



For a thermocouple input, replace the Terminal Block (4 - 5 - 8) with the one connected with the CJC Sensor included in the package. Be careful not to separate the Sensor from the terminal block. If you did, connect the CJC leg marked with a white dot to the terminal 5 and the other leg to the terminal 6. The CJC Sensor is calibrated to a particular unit and not interchangeable with another. Match the Serial No. of the unit and the sensor.

AC POWERED TYPE



*Replace the Terminal Block (4 - 5 - 8) with the one connected with the CJC Sensor included in the package. The CJC Sensor is returned to the terminal 6. Loosen only the terminal 4 - 5 and connect the TIC extension wires.

**Be aware that the AC power and DC power should be referred terminals.

WIRING INSTRUCTIONS

• Applicable wire size

Solid: 0.2 to 2.5 mm² (0.55 to 1.75 dia.)

Stranded: 0.2 to 2.5 mm²

Tinning wire ends may cause contact failure and therefore is not recommended.

Ferruled: 0.2 to 1.5 mm² (0.55 to 1.35 dia.)

The following Phoenix Contact terminals are recommended:

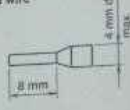
AI 0.25-8YE	0.2 to 0.25 mm ²
AI 0.34-8TQ	0.25 to 0.34 mm ²
AI 0.5-8WH	0.34 to 0.5 mm ²
AI 0.75-8GY	0.5 to 0.75 mm ²
AI 1.0-8RD	0.75 to 1.0 mm ²
AI 1.5-8BK	1.0 to 1.5 mm ²

• Expose wire conductors by 8 mm (0.31")

Wire exposure



Recommended ferruled wire



INSTRUCTION MANUAL

UNIVERSAL TRANSMITTER (field- and PC-configurable)

MODEL **M3LU**

BEFORE USE

Thank you for choosing M-System. Before use, please check 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:

Signal conditioner.....	(1)
Terminal block with CJC sensor.....	(1)
I/O range and tag name label sheet.....	(1)

■ MODEL NO.

Confirm Model No. marking on the product to be 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.

The M3LU with Option /A is programmable using the PC configurator software. For detailed information on the PC configuration, refer to the M3CON instruction manual. The M3CON PC Configurator Software is downloadable at M-System's web site: <http://www.m-system.co.jp>.

POINTS OF CAUTION

■ CONFORMITY WITH UL

- This equipment is suitable for use in a Pollution Degree 2 environment.
- DO NOT connect the thermocouple or the RTD to circuits greater than 30Vrms and 42.4Vpeak or 60V DC.
- This equipment is to be used with the maximum operating voltage 30Vrms and 42.4Vpeak or 60V DC.
- The equipment must be mounted inside a suitable fire enclosure.
- Operating temperature: -25 to +55°C (-13 to +131°F)

■ CONFORMITY WITH EC DIRECTIVES

- This equipment is suitable for use in a Pollution Degree 2 environment and in Installation Category II, with the maximum operating voltage of 300V. Functional insulation is maintained between the input and output.
- Altitude up to 2000 meters
- The equipment must be mounted inside a panel.
- Insert a noise filter for the power source connected to the unit. Densei-Lambda Model MZS-1220-33 or equivalent is recommended.
- The actual installation environments such as panel configurations, connected devices, 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 the CE conformity.

■ POWER INPUT RATING & OPERATIONAL RANGE

- Locate the power input rating marked on the product and confirm its operational range as indicated below:
100 - 240V AC rating: 85 - 264V, 47 - 66 Hz, approx. 4 - 6VA
10 - 32V DC rating: 9 - 36V, approx. 2W

■ SAFETY PRECAUTION

- 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 subject the unit to physical impact.
- Environmental temperature must be within -25 to +65°C (-13 to +149°F) with relative humidity within 0 to 95% RH in order to ensure adequate life span and operation.
- Be sure that the ventilation slits are not covered with cables, etc.

■ 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.

■ AND ...

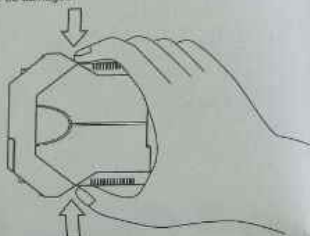
- The unit is designed to function as soon as power is supplied, however, a warm up for 10 minutes is required for satisfying complete performance described in the data sheet.

COMPONENT IDENTIFICATION

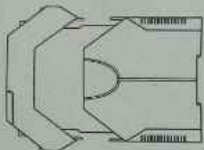


- **HOW TO OPEN THE COVER WHEN SETTING DIP SW**
Hold at the top and bottom of the unit as shown below and slide the housing cover gently to open until it hits the latching inside the unit.

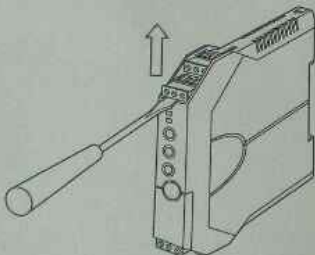
Caution:
Handle the cover carefully to protect internal components from damage. DO NOT pull beyond where the housing cover is latched. The plastic housing may be damaged.



- Housing Cover Fully Opened

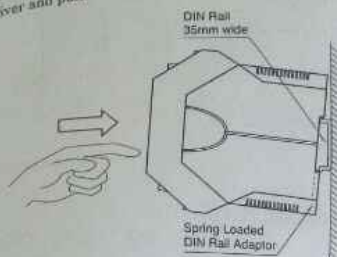


- **HOW TO SEPARATE THE TERMINAL BLOCKS**
When you need to separate the terminal blocks from the transmitter body for wiring, insert a minus driver between the terminal block and the housing body, pull up the driver and pull out the terminal block.



INSTALLATION

- **DIN RAIL MOUNTING**
Set the unit so that its DIN rail adaptor is at the bottom. Position the upper hook at the rear side of the unit on the DIN rail and push in the lower. When removing the unit, push down the DIN rail adaptor utilizing a minus screwdriver and pull.



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456
IN

123
IN

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PWR
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UNIVERSAL XMTR

MODEL

M3LU-M2/A

POWER

100-240V AC

SER NO

UG006099

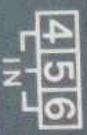
TAG NO

SMC-FPS INSP. OF THE MCC
UNIVERSAL INSP. OF THE MCC
MCC

M-SYSTEM CO., LTD. MADE IN JAPAN <http://www.m-system.co.jp> N3408A

MODEL
POWER
SER NO
TAG NO

UNIVERSAL XMTR
M3LU-M2/A
100-240V AC
UG006099



UNIVERSAL XMTR

MODEL

M3LU-M2/A

POWER

100-240V AC

SER NO

UG006099

TAG NO



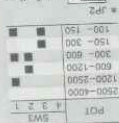
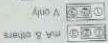
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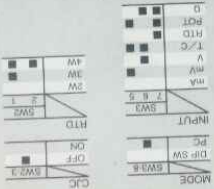
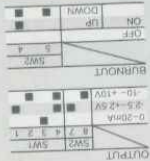
SW BRT: ■ ON □ OFF



INPUT DETAILED SPEC

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N3105A



MODE

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99	1	1	1	1
100	1	1	1	1



Model
MS111

COMM



DOWN



UP



MODE

- LD1
- LD2
- LD3

