

DISCRETE OUTPUT MODULE
(relay contact output, 8 points, tension clamp terminal block)MODEL **R3S-DC8****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:

Discrete output module.....(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.

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

- This equipment is suitable for Pollution Degree 2 and Measurement Category II (output, transient voltage 2500V). Basic insulation (output to internal bus or internal power: 250V) is maintained. Prior to installation, check that the insulation class of this unit satisfies the system requirements.
- Altitude up to 2000 meters.
- The equipment must be mounted inside the instrument panel of a metal enclosure.
- The equipment must be installed such that appropriate clearance and creepage distances are maintained to conform to CE requirements. Failure to observe these requirements may invalidate the CE conformance.
- 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.

■ HOT SWAPPABLE MODULES

- Replacing the module does not affect other modules on the same base. Thus, the module can be replaced while the power is ON. However, replacing multiple modules at once may greatly change live voltage levels. We highly recommend to replace them one by one.

■ GENERAL PRECAUTIONS

- DO NOT set the switches on the module while the power is supplied. The switches are used only for maintenance without the power.

■ 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 -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 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

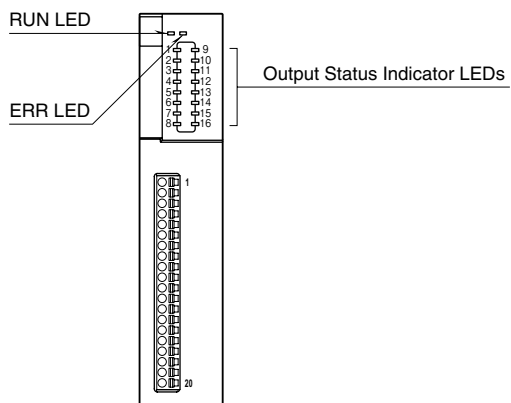
- The unit is designed to function as soon as power is supplied, however, a warm up for 10 minutes is required for satisfying complete performance described in the data sheet.

INSTALLATION

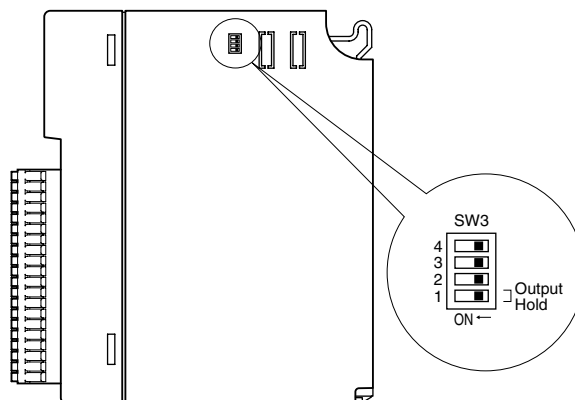
Use the Installation Base (model: R3-BSx).

COMPONENT IDENTIFICATION

FRONT VIEW



SIDE VIEW



STATUS INDICATOR LED

RUN indicator: Bi-color (red/green) LED;
 Red when the bus A operates normally;
 Green when the bus B operates normally;
 Amber when both buses operate normally.

ERR indicator: Green LED turns on in normal operating conditions.

Output status indicator:

- 1 to 8: Red LED; turns on with the output ON.
- 9 to 16: Unused.

SIDE DIP SW

- Output Hold: SW3-1

SW	OUTPUT HOLD	
	HOLD (*)	OFF
SW3-1	OFF	ON

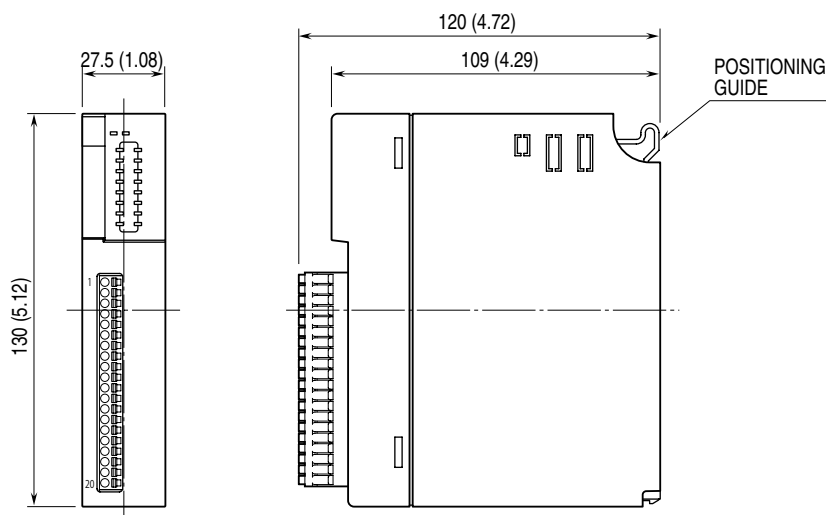
(*) Factory setting

Note: Be sure to set unused SW3-2 through 3-4 to OFF.

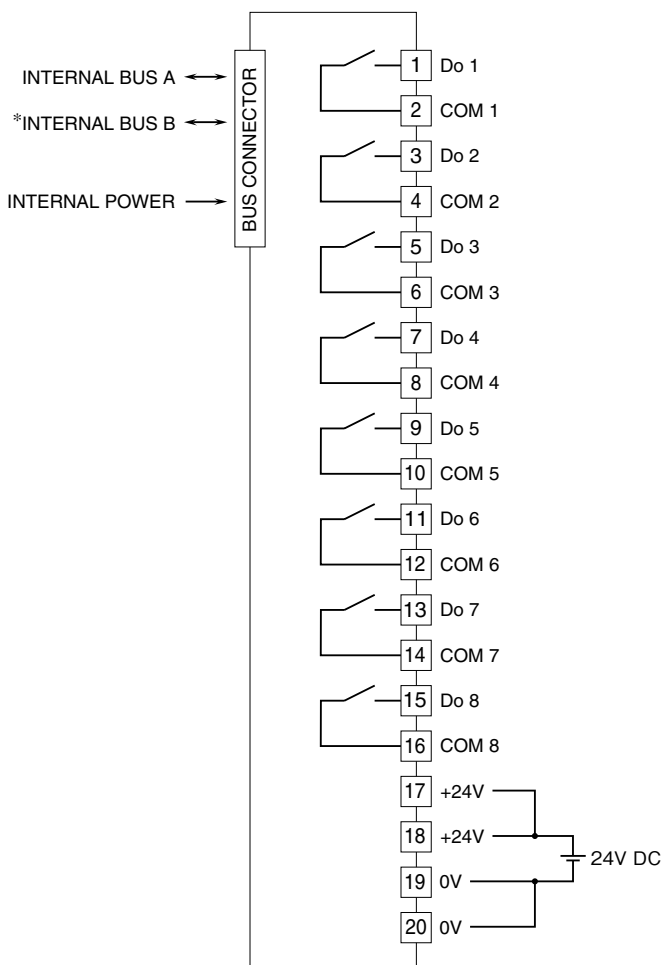
TERMINAL CONNECTIONS

Connect the unit as in the diagram below.

EXTERNAL DIMENSIONS unit: mm (inch)

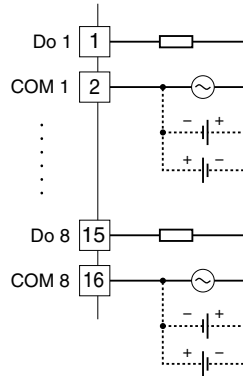


■ CONNECTION DIAGRAM



*For dual redundant communication.

■ Output Connection Examples
1 point 1 common



WIRING INSTRUCTIONS

■ APPLICABLE WIRE SIZE

- **Solid:** 0.2 to 1.0 mm² (0.55 to 1.12 dia.)
- **Stranded:** 0.2 to 1.5 mm²

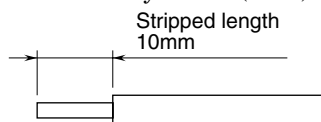
(Tinning wire ends may cause contact failure and therefore is not recommended.)

• Ferruled:

Unsheathed: 0.25 to 1.5 mm²

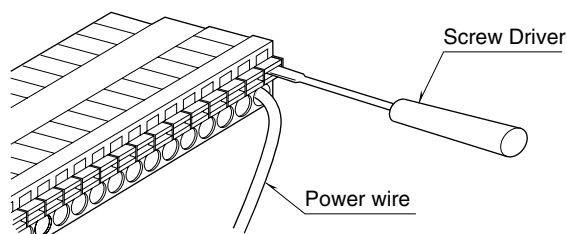
Sheathed: 0.25 to 0.75 mm²

- Expose wire conductors by 10 mm (0.39").



■ CONNECTION PROCEDURE

Insert the wire end until it comes to a full stop while pushing in the slot with the tip of a screw driver as shown below. Be sure wire insulation is not inside the terminal.

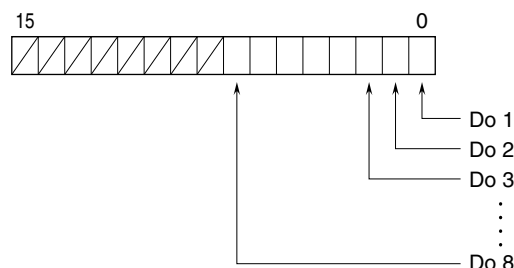


OUTPUT PIN ASSIGNMENT

PIN No.	FUNCTION
1	Do 1
2	COM 1
3	Do 2
4	COM 2
5	Do 3
6	COM 3
7	Do 4
8	COM 4
9	Do 5
10	COM 5
11	Do 6
12	COM 6
13	Do 7
14	COM 7
15	Do 8
16	COM 8
17	+24V
18	+24V
19	0V
20	0V

DATA ASSIGNMENT

■ Do



FUNCTIONS

■ OUTPUT HOLD or OUTPUT OFF

In normal conditions, the module outputs the signal from the preferred bus A.

When an error is detected, the output is switched to the data from the bus B.

• Output Hold

If both are in error, the module holds the signal and stands by until one of the communications recovers.

• Output OFF

If both are in error, the module outputs OFF signals and stands by until one of the communications recovers.

At the startup, it outputs OFF until the communication is established and normal data is received.