

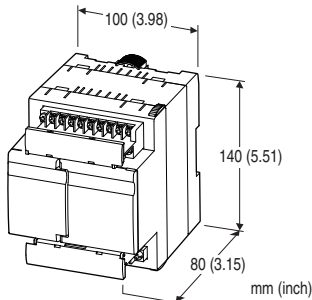
## Remote I/O R9 Series

### DISCRETE I/O EXTENSION UNIT

(Di (internal power), Do (photo MOSFET relay), pulse totalizer)

#### Functions & Features

- Extension unit for Multi Power Monitoring Unit (model: R9xWTU)
- Photo MOSFET relay output



### MODEL: R9WTU-ED16

#### ORDERING INFORMATION

- Code number: R9WTU-ED16

#### NO. OF CHANNELS

16: 16 points (Di 8, Do 8)

#### RELATED PRODUCTS

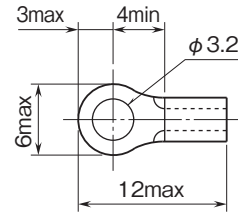
- Multi Power Monitoring Unit for CC-Link (model: R9CWTU)
- Multi Power Monitoring Unit for LonWorks (model: R9LWTU)
- Multi Power Monitoring Unit for Modbus (model: R9MWTU)
- Multi Power Monitoring Unit for Modbus/TCP (model: R9EWTU)

#### GENERAL SPECIFICATIONS

**Construction:** Stand-alone  
**Degree of protection:** IP20  
**Connection:** M3 screw terminals (torque 0.5 N·m)  
**Recommended solderless terminal:** Refer to the drawing on the end of this section.  
**Applicable wire size:** 0.3 to 0.75 mm<sup>2</sup>  
**Screw terminal:** Nickel-plated steel  
**Housing material:** Flame-resistant resin (black)  
**Isolation:** R9xWTU (input or network or auxiliary power) to input to output to between outputs  
**Input status indicator:** Red LED; turns on with the inputs supplied.

**Output status indicator:** Red LED; turns on with the output ON.

■ **Recommended solderless terminal size - M3 (unit: mm)**



#### INPUT SPECIFICATIONS

**Common:** Negative common  
**Maximum frequency:** 50 Hz  
**Minimum pulse width:** 10 msec.  
**Max. counter value:** 0 - 999 999 999  
**Count at overflow:** Reset and restart at '0.'  
**Detecting voltage/current:** 5 V DC / 5 mA approx.  
**ON/OFF levels:** ≤ 5 kΩ / ≤ 2 V for ON;  
 ≥ 100 kΩ / 4 V for OFF  
**Operation mode:** Discrete and pulse counter

#### OUTPUT SPECIFICATIONS

**Output:** Photo MOSFET relay  
**Rating:** Peak 350 V AC/DC @ 80 mA  
**ON resistance:** ≤ 50 Ω  
**Power dissipation:** 320 mW  
**Leakage current at OFF:** ≤ 10 μA

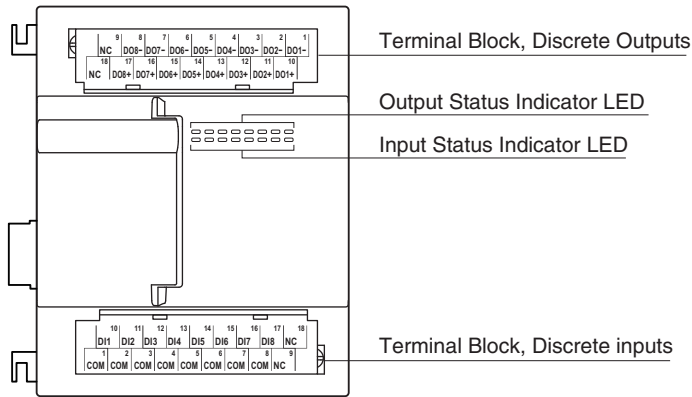
#### INSTALLATION

**Power consumption**  
 • AC: ≤ 2 VA  
 • DC: ≤ 1.5 W  
**Operating temperature:** -10 to +55°C (14 to 131°F)  
**Operating humidity:** 30 to 90 %RH (non-condensing)  
**Atmosphere:** No corrosive gas or heavy dust  
**Mounting:** Surface or DIN rail  
**Weight:** 300 g (0.66 lbs)

#### PERFORMANCE

**Insulation resistance:** ≥ 100 MΩ with 500 V DC  
**Dielectric strength:**  
 2000 V AC @ 1 minute (R9xWTU (input or network or auxiliary power) to input)  
 1500 V AC @ 1 minute (R9xWTU (input or network or auxiliary power) to output)  
 1500 V AC @ 1 minute (input to output)  
 1500 V AC @ 1 minute (between outputs)

## EXTERNAL VIEW



## TERMINAL ASSIGNMENTS

### ■ DISCRETE INPUT

10	11	12	13	14	15	16	17	18
DI1	DI2	DI3	DI4	DI5	DI6	DI7	DI8	NC
1	2	3	4	5	6	7	8	9
COM	COM	COM	COM	COM	COM	COM	COM	NC

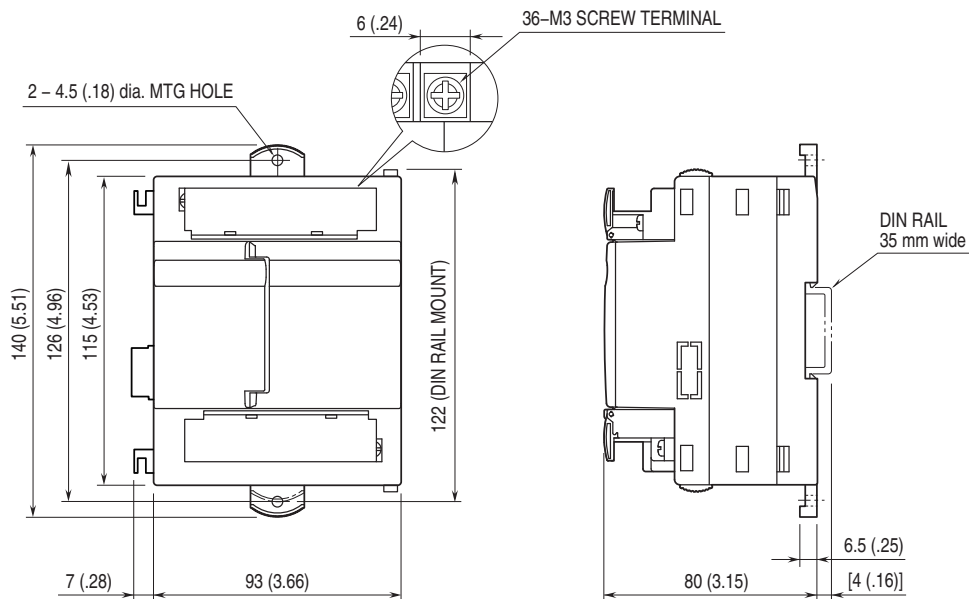
### ■ DISCRETE OUTPUT

9	8	7	6	5	4	3	2	1
NC	DO8-	DO7-	DO6-	DO5-	DO4-	DO3-	DO2-	DO1-
18	17	16	15	14	13	12	11	10
NC	DO8+	DO7+	DO6+	DO5+	DO4+	DO3+	DO2+	DO1+

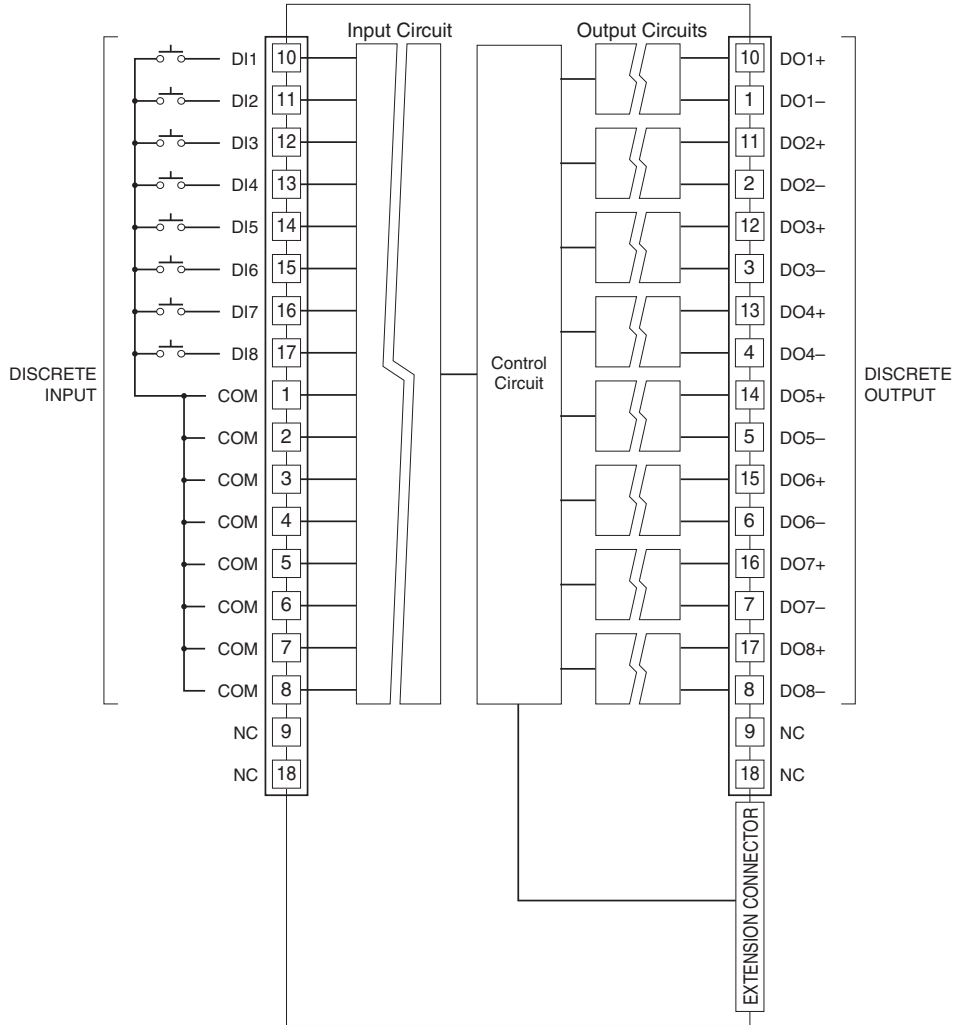
No.	ID	FUNCTION	No.	ID	FUNCTION
1	COM	Input comon	10	DI1	Input 1ch
2	COM	Input comon	11	DI2	Input 2ch
3	COM	Input comon	12	DI3	Input 3ch
4	COM	Input comon	13	DI4	Input 4ch
5	COM	Input comon	14	DI5	Input 5ch
6	COM	Input comon	15	DI6	Input 6ch
7	COM	Input comon	16	DI7	Input 7ch
8	COM	Input comon	17	DI8	Input 8ch
9	NC	Unused	18	NC	Unused

No.	ID	FUNCTION	No.	ID	FUNCTION
1	DO1-	Output 1ch-	10	DO1+	Output 1ch+
2	DO2-	Output 2ch-	11	DO2+	Output 2ch+
3	DO3-	Output 3ch-	12	DO3+	Output 3ch+
4	DO4-	Output 4ch-	13	DO4+	Output 4ch+
5	DO5-	Output 5ch-	14	DO5+	Output 5ch+
6	DO6-	Output 6ch-	15	DO6+	Output 6ch+
7	DO7-	Output 7ch-	16	DO7+	Output 7ch+
8	DO8-	Output 8ch-	17	DO8+	Output 8ch+
9	NC	Unused	18	NC	Unused

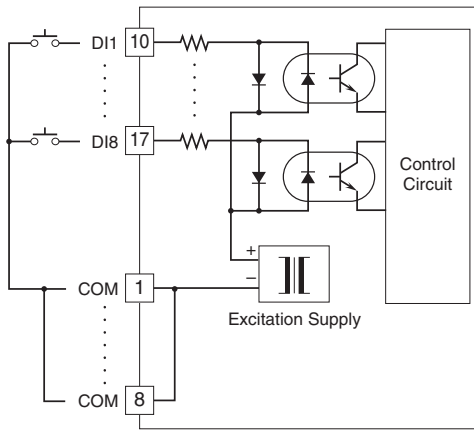
## DIMENSIONS unit: mm (inch)



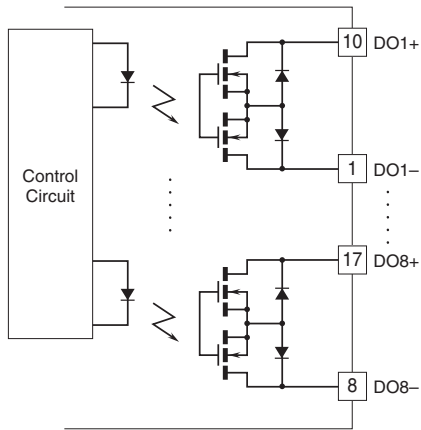
**SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM**



■ INPUT

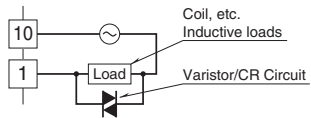


■ OUTPUT

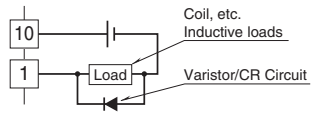


■ Refer to the figure below for Photo MOS Relay discrete protection and noise removal.

•AC



•DC





Specifications are subject to change without notice.