

## FEATURES

- 2 to 4 Analog Inputs
- 2 to 4 Analog Outputs
- 12 to 24-Bit Resolution
- 24 VDC



## DESCRIPTION

The KNC-PLC-RP20 Analog Modules provides robust industrial design and manufacturing quality, outstanding performance, and comprehensive feature integration. The RP20 series are not only widely applicable in the field of general industrial automation but also highly suitable for various specialized smart sectors such as building automation, agricultural intelligence, energy monitoring, and energy management. The RP20's are designed to offer customers versatile and flexible solution possibilities.

## SPECIFICATIONS

| Parameter                           | RP20-0202IV                                             |
|-------------------------------------|---------------------------------------------------------|
|                                     | 2 X AI, IV, 2 X AO, IV                                  |
| <b>Analog Input Specifications</b>  |                                                         |
| AI Channels                         | 2                                                       |
| Resolution                          | 12-Bit                                                  |
| Conversion Rate (per channel)       | 15 Times / Second                                       |
| Signal                              | 4-20mA, 0-20mA, 1-5V, 0-10V                             |
| Measurement Accuracy                | 0.3% F.S.                                               |
| Input Impedance                     | Current Mode: 100Ω, Voltage Mode: 50KΩ                  |
| Indicators                          | Red LED Indicates Input Value Exceeds the Limit         |
| Signal Limits                       | Current Input: Maximum 24mA, Voltage Input: Maximum 12V |
| <b>Analog Output Specifications</b> |                                                         |
| AO Channels                         | 2                                                       |
| Resolution                          | 12-Bit                                                  |
| Conversion Rate (per channel)       | 15 Times / Second                                       |
| Signal                              | 4-20mA, 0-20mA, 1-5V, 0-10V                             |
| Measurement Accuracy                | 0.3% F.S.                                               |
| External Load                       | Current Mode: Maximum 500Ω, Voltage Mode: Minimum 1KΩ   |
| Terminal Input Power Rated Voltage  | 24VDC (20.4VDC~28.8VDC)                                 |
| Terminal Input Power Rated Current  | 80mA (Typical Value @ 24VDC)                            |
| <b>General Specifications</b>       |                                                         |
| K-Bus Current Consumption           | 150mA (5VDC, Room Temperature)                          |
| Dimensions (W × H × D)              | 12mm x 100mm x 80 mm                                    |
| Weight                              | 70g                                                     |

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| Parameter                       | RP20-0400RD                                     |
|---------------------------------|-------------------------------------------------|
|                                 | 4 X AI, RTD                                     |
| <b>Technical Specifications</b> |                                                 |
| AI Channels                     | 4                                               |
| Resolution                      | 24-Bit                                          |
| Sensor Type                     | Pt100, Pt1000, Cu50, Cu100                      |
| Wiring Method                   | Two-Wire or Three-Wire                          |
| Temperature Resolution          | 0.1°C                                           |
| Measurement Accuracy            | ±0.2% F.S.                                      |
| Conversion Rate (per channel)   | 1 time/second                                   |
| Filtering Method                | No Filtering / Averaging Filtering              |
| Isolation                       | √                                               |
| K-Bus Current Consumption       | 160mA (5VDC, Room Temperature)                  |
| Indicators                      | Red LED Indicates Input Value Exceeds the Limit |
| Dimensions (W × H × D)          | 12mm × 100mm × 80mm                             |
| Weight                          | 68g                                             |

| Parameter                       | RP20-0400TC                                     |
|---------------------------------|-------------------------------------------------|
|                                 | 4 X AI, TC                                      |
| <b>Technical Specifications</b> |                                                 |
| AI Channels                     | 4                                               |
| ADC Resolution                  | 24-Bit                                          |
| Sensor Type                     | J, K, E, S, T, 0-99mV                           |
| Wiring Method                   | Two-Wire                                        |
| Temperature Resolution          | 0.1°C                                           |
| Cold Junction Compensation      | Internal Compensation, External Compensation    |
| Measurement Accuracy            | ±0.2% F.S.                                      |
| Conversion Rate (per channel)   | 1 time/second                                   |
| Filtering Method                | No Filtering / Averaging Filtering              |
| Isolation                       | √                                               |
| K-Bus Current Consumption       | 160mA (5VDC, Room Temperature)                  |
| Indicators                      | Red LED Indicates Input Value Exceeds the Limit |
| Dimensions (W × H × D)          | 12mm × 100mm × 80mm                             |
| Weight                          | 68g                                             |

| Parameter                            | RP20-0400IV                                                             |
|--------------------------------------|-------------------------------------------------------------------------|
|                                      | 4 X AI, IV                                                              |
| <b>Technical Specifications</b>      |                                                                         |
| AI Channels                          | 4                                                                       |
| Resolution                           | 16-Bit                                                                  |
| Conversion Rate (per channel)        | 50 Times/Second                                                         |
| Signal                               | 4-20mA, 0-20mA, 1-5V, $\pm 10V$ , $\pm 20mA$                            |
| Measurement Accuracy                 | 0.2% F.S.                                                               |
| Input Impedance                      | Current Mode: Maximum 100 $\Omega$ , Voltage Mode: Minimum 50K $\Omega$ |
| Signal Limits                        | Current Input: $\pm 30mA$ , Voltage Input: $\pm 15V$                    |
| K-Bus Current Consumption            | 150mA (5VDC, Room Temperature)                                          |
| Indicators                           | Red LED Indicates Input Value Exceeds the Limit                         |
| Dimensions (W $\times$ H $\times$ D) | 12mm $\times$ 100mm $\times$ 80mm                                       |
| Weight                               | 70g                                                                     |

| Parameter                            | RP20-0004IV                                                             |
|--------------------------------------|-------------------------------------------------------------------------|
|                                      | 4 X AO, IV                                                              |
| <b>Technical Specifications</b>      |                                                                         |
| AO Channels                          | 4                                                                       |
| Resolution                           | 16-Bit                                                                  |
| Conversion Rate (per channel)        | 50 Times/Second                                                         |
| Signal                               | 4-20mA, 0-20mA, 1-5V, $\pm 10V$                                         |
| Measurement Accuracy                 | 0.2% F.S.                                                               |
| External Load                        | Current Mode: Maximum 100 $\Omega$ , Voltage Mode: Minimum 50K $\Omega$ |
| Terminal Input Power Rated Voltage   | 24VDC (20.4VDC~28.8VDC)                                                 |
| Terminal Input Power Rated Current   | 80mA (Typical Value@24V)                                                |
| K-Bus Current Consumption            | 150mA (5VDC, Room Temperature)                                          |
| Indicators                           | None                                                                    |
| Dimensions (W $\times$ H $\times$ D) | 12mm $\times$ 100mm $\times$ 80mm                                       |
| Weight                               | 70g                                                                     |

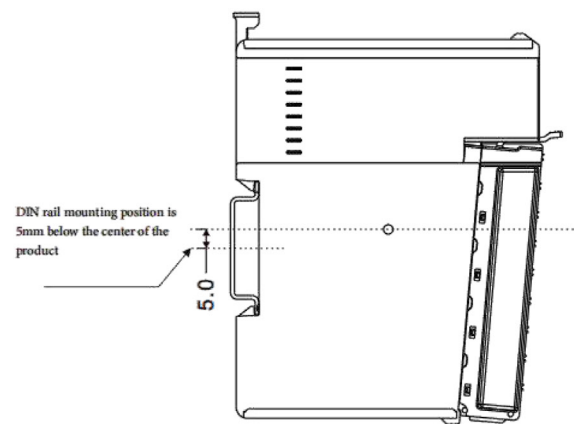
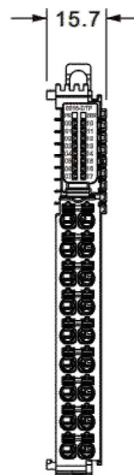
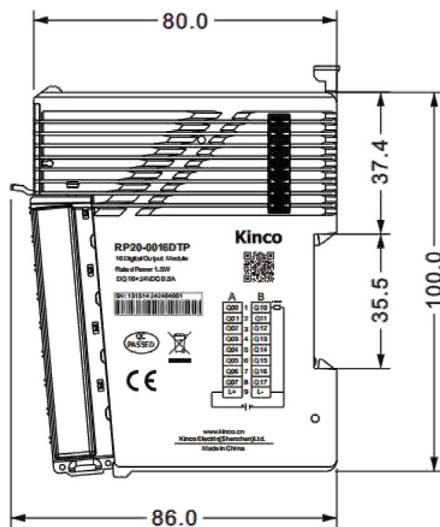
| Operating Environment         |                         |                                                                                                |
|-------------------------------|-------------------------|------------------------------------------------------------------------------------------------|
| Climatic Conditions           | Ambient Temperature     | -40°C~+70°C                                                                                    |
|                               | Relative Humidity       | 10%~95%, No Condensation                                                                       |
|                               | Atmospheric Pressure    | Equivalent to 0-3000 Meters Above Sea Level                                                    |
| Mechanical Conditions         | Free Fall               | With Transport Packaging, Allows 5 Drops from 1m Height to the Cement Floor                    |
| Operating Conditions          |                         |                                                                                                |
| Climatic Conditions           | Ambient Temperature     | Open Device with Natural Ventilation, Ambient Temperature Range: -20°C~55°C                    |
|                               | Relative Humidity       | 10%~95%, No Condensation                                                                       |
|                               | Atmospheric Pressure    | Altitude ≤ 2000 Meters                                                                         |
|                               | Pollution Level         | Suitable for Pollution Level 2                                                                 |
| Mechanical Conditions         | Sine Vibration          | 5 < f, 8.4 Hz, Random: 3.5mm Displacement; Continuous: 1.75mm Displacement                     |
|                               |                         | 8.4 < f < 150 Hz, Random: 1.0g Acceleration; Continuous: 0.5g Acceleration                     |
|                               | Shock                   | Half Sine Wave, 15g, 11ms, 6 Times Per Axis                                                    |
| Electromagnetic Compatibility | EMC Immunity Level      | Zone B, IEC61131-2                                                                             |
|                               | Electrostatic Discharge | Air Discharge 8kV, Contact Discharge 4kV                                                       |
|                               |                         | Performance Level A                                                                            |
|                               | Surge                   | DC Power Supply 0.5kV CM, 0.5kV DM                                                             |
|                               |                         | I/O and Communication Ports: 1kV CM                                                            |
|                               |                         | Performance Level A                                                                            |
|                               | Fast Transient Burst    | Power Coupling: 2kV, 5kHz.<br>I/O and Communication Coupling: 1kV, 5kHz<br>Performance Level A |
| Protection Level              |                         | IP20                                                                                           |
| Cooling Type                  |                         | Natural Air Cooling                                                                            |
| Installation Type             |                         | DIN35 Rail Mounting                                                                            |

# RP20 Analog Modules

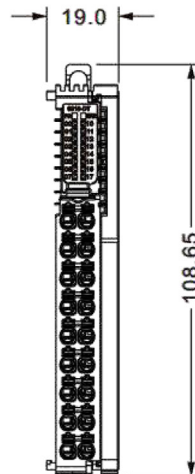
# Kinco

## DIMENSIONS

Module



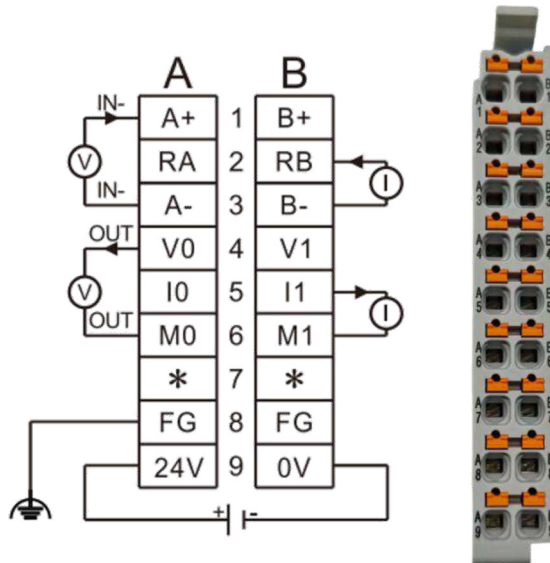
Module + Lid



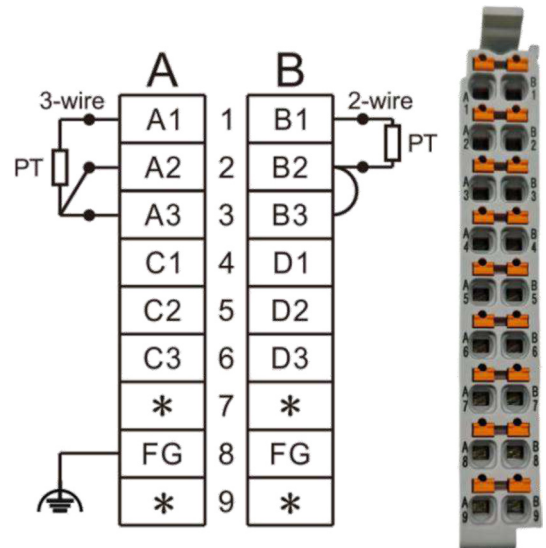
Units are in mm

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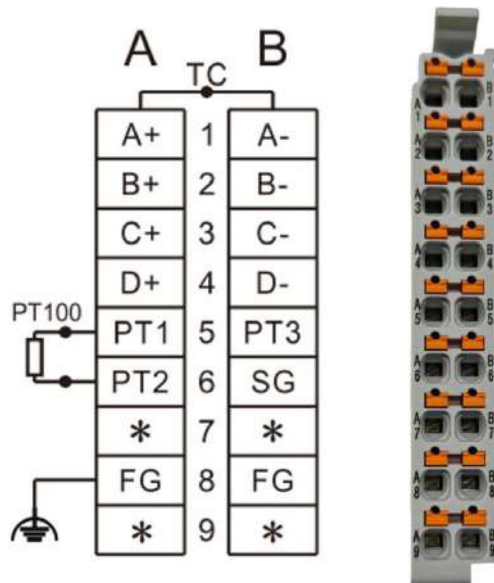
RP20-0202IV



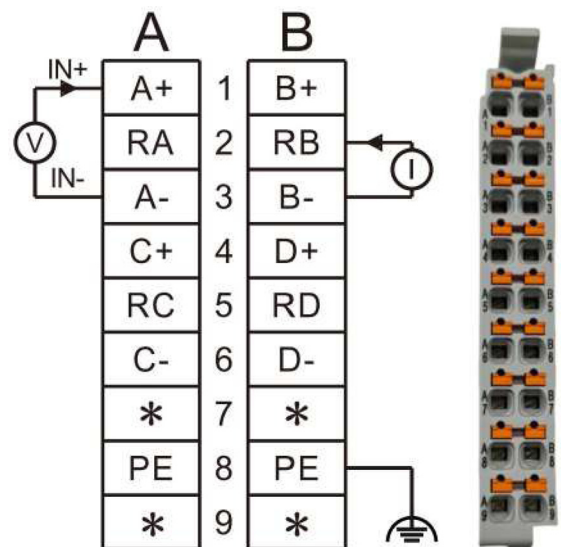
RP20-0400RD



RP20-0400TC



RP20-0400IV



RP20-0004IV

