## Features

- ◆ **Modular PLC with pluggable display**
- ◆ **Flexible IO card selection**

CE | RoHS Compliant

IP-65

## Technical Specification

### Display specifications

| | |
|---|---|
| Type | 7 segment LED |
| Digits | (4 + 4) red + 6 green \| 3 + 4 digits red, 4 digits green |
| LED banks | 4 red + 4 green LED \| 6 red round + 10 red bar graph |
| No. of keys | 5 Touch keys (4 User configurable) |

| | |
|---|---|
| No. of slots | 2 |

### Input specifications

| | MIBRX-48-0-0-230V | MIBRX-48-0-0-24V |
|---|---|---|
| Digital input | | |
| No. of inputs | 5+1* | 5+2* |
| Input type | PNP | |
| Input voltage range | 5-30V | |
| Response time | Depends on debounce time & ladder execution time | |
| Debounce time | 10ms | |
| **Fast input** | | |
| No. of inputs | 1 | |
| Input type | PNP | |
| Input frequency | 5 kHz | |
| **Analog inputs** | | |
| No. of channels | 1* | 3* |
| Analog type | Voltage | 2 Voltage, 1 Current |
| Range | 0-10V | 0-10V, 0-20mA |
| Resolution | 12 bit | |
| Conversion time | 100ms | |
| Accuracy | 0.25% | |

\* = 1 Digital input can be configured as analog input (0-10V)

### Communication

| | |
|---|---|
| Communication port | 1 Port - RS485 slave |
| Communication protocol | MODBUS RTU |
| Connector type | 2 Wire |
| Transmission type | Half duplex |
| Transmission speed | 9600,19200, 38400, 57600, 115200 bps |
| Data bits | 7 or 8 |
| Parity | None, Odd, Even, Space, Mark |
| Stop bits | 1 or 2 |

### Functional specifications

| | |
|---|---|
| Programming | Windows based software for ladder programming & HMI config |
| Timer operational modes | On delay, Off delay, Pulse, Special (Up / Down) Timer |
| Timer resolution | 1ms (Only accurate 1ms timer block) |
| Counter | Up counter, Down counter, Up-Down counter, Special (Up-Down counter) |
| Other blocks | Analog input / output, Time switch, RTC etc |
| Memory retention | 10 Years |
| RTC | No |
| **Memory** | |
| Data memory | 32Kb |
| Code memory | 240Kb |
| EPROM | 8Kb |
| No. of objects | 5000 |
| Min. scan time | 200usec |
| Typical scan time | 1msec (Based on ladder programming) |

### Environmental specifications

| | |
|---|---|
| Operating temperature | 5 to 55˚C |
| Storage temperature | -25 to 70˚C |
| Humidity (Non condensing) | 10 to 95% |

### Mechanical specifications

| | |
|---|---|
| Mounting type | Panel mount |
| Weight | 200 gms without IO cards |

### Supply specification

| | | |
|---|---|---|
| Supply voltage | 90 to 270VAC/ DC (50/60Hz) | 18 to 30VDC |
| Power consumption | 9VA | 6W |
| Sensor source | 24V, 50mA | |

### Dimensions (All are in mm)

100.5 | 9 | 69 | 54.7

FRONT VIEW | SIDE VIEW

## Terminal connection

### MIBRX-48-0-0-230V



| + – RS485 | DI0 | DI1 | DI2 | DI3 | DI4 | DI5/ V0 + | V0 - | NTC | SS+ SS - | N | L |

### MIBRX-48-0-0-24VDC



| + – RS485 | DI0 | DI1 | DI2 | DI3 | DI4 | DI5/ V0+ | DI6/ V1+ | V- | + IO - NTC + - 24V + |
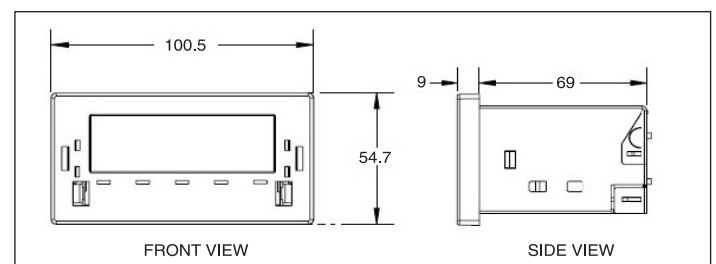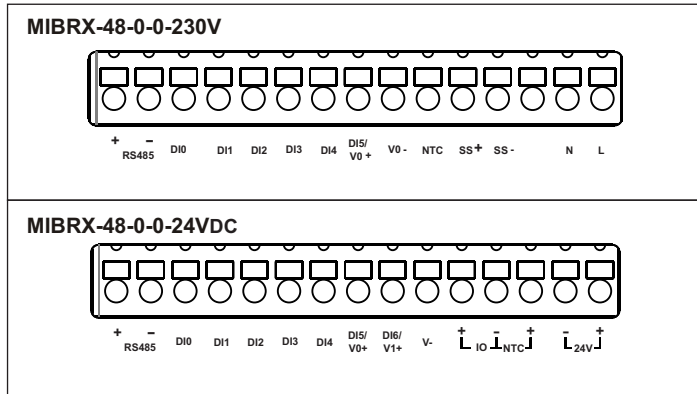
## Ordering information

| Product code | Description | Certification |
|---|---|---|
| **MIBRX-48-0-0-230V** | MiBRX 48x96 Base module - 2 slots, 6DI (incl 1FI, 1AI-V), NTC- 230V | CE RoHS compliant |
| **MIBRX-48-0-0-24VDC** | MiBRX 48x96 Base module - 2 slots, 7DI (incl 1FI, 2AI-V), 1AI-I, NTC-24VDC | CE RoHS compliant |

## Supported display modules

| Display module | Description | Certification |
|---|---|---|
| **MIBRX-DSP-48-7 -2-11-A** | MiBRX Display 48x96 - 7 Seg (3+4 & 4 digit), 6 LED, 10 Bar Graph LED | CE RoHS compliant |
| **MIBRX-DSP-48-7 -2-14-B** | MiBRX Display 48x96 - 7 Seg (8 & 6 digit), 8 LED | CE RoHS compliant |

### Accessories

| Accessories for communication |
|---|
| AC-USB-RS485-02 (Program downloading cable - USB to 2 pin open wire) |
| Power Supplies |
| RPS60-24-CE-RoHS |
| Window - Based software for ladder programming - www.selec.com/software |
| Relay modules |
| 1) RLYMD-1-S4-1CO-24VDC : 4 Channel 1 change over relay module |
| 2) RLYMD-1-S4-2CO-24VDC : 4 Channel 2 change over relay module |
| 3) RLYMD-2-S8-1CO-24VDC : 8 Channel 1 change over relay module |
| 4) RLYMD-2-S8-2CO-24VDC : 8 Channel 2 change over relay module |
| 5) ERLYMD-2-1-S8-1CO-24VDC : 8 Channel 1 change over communication based relay module |

## Supported I/O cards

| IO cards | Description | Certification |
|---|---|---|
| **MiBRX-SC-DI04** | MiBRX Slot Card - 4 Digital Inputs | CE RoHS |
| **MIBRX-SC-DI04-ISO** | MiBRX Slot Card - 4 Digital Inputs (Isolated) | CE RoHS |
| **MiBRX-SC-DI06** | MiBRX Slot Card - 6 Digital Inputs | CE RoHS |
| **MiBRX-SC-DI06-AC** | MiBRX Slot Card - 6 Digital inputs (AC) | CE RoHS |
| **MIBRX-SC-DI06-ISO** | MiBRX Slot Card - 6 Digital Inputs (Isolated) | CE RoHS |
| **MiBRX-SC-RO03** | MiBRX Slot Card - 3 Relay Outputs | CE RoHS |
| **MiBRX-SC-RO04** | MiBRX Slot Card - 4 Relay Outputs | CE RoHS |
| **MIBRX-SC-RO04-12V** | MiBRX Slot Card - 4 Relay Output (12V) | CE RoHS |
| **MiBRX-SC-RO05** | MiBRX Slot Card - 5 Relay Outputs (1.5 A) | CE RoHS |
| **MiBRX-SC-TO04** | MiBRX Slot Card - 4 Transistor Outputs | CE RoHS |
| **MiBRX-SC-DI02-RO02** | MiBRX Slot Card - 2 Digital Inputs & 2 Relay Outputs | CE RoHS |
| **MIBRX-SC-DI02-RO03** | MiBRX Slot Card - 2 Digital Inputs & 3 Relay Outputs | CE RoHS |
| **MiBRX-SC-DI02-TO02** | MiBRX Slot Card - 2 Digital Inputs & 2 Transistor Outputs | CE RoHS |
| **MIBRX-SC-DI02-AI01-T** | MiBRX Slot Card - 2 Digital Inputs & 1 Analog Input - TC/RTD | CE RoHS |
| **MiBRX-SC-AI02-V** | MiBRX Slot Card - 2 Analog Inputs - Voltage | CE RoHS |
| **MiBRX-SC-AI02-V-ISO** | MiBRX Slot Card - 2 Analog inputs - Voltage (Isolated) | CE RoHS |
| **MiBRX-SC-AI02-I** | MiBRX Slot Card - 2 Analog Inputs - Current | CE RoHS |
| **MIBRX-SC-AI02-I-ISO** | MiBRX Slot Card - 2 Analog inputs - Current (Isolated) | CE RoHS |
| **MIBRX-SC-AI02-V-I** | MiBRX Slot Card - 2 Analog Inputs - 1 Voltage & 1 Current | CE RoHS |
| **MIBRX-SC-AI02-TC** | MiBRX Slot Card - 2 Analog Inputs - Thermocouple | CE RoHS |
| **MiBRX-SC-AI02-TC-ISO** | MiBRX Slot Card - 2 Analog inputs - Thermocouple (Isolated) | CE RoHS |
| **MIBRX-SC-AI02-RTD** | MiBRX Slot Card - 2 Analog Inputs - RTD | CE RoHS |
| **MIBRX-SC-AI02-RTD-ISO** | MiBRX Slot Card - 2 Analog inputs - RTD (Isolated) | CE RoHS |
| **MIBRX-SC-AI02-Pt1000** | MiBRX Slot Card - 2 Analog Inputs - PT1000 | CE RoHS |
| **MiBRX-SC-AI02-PTC** | MiBRX Slot Card - 2 Analog Inputs - PTC | CE RoHS |
| **MiBRX-SC-AI02-NTC** | MiBRX Slot Card - 2 Analog Inputs - NTC | CE RoHS |
| **MiBRX-SC-AO01-V/I** | MiBRX Slot Card - 1 Analog Output | CE RoHS |
| **MIBRX-SC-AO02-V-I-ISO** | MiBRX Slot Card - 2 Analog Outputs (Isolated) | CE RoHS |
| **MiBRX-SC-FI02** | MiBRX Slot Card - 2 Fast Inputs (10KHz) | CE RoHS |
| **MiBRX-SC-FO01-TO01** | MiBRX Slot Card - 1 Fast Output (10KHz) & 1 Transistor Output | CE RoHS |
| **MiBRX-SC-LC02** | MiBRX Slot Card - 2 Analog Inputs - Load Cell (24 Bit) | CE RoHS |
| **MiBRX-SC-DL** | MiBRX Slot Card - Datalogging (2MB) & RTC | CE RoHS |
| **MiBRX-SC-WIFI** | MiBRX Slot Card - WIFI | CE RoHS |
| **MiBRX-SC-PD** | MiBRX Portable Downloader | CE RoHS |