

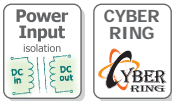
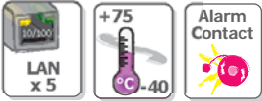
# RS-405/RSM-405 Series



5-Port Real-time Redundant Ring Switch

## Highlight Information ▶▶▶

RS-405/RSM-405 Series



For RSM-405 Series



For RS-405 Series



RSM-405 Series

RS-405 Series



## ● Introduction

The RS-405/RSM-405 series is a 5-Port Industrial Ethernet (10/100 Base-TX) Real-Time Redundant Ring Switch. RS-405/RSM-405 supports 10/100M auto negotiation feature and auto MDI/MDI-X function. It can automatically switch the transmission speed (10 Mbps or 100 Mbps) for corresponding connections. Built-in ICP DAS Cyber-Ring technique that enable multiple switches to be placed into a redundant ring. It detects and recovers from a copper link failure within approximately 300 ms – for the majority of applications a seamless process.

## ● Features

- Automatic MDI/MDI-X crossover for plug-and-play
- Each port supports both 10/100 Mbps speed auto negotiation
- Store-and-forward architecture
- Full duplex IEEE 802.3x and half duplex backpressure flow control
- 3.2 Gbps high performance memory bandwidth
- Frame buffer memory: 1 Mbit
- Integrated look-up engine with dedicated 2048 unicast MAC addresses
- Redundant Power Inputs +10 V<sub>DC</sub> ~ +30 V<sub>DC</sub>
- Power failure alarm by relay output
- Supports operating temperatures from -40 °C ~ +75 °C
- DIN-Rail

## ● Specifications

Models	RS-405	RSM-405
<b>Technology</b>		
Standards	IEEE 802.3, 802.3u and 802.3x	
Processing Type	Store & forward, wire speed switching	
MAC Addresses	2048	
Memory Bandwidth	3.2 Gbps	
Frame Buffer Memory	1 Mbit	
Flow Control	IEEE 802.3x flow control, back pressure flow control	
<b>Interface</b>		
RJ-45 Ports	10/100 Base-TX auto negotiation speed, F/H duplex mode, and auto MDI/MDI-X connection	
LED Indicators	Power, 10/100M, Link/Act, Master	
Ethernet Isolation	1500 V <sub>rms</sub> 1 minute	
COM1	RS-232 (TXD, RXD and GND); Non-isolation	
COM2	RS-485 (D2+, D2-; self-tuner ASIC inside); Non-isolation	
Frame Ground for EMS Protection	Yes	
<b>Power</b>		
Input Voltage Range	+10 V <sub>DC</sub> ~ +30 V <sub>DC</sub> (Isolation redundant input)	
Power Consumption	0.22 A @ 24 V <sub>DC</sub> , +/-5% arrowed with 100M Full duplex	
Protection	Power reverse polarity protection	
Frame Ground for EMS Protection	Yes	
Connection	7-Pin Removable Terminal Block	
<b>Mechanical</b>		
Casing	Plastic (Flammability UL 94V-0)	Metal (IP30 Protection)
Dimensions (W x L x H)	64 mm x 98 mm x 118 mm	73 mm x 102 mm x 132 mm
Installation	DIN-Rail	DIN-Rail or Wall Mounting
<b>Environmental</b>		
Operating Temperature	-40 °C ~ +75 °C	
Storage Temperature	-40 °C ~ +85 °C	
Ambient Relative Humidity	10% ~ 90% RH, non-condensing	
<b>Include Cable</b>		
CA-090510 x 1		

## LED Functions

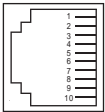
Standard RJ-45 female connectors are provided. A standard RJ-45 plug cable is all that is necessary to connect your device to the unit since switch that supports auto crossover.

### RS/RSM-405 Series LED Indicator Functions

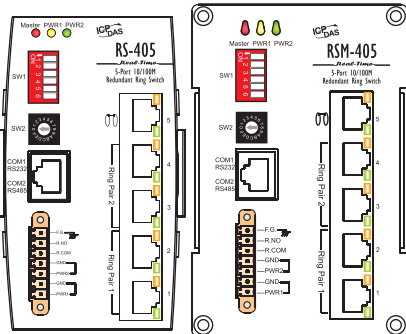
LED	Color	Description
Master	Red On	The switch is master of ring network
	Red Off	The switch is slave of ring network
PWR1	Orange On	Power input 1 is alive
	Orange Off	Power input 1 is offline
PWR2	Green On	Power input 2 is alive
	Green Off	Power input 2 is offline
Ethernet Port	Orange On	Link to 100 Mbps
	Orange Blink	Backup Port
	Green Blink	Data Transmission
	Green Blink	Data Transmission

## Serial Port

### 10-Pin RJ-45 Serial Port Pin-Out

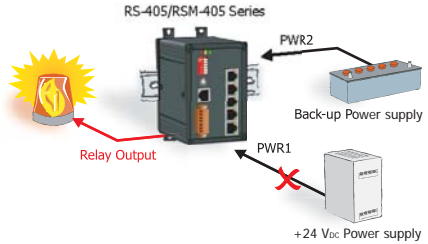


Pin#	Signal Name	Function
1	NC	No Connection
2	D+	RS-485 D+
3	D-	RS-485 D-
4	GND	RS-232 Ground
5	TXD	RS-232 TXD
6	RXD	RS-232 RXD
7	NC	No Connection
8	NC	No Connection
9	NC	No Connection
10	NC	No Connection



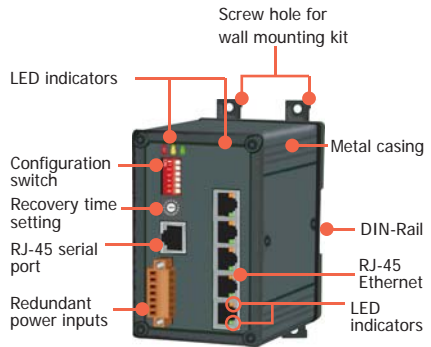
## Redundant Power Inputs

Both power inputs can be connected simultaneously to live DC power sources. If one power source fails, the other live source acts as a backup, and automatically supplies all of RS-405/RSM-405 series power needs.

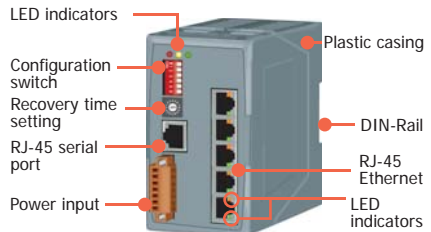


## Appearance

### RS-405 Series

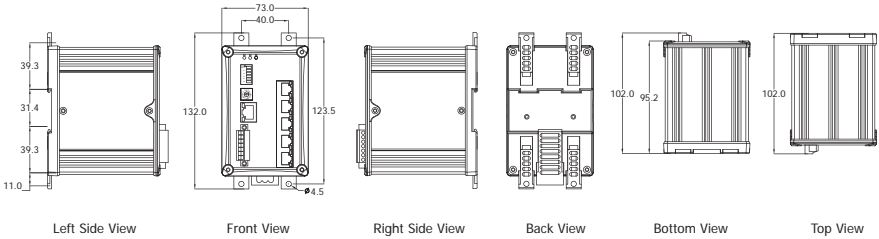


### RSM-405 Series

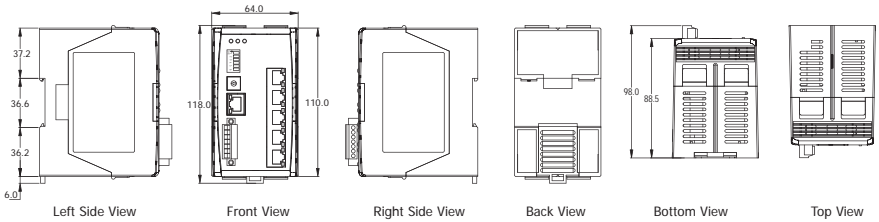


## ● Dimensions (Unit: mm)

### RSM-405 Series



### RS-405 Series



## ● Ordering Information

RS-405 CR	5-Port Redundant Ring Switch with Isolation Power Input +10 V <sub>DC</sub> ~ +30 V <sub>DC</sub> (RoHS)
RSM-405 CR	5-Port Redundant Ring Switch with Isolation Power Input +10 V <sub>DC</sub> ~ +30 V <sub>DC</sub> , metal casing (RoHS)
RS-405A CR	5-Port Redundant Ring Switch with Non-isolation Power Input +12 V <sub>DC</sub> ~ +48 V <sub>DC</sub> (RoHS)
RSM-405A CR	5-Port Redundant Ring Switch with Non-isolation Power Input +12 V <sub>DC</sub> ~ +48 V <sub>DC</sub> , metal casing (RoHS)

## ● Accessories

CA-090510	9-Pin Female D-Sub & RJ-45 Cable, 1M Cable
GPSU06-6	24V/0.25A, 6 W Power Supply
KWM020-1824F	24V/0.75A, 18 W Power Supply
DIN-KA52F	24V/1.04A, 25 W Power Supply with DIN-Rail Mounting