



redz-sc.com

hi@redz-sc.com

# HUR Series Modbus RTU Remote I/O Devices

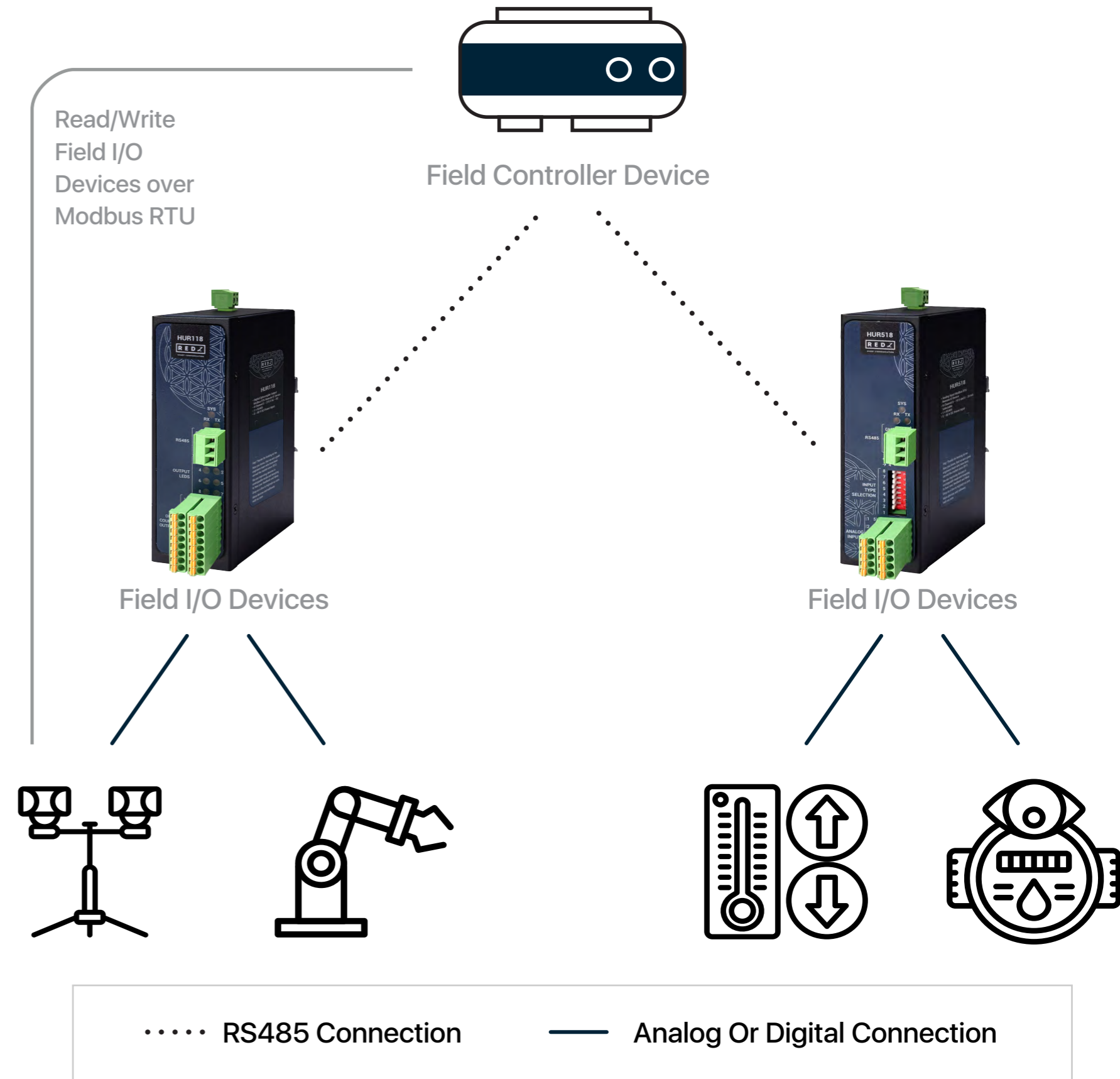
Different I/O Options  
and 2 x 10/100Base-T(x) Ports



HUR Series Modbus RTU Remote Input/Output (I/O) Devices are designed for facilities of rugged industry and infrastructure and perform various features such as wide temperature, wide range power input range... etc. HUR Series Modbus RTU Remote I/O Devices offers different I/O options, which provide greater flexibility and are compatible with many different applications that makes them the perfect choice for establishing a cost-effective remote I/O system.

- HUR Series Modbus RTU Remote Input/Output (I/O) Devices support up to 8 I/O, any of following options can be selected:
- 8 Channel 5-275V AC-DC, 100mA Digital Optocoupler Output
  - 8 Channel Digital 5Amps 250VAC/30VDC Relay Output
  - 8 Channel 12-275V AC-DC, 60mA Digital Optocoupler Input
  - 8 Channel 0-10V and 0-20mA Selectable Analog Input
  - 5 Channel 4-20mA Analog Output

Analog Input, Digital Input, Analog Output or Digital Output options can be selected. All I/O data can be read via Modbus RTU. I/O data can also be controlled through Modbus RTU protocol via commands for output models.



# Main Features

- Device Address changeable with Modbus RTU commands
- Easy to Monitor Device Parameters such as Device Up Time, Modbus RTU read counter etc. with Modbus Commands
- Supports Modbus RTU Protocol over RS485 with 115200 8N1 Data Type
- Easy to Use Test and Parameter Change Software
- Easy Firmware Upgrade over Serial Line
- AC or DC wide range power options
- Wide operating temperature range from -25 to 70 °C AC and -40 to 85 °C DC power input versions
- Rugged Metal IP-40 housing design
- DIN-Rail mounting

## Extra Features for Output Models

- Output configuration can be defined by user for restart
- Output values can be saved and applied during auto restart

## MODBUS TCP CHARACTERISTICS

### Modbus Protocol

- Modbus RTU
- 19200 8N1

### Modbus Address

- Default value is 0x01
- Changeable via Modbus Command

### Monitoring Parameters

- Modbus Read counter
- Time counter (in seconds)
- FW version

## EXTRA FEATURES FOR OUTPUT MODELS

### Save Output Values Before Auto Restart

- Default enabled and when system auto restarts (every 24 hours) the values are saved and applied after restart
- Changeable via Modbus Command

### Save Output Values and Apply on Power Up

- Default disabled, user can activate and enter parameters for each output individually
- Changeable via Modbus Command

## I/O CONNECTORS AND INDICATORS - HUR118 & HUR218

### I/O Connector

- Terminal Connectors  
Digital Outputs: 8 Channel  
Output Terminals, polarity is not important.  
Total 16 connection pins for each slot.
- 5-275V AC-DC, 100mA Digital  
Optocoupler Outputs

### Isolation

- Digital Optocoupler Output:  
3750 Vrms for 1 min

### Over Voltage Protection

- Digital Optocoupler Output: 275V
- Non-repetitive peak on-state  
pulse current: 80A

### Output Status LEDs

- Shows which pin is ON and OFF



## I/O CONNECTORS AND INDICATORS - HUR128 & HUR228

### I/O Connector

- Terminal Connectors  
Digital Outputs: 8 Channel  
5Amps 250VAC/30VDC Digital Relay  
Output  
8 Channel Output terminals and polarity  
is not important. 2 pins for each  
connection and total 16 connection pins.

Maximum 5 Amperes 250VAC/30VDC for  
each channel.

### Dielectric Strength

- 3kV dielectric strength (between coil  
and contacts)  
Meets IEC61131-2 reinforce insulation

### Output Status LEDs

- Shows which pin is ON and OFF



## I/O CONNECTORS AND INDICATORS - HUR318 & HUR418

### I/O Connector

- Terminal Connectors  
Digital Inputs: 8 Channel  
12-275V AC-DC, 60mA Digital  
Optocoupler Input  
8 Channel Input terminals and polarity is not important. 2 pins for each connection and total 16 connection pins for each slot.

### Isolation

- Digital Optocoupler Input:  
4470Vrms 1min

### Over Voltage Protection

- Digital Optocoupler Input:  
275V



## I/O CONNECTORS AND INDICATORS - HUR518 & HUR618

### I/O Connector

- Terminal Connectors  
Analog Inputs: 8 Channel  
0-20mA Analog Input  
Polarity is important and all inputs references to Common point.  
2 Common points 8 Analog Inputs total  
10 connection pins for each slot.  
0-10V and 0-20mA Switch Selectable  
Analog Input

### Analog Input Features

- 16-bit resolution with no missing codes  
Throughput: 250 kSPS



## I/O CONNECTORS AND INDICATORS - HUR555 & HUR655

### I/O Connector

- Terminal Connectors
- Analog Outputs: 5 Channel  
4-20mA Analog Output
- 5 Analog Outputs total 10 connection pins for each slot.
- 4-20mA Analog Output designed for 24V 250ohm load or 12V 125ohm load.

### Over Voltage Protection

- Analog Output:  
40V



## INTERFACE, INDICATORS AND FIRMWARE UPGRADE

### RS485 Terminal

Terminal Connector for 2 wire RS485 connection and GND

### Activity LEDs

Tx LED: Flashes when the device sends Modbus RTU packages  
Rx LED: Flashes when the device receives Modbus RTU packages

### System LED

Flashes during normal operation

### Firmware Upgrade Over Serial Line

Available over RS485 Serial Line

## POWER - DC MODELS

Input Range	5-48V DC wide range power input (Allows up to 60 V DC)
Reverse Polarity Protection	Available
Thermal Shutdown and Current Limit Protection	Available

## POWER - AC MODELS

Input Range	100 - 240V AC (120 - 370V DC), 50Hz to 60Hz AC Input
Isolation	Fully Isolated >4200Vrms, 5mA 1 Min  Insulation: Class II



## PHYSICAL AND ENVIRONMENTAL CHARACTERISTICS DC MODELS

Enclosure	Metal, IP 40
Dimensions	43 x 95 x 124 (w x d x h) mm
Weight	~400gr
Storage Temperature	-65 to 150 °C
Operating Temperature	-40 to 85 °C
Operating Humidity	5% to 95% Non-condensing

## PHYSICAL AND ENVIRONMENTAL CHARACTERISTICS AC MODELS

Enclosure	Metal, IP 40
Dimensions	43 x 95 x 124 (w x d x h) mm
Weight	~400gr
Storage Temperature	-40 to 105 °C
Operating Temperature	-25 to 70 °C
Operating Humidity	5% to 95% Non-condensing

# Ordering Information

**HUR118:** 8 Channels 5-275V AC-DC, 100mA Digital Optocoupler Output Modbus RTU Remote IO Device, 1 x RS485, 5-48V (max. 60V) DC Power Input

**HUR128:** 8 Channels Digital 5Amps 250VAC/30VDC Relay Output Modbus RTU Remote IO Device, 1 x RS485, 5-48V (max. 60V) DC Power Input

**HUR218:** 8 Channels 5-275V AC-DC, 100mA Digital Optocoupler Output Modbus RTU Remote IO Device, 1 x RS485, 100 - 240V AC (120 - 370V DC), 50Hz to 60Hz AC Power Input

**HUR228:** 8 Channels Digital 5Amps 250VAC/30VDC Relay Output Modbus RTU Remote IO Device, 1 x RS485, 100 - 240V AC (120 - 370V DC), 50Hz to 60Hz AC Power Input

**HUR318:** 8 Channels 12-275 AC-DC, 60mA Digital Optocoupler Input Modbus RTU Remote IO Device, 1 x RS485, 5-48V (max. 60V) DC Power Input

**HUR418:** 8 Channels 12-275 AC-DC, 60mA Digital Optocoupler Input Modbus RTU Remote IO Device, 1 x RS485, 100 - 240V AC (120 - 370V DC), 50Hz to 60Hz AC Power Input

**HUR518:** 8 Channels 0-10V and 0-20mA Selectable Analog Input Modbus RTU Remote IO Device, 1 x RS485, 5-48V (max. 60V) DC Power Input

**HUR555:** 5 Channels 4-20mA Analog Output Modbus RTU Remote IO Device, 1 x RS485, 5-48V (max. 60V) DC Power Input

**HUR618:** 8 Channels 0-10V and 0-20mA Selectable Analog Input Modbus RTU Remote IO Device, 1 x RS485, 100 - 240V AC (120 - 370V DC), 50Hz to 60Hz AC Power Input

**HUR655:** 5 Channels 4-20mA Analog Output Modbus RTU Remote IO Device, 1 x RS485, 100 - 240V AC (120 - 370V DC), 50Hz to 60Hz AC Power Input



## PRODUCT SELECTION

Model	5-48V (max. 60V) DC Power input	100 - 240V AC (120 - 370V DC), 50Hz to 60Hz AC Power Input	1 x RS485 Port	8 Channel 5-275V AC-DC, 100mA Digital Optocoupler Output	8 Channel Digital 5Amp. Relay Output	8 Channel 12-275 AC-DC, 60mA Digital Optocoupler Input	8 Channel 0-10V and 0-20mA Selectable Analog Input	5 Channel 4-20mA Analog Output
HUR118	●		●	●				
HUR218		●	●	●				
HUR128	●		●		●			
HUR228		●	●		●			
HUR318	●		●			●		
HUR418		●	●			●		
HUR518	●		●				●	
HUR618		●	●				●	
HUR555	●		●					●
HUR655		●	●					●