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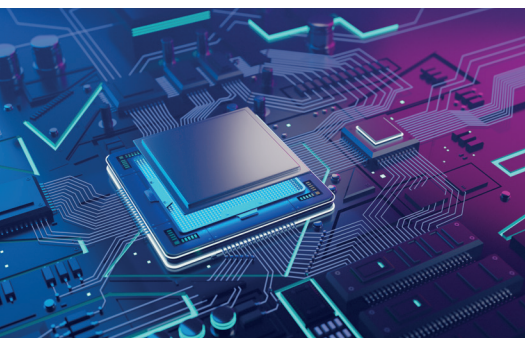
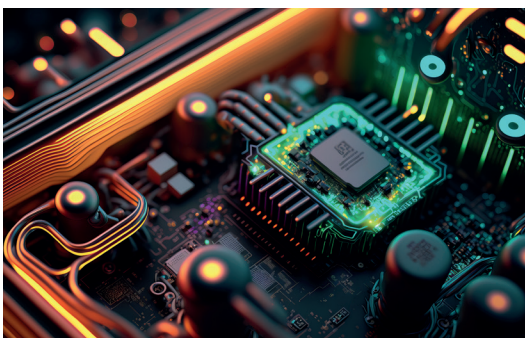
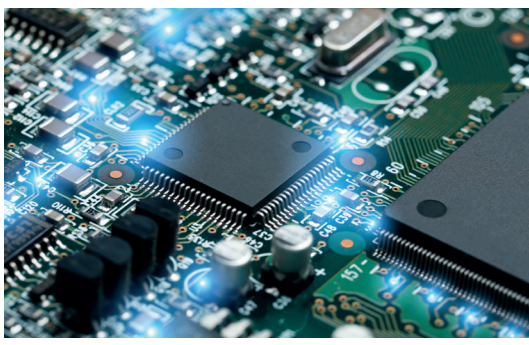
Product Catalogue

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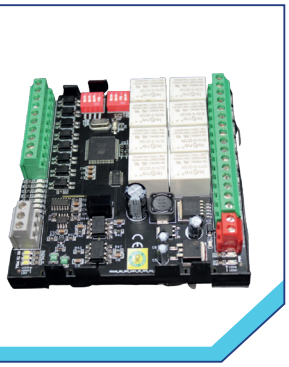
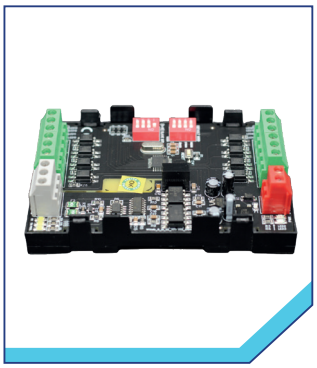
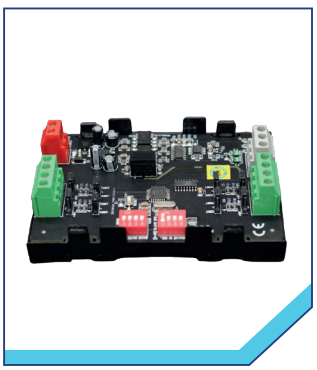
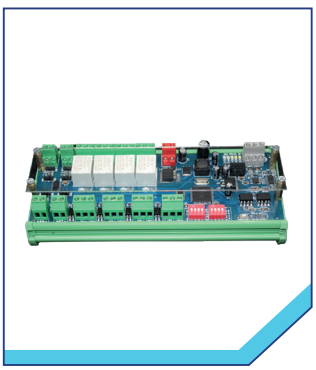
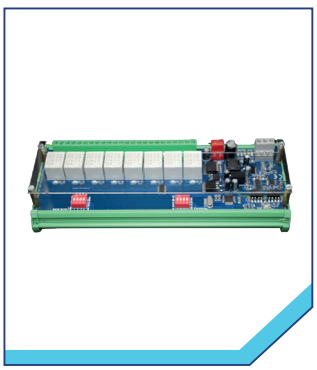
Product Images

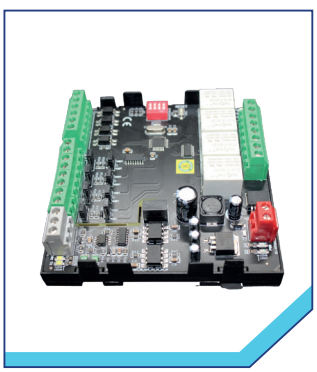


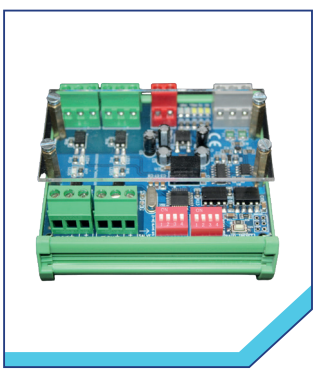


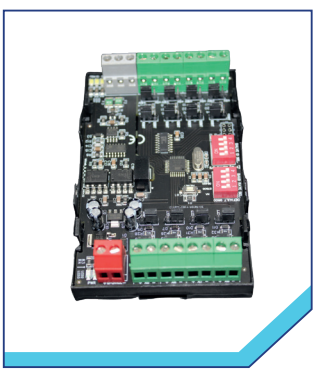


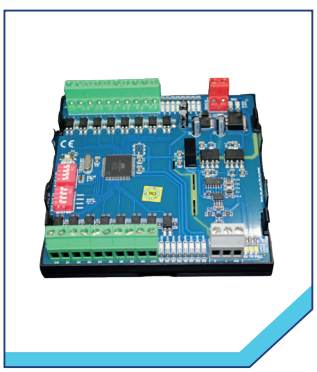












IO Module Configurations - Augmatic Technologies

Part Codes	DI	DO	AI	AO	PT	Port Type and selection options	Description
WIN - IO - 8DOM	-	8	-	-		8 DO Ports	8 Port DO(relay based 10A 230v) w Modbus RTU RS485+DIP SW. 24VDC power sources recommended
WIN - IO - 4DOM	-	4	-	-		4 DO Ports	4 Port DO(relay based 10A 230v) w Modbus RTU RS485+DIP SW
WIN - IO - 4DDAM	4	4	4	-		4 DO Ports+ 4 DI Ports + (0-20ma+4-20ma+0-5v+0-10v)	4 Port DO(Relay based 10A 230V), 4DI(4-30vDC), 4AI(4-20ma,0-20ma, 0-5, 0-10v) w Modbus RTU RS485+DIP (AI resolution of 10 bit / 12 bit on request)
WIN - IO - 8DDM	8	8	-	-		8 DO Ports + 8 DI Ports	8 Port DO(Relay based 10A 230V), 8 port DI(4-30VDC) w Modbus RTU RS485+DIP. 24 VDC power source recommended.
WIN - IO - 16DIM	16	-	-	-		16 DI Ports	16 Port DI(4-30VDC) w Modbus RTU RS485+DIP
WIN - IO - 8DIM	8	-	-	-		8 DI Ports	8 Port DI(4-30VDC) w Modbus RTU RS485+DIP
WIN - IO - 4DIM	4	-	-	-		4 DI Ports	4 Port DI (4-30VDC) w Modbus RTU Rs485+DIP
WIN - IO - 4AOMV	-	-	-	4		0 - 10 VDC	4 Port AO (0-10v) w Modbus RTURS485+DIP (AO resolution 10 bit / 12 bit optional)
WIN - IO - 4AOMC	-	-	-	4		4 - 20 mA	4 Port AO (4-20mA) w Modbus RTURS485+DIP (AO resolution 10 bit / 12 bit optional)
WIN - IO - 4AIM	-	-	4	-		4 Port AI (0-20ma+4-20ma+0-5v+0-10v)	4 Port AI(4-20ma,0-20ma,0-5,0-10v) w Modbus RTU RS485+DIP (Default 10 bit / 12 bit optional)
WIN - IO - 8AIM	-	-	8	-	2	8 Port AI (0-20ma+4-20ma+0-5v+0-10v)	8 Port AI (4-20ma,0-20ma,0-5,0-10v) w Modbus RTU RS485+DIP (Default 10 bit / 12 bit optional)
WIN - IO - 6AI2PTM	-	-	6	-		6 Port AI (0-20ma+4-20ma+0-5v+0-10v)+2 Port PT100	8 port AI (2 nos PT100 and 6 nos (4-20ma, 0-20 ma, 0-5,0-10v) w Modbus RTU Rs485 + DIP (Default 10 bit. 12 bit optional) + PT100 15 bit resolution
WIN - IO - 4DIAM	4	-	4	-		4 Port DI+ 4 Port AI (0-20ma+4-20ma+0-5v+0-10v)	4 port DI (4-30VDC), 4 port AI(4-20ma,0-20ma, 0-5,0-10v) w Modbus RTU RS485+DIP+12 bit upgrade optional
WIN - IO - 4DOAM	-	4	4	-		4 Port DO+ 4 Port AI (0-20ma+4-20ma+0-5v+0-10v)	4 Port DO (Relay 10A 230V) and 4 port AI (4-20ma,0-20ma,0-5,0-10v) w Modbus RTU RS485+DIP+12 bit upgrade optional
WIN - IO - 1M-1TCP	Converter						Modbus RTU Rs485 (Master) to Modbus TCP Ethernet (Slave)
WIN - IO - 2DDAM	2	2	2	-		2 Port DI+ 2 Port DO+2 port AI (0-20ma+4-20ma+0-5v+0-10v)	4 Port DO (Relay based 10A 230V), 4DI (4-30vDC), 4AI (4-20ma,0-20ma,0-5, 0-10v) w Modbus RTU+DIP+PS (AI resolution of 10 bit / 12 bit on request)

IO Module Configurations - Augmatic Technologies

Part Codes	DI	DO	AI	AO	PT	Port Type and selection options	Description
WIN - IO - 1AI1AOM	-	-	1	1		1 Port AI (0-20ma+4-20ma+0-5v+0-10v) & 1 Port AO (0-10V AO Output)	1 port AI (Default 10 bit / 12 bit optional at additional cost) / 1 port AO (Default 8 bit / 12 bit option on board with Jumper) with Modbus RTU RS485+DIP
WIN - IO - 4DI1DOM	4	1	-	-		4 Port DI + 4 Port DO	4 Port DO(Relay based 10A 230V), 1DI(4-30vDC) or with 24VDC voltage reference
WIN - IO - 4DDAI-NTCM	4	4	4	-		0-20ma+4-20ma+0-5v+0-10v / NTC - type 3 10k	4 Port DO(Relay based 10A 230V), 4DI(4-30vDC), 4AI(4-20ma,0-20ma,0-5,0-10v) w Modbus RTU+ DIP+PS (AI resolution of 10 bit / 12 bit on request) and jumper selectable NTC for type3 10k type
WIN - IO - 8DOME	-	8	-	-		8 DO Ports	8 port DO (Relay 10A 230V AC) Modbus TCP over Ethernet
WIN - IO - 16DIME	16	-	-	-		16 DI Ports	16 Port DI(4-30VDC) w Modbus TCP over Ethernet
WIN - IO - 4DDAME	4	4	4	-		4 DO Ports+ 4 DI Ports + (0-20ma+4-20ma+0-5v+0-10v)	4 Port DO(Relay based 10A 230V), 4DI(4-30vDC), 4AI (4-20ma,0-20ma,0-5,0-10v) w Modbus TCP over Ethernet (AI resolution of 10bit/12 bit on request)
WIN - IO - 8DDME	8	8	-	-		8 DO Ports + 8 DI Ports	8 Port DO(Relay based 10A 230V), 8 port DI(4-30VDC) w Modbus TCP over Ethernet
WIN - IO - 8AIME	-	-	8	-		8 Port AI (0-20ma+4-20ma+0-5v+0-10v)	8 Port AI(4-20ma,0-20ma,0-5,0-10v) w Modbus TCP over Ethernet (Default 10 bit / 12 bit optional)
WIN - IO - TnHM	-	-	-	-		Probe based Temp (-40 -80Deg C) & Humidity 0-100 %	Probe Based Temperature & Humidity Sensor Range (-40-80 Deg C) and (0-100%) with Modbus RTU RS485
WIN - IO - TnHMW	-	-	-	-		Probe based Temp (-40 -80Deg C) & Humidity 0-100 %	Probe Based Temperature & Humidity Sensor Range (-40-80 Deg C) and (0-100%) with Modbus over Wifi
WIN - IO - 2MOD-BAC	-	-	-	-		2 Port Modbus RS485 to BACNET IP Gateway	Modbus RTU RS485, Modbus TCP to BANNET IP Converter
WIN - IO - 3MOD-BAC	-	-	-	-		2 Port Modbus RS485 to BACNET IP Gateway	Modbus RTU RS485, Modbus TCP to BANNET IP Converter
WIN - IO - 8DIAM	8	-	8	-		0-20ma+4-20ma+0-5v+0-10v	8 port DI(4-30vDC), 8 port AI(4-20ma,0-20ma,0-5, 0-10v) w Modbus RTU+DIP+12 bit upgrade optional
WIN - IO - 8DOAM	-	8	8	-		0-20ma+4-20ma+0-5v+0-10v	8 Port DO(Relay 10A 230V) and 8 port AI (4-20ma, 0-20ma,0-5,0-10v) w Modbus RTU+DIP+PS upgrade

Certification

RoHS CE

DEFINITIONS

DIP SW - SLAVE ID and BAUD Rate
DIN - DIN Rail based module with top transparent Acrylic cover
CE - Closed Enclosure with open terminals and LED Indicators
Two Variants of Power supply available
12-24 / 15-40 VDC
24 AC / DC

WIN-IO-8DOM

01

Technical Datasheet Input / Output Modules 8 Port Digital Output with Modbus RTU Protocol with RS485 Interface

The IO modules communicate via RS485. The port can drive distances up to max 700 meters without the use of any repeater (this feature however also depends on the signal strength of the Modbus Master Device).
The RS485 Digital IO module is sturdy, low power usage and easy to use.
The IO modules are mounted on DIN rail mountable casing and with exposed connectors and LED indicators. The DIP switch for Slave ID and Baud rate are placed inside the enclosure.
The design of the modules incorporates **'resettable Fuses'** to safeguard against reverse polarity connection both for **Power and Communication**

Specifications

I/O Connectors	12 Pin 5.08 mm pitch pluggable screw Terminal Block
Dimensions	110 mm L x 110 mm B x 50 mm H
Power	Input Power – 15-40 VDC or 24 V AC / DC options
	Typical – 12V DC @ 150mA
Operating Temperature	0 – 60° C (32 ~ 140°F)
Storage Temperature	-20 - 70° C (-4 ~ 158°F)
Storage Humidity	5 ~ 95 % RH, non – Condensing

DO with Relay Output

Channels	8
Contact Form	1A, 1C
Contact Material	Ag Alloy
Contact Capacity	10A @ 240VAC, 10A @ 28VDC
Coil Voltage	5 – 48 VDC
Coil Power	0.36 W
Insulation Resistance	250MΩ
Electrical Life	1 x 10^5
Mechanical Life	1 x 10^7
Operating Time	7 msec, Max 15 msec
Release Time	2 msec, Max 6 msec

Configuration Settings

Communication Speed	9600 – 115200 Kbps (DIP SW selectable)
Data Bits	8
Parity	None
Stop bit	1
CRC	Yes
Slave ID	1 - 15 (DIP SW selectable)
Function code	0x05 and 0x0F (5 Single coil & 15 multiple coil)
DO Register Address	0,1,2,3,4,5,6,7.

WIN-IO-4DOM

02

Technical Datasheet Input / Output Modules 4 Port Digital Output with Modbus RTU Protocol with RS485 Interface

The IO modules communicate via RS485. The port can drive distances up to max 700 meters without the use of any repeater (this feature however also depends on the signal strength of the Modbus Master Device).
The RS485 Digital IO module is sturdy, low power usage and easy to use.
The IO modules are mounted on DIN rail mountable casing and with exposed connectors and LED indicators. The DIP switch for Slave ID and Baud rate are placed inside the enclosure.
The design of the modules incorporates **'resettable Fuses'** to safeguard against reverse polarity connection both for **Power and Communication.**

Specifications

I/O Connectors	12 Pin 5.08 mm pitch pluggable screw Terminal Block
Dimensions	85 mm L x 72 mm B x 50 mm H
Power	Input Power – 15-40 VDC or 24 V AC / DC options Typical – 12V DC @ 80mA
Operating Temperature	0 – 60° C (32 ~ 140°F)
Storage Temperature	-20 - 70° C (-4 ~ 158°F)
Storage Humidity	5 ~ 95 % RH, non – Condensing

DO with Relay Output

Channels	4
Contact Form	1A, 1C
Contact Material	Ag Alloy
Contact Capacity	10A @ 240VAC, 10A @ 28VDC
Coil Voltage	5 – 48 VDC
Coil Power	0.36 W
Insulation Resistance	250MΩ
Electrical Life	1 x 10^5
Mechanical Life	1 x 10^7
Operating Time	7 msec, Max 15 msec
Release Time	2 msec, Max 6 msec

Configuration Settings

Communication Speed	9600 – 115200 Kbps (DIP SW selectable)
Data Bits	8
Parity	None
Stop bit	1
CRC	Yes
Slave ID	1 - 15 (DIP SW selectable)
Function code	0x05 and 0x0F (5 Single coil & 15 multiple coil)
DO Register Address	0,1,2,3.

WIN-IO-4DDAM

03

Technical Datasheet Input / Output Modules 4 Port Digital Input, Digital Output and Analog Input with Modbus RTU Protocol with RS485 Interface

The IO modules communicate via RS485. The port can drive distances up to max 700 meters without the use of any repeater (this feature however also depends on the signal strength of the Modbus Master Device).
The RS485 Digital IO module is sturdy, low power usage and easy to use.
The IO modules are mounted on DIN rail mountable casing and with exposed connectors and LED indicators. The DIP switch for Slave ID and Baud rate are placed inside the enclosure.
The design of the modules incorporates **'resettable Fuses'** to safeguard against reverse polarity connection both for **Power and Communication**

Specifications

I/O Connectors	12 Pin 5.08 mm pitch pluggable screw Terminal Block
Dimensions	110 mm L x 110 mm B x 50 mm H
Power	Input Power – 15-40 VDC or 24 V AC / DC options Typical – 12V DC @ 120mA
Operating Temperature	0 – 60° C (32 ~ 140°F)
Storage Temperature	-20 - 70° C (-4 ~ 158°F)
Storage Humidity	5 ~ 95 % RH, non – Condensing

DO with Relay Output

Channels	4
Contact Form	1A, 1C
Contact Material	Ag Alloy
Contact Capacity	10A @ 240VAC, 10A @ 28VDC
Coil Voltage	5 – 48 VDC
Coil Power	0.36 W
Insulation Resistance	250MΩ
Electrical Life	1 x 10^5
Mechanical Life	1 x 10^7
Operating Time	7 msec, Max 15 msec
Release Time	2 msec, Max 6 msec

AI Inputs

Channels	4
Input Signal	4 – 20 mA / 0 - 5 VDC / 0 – 10VDC / (jumper selectable)
Accuracy	± 2% Full scale
Input Resolution	10 bits / 12 bits (Optional)
Isolation	Optically Isolated
External Loop Voltage	+ 12 VDC min
AI input impedance	120Ω

DI Inputs

Channels	4
Sense Voltage	3.3 – 30 VDC
Sense Logic	Logic '0' = <1 VDC, Logic '1' = >3.3 VDC
Isolation	Optically isolated
Response Time	2 msec, Max 6 msec

Configuration Settings

Communication Speed	9600 – 115200 Kbps (DIP SW selectable)
Data Bits	8
Parity	None
Stop bit	1
CRC	Yes
Slave ID	1 - 15 (DIP SW selectable)
Function code DO	0x05 and 0x0F (5 Single coil & 15 multiple coil)
DO Register Address	4,5,6,7.
Function code DI	0x02 Read discrete Input
DI Register Address	0,1,2,3.
Function Code AI	0x03 Read Holding Registers
AI Register Address	10 Bit - 2,3,4,5 / 12 Bit – 6,7,8,9.

WIN-IO-16DIM

Technical Datasheet Input / Output Modules 16 Port Digital Input with Modbus RTU Protocol with RS485 Interface

The IO modules communicate via RS485. The port can drive distances up to max 700 meters without the use of any repeater (this feature however also depends on the signal strength of the Modbus Master Device).
The RS485 Digital IO module is sturdy, low power usage and easy to use.
The IO modules are mounted on DIN rail mountable casing and with exposed connectors and LED indicators. The DIP switch for Slave ID and Baud rate are placed inside the enclosure.
The design of the modules incorporates **'resettable Fuses'** to safeguard against reverse polarity connection both for **Power and Communication**

Specifications

I/O Connectors	12 Pin 5.08 mm pitch pluggable screw Terminal Block
Dimensions	110 mm L x 110 mm B x 50 mm H
Power	Input Power – 15-40 VDC or 24 V AC / DC options Typical – 12V DC @ 110mA
Operating Temperature	0 – 60° C (32 ~ 140°F)
Storage Temperature	-20 - 70° C (-4 ~ 158°F)
Storage Humidity	5 ~ 95 % RH, non – Condensing

DI Inputs

Channels	16
Sense Voltage	3.3 – 30 VDC
Sense Logic	Logic '0' = <1 VDC, Logic '1' = >3.3 VDC
Isolation	Optically isolated
Response Time	2 msec, Max 6 msec

Configuration Settings

Communication Speed	9600 – 115200 Kbps (DIP SW selectable)
Data Bits	8
Parity	None
Stop bit	1
CRC	Yes
Slave ID	1 - 15 (DIP SW selectable)
Function code DI	0x02 Read Discrete Input
DI Register Address	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16

WIN-IO-8DIM

Technical Datasheet Input / Output Modules 8 Port Digital Input with Modbus RTU Protocol with RS485 Interface

The IO modules communicate via RS485. The port can drive distances up to max 700 meters without the use of any repeater (this feature however also depends on the signal strength of the Modbus Master Device).
The RS485 Digital IO module is sturdy, low power usage and easy to use.
The IO modules are mounted on DIN rail mountable casing and with exposed connectors and LED indicators. The DIP switch for Slave ID and Baud rate are placed inside the enclosure.
The design of the modules incorporates **'resettable Fuses'** to safeguard against reverse polarity connection both for **Power and Communication**

Specifications

I/O Connectors	12 Pin 5.08 mm pitch pluggable screw Terminal Block
Dimensions	70 mm L x 110 mm B x 50 mm H
Power	Input Power – 15-40 VDC or 24 V AC / DC options Typical – 12V DC @ 80mA
Operating Temperature	0 – 60° C (32 ~ 140°F)
Storage Temperature	-20 - 70° C (-4 ~ 158°F)
Storage Humidity	5 ~ 95 % RH, non – Condensing

DI Inputs

Channels	8
Sense Voltage	3.3 – 30 VDC
Sense Logic	Logic '0' = <1 VDC, Logic '1' = >3.3 VDC
Isolation	Optically isolated
Response Time	2 msec, Max 6 msec

Configuration Settings

Communication Speed	9600 – 115200 Kbps (DIP SW selectable)
Data Bits	8
Parity	None
Stop bit	1
CRC	Yes
Slave ID	1 - 15 (DIP SW selectable)
Function code DI	0x02 Read Discrete Input
DI Register Address	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16

WIN-IO-4DIM

Technical Datasheet Input / Output Modules 4 Port Digital Input with Modbus RTU Protocol with RS485 Interface

The IO modules communicate via RS485. The port can drive distances up to max 700 meters without the use of any repeater (this feature however also depends on the signal strength of the Modbus Master Device).
The RS485 Digital IO module is sturdy, low power usage and easy to use.
The IO modules are mounted on DIN rail mountable casing and with exposed connectors and LED indicators. The DIP switch for Slave ID and Baud rate are placed inside the enclosure.
The design of the modules incorporates **'resettable Fuses'** to safeguard against reverse polarity connection both for **Power and Communication**

Specifications

I/O Connectors	12 Pin 5.08 mm pitch pluggable screw Terminal Block
Dimensions	70 mm L x 110 mm B x 50 mm H
Power	Input Power – 15-40 VDC or 24 V AC / DC options Typical – 12V DC @ 80mA
Operating Temperature	0 – 60° C (32 ~ 140°F)
Storage Temperature	-20 - 70° C (-4 ~ 158°F)
Storage Humidity	5 ~ 95 % RH, non – Condensing

DI Inputs

Channels	4
Sense Voltage	3.3 – 30 VDC
Sense Logic	Logic '0' = <1 VDC, Logic '1' = >3.3 VDC
Isolation	Optically isolated
Response Time	2 msec, Max 6 msec

Configuration Settings

Communication Speed	9600 – 115200 Kbps (DIP SW selectable)
Data Bits	8
Parity	None
Stop bit	1
CRC	Yes
Slave ID	1 - 15 (DIP SW selectable)
Function code DI	0x02 Read Discrete Input
DI Register Address	1,2,3,4.

WIN-IO-4AOMV

Technical Datasheet Input / Output Modules 4 Port Analog Output Voltage with Modbus RTU Protocol with RS485 Interface

The IO modules communicate via RS485. The port can drive distances up to max 700 meters without the use of any repeater (this feature however also depends on the signal strength of the Modbus Master Device).
The RS485 Digital IO module is sturdy, low power usage and easy to use.
The IO modules are mounted on DIN rail mountable casing and with exposed connectors and LED indicators. The DIP switch for Slave ID and Baud rate are placed inside the enclosure.
The design of the modules incorporates **'resettable Fuses'** to safeguard against reverse polarity connection both for **Power and Communication**

Specifications

I/O Connectors	12 Pin 5.08 mm pitch pluggable screw Terminal Block
Dimensions	70 mm L x 110 mm B x 50 mm H
Power	Input Power – 15-40 VDC or 24 V AC / DC options Typical – 12V DC @ 80mA
Operating Temperature	0 – 60° C (32 ~ 140°F)
Storage Temperature	-20 - 70° C (-4 ~ 158°F)
Storage Humidity	5 ~ 95 % RH, non – Condensing

AO Outputs

Channels	4
Inputs Resolution	10 Bit / 12 Bit (Optional)
Signal Range	0 – 10V
Accuracy	± 2 % of Full scale
Linearity Error	0.10%
Conversion Time	20 msec

Configuration Settings

Communication Speed	9600 – 115200 Kbps (DIP SW selectable)
Data Bits	8
Parity	None
Stop bit	1
CRC	Yes
Slave ID	1 - 15 (DIP SW selectable)
Function code AO	0x10 Write Multiple registers
AO Register Address	10 Bit - 8,9,10,11 / 12 bit – 12,13,14,15

WIN-IO-4AOMC

08

Technical Datasheet Input / Output Modules 4 Port Analog Output Current with Modbus RTU Protocol with RS485 Interface

The IO modules communicate via RS485. The port can drive distances up to max 700 meters without the use of any repeater (this feature however also depends on the signal strength of the Modbus Master Device).
The RS485 Digital IO module is sturdy, low power usage and easy to use.
The IO modules are mounted on DIN rail mountable casing and with exposed connectors and LED indicators. The DIP switch for Slave ID and Baud rate are placed inside the enclosure.
The design of the modules incorporates **'resettable Fuses'** to safeguard against reverse polarity connection both for **Power and Communication**

Specifications

I/O Connectors	12 Pin 5.08 mm pitch pluggable screw Terminal Block
Dimensions	70 mm L x 110 mm B x 50 mm H
Power	Input Power – 15-40 VDC or 24 V AC / DC options Typical – 12V DC @ 80mA
Operating Temperature	0 – 60° C (32 ~ 140°F)
Storage Temperature	-20 - 70° C (-4 ~ 158°F)
Storage Humidity	5 ~ 95 % RH, non – Condensing

AO Outputs

Channels	4
Inputs Resolution	10 Bit / 12 Bit (Optional)
Signal Range	4 - 20 mA
Accuracy	± 2 % of Full scale
Linearity Error	0.10%
Conversion Time	20 msec

Configuration Settings

Communication Speed	9600 – 115200 Kbps (DIP SW selectable)
Data Bits	8
Parity	None
Stop bit	1
CRC	Yes
Slave ID	1 - 15 (DIP SW selectable)
Function code AO	0x10 Write Multiple registers
AO Register Address	8,9,10,11.
Function code AO	0x10 Write Multiple registers
AO Register Address	10 Bit - 8,9,10,11 / 12 bit – 12,13,14,15

WIN-IO-4AIM

09

Technical Datasheet Input / Output Modules 4 Port Analog Input with Modbus RTU Protocol with RS485 Interface

The IO modules communicate via RS485. The port can drive distances up to max 700 meters without the use of any repeater (this feature however also depends on the signal strength of the Modbus Master Device).
The RS485 Digital IO module is sturdy, low power usage and easy to use.
The IO modules are mounted on DIN rail mountable casing and with exposed connectors and LED indicators. The DIP switch for Slave ID and Baud rate are placed inside the enclosure.
The design of the modules incorporates **'resettable Fuses'** to safeguard against reverse polarity connection both for **Power and Communication**

Specifications

I/O Connectors	12 Pin 5.08 mm pitch pluggable screw Terminal Block
Dimensions	70 mm L x 110 mm B x 50 mm H
Power	Input Power – 15-40 VDC or 24 V AC / DC options Typical – 12V DC @ 80mA
Operating Temperature	0 – 60° C (32 ~ 140°F)
Storage Temperature	-20 - 70° C (-4 ~ 158°F)
Storage Humidity	5 ~ 95 % RH, non – Condensing

AI Inputs

Channels	4
Input Signal	4 – 20 mA/ 0 - 5VDC / 0 – 10 VDC Jumper selectable
Accuracy	± 2% Full scale
Input Resolution	10 bits / 12 bits (Optional)
Isolation	Optically Isolated
External Loop Voltage	+ 12 VDC min
AI input impedance	120Ω

Configuration Settings

Communication Speed	9600 – 115200 Kbps (DIP SW selectable)
Data Bits	8
Parity	None
Stop bit	1
CRC	Yes
Slave ID	1 - 15 (DIP SW selectable)
Function Code AI	0x03 Read Holding Registers
AI Register Address	10 Bit - 1,2,3,4 / 12 Bit – 5,6,7,8.

WIN-IO-8AIM

10

Technical Datasheet Input / Output Modules 8 Port Analog Input with Modbus RTU Protocol with RS485 Interface

The IO modules communicate via RS485. The port can drive distances up to max 700 meters without the use of any repeater (this feature however also depends on the signal strength of the Modbus Master Device).
The RS485 Digital IO module is sturdy, low power usage and easy to use.
The IO modules are mounted on DIN rail mountable casing and with exposed connectors and LED indicators. The DIP switch for Slave ID and Baud rate are placed inside the enclosure.
The design of the modules incorporates **'resettable Fuses'** to safeguard against reverse polarity connection both for **Power and Communication**

Specifications

I/O Connectors	12 Pin 5.08 mm pitch pluggable screw Terminal Block
Dimensions	70 mm L x 110 mm B x 50 mm H
Power	Input Power – 15-40 VDC or 24 V AC / DC options Typical – 12V DC @ 110mA
Operating Temperature	0 – 60° C (32 ~ 140°F)
Storage Temperature	-20 - 70° C (-4 ~ 158°F)
Storage Humidity	5 ~ 95 % RH, non – Condensing

AI Inputs

Channels	8
Input Signal	4 – 20 mA/ 0 - 5VDC / 0 – 10 VDC Jumper selectable
Accuracy	± 2% Full scale
Input Resolution	10 bits / 12 bits (Optional)
Isolation	Optically Isolated
External Loop Voltage	+ 12 VDC min
AI input impedance	120Ω

Configuration Settings

Communication Speed	9600 – 115200 Kbps (DIP SW selectable)
Data Bits	8
Parity	None
Stop bit	1
CRC	Yes
Slave ID	1 - 15 (DIP SW selectable)
Function Code AI	0x03 Read Holding Registers
AI Register Address	10 Bit - 1,2,3,4,5,6,7,8 / 12 Bit – 9,10,11,12,13,14,15,16.

WIN-IO-6AI2PTM

11

Technical Datasheet Input / Output Modules 6 Port Analog Input and 2 Port PT1000 with Modbus RTU Protocol with RS485 Interface

The IO modules communicate via RS485. The port can drive distances up to max 700 meters without the use of any repeater (this feature however also depends on the signal strength of the Modbus Master Device).
The RS485 Digital IO module is sturdy, low power usage and easy to use.
The IO modules are mounted on DIN rail mountable casing and with exposed connectors and LED indicators. The DIP switch for Slave ID and Baud rate are placed inside the enclosure.
The design of the modules incorporates **'resettable Fuses'** to safeguard against reverse polarity connection both for **Power and Communication**

Specifications

I/O Connectors	12 Pin 5.08 mm pitch pluggable screw Terminal Block
Dimensions	110 mm L x 110 mm B x 50 mm H
Power	Input Power – 15-40 VDC or 24 V AC / DC options Typical – 12V DC @ 120mA
Operating Temperature	0 – 60° C (32 ~ 140°F)
Storage Temperature	-20 - 70° C (-4 ~ 158°F)
Storage Humidity	5 ~ 95 % RH, non – Condensing

AI Inputs

Channels	6
Input Signal	4 – 20 mA/ 0 - 5VDC / 0 – 10 VDC Jumper selectable
Accuracy	± 2% Full scale
Input Resolution	10 bits / 12 bits (Optional)
Isolation	Optically Isolated
External Loop Voltage	+ 12 VDC min
AI input impedance	120Ω

PT1000 Inputs

Channels	2
Input Signal	PT1000
Accuracy	± 2% Full scale
Input Resolution	15-bit Accuracy
Isolation	Optically Isolated
External Loop Voltage	+ 12 VDC min

Configuration Settings

Communication Speed	9600 – 115200 Kbps (DIP SW selectable)
Data Bits	8
Parity	None
Stop bit	1
CRC	Yes
Slave ID	1 - 15 (DIP SW selectable)
Function Code AI	0x09 Read Holding Registers
AI Register Address	10 Bit - 1,2,3,4,5,6 / 12 Bit – 10,11,12,13,14,15.
PT Register Address	15 bit - 8,9.

WIN-IO-4DIAM

12

Technical Datasheet Input / Output Modules 4 Port Digital Input and Analog Input with Modbus RTU Protocol with RS485 Interface

The IO modules communicate via RS485. The port can drive distances up to max 700 meters without the use of any repeater (this feature however also depends on the signal strength of the Modbus Master Device).
The RS485 Digital IO module is sturdy, low power usage and easy to use.
The IO modules are mounted on DIN rail mountable casing and with exposed connectors and LED indicators. The DIP switch for Slave ID and Baud rate are placed inside the enclosure.
The design of the modules incorporates **'resettable Fuses'** to safeguard against reverse polarity connection both for **Power and Communication**

Specifications

I/O Connectors	12 Pin 5.08 mm pitch pluggable screw Terminal Block
Dimensions	110 mm L x 110 mm B x 50 mm H
Power	Input Power – 15-40 VDC or 24 V AC / DC options
	Typical – 12V DC @ 90mA
Operating Temperature	0 – 60° C (32 ~ 140°F)
Storage Temperature	-20 - 70° C (-4 ~ 158°F)
Storage Humidity	5 ~ 95 % RH, non – Condensing

AI Inputs

Channels	4
Input Signal	4 – 20 mA / 0 – 10VDC / NTC
	Type 3 (jumper selectable)
Accuracy	± 2% Full scale
Input Resolution	10 bits / 12 bits (Optional)
Isolation	Optically Isolated
External Loop Voltage	+ 12 VDC min
AI input impedance	120Ω

DI Inputs

Channels	4
Sense Voltage	3.3 – 30 VDC
Sense Logic	Logic '0' = <1 VDC,
	Logic '1' = >3.3 VDC
Isolation	Optically isolated
Response Time	2 msec, Max 6 msec

Configuration Settings

Communication Speed	9600 – 115200 Kbps (DIP SW selectable)
Data Bits	8
Parity	None
Stop bit	1
CRC	Yes
Slave ID	1 - 15 (DIP SW selectable)
Function code DI	0x02 Read discrete Input
DI Register Address	0,1,2,3.
Function Code AI	0x03 Read Holding Registers
AI Register Address	10 Bit - 2,3,4,5 / 12 Bit – 6,7,8,9.

WIN-IO-2DDAM

Technical Datasheet Input / Output Modules 2 Port Digital Input, Digital Output and Analog Input with Modbus RTU Protocol with RS485 Interface

The IO modules communicate via RS485. The port can drive distances up to max 700 meters without the use of any repeater (this feature however also depends on the signal strength of the Modbus Master Device).
The RS485 Digital IO module is sturdy, low power usage and easy to use.
The IO modules are mounted on DIN rail mountable casing and with exposed connectors and LED indicators. The DIP switch for Slave ID and Baud rate are placed inside the enclosure.
The design of the modules incorporates **'resettable Fuses'** to safeguard against reverse polarity connection both for **Power and Communication**

Specifications

I/O Connectors	12 Pin 5.08 mm pitch pluggable screw Terminal Block
Dimensions	110 mm L x 110 mm B x 50 mm H
Power	Input Power – 15-40 VDC or 24 V AC / DC options Typical – 12V DC @ 90mA
Operating Temperature	0 – 60° C (32 ~ 140°F)
Storage Temperature	-20 - 70° C (-4 ~ 158°F)
Storage Humidity	5 ~ 95 % RH, non – Condensing

DO with Relay Output

Channels	2
Contact Form	1A, 1C
Contact Material	Ag Alloy
Contact Capacity	10A @ 240VAC, 10A @ 28VDC
Coil Voltage	5 – 48 VDC
Coil Power	0.36 W
Insulation Resistance	250MΩ
Electrical Life	1 x 10^5
Mechanical Life	1 x 10^7
Operating Time	7 msec, Max 15 msec
Release Time	2 msec, Max 6 msec

AI Inputs

Channels	2
Input Signal	4 – 20 mA / 0 - 5 VDC/ 0 – 10VDC / (jumper selectable)
Accuracy	± 2% Full scale
Input Resolution	10 bits / 12 bits (Optional)
Isolation	Optically Isolated
External Loop Voltage	+ 12 VDC min
AI input impedance	120Ω

DI Inputs

Channels	2
Sense Voltage	3.3 – 30 VDC
Sense Logic	Logic '0' = <1 VDC, Logic '1' = >3.3 VDC
Isolation	Optically isolated
Response Time	2 msec, Max 6 msec

Configuration Settings

Communication Speed	9600 – 115200 Kbps (DIP SW selectable)
Data Bits	8
Parity	None
Stop bit	1
CRC	Yes
Slave ID	1 - 15 (DIP SW selectable)
Function code DO	0x05 and 0x0F (5 Single coil & 15 multiple coil)
DO Register Address	4,5.
Function code DI	0x02 Read discrete Input
DI Register Address	0,1.
Function Code AI	0x03 Read Holding Registers
AI Register Address	10 Bit - 2,3 / 12 Bit – 6,7.

WIN-IO-1AI1AOM

14

Technical Datasheet Input / Output Modules 1 Port Analog Input and Output with Modbus RTU Protocol with RS485 Interface

The IO modules communicate via RS485. The port can drive distances up to max 700 meters without the use of any repeater (this feature however also depends on the signal strength of the Modbus Master Device).
The RS485 Digital IO module is sturdy, low power usage and easy to use.
The IO modules are mounted on DIN rail mountable casing and with exposed connectors and LED indicators. The DIP switch for Slave ID and Baud rate are placed inside the enclosure.
The design of the modules incorporates **'resettable Fuses'** to safeguard against reverse polarity connection both for **Power and Communication.**

Specifications

I/O Connectors	12 Pin 5.08 mm pitch pluggable screw Terminal Block
Dimensions	70 mm L x 110 mm B x 50 mm H
Power	Input Power – 15-40 VDC or 24 V AC / DC options Typical – 12V DC @ 80mA
Operating Temperature	0 – 60° C (32 ~ 140°F)
Storage Temperature	-20 - 70° C (-4 ~ 158°F)
Storage Humidity	5 ~ 95 % RH, non – Condensing

AI Inputs

Channels	1
Input Signal	4 – 20 mA/ 0 - 5VDC / 0 – 10 VDC Jumper selectable
Accuracy	± 2% Full scale
Input Resolution	10 bits / 12 bits (Optional)
Isolation	Optically Isolated
External Loop Voltage	+ 12 VDC min
AI input impedance	120Ω

AO Outputs

Channels	1
Inputs Resolution	10 Bit
Signal Range	0 – 10V
Accuracy	± 2 % of Full scale
Linearity Error	0.10%
Conversion Time	20 msec

Configuration Settings

Communication Speed	9600 – 115200 Kbps (DIP SW selectable)
Data Bits	8
Parity	None
Stop bit	1
CRC	Yes
Slave ID	1 - 15 (DIP SW selectable)
Function Code AI	0x03 Read Holding Registers
AI Register Address	10 Bit - 2 / 12 Bit – 3.
Function Code AO	0x10 Write Multiple registers
AO register Address	10 Bit - 8.

WIN-IO-4DI1DOM

15

Technical Datasheet Input / Output Modules 4 Port Digital Input and 1 port Digital Output with Modbus RTU Protocol with RS485 Interface

The IO modules communicate via RS485. The port can drive distances up to max 700 meters without the use of any repeater (this feature however also depends on the signal strength of the Modbus Master Device).
The RS485 Digital IO module is sturdy, low power usage and easy to use.
The IO modules are mounted on DIN rail mountable casing and with exposed connectors and LED indicators. The DIP switch for Slave ID and Baud rate are placed inside the enclosure.
The design of the modules incorporates **'resettable Fuses'** to safeguard against reverse polarity connection both for **Power and Communication**

Specifications

I/O Connectors	12 Pin 5.08 mm pitch pluggable screw Terminal Block
Dimensions	70 mm L x 110 mm B x 50 mm H
Power	Input Power – 15-40 VDC or 24 V AC / DC options Typical – 12V DC @ 90mA
Operating Temperature	0 – 60° C (32 ~ 140°F)
Storage Temperature	-20 - 70° C (-4 ~ 158°F)
Storage Humidity	5 ~ 95 % RH, non – Condensing

DO with Relay Output

Channels	1
Contact Form	1A, 1C
Contact Material	Ag Alloy
Contact Capacity	10A @ 240VAC, 10A @ 28VDC
Coil Voltage	5 – 48 VDC
Coil Power	0.36 W
Insulation Resistance	250MΩ
Electrical Life	1 x 10^5
Mechanical Life	1 x 10^7
Operating Time	7 msec, Max 15 msec
Release Time	2 msec, Max 6 msec

DI Inputs

Channels	4
Sense Voltage	3.3 – 30 VDC
Sense Logic	Logic '0' = <1 VDC, Logic '1' = >3.3 VDC
Isolation	Optically isolated
Response Time	2 msec, Max 6 msec

Configuration Settings

Communication Speed	9600 – 115200 Kbps (DIP SW selectable)
Data Bits	8
Parity	None
Stop bit	1
CRC	Yes
Slave ID	1 - 15 (DIP SW selectable)
Function code DO	0x05 and 0x0F (5 Single coil & 15 multiple coil)
DO Register Address	1
Function code DI	0x02 Read Discrete Input
DI Register Address	0,1,2,3

WIN-IO-8DOME

Technical Datasheet Input / Output Modules 8 Port Digital Output with Modbus TCP Ethernet.

The IO modules communicate via RS485. The port can drive distances up to max 700 meters without the use of any repeater (this feature however also depends on the signal strength of the Modbus Master Device).
The RS485 Digital IO module is sturdy, low power usage and easy to use.
The IO modules are mounted on DIN rail mountable casing and with exposed connectors and LED indicators. The DIP switch for Slave ID and Baud rate are placed inside the enclosure.
The design of the modules incorporates **'resettable Fuses'** to safeguard against reverse polarity connection both for **Power and Communication**

Specifications

I/O Connectors	12 Pin 5.08 mm pitch pluggable screw Terminal Block
Dimensions	72 mm B x 195 mm L x 40 mm H
Power	Input Power – 15-40 VDC or 24 V AC / DC options Typical – 12V DC @ 110mA
Operating Temperature	0 – 60° C (32 ~ 140°F)
Storage Temperature	-20 - 70° C (-4 ~ 158°F)
Storage Humidity	5 ~ 95 % RH, non – Condensing

DO with Relay Output

Channels	8
Contact Form	1A, 1C
Contact Material	Ag Alloy
Contact Capacity	10A @ 240VAC, 10A @ 28VDC
Coil Voltage	5 – 48 VDC
Coil Power	0.36 W
Insulation Resistance	250MΩ
Electrical Life	1 x 10^5
Mechanical Life	1 x 10^7
Operating Time	7 msec, Max 15 msec
Release Time	2 msec, Max 6 msec

Configuration Settings

Communication Speed	10/100 Base-T Ethernet compatible
Data Bits	8
Parity	None
Stop bit	1
CRC	Yes
Slave ID	Configured through web App (Details provided with Product)
Function code	0x05 and 0x0F (5 Single coil & 15 multiple coil)
DO Register Address	0,1,2,3,4,5,6,7.

Note: The web App enables the configuration of the Module by selection of IP Address, Slave ID and its register values.

WIN-IO-16DIME

17

Technical Datasheet Input / Output Modules 16 Port Digital Input with Modbus TCP Ethernet

The IO modules communicate via RS485. The port can drive distances up to max 700 meters without the use of any repeater (this feature however also depends on the signal strength of the Modbus Master Device).
The RS485 Digital IO module is sturdy, low power usage and easy to use.
The IO modules are mounted on DIN rail mountable casing and with exposed connectors and LED indicators. The DIP switch for Slave ID and Baud rate are placed inside the enclosure.
The design of the modules incorporates **'resettable Fuses'** to safeguard against reverse polarity connection both for **Power and Communication**

Specifications

I/O Connectors	12 Pin 5.08 mm pitch pluggable screw Terminal Block
Dimensions	72 mm B x 195 mm L x 40 mm H
Power	Input Power – 15-40 VDC or 24 V AC / DC options Typical – 12V DC @ 110mA
Operating Temperature	0 – 60° C (32 ~ 140°F)
Storage Temperature	-20 - 70° C (-4 ~ 158°F)
Storage Humidity	5 ~ 95 % RH, non – Condensing

DI Inputs

Channels	16
Sense Voltage	4 – 30 VDC
Sense Logic	Logic '0' = <1 VDC, Logic '1' = >3.3 VDC
Isolation	Optically isolated
Response Time	2 msec, Max 6 msec

Configuration Settings

Communication Speed	10/100 Base-T Ethernet compatible
Data Bits	8
Parity	None
Stop bit	1
CRC	Yes
Slave ID	Configured through web App (Details provided with Product)
Function code	0x05 and 0x0F (5 Single coil & 15 multiple coil)
DO Register Address	0,1,2,3,4,5,6,7.

Note: The web App enables the configuration of the Module by selection of IP Address, Slave ID and its register values.

WIN-IO-4DDAME

18

Technical Datasheet Input / Output Modules 4 Port Digital Input, Digital Output and Analog Input with Modbus TCP Ethernet

The IO module communicates via Ethernet Interface. The module is designed to allow interface with other Modbus TCP/IP compatible devices. The module acts as an input/output device between the Modbus TCP/IP Network and the Gateway.
Digital IO module is sturdy, low power usage and easy
The IO modules are mounted on DIN rail mountable casing and with exposed connectors and LED indicators. The DIP switch for Slave ID and Baud rate are placed inside the enclosure.
The design of the modules incorporates **'resettable Fuses'** to safeguard against reverse polarity connection both for **Power and Communication**

Specifications

I/O Connectors	12 Pin 5.08 mm pitch pluggable screw Terminal Block
Dimensions	110 mm L x 110 mm B x 50 mm H
Power	Input Power – 15-40 VDC or 24 V AC / DC options Typical – 12V DC @ 120mA
Operating Temperature	0 – 60° C (32 ~ 140°F)
Storage Temperature	-20 - 70° C (-4 ~ 158°F)
Storage Humidity	5 ~ 95 % RH, non – Condensing

DO with Relay Output

Channels	4
Contact Form	1A, 1C
Contact Material	Ag Alloy
Contact Capacity	10A @ 240VAC, 10A @ 28VDC
Coil Voltage	5 – 48 VDC
Coil Power	0.36 W
Insulation Resistance	250MΩ
Electrical Life	1 x 10^5
Mechanical Life	1 x 10^7
Operating Time	7 msec, Max 15 msec
Release Time	2 msec, Max 6 msec

AI Inputs

Channels	4
Input Signal	4 – 20 mA / 0 - 5 VDC / 0 – 10VDC / (jumper selectable)
Accuracy	± 2% Full scale
Input Resolution	10 bits / 12 bits (Optional)
Isolation	Optically Isolated
External Loop Voltage	+ 12 VDC min
AI input impedance	120Ω

DI Inputs

Channels	4
Sense Voltage	3.3 – 30 VDC
Sense Logic	Logic '0' = <1 VDC, Logic '1' = >3.3 VDC
Isolation	Optically isolated
Response Time	2 msec, Max 6 msec

Configuration Settings

Communication Speed	10/100 Base-T Ethernet compatible
Data Bits	8
Parity	None
Stop bit	1
CRC	Yes
Slave ID	Configured through web App (Details provided with Product)
Function code DO	0x05 and 0x0F (5 Single coil & 15 multiple coil)
DO Register Address	4,5,6,7.
Function code DI	0x02 Read discrete Input
DI Register Address	0,1,2,3.
Function Code AI	0x03 Read Holding Registers
AI Register Address	10 Bit - 2,3,4,5 / 12 Bit – 6,7,8,9.

WIN-IO-8DDME

19

Technical Datasheet Input / Output Modules 8 Port Digital Input, Digital Output with Modbus TCP Ethernet

The IO modules communicate via RS485. The port can drive distances up to max 700 meters without the use of any repeater (this feature however also depends on the signal strength of the Modbus Master Device).
The RS485 Digital IO module is sturdy, low power usage and easy to use.
The IO modules are mounted on DIN rail mountable casing and with exposed connectors and LED indicators. The DIP switch for Slave ID and Baud rate are placed inside the enclosure.
The design of the modules incorporates **'resettable Fuses'** to safeguard against reverse polarity connection both for **Power and Communication**

Specifications

I/O Connectors	12 Pin 5.08 mm pitch pluggable screw Terminal Block
Dimensions	110 mm L x 110 mm B x 50 mm H
Power	Input Power – 15-40 VDC or 24 V AC / DC options Typical – 12V DC @ 120mA
Operating Temperature	0 – 60° C (32 ~ 140°F)
Storage Temperature	-20 - 70° C (-4 ~ 158°F)
Storage Humidity	5 ~ 95 % RH, non – Condensing

DO with Relay Output

Channels	8
Contact Form	1A, 1C
Contact Material	Ag Alloy
Contact Capacity	10A @ 240VAC, 10A @ 28VDC
Coil Voltage	5 – 48 VDC
Coil Power	0.36 W
Insulation Resistance	250MΩ
Electrical Life	1 x 10^5
Mechanical Life	1 x 10^7
Operating Time	7 msec, Max 15 msec
Release Time	2 msec, Max 6 msec

DI Inputs

Channels	8
Sense Voltage	3.3 – 30 VDC
Sense Logic	Logic '0' = <1 VDC, Logic '1' = >3.3 VDC
Isolation	Optically isolated
Response Time	2 msec, Max 6 msec

Configuration Settings

Communication Speed	10/100 Base-T Ethernet compatible
Data Bits	8
Parity	None
Stop bit	1
CRC	Yes
Slave ID	Configured through web App (Details provided with Product)
Function code DO	0x05 and 0x0F (5 Single coil & 15 multiple coil)
DO Register Address	0,1,2,3,4,5,6,7.
Function code DI	0x02 Read Discrete Input
DI Register Address	8,9,10,11,12,13,14,15

Note: TThe web App enables the configuration of the Module by selection of IP Address, Slave ID and its register values.

WIN-IO-8AIME

20

Technical Datasheet Input / Output Modules 8 Port Analog Input with Modbus TCP Ethernet.

The IO modules communicate via RS485. The port can drive distances up to max 700 meters without the use of any repeater (this feature however also depends on the signal strength of the Modbus Master Device).
The RS485 Digital IO module is sturdy, low power usage and easy to use.
The IO modules are mounted on DIN rail mountable casing and with exposed connectors and LED indicators. The DIP switch for Slave ID and Baud rate are placed inside the enclosure.
The design of the modules incorporates **'resettable Fuses'** to safeguard against reverse polarity connection both for **Power and Communication**

Specifications

I/O Connectors	12 Pin 5.08 mm pitch pluggable screw Terminal Block
Dimensions	70 mm L x 110 mm B x 50 mm H
Power	Input Power – 15-40 VDC or 24 V AC / DC options
	Typical – 12V DC @ 110mA
Operating Temperature	0 – 60° C (32 ~ 140°F)
Storage Temperature	-20 - 70° C (-4 ~ 158°F)
Storage Humidity	5 ~ 95 % RH, non – Condensing

AI Inputs

Channels	8
Input Signal	4 – 20 mA/ 0 - 5VDC / 0 – 10 VDC Jumper
Accuracy	selectable
Input Resolution	± 2% Full scale
Isolation	10 bits / 12 bits (Optional)
External Loop	Optically Isolated
Voltage	+ 12 VDC min
AI input impedance	120Ω

Configuration Settings

Communication Speed	10/100 Base-T Ethernet compatible
Data Bits	8
Parity	None
Stop bit	1
CRC	Yes
Slave ID	Configured through web App (Details provided with Product)
Function Code AI	0x03 Read Holding Registers
AI Register Address	10 Bit - 1,2,3,4,5,6,7,8 / 12 Bit – 9,10,11,12,13,14,15,16.

Note: The web App enables the configuration of the Module by selection of IP Address, Slave ID and its register values.

WIN-IO-TnHM

21

Technical Datasheet Temperature & Humidity Sensor with Modbus Rs485

This is a highly accurate grade Temperature and Humidity sensor that can be connected to DC power source of 12 V directly or a direct AC source. It's a probe-based sensor for temperature and humidity measurement. Additionally, it can be delivered with Modbus Rs485 interface or a Modbus TCP over WIFI interface to communicate to the IoT Gateway / PLC. The sensor would have an IP 40 casing and wall mountable.

Specifications

I/O Connectors	12 Pin 5.08 mm pitch pluggable screw Terminal Block
Dimensions	100 mm L x 100 mm B x 50 mm H
Power	Input Power – 12 VDC or AC Optional Typical – 5 W
Operating Temperature	0 – 60° C (32 ~ 140°F)
Storage Temperature	-20 - 70° C (-4 ~ 158°F)
Storage Humidity	5 ~ 95 % RH, non – Condensing

Sensor Details

Temperature	- 40 to + 80° C
Accuracy @25°	± 0.3° C
Humidity	0 – 100% RH
Accuracy RH	± 2%
Communication	I2C

Communication Type

Communication Interface	Modbus RS485

Configuration Settings

Communication Speed	9600 – 115200 Kbps (DIP SW selectable)
Data Bits	8
Parity	None
Stop bit	1
CRC	Yes
Slave ID	1 - 15 (DIP SW selectable)
Function Code Temp	0x03 Read Holding Registers
Function Code Humidity	0x03 Read Holding Registers
Register Address	0 and 1.

WIN-IO-TnHMW

22

Technical Datasheet Temperature & Humidity Sensor with Modbus TCP over wifi

This is a highly accurate grade Temperature and Humidity sensor that can be connected to DC power source of 5 - 12 V directly. It's a probe-based sensor for temperature and humidity measurement. Additionally, it would have a Modbus TCP over WIFI interface to communicate to the IoT Gateway. The sensor would have an IP 40 casing and wall mountable.

Specifications

I/O Connectors	12 Pin 5.08 mm pitch pluggable screw Terminal Block
Dimensions	80 mm L x 80 mm B x 50 mm H
Power	Input Power – 5 - 12 VDC
	Typical – 5 W
Operating Temperature	0 – 60° C (32 ~ 140°F)
Storage Temperature	-20 - 70° C (-4 ~ 158°F)
Storage Humidity	5 ~ 95 % RH, non – Condensing

Sensor Details

Temperature	- 40 to + 80° C
Accuracy @25°	± 0.3° C
Humidity	0 – 100% RH
Accuracy RH	± 2%
Communication	I2C

Communication Type

Communication Interface	Modbus TCP - Wi-Fi
Additional Options	Modbus TCP - Ethernet

Optional Features

- **Battery Backup**
- **Direct A/C power supply**

Configuration Settings

Communication Speed	Uses Wi-Fi
Data Bits	8
Parity	None
Stop bit	1
CRC	Yes
Slave ID	Configured through web App (Details provided with Product)
Function Code Temp	0x03 Read Holding Registers
Function Code Humidity	0x03 Read Holding Registers
Register Address	0 and 1.

Note: The web App enables the configuration of the Module by selection of IP Address, Slave ID and its register values.

WIN-IO-1RTU-1TCP

23

Technical Datasheet Input / Output Module - Modbus RTU Protocol to Modbus TCP Protocol

The IO modules communicate via RS485. The port can drive distances up to max 700 meters without the use of any repeater (this feature however also depends on the signal strength of the Modbus Slave Device).
The 1 Port Modbus RTU RS485 to Modbus TCP Ethernet module is sturdy, low power usage and easy to use.
The design of the modules incorporates **'resettable Fuses'** to safeguard against reverse polarity connection both for **Power and Communication**.

Specifications

I/O Connectors	2 Pin 5.08 mm pitch pluggable screw terminals.
Dimensions	70 mm L x 110 mm B x 50 mm H
Power	Input Power – 24 AC / DC
	Typical Power Consumption – 5W
Operating Temperature	0 – 60° C (32 ~ 140°F)
Storage Temperature	-20 -70° C (-4 ~ 158°F)
Storage Humidity	5 ~ 95 % RH, non – Condensing

Configuration Settings

- **Connect 24 V AC/DC Supply to the Module.**
- **Connect MODBUS RTU Multiple Slave devices or Single devices to the A & B Terminal of Module.**
- **Connect MODBUS TCP Network Ethernet Cable to the Ethernet port of the module.**
- **Default IP Address of Module is "192.168.1.254".**
- **After connecting we are ready to simulate the RTU to TCP Conversion.**
- **Please enter "192.168.1.254" on your browser, make sure your device should in the same network of Module.**
- **After Entering above IP Address, you will find a webpage which has 5 pages for Configurations.**

WIN-IO-4DIDOAI-NTCM 24

Technical Datasheet Input / Output Modules 4 Port Digital Input, Digital Output and Analog Input with NTC with Modbus RTU Protocol with RS485 Interface

The IO modules communicate via RS485. The port can drive distances up to max 700 meters without the use of any repeater (this feature however also depends on the signal strength of the Modbus Master Device).
The RS485 Digital IO module is sturdy, low power usage and easy to use.
The IO modules are mounted on DIN rail mountable casing and will also have a top acrylic safety cover on top for safety.
The design of the modules incorporates '**Resettable Fuses**' to safeguard against reverse polarity connection both for **Power and Communication port**.

Specifications

I/O Connectors	12 Pin 5.08 mm pitch pluggable screw Terminal Block, 2 Pin 5.08 mm pitch pluggable screw terminals.
Dimensions	110 mm L x 110 mm B x 50 mm H
Power	Input Power – 12 - 24 VDC or 24 V AC/DC Typical – 12V DC @ 120mA
Operating Temperature	0 – 60˚C (32 ~ 140˚F)
Storage Temperature	-20 - 70˚C (-4 ~ 158˚F)
Storage Humidity	5 ~ 95 % RH, non-Condensing

DO with Relay Output

Channels	4
Contact Form	1A, 1C
Contact Material	Ag Alloy
Contact Capacity	10A @ 240VAC, 10A @ 28VDC
Coil Voltage	5 – 48 VDC
Coil Power	0.36 W
Insulation Resistance	250MΩ
Electrical Life	1 x 10^5
Mechanical Life	1 x 10^7
Operating Time	7 msec, Max 15 msec
Release Time	2 msec, Max 6 msec

AI Inputs

Channels	4
Input Signal(selectable)	4 – 20 mA / 0 – 10VDC / NTC Type 3 (jumper)
Accuracy	±2% Full scale
Input Resolution	10 bits / 12 bits (Optional)
Isolation	Optically Isolated
External Loop Voltage	+ 12 VDC min
AI input impedance	120Ω

DI Inputs

Channels	4
Sense Voltage	3.3 – 30 VDC
Sense Logic	Logic '0' = <1 VDC, Logic '1' = >3.3 VDC
Isolation	Optically isolated
Response Time	2 msec, Max 6 msec

Configuration Settings

Communication Speed	9600 – 115200 (DIP SW selectable)
Data Bits	8
Parity	None
Stop bit	1
CRC	Yes
Slave ID	Configurable with DIP Switch
Function code	0x05 and 0x0F (5 Single coil &
DO Register Address	15 multiple coil) 4,5,6,7.
Function code DI	0x02 Read discrete Input
DI Register Address	0,1,2,3.
Function Code AI	0x03 Read Holding Registers
AI Register Address	10 Bit - 2,3,4,5 / 12 Bit – 6,7,8,9.

WIN-IO-3MOD-BAC

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Protocol Gateway provide a cost effective interface to building management system (BMS)

Specifications

Processor	Integrated Graphical Processor ARM® Mali™-T764 GPU*1

Power Requirements

Voltage	VAC 12-24 Volts or VDC 9-36 Volts
Current	280m A @ 24 VDC

Communication

1x 10/100 Mbps Ethernet port
Modbus TCP/IP or Bacnet TCP/IP
3x RS485 Ports (Optional Isolated Interface)
RS 485 Port : Modbus RTU

Memory

2 GB RAM, 32 GB Storage

Environmental

Operating temperature	-40-80 degC

Ethernet

Protection	2KV electromagnetism isolation
Interface	RS-485 2 wire (A+, B-)
Baud Rate	RS-485; 600bps ~ 1024Kbps
Data Bits	5, 6, 7, 8
Check Bit	None, Even, Odd
Buffer	Send and receive 1k bytes

Application

Modbus RTU to Modbus TCP/IP
Modbus RTU to BACnet TCP/IP
Modbus TCP/IP to BACnet TCP/IP

WIN-IO-3MOD-BAC

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Protocol Gateway provide a cost effective interface to building management system (BMS)

Specifications

Processor	ARM Cortex M7 with 600 MHz speed

Power Requirements

Voltage	VAC 12-24 Volts or VDC 9-36 Volts
Current	280m A @ 24 VDC

Communication

1x 10/100 Mbps Ethernet port
Modbus TCP/IP or Bacnet TCP/IP
2x RS485 Ports (Optional Isolated Interface)
RS 485 Port : Modbus RTU or BACnet MSPT

Memory

256Mb SDRAM, 32 Mb Flash

Environmental

Operating temperature	-40-80 degC

Ethernet

Protection	2KV electromagnetism isolation
Interface	RS-485 2 wire (A+, B-)
Baud Rate	RS-485; 600bps ~ 1024Kbps
Data Bits	5, 6, 7, 8
Check Bit	None, Even, Odd
Buffer	Send and receive 1k bytes

Application

Modbus RTU to Modbus TCP/IP
Modbus RTU to BACnet TCP/IP
Modbus TCP/IP to BACnet TCP/IP
BACnet TCP/IP to Modbus TCP/IP
BACnet MSTP to BACnet TCP/IP

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