NuDAM-6100 Series

Modules supporting Modbus RTU protocol

Introduction

The NuDAM modules provide direct communications with a wide variety of sensors; perform signal conditioning, scaling, linearization and conversion; can acquire measurements of temperature, pressure, flow, voltage, current; and handle multiple digital signal types broadly used in IoT and other industrial applications, such as facility monitoring, environment monitoring, and industrial process control. The new ND-6117, ND-6124, ND-6150, and ND-6160 modules feature Modbus/RTU as the best remote data transmission protocol, which provides customers a comprehensive product offering.



Common Specifications

General

Item	Description
Power input range	+10~+30 VDC (reversal protection)
Power consumption	ND-6017: 0.8 W ND-6124: 3 W ND-6150: 1.5 W ND-6160: 1.8 W
Isolation protection	3000 VDC
Operation temperature	-10–70 °C
Regulation	CE/FCC

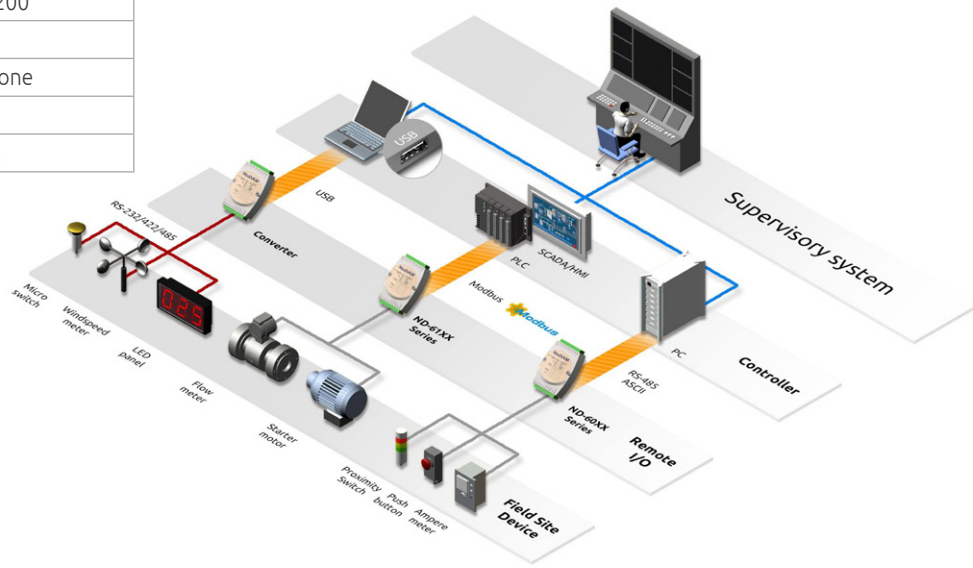
Serial

Item	Description
Interface	RS-485, 2-wire
Communication protocol	Modbus RTU & ASCII
Speed	1200 to 115200
Data flow control	Yes
Parity	Even, Odd, None
Data bits	8-bit
Stop bits	1- or 2-bit

Ordering Information

- **ND-6117**
  8-ch analog input, RS-485, Modbus RTU and ASCII
- **ND-6124**
  4-ch analog output, 4-ch digital input, RS-485, Modbus RTU and ASCII
- **ND-6150**
  8-ch digital input, 8-ch digital output, RS-485, Modbus RTU and ASCII
- **ND-6160**
  4-ch relay output,4-ch digital input, RS-485, Modbus RTU and ASCII

Solution Diagram



Specifications

	ND-6117	ND-6124	ND-6150	ND-6160
Function	Analog input	Analog output & digital input	Digital input & output	Relay output & digital input
Analog input				
Channel	8 differential or 6 differential & 2 single-ended	-	-	-
Resolution	16/12-bit	-	-	-
Sample rate (Software selectable)	60/s (12-bit) 10/s (16-bit)	-	-	-
Input range(Voltage)	±150/500 mV, ±1/5/20 V	-	-	-
Input range(Current)	±20 mA	-	-	-
Analog output				
Channel	-	4	-	-
Resolution	-	14-bit	-	-
Output range(Voltage)	-	0–5V, ±5V, 0–10V, ±10V	-	-
Output range(Current)	-	0–20 mA	-	-
Accuracy(Voltage)	-	±0.02% of FSR	-	-
Accuracy(Currnet)	-	±0.1% of FSR	-	-
Digital output				
Channel	-	-	8 isolated output (source)	4 relay output
Max. load current	-	-	650mA per channel	-
Output isolation Voltage	-	-	3750Vrms	-
Relay contact rating(AC)	-	-	-	0.6A/125Vac
Relay contact rating(DC)	-	-	-	2A/30Vdc
ON/OFF time interval	-	-	-	Operate Time: 3ms max. Release Time: 2ms max.
Digital input				
Channel	-	4 isolated with common source	8 (sink/source) Isolated with common source	4 isolated with common source
Wet Contact Input	-	Low(0): 1V max.	Low(0): 1V max.	Low(0): 1V max.
	-	High(1): 10V to 30V	High(1): 10V to 30V	High(1): 10V to 30V
Dry Contact Input:	-	-	Low(0): open High(1): close to DI.GND	-
Input isolation Voltage	-	3750Vrms	3750Vrms	3750Vrms
General Spec				
Operation temp.	-10–70 °C	-10–70 °C	-10–70 °C	-10–70 °C
Communication protocol	Modbus RTU & ASCII	Modbus RTU & ASCII	Modbus RTU & ASCII	Modbus RTU & ASCII

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