

General Specifications

Model ND230 Ao/DeviceNet Converter

GS 77P01L01-01E

■ General

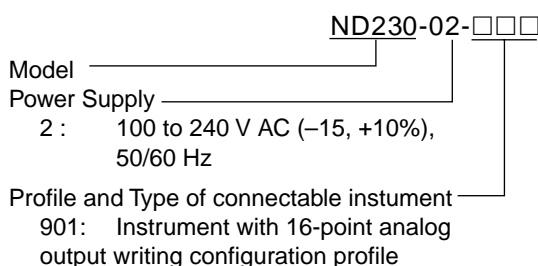
The Model ND230 Ao/DeviceNet converter receives input of digital values (0 to 10000) from OMRON's SYSMAC PLCs or Yokogawa Electric's FA-M3 PLCs via the DeviceNet, and converts them to 16* (1 to 5 V DC) analog output signals.

The analog output signals can be coupled with Yokogawa M&C's signal converter-the JUXTA D Series—via a dedicated cable. The ND230 is designed for either wall mounting or DIN-rail mounting.

*: Up to 16 JUXTA D series converter can be used.



■ Model and Suffix Codes



User-defined optional feature:

The 1 to 5 V write-in scale can be user-defined within the range of -30000 to 30000 when ordering. No user definition results in the default range of 0 to 10000.

■ Hardware Specifications

- Construction: 14-pin plug-in converter designed for wall or DIN-rail mounting
- Material: ABS resin for casing
- Weight: Approx. 380 g (including a 110 g socket)
- Analog output side: 16 points of 1 to 5 V signal, connector
- I/O on PLC side: DeviceNet front-panel connector
- LED indicator: RDY, MS and NS
- Power supply: 100 to 240 V AC (-15%/+10%), 50/60 Hz
- Insulation resistance: 100 MΩ min. at 500 V DC between any two terminals among the ND220 output, DeviceNet output terminals, power supply and grounding terminals
- Withstand voltage: 2000 V AC for 1 minute between any two terminals among the ND220 output, DeviceNet output terminals, power supply and grounding terminals
- Power consumption: Approx. 3.4 VA (100 V AC), approx. 5.8 VA (240 V AC)

■ Output Specifications

- Accuracy: ±0.1% of full scale (under standard operating conditions)
- Write-in count: 0 to 10000 (The scale can be user-defined within the range of -30000 to 30000 when ordering.)
- Output cycle: Approx. 250 ms/16 outputs

■ DeviceNet Specifications

- Baud rate setting: 125, 250 or 500 kbps set with DIP switch
- Node address setting: 0 to 63, set with DIP switch
- Number of channels occupied: 24
- Transmission speed/distance: The available overall distance of transmission differs depending on the transmission speed, as shown below:
 - 125 kbps : up to 500 m
 - 250 kbps : up to 250 m
 - 500 kbps : up to 100 m

■ Environmental Requirements

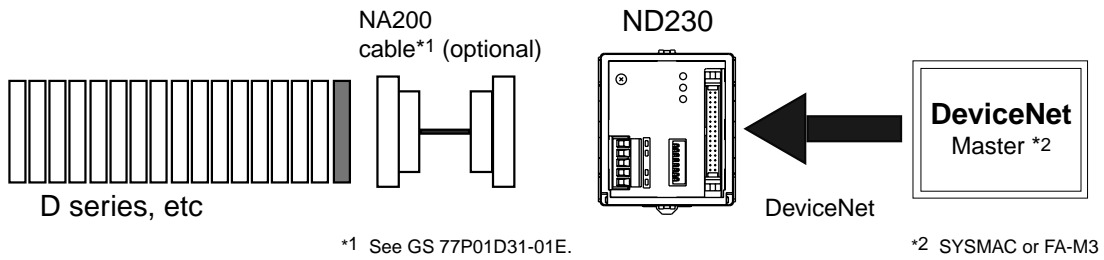
- Normal operating conditions:
 - Ambient temperature range: 0 to 50°C
 - Temperature change: 10°C/h max.
 - Ambient humidity range: 5 to 90% RH (no condensation)
 - Altitude of installation: 2000 m max.
- Transport/storage conditions:
 - Temperature range: -40 to 70°C
 - Ambient humidity range: 5 to 95% RH (no condensation)
- Effect of ambient temperature change:
 - Voltage output: ±0.2% of full scale max. per 10°C
- Effect of supply voltage fluctuation (within rated supply voltage range):
 - Voltage output: ±0.1% of full scale max.

I/O Configuration Profile

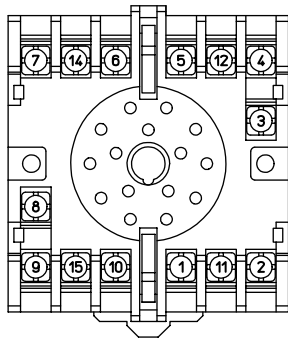
Number of channels occupied: 24

	IN AREA	Content	OUT AREA	Content	
No.1 Output 1-5V	0 (HEX)		0 (HEX)	No. 1: Output setting	DeviceNet ←————→ Node address setting : 0 to 63 Baud rate setting 125kbps 250kbps 500kbps
No.2 Output 1-5V	1		1	No. 2: Output setting	
No.3 Output 1-5V	2		2	No. 3: Output setting	
No.4 Output 1-5V	3		3	No. 4: Output setting	
No.5 Output 1-5V	4		4	No. 5: Output setting	
No.6 Output 1-5V	5		5	No. 6: Output setting	
No.7 Output 1-5V	6		6	No. 7: Output setting	
No.8 Output 1-5V	7		7	No. 8: Output setting	
No.9 Output 1-5V	8		8	No. 9: Output setting	
No.10 Output 1-5V	9		9	No.10: Output setting	
No.11 Output 1-5V	A		A	No.11: Output setting	
No.12 Output 1-5V	B		B	No.12: Output setting	
No.13 Output 1-5V	C		C	No.13: Output setting	
No.14 Output 1-5V	D		D	No.14: Output setting	
No.15 Output 1-5V	E		E	No.15: Output setting	
No.16 Output 1-5V	F		F	No.16: Output setting	

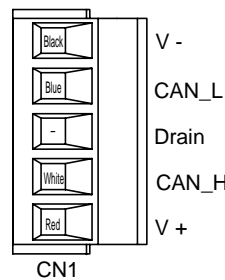
Communication Wiring Diagram



Terminal Arrangement



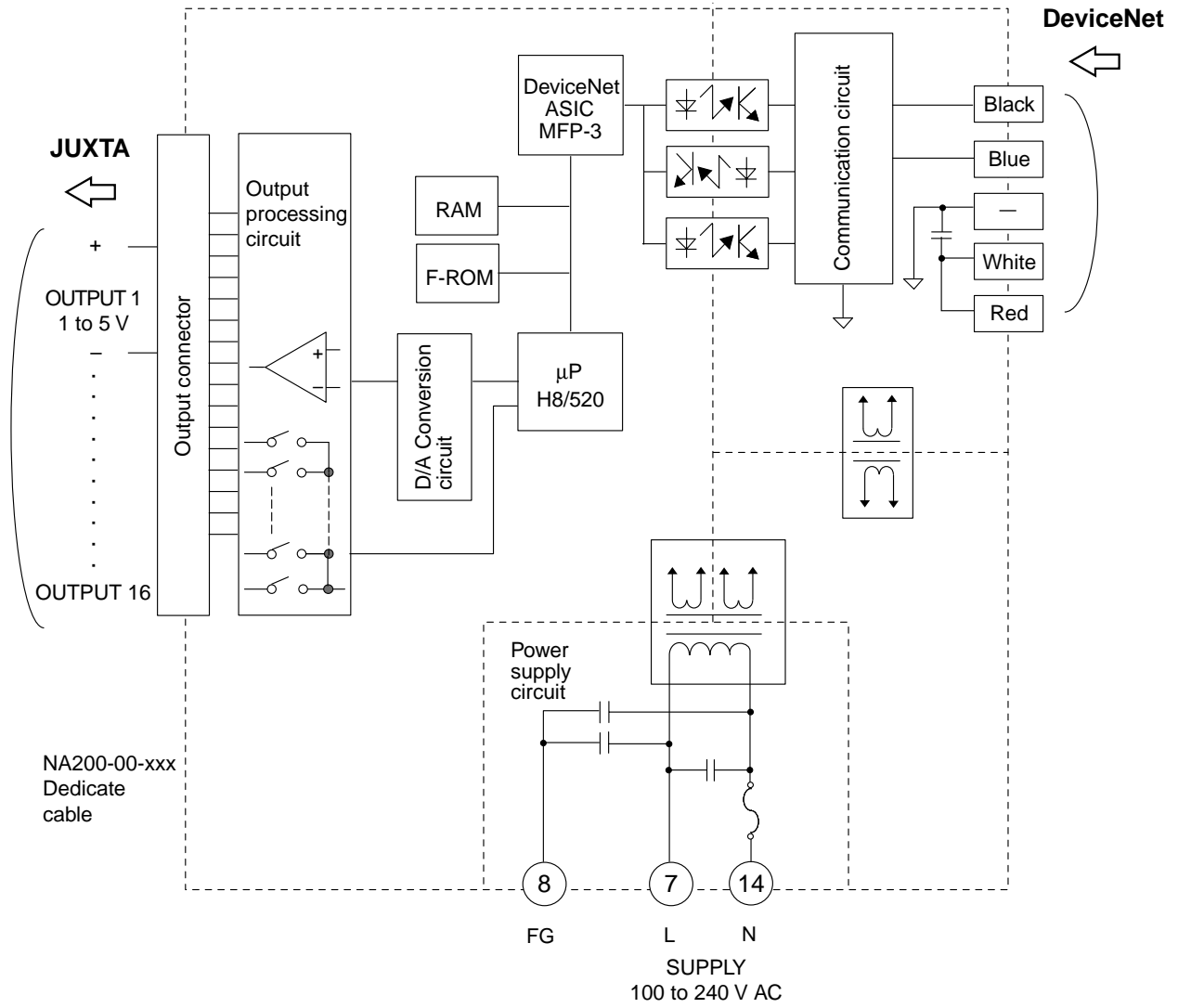
Terminal No.	Power Supply Singnal
7	L
8	⏚
14	N
All other terminals are unusable.	



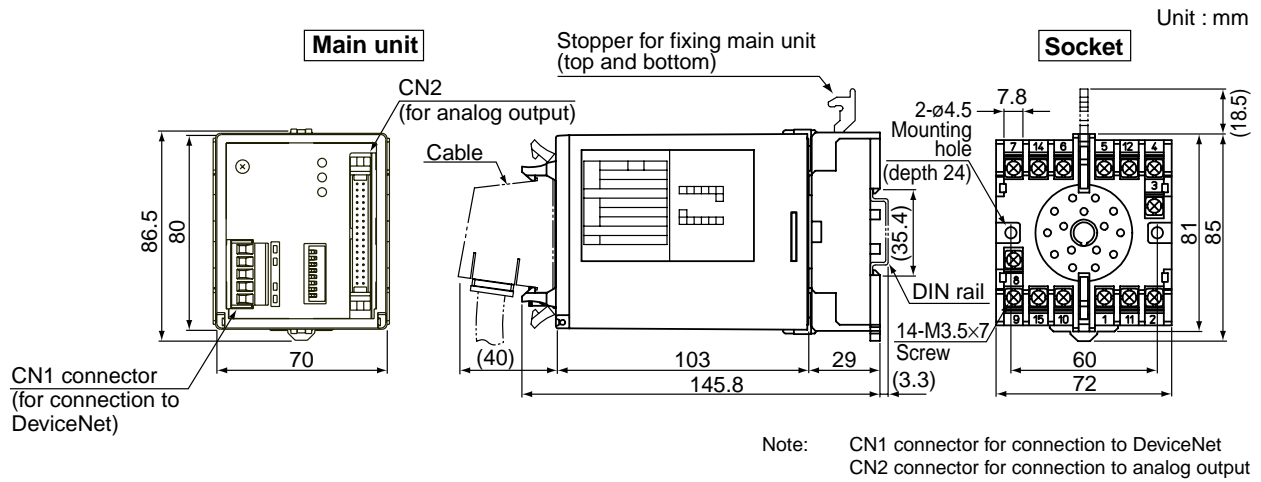
CN1 Connector Assignments

Color	DeviceNet Signal
Black	V -
Blue	CAN_L
Drain	Drain
White	CAN_H
Red	V +

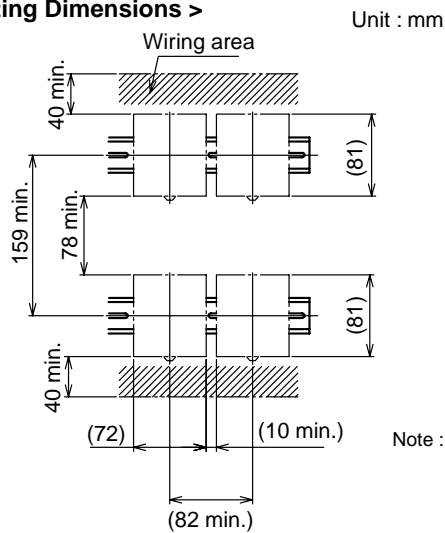
■ Block Diagram



■ Dimensions



< Mounting Dimensions >



Note : A minimum spacing of 10 mm is required between ND220 converters for close, side-by-side mounting. No spacing is required, however, if the converters are rated for a 100 to 120 V AC supply voltage range.