



Q62DAN Q64DAN
Q68DAVN Q68DAIN

Digital-Analog Converter Module

New Analog Output Channel with Isolated External Power Supply!
Ensuring improved safety, noise resistance, and reliability.

1CH
2CH

Analog output

Fluid control

Isolated

External power supply

Tank

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Features

- Improved Noise Resistance**

Isolating the analog output channel from the external power supply ensures that any power fluctuations caused by external noise do not disrupt the analog output.
- Improved Safety**

Safety is improved substantially by isolating the external power supply. This design ensures that sensitive internal components are protected by any possible short circuits caused by incorrect wiring.

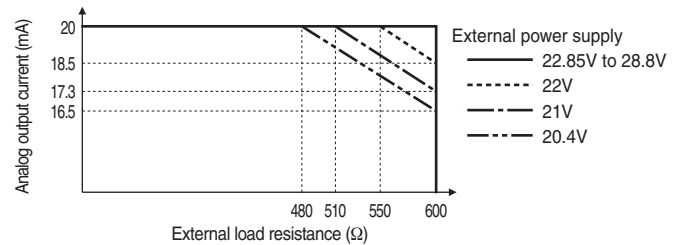
Mitsubishi Electric Corporation Nagoya Works is a factory certified for ISO14001 (standards for environmental management systems) and ISO9001 (standards for quality assurance management systems)



Comparison with previous models

Model Name		Previous Models		New Models	
		Q62DA Q64DA Q64DAI	Q68DAV	Q62DAN Q64DAN Q68DAIN	Q68DAVN
External load resistance value		DC0 to 20mA (0Ω to 600Ω) Restrictions apply*	—	DC0 to 20mA (0Ω to 600Ω)	—
Isolation method	I/O terminals isolated from PLC power supply	Photocoupler isolation		Photocoupler isolation	
	Output channel isolation	Not isolated		Not isolated	
	Analog output isolated from external power supply	Not isolated		Transformer isolation	
Dielectric withstand voltage	I/O terminals isolated from PLC power supply	500VAC for 1 minute		500VAC for 1 minute	
	Analog output isolated from external power supply	—		500VAC for 1 minute	
Insulation resistance	I/O terminals isolated from PLC power supply	500VDC 20MΩ or more		500VDC 20MΩ or more	
	Analog output isolated from external power supply	—		500VDC 20MΩ or more	
External Dimensions		98(H)x27.4(W)x90(D) [mm]		98(H)x27.4(W)x112(D) [mm]	

* When the external power supply voltage is less than 22.85VDC, the analog output current and the external load resistance are as shown in the figure at right.



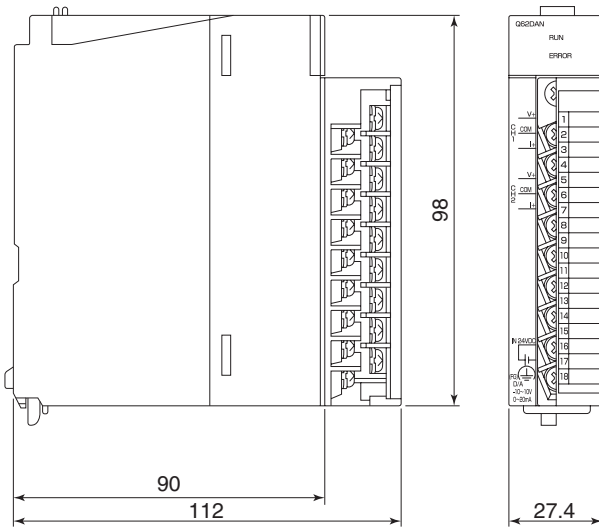
Performance specifications

Model name		Q62DAN	Q64DAN	Q68DAVN	Q68DAIN				
Number of analog output points		2 points (2 channels)	4 points (4 channels)	8 points (8 channels)					
Digital input		16-bit signed binary (In standard resolution mode: -4096 to 4095; In high resolution mode: -12288 to 12287, -16384 to 16383)							
Analog output	Voltage	-10VDC to 10V (external load resistance 1kΩ to 1MΩ)			—				
	Current	DC0mA to 20mA (external load resistance 0Ω to 600Ω)	—		DC0mA to 20mA (external load resistance 0Ω to 600Ω)				
I/O characteristics, max. resolution		Analog output range		Standard resolution mode		High resolution mode			
		Voltage	0V to 5V	0 to 4000	Digital input value	Max. resolution	0 to 12000	Digital input value	Max. resolution
			1V to 5V		1.25mV	0.416mV			
			-10 to 10V	1.0mV	0.333mV				
		Current	V user range setting	-4000 to 4000	2.5mV	-16000 to 16000	0.625mV		
			0mA to 20mA	0 to 4000	0.75mV	-12000 to 12000	0.333mV		
			4mA to 20mA		5μA	1.66μA			
User range setting	-4000 to 4000		4μA	1.33μA					
Accuracy (vs. max. analog output value)	Ambient temp. 25±5°C	±0.1% or less (voltage: ±10mV, current: ±20μA)							
	Ambient temp. 0 to 55°C	±0.3% or less (voltage: ±30mV, current: ±60μA)							
Conversion rate		80μs / channel							
Absolute max. output	Voltage	±12V			—				
	Current	21mA	—		21mA				
Number E2PROM writings		Max. 100,000 times							
Output short-circuit protection		Protected							
Isolation method		I/O terminal isolation from PLC power supply: Photocoupler isolation Output channel isolation: Not isolated Analog output isolation from external power supply: Transformer isolation							
Dielectric withstand voltage		Between I/O terminals and PLC power supply: 500VAC for 1 minute Between analog output and external power supply: 500VAC for 1 minute							
Insulation resistance		Between I/O terminals and PLC power supply: 500VDC, 20MΩ or more Between analog output and external power supply: 500VDC, 20MΩ or more							
Number of occupied I/O points		16 points (I/O assignment: intelligent 16 points)							
Connection terminal		18-point terminal block							
Applicable wire size		0.3 to 0.75mm ²							
Applicable solderless terminal		R1.25-3 (sleeved crimp terminals cannot be used)		FG terminal: R1.25-3, 1.25-YS3, RAV1.25-3, V1.25-YS3A Other than FG terminal: R1.25-3 (sleeved crimp terminals cannot be used)					
External power supply		24VDC +20%, -15%							
		Ripple and spike 500mVP-P or less							
		Inrush current: 2.5A, 250μs or less	Inrush current: 2.5A, 260μs or less	Inrush current: 2.5A, 230μs or less	Inrush current: 2.5A, 230μs or less				
Internal current consumption (5VDC)		0.33A	0.34A	0.38A	0.38A				
Weight		0.19kg	0.2kg	0.2kg	0.2kg				

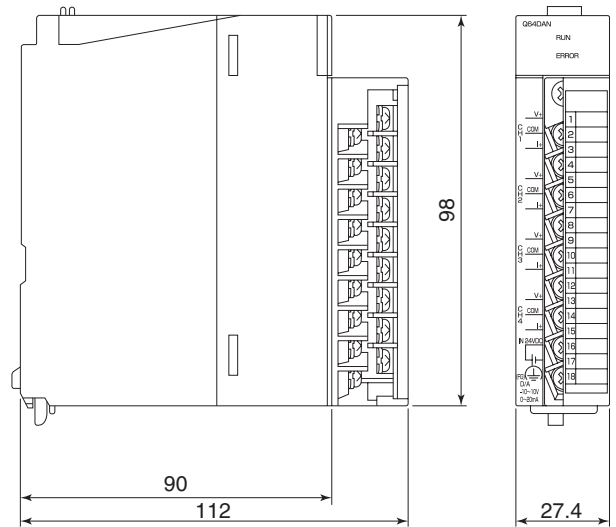
External dimensions

Unit: mm

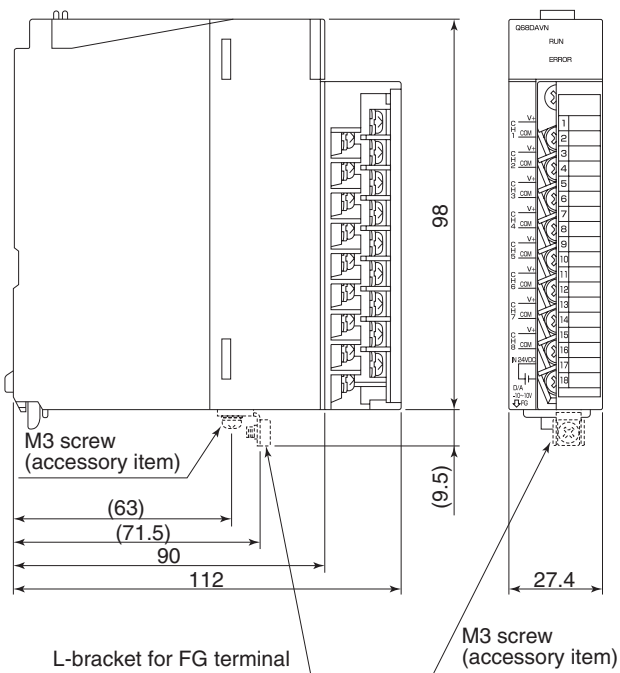
Q62DAN



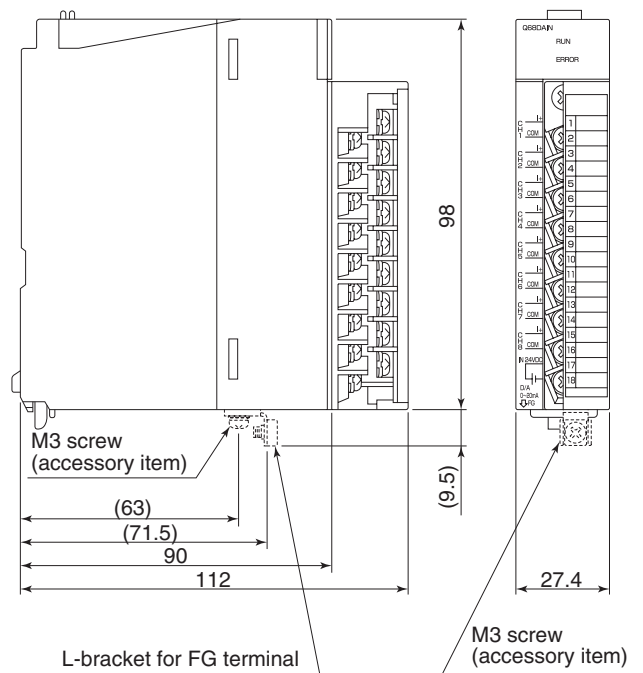
Q64DAN



Q68DAVN



Q68DAIN



Utility package combinations

The utility package versions supported by this converter module are listed below.

Utility package name	Model name	Version	Supported / not supported
GX Configurator-DA	SW0D5C-QDAU	1.00A to 1.18U	Not currently supported (*)
	SW2D5C-QDAU	2.00A to 2.02C	Not currently supported (*)
	SW2D5C-QDAU	2.03D or higher	Supported

* This utility package version and previous versions are supported by previous-model modules with model names which do not end with "N".

Product list

Product name	Model name	Model code
Q62DAN model Digital-Analog Converter Module	Q62DAN	1W4586
Q64DAN model Digital-Analog Converter Module	Q64DAN	1W4587
Q68DAVN model Digital-Analog Converter Module	Q68DAVN	1W4588
Q68DAIN model Digital-Analog Converter Module	Q68DAIN	1W4589

Manuals

Manual name	Manual supply status	IB/SH No.	Model code
Digital-Analog Converter Module User's Manual Q62DAN/Q64DAN/Q68DAVN/Q68DAIN/Q62DA/Q64DA/Q68DAV/Q68DAI/ GX Configurator-DA(SW2D5C-QDAU-E)	Sold separately	SH-080054-L	13JR02
Digital-Analog Converter Module User's Manual (Hardware Edition) Q62DAN/Q64DAN/Q68DAVN/Q68DAIN	Shipped with product	IB-0800321-A	13JP80

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