

SANUPS

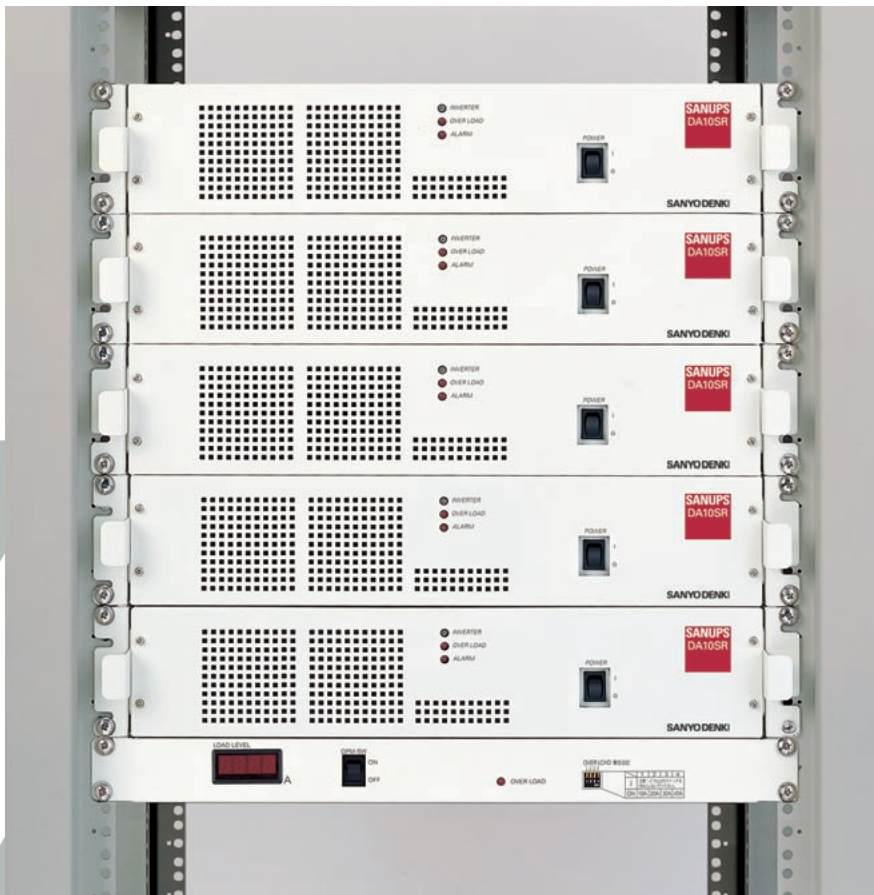
INVERTER

DA

SA/SC/SR

C **UL** US

CE
Self-Certification



SANYO DENKI

E
ENGLISH

CONVERTING DC 48 V TO STABLE AC 100V / 200V.

Inverter

SANUPS DA10SA DA10SC DA10SR

19 inch
Rack
Mountable

Conformity with
JIS / EIA standards

Single system

Input	Output	Capacity
DC48V	AC100/110/ 120V	1kVA (0.8kW)



Single system

Input	Output	Capacity
DC48V	AC200/220/ 230/240V	1kVA (0.8kW)



Parallel redundant system

Input	Output	Capacity
DC48V	AC100/110/115/120V AC200/220/230/240V	1~5kVA (0.8~4kW)

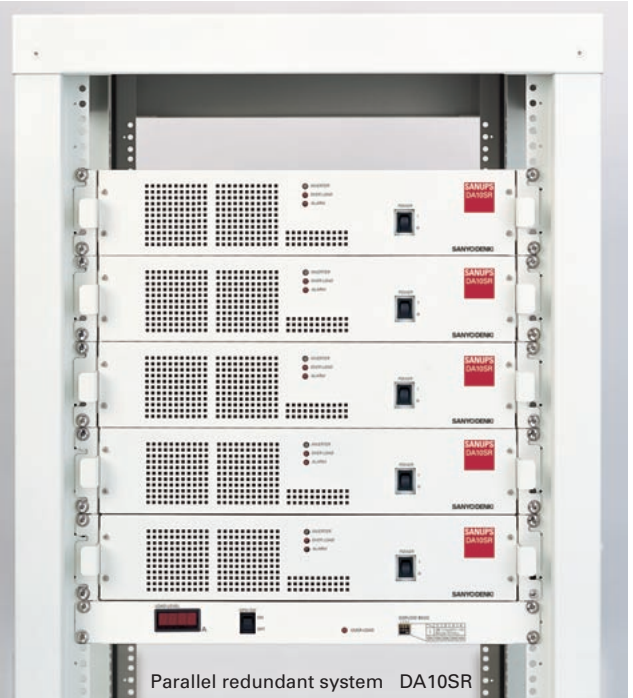


DA10SA and DA10SC are the compact stand-alone inverter that realize the complete sine wave.

DA10SA and DA10SC can be operated OFF-LINE mode by the AC bypass power.

The DA10SR has realized the highly reliable operation by the parallel redundant system (N + 1 unit configuration). SANUPS DA10SR is supplied in the unit type that can be mounted on the EIA standard 19-inch rack. Number of SANUPS DA10SR units can be increased as desired when the load capacity increases.

Output capacity of 5 kVA can be supplied with 5 units at a maximum.



Parallel redundant system DA10SR



Stand alone DA10SC

Feature 1

Supplying extremely stable and reliable power

●Achieving a high reliability with parallel redundant operation.

●Making a single-phase 100V / 200V series 1 kVA as a basic unit, achieving our original complete individual controlling.(SA,SC,SR)

●Parallel redundant configuration of N+1 units containing an extra 1 unit for redundant power capacity provides against unexpected trouble, and can achieve higher reliability of inverter power supply.(SR)

●Complete sine wave output.

●No error operation of loads due to a wave disorder.(SA,SC,SR)

Feature 2

Power expandability with small investment

●Achieve power expandability and higher reliability by adding 1 kVA unit as the need arises.(SR)






●Expandable up to 5 kVA as desired when the load increases.

●Can easily support the parallel redundant operation.

Specifications

■ Stand-alone unit

■ Inverter unit

Item	Model No.	SA (Stand-alone type)	SC (Stand-alone type)	SR (Parallel operation type)	Remarks	
		UL DA10SA0-100U 	DA10SC0-200U  DA10SC0-200E 	DA10SRC0-100U  —		DA10SRC0-200U 
Output capacity (Apparent power/Active power)		1kVA/0.8kW				
System	Rating	Continuous				
	Cooling system	Forced air				
DC input	Nominal voltage	48V				
	Voltage range	41 to 55V	40.5 to 57V			
	Maximum input current	25A	26A		On minimum DC input, and nominal output	
	Psophometric noise	2mV			On nominal input voltage, and linear load	
AC Input voltage		100 to 120V	200 to 240V	—	Bypass	
AC Output	Number of phase / wire	Single-phase / 2-wire				
	Nominal voltage	100/110/120V (Default 120V)	200/220/230/240V (Default 200V)	100/110/115/120V (Default 120V)	200/220/230/240 (Default 200V)	User selectable
	Voltage regulation	±3%	±5%			
	Nominal frequency	50/60Hz (Default 60Hz)				User selectable
	Frequency accuracy	±1%				
	Voltage wave distortion rate	Linear load	<5%			On rated operation
		Non-linear load	<10%			On rated operation
	Transient voltage fluctuation	±10%				On 0-100% load change
	Response time	<150ms				
	Load factor	0.8(lag)				Fluctuation range 0.6 (lag) to 1
	Overcurrent protection	>105%				Pendent control
	Output switching time	Inverter→Bypass	20 ms (Selector switch. When equipment is faulty) 25 ms (When DC power supply is stopped)	5 ms (Selector switch. When equipment is faulty. When DC power supply is stopped)	—	
		Bypass→Inverter	20 ms (Selector switch), 120 ms (When AC power supply is stopped) 1.5 s (When DC power supply is recovered)	5 ms (Selector switch. When DC power supply is recovered.) 20 ms (When AC power supply is stopped)	—	
EMI and EMS	FCC part15 sub B class A EN55011:1998+A1:1999 Group 1 Class A EN61000-6-2:1999 (SA type) FCC part15 sub B class A (SR-100V type) FCC part15 sub B Class A EN55022:1998 /A1:2000/A2:2003 (CISPR22:1997/A1:2000/A2:2002) EN61000-6-2 : 2001 (IEC61000-6-2 : 1999) (SC and SR-200V type)					
Acoustic noise	<40dB				At 39.37in. from the unit front, A characteristic	
Operation temperature	32 to 104°F (0 to 40°C)		41 to 104°F (5 to 40°C)			
Relative humidity	30 to 90% (non-condensing)		5 to 85% (non-condensing)			
Standard of safety	UL,c-UL(UL60950),CE				Note	

Note: UL: Recognition E203489 CE: Self-Certification Compliant EN60950

■ SR Input/output unit with display function

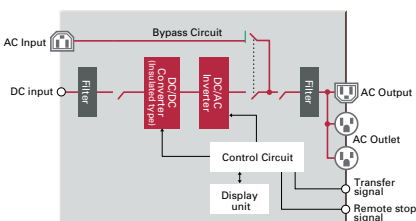
Item	Model No.	DA10SR0PDB5DPMU	DA10SR2PDB5DPMU	Remarks
Maximum connection number of inverter		5		
AC output	Nominal capacity (Apparent power/Active power)	5kVA/4kW		
	Nominal voltage	100/110/115/120V	200/220/230/240V	Depends on inverter output
	Voltage regulation	±5%		Depends on inverter output
	Load factor	0.8(lag)		Depends on inverter output
Digital parameter range	Approx. ±10%			Target value
Output current threshold setting	10A/20A/30A/40A		5A/10A/15A/20A	Switch setting

■ SR Capacity increase/redundant configuration

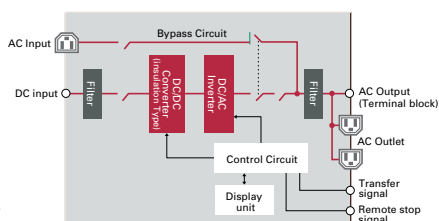
Item	Number of units	2		3		4		5	
System configuration		N	N+1	N	N+1	N	N+1	N	N+1
Direct input	Nominal voltage	48V							
	DC input voltage range	40.5 to 57.0V							
	Nominal input voltage capacity	46A	23A	69A	46A	92A	69A	115A	92A
	Maximum input capacity	52A	26A	78A	52A	104A	78A	130A	104A
AC output	Nominal capacity (Apparent power/Active power)	2kVA/1.6kW	1kVA/0.8kW	3kVA/2.4kW	2kVA/1.6kW	4kVA/3.2kW	3kVA/2.4kW	5kVA/4.0kW	4kVA/3.2kW
	Nominal voltage	100/110/115/120V(SR0 Type) or 200/220/230/240V(SR2 Type)							
	Voltage regulation	<5%							
	Load factor	0.8(lag)							

General System Diagram

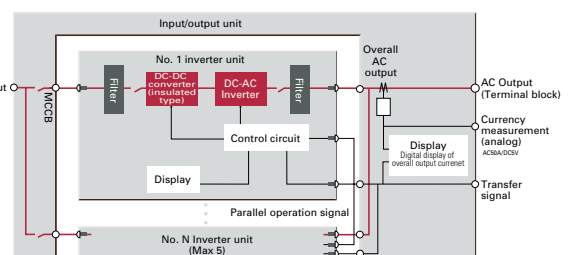
■ DA10SA



■ DA10SC



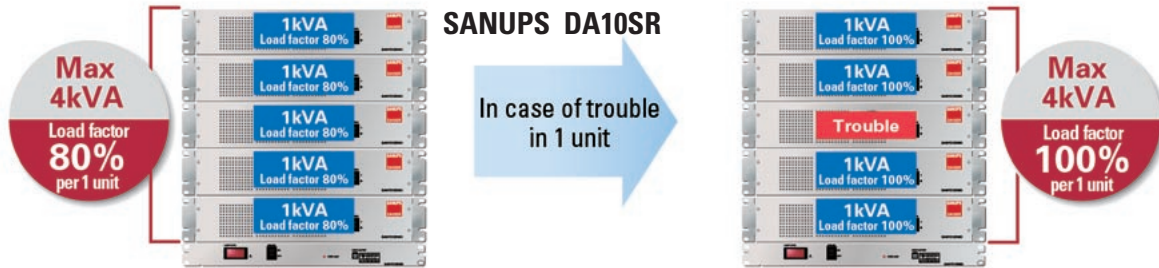
■ DA10SR



Feature 1 *Supplying extremely stable and reliable power*

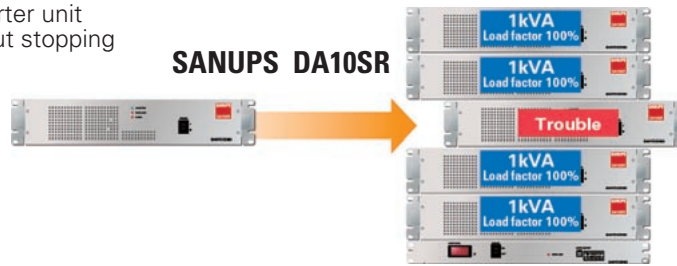
- Achieving a high reliability with parallel redundant operation.(SR)

- Making a single-phase 100V / 200V Model 1 kVA as a basic unit, achieving our original complete individual controlling.
- Parallel redundant configuration of N+1 units containing an extra 1 unit for redundant power capacity provides against unexpected trouble, and can achieve higher reliability of inverter power supply.



- When you plan the N+1 configuration, please investigate the configuration containing the total required power capacity +1 unit.

■ In case of trouble, inverter unit can be exchanged without stopping the power output.



- Complete sine wave output.

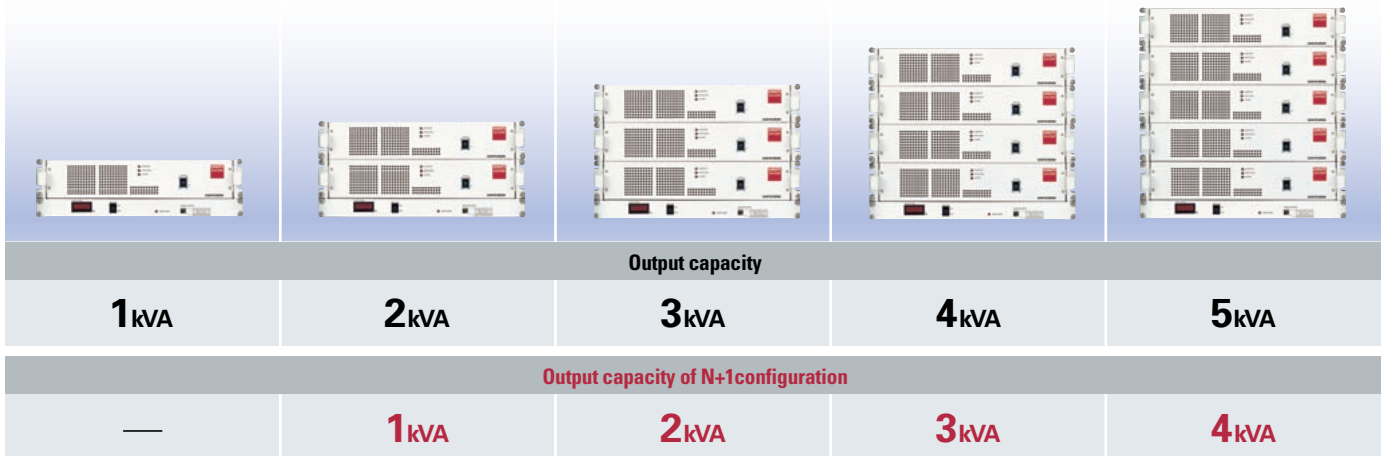
- No error operation of loads due to waveform disorder.



Feature 2 *Power expandability with small investment*

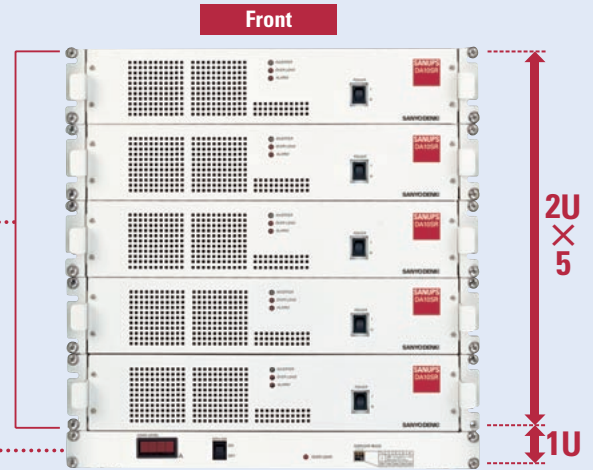
- Achieve power expandability and higher reliability by adding 1 kVA unit as the need arises.(SR)

- Expandable up to 5 kVA as desired when the load increases.
- Can easily support the parallel redundant operation.



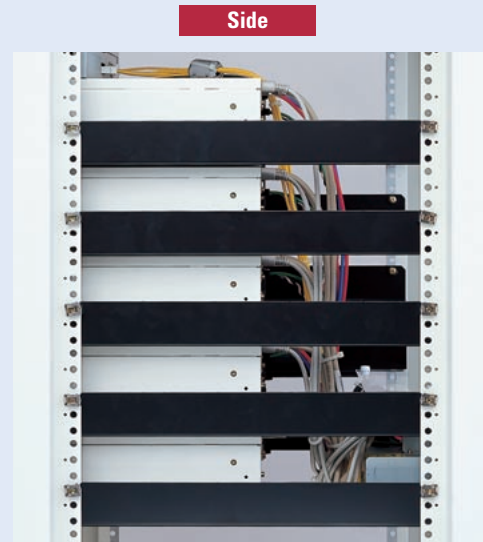
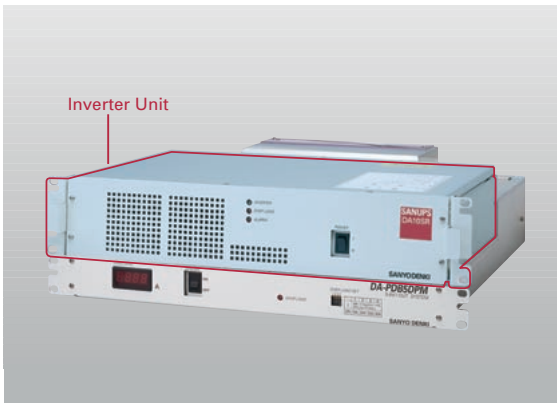
SR Various Units and Configuration Example of 5 inverter units + input/output unit with display function

Inverter unit



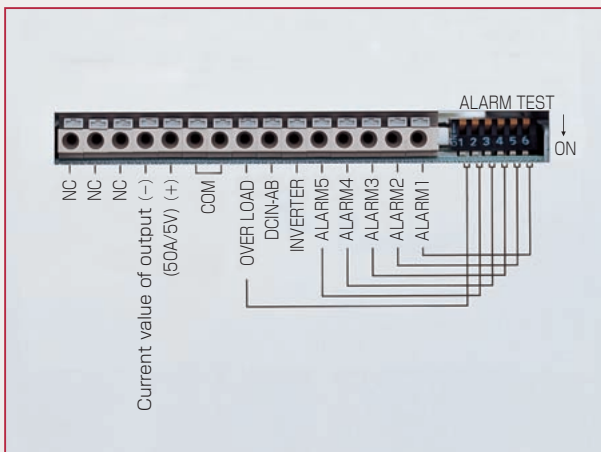
Input/output unit with display function

Picture shows the configuration when single inverter unit is installed.



- Users are requested to prepare the support rail by users.
- This equipment is designed for EIA/JIS standard 19-inch rack.

External transfer signal



External transfer signals and their arising conditions

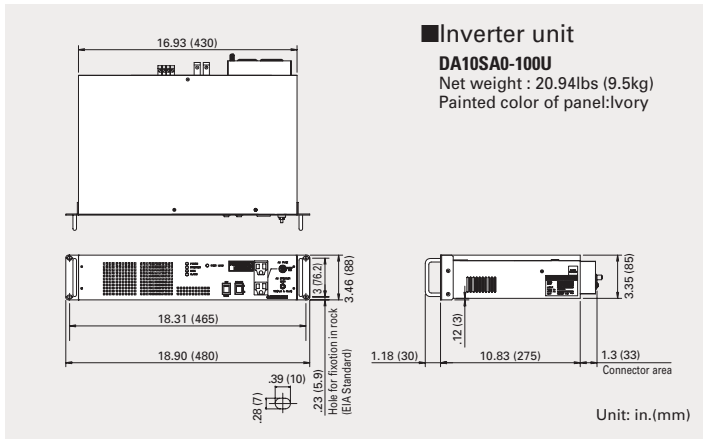
(No-voltage contact: Contact capacity DC 60 V 0.1 A)

External transfer signals	Arising conditions
ALARM (fault)	In the event of the inverter unit failure (Including output voltage drop caused by overload)
INVERTER (operation/output)	In the condition that the equipment operates normally
DCIN-AB (DC input abnormal)	In the event of no DC input or failure (DCIN-AB signal is output in the event of input failure on even one of connected units.)
OVERLOAD (overload)	In the event of overloaded condition exceeding the preset current value* *Note: The current value cannot be preset in case the display unit is not installed.

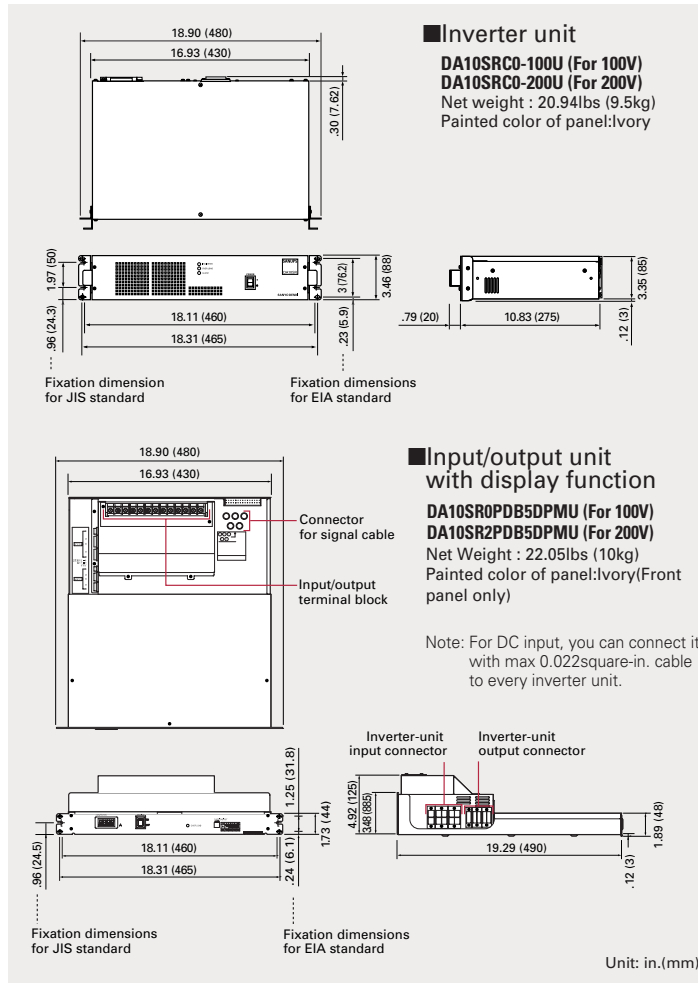
Measurement signal (analog)

The overall output current measurement value is the voltage output on the rate of AC 50A / DC 5V .

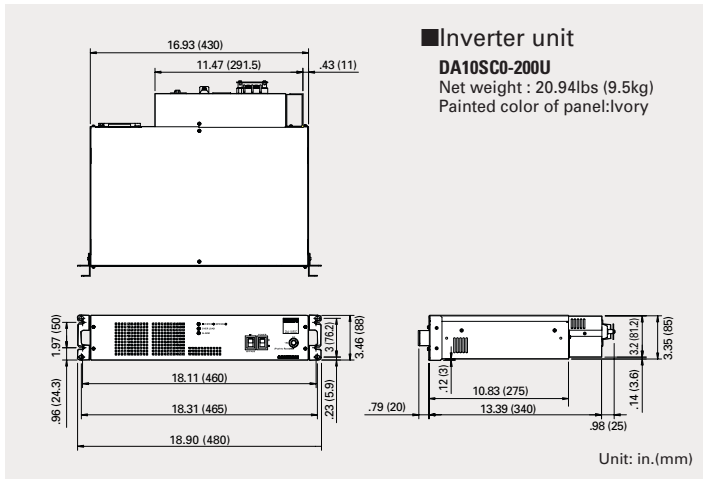
SA Outside dimensions



SR Outside dimensions



SC Outside dimensions



SANUPS

SANYO DENKI UNIVERSAL POWER SYSTEM

Notes when investigating use of this product in your applications

- Before starting installation, assembling and use, read the "Operation Manual" carefully and use the product correctly in your applications.
- When you are going to use this product in the following application, the special considerations are required for operation, running, maintenance and control. Be sure to consult with our company as a part of your investigations.
 - Medical equipment and other equipment that are related directly to human life.
 - Train or elevator that can give injury to human body.
 - Socially and publicly important computer systems

- (d) And other equipment that are related to safety of human life and that can affect severe effects on maintenance of public functions.
- For the applications that undergo vibration such as vehicles, ships and transportation facilities, please consult with our company.
- Never modify this product or give additional processing to this product.
- For the installation and maintenance work, please consult with our company or with specialized company.

※ For any inquiry or consultation, please contact our sales representative.

Our company has acquired ISO9001 assessments.

Products shown by this catalog are manufactured by the plants that are controlled by the severe quality control system conforming to the ISO9001 assessments.

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