DeviceNet Analog Remote I/O

▣ Features

- Adopts DeviceNet, standard open Network
  : Communicates other DeviceNet devices without additional installations
  : Configuratable power and communication system only with communication cables
  : Connectable max. 63 units per 1 master unit
- Strong against noise and high accuracy (0.3%) measurement with differential input method (measuring difference between +, - input signal)
- Various I/O range: 0-5VDC, 1-5VDC, 0-10VDC, -5-5VDC, -10-10VDC, DC4-20mA, DC0-20mA
- Scale function: Settable high/low limit scale value for analog I/O range (Set range: -28,000 to 28,000)
- Various functions
  : Automatic communication speed recognition, Network voltage monitoring, Input digital filter, Peak/Bottom Hold, hysteresis, reading model name and number of units, I/O and status flag monitoring
- Built-in surge, ESD protection, Reverse polarity protection circuit
- Mounting DIN rail method and screw lock method

Please read "Caution for your safety" in operation manual before using.

CE DeviceNet™ CONFORMANCE TESTED
(only for ARD-AI04, other models are compatible)

▣ Ordering Information

AR D – A I 04

I/O points	04	4-point type
I/O type	I	Input type
	O	Output type
Digital/Analog	A	Analog type
	D※1	Digital type
Network	D	DeviceNet type
Item	AR	Autonics Remote I/O

※1. For digital type ARD-D Series, refer to the S-5 page.

▣ Specifications

Model		ARD-AI04	ARD-AO04
Power supply		Rated voltage: 24VDC, Voltage range: 12-28VDC	
Power consumption		Max. 3W	
I/O points		Input 4-point (switchable voltage/current)	Output 4-point (voltage 2CH, current 2CH)
Control I/O	Voltage	0-10VDC, -10-10VDC, 0-5VDC, 1-5VDC, -5-5VDC (input impedance: max. 1MΩ)	0-10VDC, -10-10VDC, 0-5VDC, 1-5VDC, -5-5VDC (load resistance: max. 1KΩ)
	Current	DC4-20mA, DC0-20mA (input impedance: 250Ω)	DC4-20mA, DC0-20mA (load resistance: max. 600Ω)
	Max. allowable range	±5% F.S of rated input range	±5% F.S of rated output range
	Resolution	14bit, 1/16,000	
	Accuracy	● At room temperature (25±5℃) range: ±0.3% F.S. ● Out of room temperature range: ±0.6% F.S.	
Insulation resistance		Min. 200MΩ (at 500VDC megger)	
Noise resistance		±240V the square wave noise (pulse width: 1μs) by the noise simulator	
Dielectric strength		500VAC 50/60Hz for 1 min. (between external terminals and case, between I/O and power terminals)	
Vibration		1.5mm amplitude at frequency of 10 to 55Hz (for 1 min.) in each X, Y, Z direction for 2 hours	
Shock		500m/s^2 (approx. 50 G) in each X, Y, Z direction for 3 times	
Environment	Ambient temperature	-10 to 50℃, storage: -25 to 75℃	
	Ambient humidity	35 to 85%RH, storage: 35 to 85%RH	

※Environment resistance is rated at no freezing or condensation.

▣ Specifications

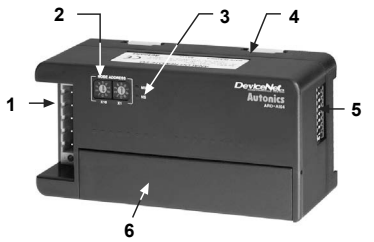
Model	ARD-AI04	ARD-AO04
Protection structure	IP20 (IEC standard)	
Protection circuit	Surge, ESD protection, Reverse polarity protection circuit	
Indicator	Network status (NS) LED (green, red), Unit status (MS) LED (green, red)	
Material	Front case, Body Case: PC	
Mounting	DIN rail or screw lock type	
Isolation type	I/O and inner circuit: non-insulated, DeviceNet and inner circuit: insulated, Power and DeviceNet: insulated	
Approval	CE DeviceNet	CE, DeviceNet compatible
Weight※1	Approx. 210g (approx. 145g)	

※1. The weight includes packaging. The weight in parentheses is for unit only.

▣ DeviceNet Communication

Item	Specifications
Communication	I/O Slave messaging (Group 2 Only slave) ● Poll command: Yes ● Bit_strobe command: Yes ● Cyclic command: Yes ● COS command: Yes
Communication distance	Max. 500m (125kbps), Max. 250m (250kbps), Max. 100m (500kbps)
NODE ADDRESS setting	Max. 64 nodes
Communication speed	·125 kbps ·250 kbps ·500 kbps (automatically set when connecting with Master)
Insulation	I/O and inner circuit: Non-insulation, DeviceNetand inner circuit: Insulation, DeviceNet power: Insulation
Approval	ODVA Conformance conformance: ARD-AI04 ODVA Conformance compatible : ARD-AO04

▣ Unit Descriptions



1. DeviceNet connector

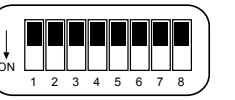
No.	Color	For	Organization
5	Red	24VDC (+)	V+
4	White	CAN_H	CAN_H
3	None	SHIELD	SHIELD
2	Blue	CAN_L	CAN_L
1	Black	24VDC (-)	V-

2. Rotary switch for node address : Two rotary switches are used for setting node address.
X10 switch represents the 10's multiplier and X10 switch represents the 1's multiplier.

3. Status LED: It is LED for displaying Unit status (MS) and Network status (NS).

4. Rail Lock: It is used for mounting DIN rail or with screws.

5. DIP switch: It is used for set I/O range. (factory default: all switches are OFF)
(●: ON, -: OFF)

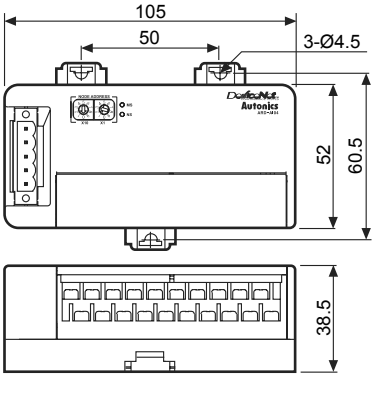


	ARD-AI04 (Input model)						ARD-AO04 (output model)							
	CH0, CH1			CH2, CH3			CH0, CH1			CH2, CH3				
I/O range	SW1	SW2	SW3	SW4	SW5	SW6	SW1	SW2	SW3	SW4	SW5	SW6	SW7	SW8※1
0-5VDC	—	—	—	—	—	—	—	—	—	Not supported			Not supported (Off Setting)	**ON** Using DIP switch **OFF** Not using DIP switch
1-5VDC	●	—	—	●	—	—	●	—	—					
0-10VDC	—	●	—	—	●	—	—	●	—					
-5-5VDC	●	●	—	●	●	—	●	●	—					
-10-10VDC	—	—	●	—	—	●	—	—	●					
DC4-20mA	●	—	●	●	—	●	Not supported			—	—	—		
DC0-20mA	—	●	●	—	●	●				●	—	—		

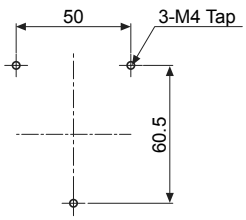
※1: By turning ON SW8, I/O range is set by DIP switches (SW1 to SW6). By turning OFF SW8, I/O range is set by communication.
When setting I/O range by DIP switches, CH0 and CH1 (CH2 and CH3) cannot be set individually.
When setting it by communication, each channel is set individually.

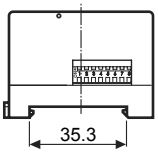
6. I/O Terminal block: It is terminal block for connecting external device I/O.

▣ Dimensions



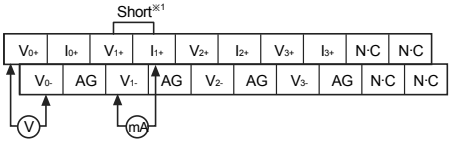
●Panel cut-out (unit: mm)





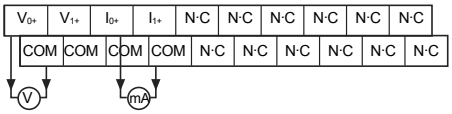
▣ Connections

●ARD-AI04



※1: For current input, short between $V_{□+}$ and $I_{□+}$.

●ARD-AO04



Voltage	0-5VDC
	1 to 5VDC
	-5-5VDC
	0-10VDC
	-10-10VDC
Current	DC0-20mA
	DC4-20mA

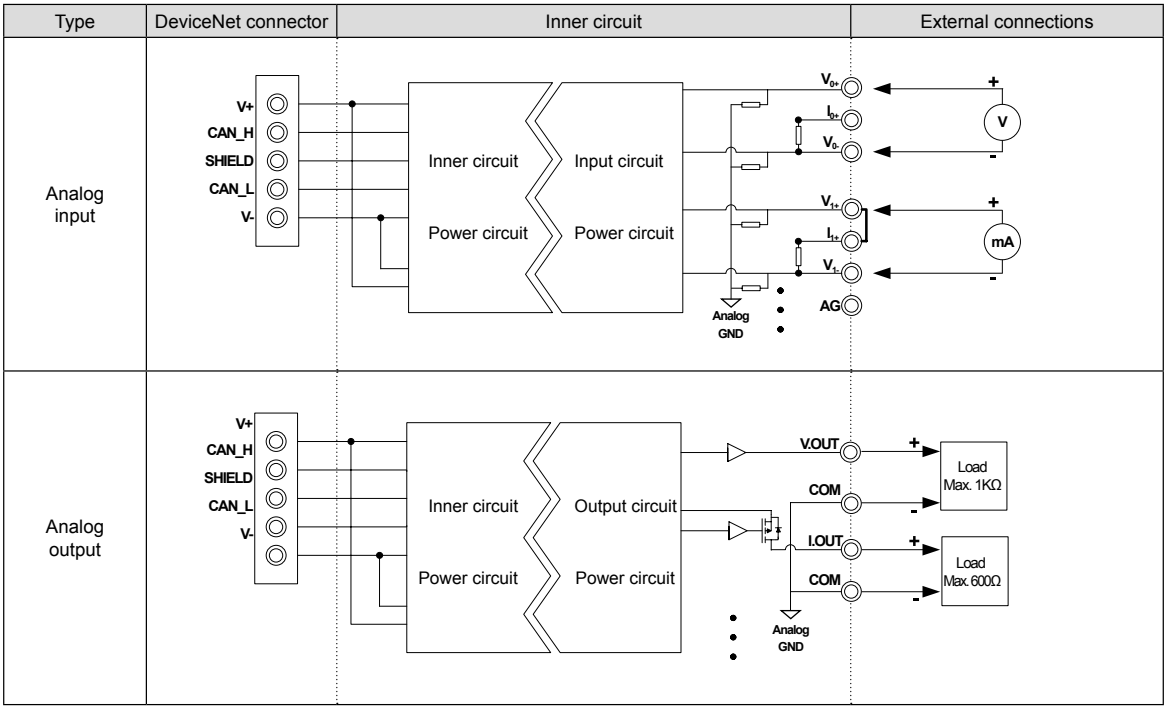
▣ Status LED

※Status of MS LED, NS LED

(☼: ON, ◑: Flash, ●: OFF)

No.	Type	LED status	Color	Descriptions	Troubleshooting
1	MS	☼	Green	**Normal operation** I/O communication or message communication is working.	—
	NS	☼	Green		
2	MS	☼	Green	**Standby of duplicated address** The status of standby for receiving message of duplicated address check from master unit.	—
	NS	●	—		
3	MS	☼	Green	**Standby of normal operation** The status of standby for establish connection from master unit.	—
	NS	◑	Green		
4	MS	☼	Red	**Watchdog timer error** The status that DIP switch or another switch setting is invalid.	Change the switch with valid value and re-supply the power.
	NS	●	—		
5	MS	◑	Red	**Switch setting error** The status that DIP switch or another switch setting is invalid.	Change the switch setting to valid value and re-supply the power.
	NS	●	—		
6	MS	◑	Red	**Changed address during normal operation** The status that address is changed during normal operation.	Change the initial address at the power applied at first.
	NS	☼	Green		
7	MS	☼	Green	**Invalid address** The status of setting invalid address	Change the valid address and re-supply the power.
	NS	☼	Red		
8	MS	☼	Red	**Duplicated address** There is duplicated address in the network. **Occuring Bus-Off error** Communication is stopped with Bus-Off.	Change node address not duplicated. Power on the slave unit again. Check master unit, communication, cable, terminating resistance and noise of network.
	NS	☼	Red		
9	MS	☼	Green	**I/O Connection time out**	Check the master setting and the user program.
	NS	◑	Red		

▣ I/O Circuit Diagram

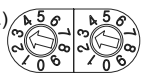


▣ Setup And Installation

◎ Node address setup

① Two rotary switches are used for setting node address.
X10 switch represents the 10's multiplier and X10 switch represents the 1's multiplier.
Node address is settable from 0 to 63.
② Node address is changed when re-supplying the power to the unit.
After changing node address, must re-supply the power.

E.g.)



The X10 and X1 switches point "3", the address is "33".

◎ Installation

• Mounting on panel

① Pull Rail Locks (3EA) on the rear part of a unit, there are fixing screw hole.
② Place the unit on a panel to be mounted.
③ Make a hole on a fixing screw position.
④ Fasten the screw to fix the unit tightly.
Tightening torque should be below 0.5N.m.

• Mounting on DIN rail

① Pull two Rail Locks on the rear part of unit.
② Place the unit on DIN rail to be mounted.
③ Press Rail Locks to fix the unit tightly.

◎ I/O cable connection

Refer to the I/O circuit diagram and connections.
Connect a sensor or the signal cable of external I/O device to the terminal block. (tightening torque: 0.5N·m)

◎ DeviceNet cable connection

① For stable system, it is recommended to use the DeviceNet dedicated cable.
② Connect the DeviceNet cable to the DeviceNet connector and tighten the fixed screw of the connector by a driver. (tightening torque: 0.5N·m)
③ Connect the DeviceNet connector to ARD unit and supply the power to Network.

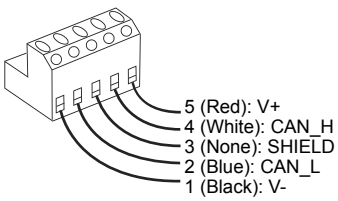
Master unit

PIN No.	Signal
5	V+
4	CAN_H
3	SHIELD
2	CAN_L
1	V-

Red	
White	
None	
Blue	
Black	

ARD unit

PIN No.	Signal
5	V+
4	CAN_H
3	SHIELD
2	CAN_L
1	V-



◎ Setting of Master unit

① Check the LED status of ARD unit when power is supplied. Normal operation is below.

Type	Status LED	Status descriptions
Unit status (MS) LED	Green LED is ON	When master unit status is communication standby: NS LED flashes When master unit setting is completed: NS LED is ON.
Network status (NS) LED	Green LED is ON/flashes	

② Install the software provided by master unit manufacturing company.
③ Set communication speed and address in the software.
- Baud rate: 125/250/500kbps
- Address of master unit: Usually it is set 00 address.

④ Register connected unit on Network to the master unit.
- There are two ways to register units; automatically register in on-line or manually register in off-line. (Refer to the manual of master unit.)
- I/O assignment of ARD Series: Usually it is automatically assigned by the setting software.
- Setting of operation mode: Select among Poll, COS, Cyclic, Bit Strobe. (Usually set Poll mode.)

◎ Check operating stauts

When installation and setting are complete, unit status (MS) LED and Network status (NS) LED turn ON green.
(Refer to ▣ Status LED.)

▣ Communication Distance

Baud Rate	Max. network length	Max. length of branch line	Allowable expansion length of branch line
125kbps	500m	6m	156m
250kbps	250m	6m	78m
500kbps	100m	6m	39m

▣ Terminating Resistance

● 120Ω ● 1% of metallic film ● 1/4W

※Do not install terminating resistance on ARD unit or it may cause network problem (impedance can be too high or low) or malfunction.

※Connect terminating resistance on the both ends of the trunk line.

▣ Functions

Model		ARD-AI04 (input model)	ARD-AO04 (output model)
Basic	Com. speed auto-recognition	●	●
	Network power voltage monitoring	●	●
	Unit power on total time monitoring	●	●
	Unit comment	●	●
	Last maintenance data stored	●	●
Analog	Scaling	●	●
	I/O comment	●	●
	Adjustment gradient	●	●
	Adjustment offset	●	●
	Input conversion points setting	●	—
	Input digital filter	●	—
	Peak/Bottom hold	●	—
	Disconnected cable detection	●	—
	Input comparison	●	—
	Hysteresis	●	—
	Output setting for error	—	●

◎ Communication speed auto-recognition

It recognizes communication speed when connecting master. Communication speed is able to change only from master unit.
After changing communication speed, re-supply the network power to apply the changed communication speed.

◎ Network power voltage monitoring

- If network power voltage is lower than the set value, the network power voltage drop flag bit of Status bit is ON. It can be read by Configurator or Explicit message.
- Set monitoring voltage by Explicit message at Network Power voltage (Set Value) of Application Object.
- Set range: 0 to 255
  (factory default: 12V, Allowable range: ±1V)

※ Min. supplied power is 12V for ARD unit.
If network voltage is lower than 12V, the contents of Explicit message reading is not guaranteed.

◎ Unit power on total time monitoring

- When total time for supplying power to the unit becomes the SV, Threshold Run Hours Flag bit of Status Bit turns ON. It can be read by Configurator or Explicit message.
- Set the time by Explicit message at Threshold Run Hour of Application Object.
- Set range: 0 to 429,496,729 hours
(factory default: 876,000 hours),
Measured unit: 0.1 hours (6 minutes)

◎ Unit comment

- You can set the comments for the unit (product description) on network. It can be read by Configurator or Explicit message.
- Set comment by Explicit message at Unit Comment of Application Object.
- Set range: max. 32 characters

◎ Last maintenance date

- It saves the last date of maintenance. It can be read/written by Configurator or Explicit message.
- Set maintenance date by Explicit message at I/O Last Maintenance Data Setting of Analog Input Point Object.
  E.g.)Data: 0x07DB020E→07DB (2011), 02 (Februray), 0E (14th)

◎ Input conversion points setting

- Conversion cycle is changed by the number of points (point, channel).
  (conversion cycle: 1ms/point, when using 4 points, it is 4 ms). It can be read/written by Configurator or Explicit message. After changing the number of conversion points, re-supply the network power.
- Set the number of conversion points by Explicit message at Number of AD Conversion Points Setting of Analog Input Point Object.
- Set range: 1 to 4-point (factory default: 4-point), conversion cycle: 1 ms/1-point

◎ Display scale

- Set high/low-limit scale value of analog input or output. It can be read by Configurator or Explicit message.

Default Scaling	Function Choice : Scaling Flag bit ON Scaling Type : Default Scaling (factory default)	It is set as 1,000 per 1V (mA). In case of 1-5V, 4-20mA, it is applied from over min. allowable range 0.8V (800), 3.2 (3,200). The below input value is break detection. It outputs as min. allowable range.
None Scaling	Function Choice : Scaling Flag bit OFF Scaling Type : Default Scaling	It is set as default value 0 to 16000 (-8000 to 8000). (0-5V, 1-5V, 0-10V, 4-20mA, 0-20mA: 0 to 16000, -5-5V, -10-10V: -8,000 to 8,000)
User Scaling	Function Choice : Scaling Flag bit ON Scaling Type : User Scaling	Set high/low-limit value to apply at 'Scaling Point 0%' and 'Scaling Point 100%'. Set range: -28,000 to 28,000

◎ I/O comment

- You can set the comment for I/O. It is able to read/write by Configurator or Explicit message.
- Set I/O comment by Explicit message at I/O Comment of Analog Input Point Object, Analog Output Point Object.
- Set range: max. 32 characters

◎ Gradient adjustment

- It adjusts the gradient of input/output value or scale value. It is able to read/write by Configurator or Explicit message.
- It is applied when Adjust Gradient Flag bit is set as ON at Function Choice of Analog Input Point Object. Set the range at Adjustment Gradient value.
- Adjustment range: -5 to 5%,
  Set range: -500 to 500 (factory default: 0)
  E.g.)When input value is 1000, Adjustment Gradient is 500 (+5%) X'=aX, a=1+Adjustment Gradient (0.05), X=1000, X'=1.05×1000=1050

◎ Offset adjustment

- This function is to adjust the error occurring from external analog sensor, etc, not from the unit itself. It is also applied to analog output. It is able to read/write by Configurator or Explicit message.
- It is applied when Adjustment Offset Flag bit is set as ON at Function Choice of Analog Input Point Object. Set the value at Adjustment Offset Value.
- Adjustment range: -5 to 5%,
  Set range: -500 to 500 (factory default: 0)
  E.g.)When input range is 0 to 10V, Full Scale 0 to 16000, input value is 1600 (1V) and Adjustment Gradient 500 (+5%), X'=X+b, X=1600, b=16000×0.05 (added input value and percentage of Full Scale) X'=1600+800=2400 (1.5V)

◎ Input digital filter

- This function is used when input value vibrates or repeatedly shake by included noise at input signal. Accurate control is available by stable input with this function. It adopts moving average filter method not to affect sampling cycle. It is able to read/write by Configurator or Explicit message.
- It is applied when Moving Average is set as ON at Function Choice of Analog Input Point. Set the number of digital filters at Moving Average Filter of Number.
- Set range: 0 to 8
  (factory default: 3[Moving Average No_8])

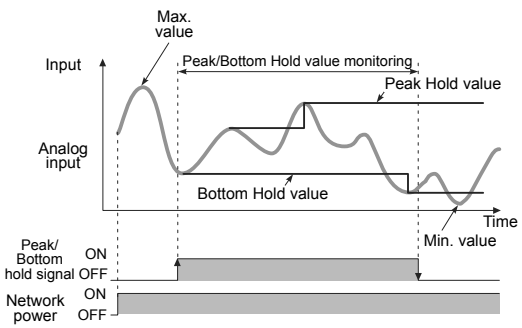
◎ Input min./max. value save

● Min./Max. save when power is ON

It saves min./max. input value from power ON the network. (When network power is OFF, the saved min./max. input value are cleared.)
It is able to read by Configurator or Explicit message.
When Clear Max, Clear Min Flag bit of is ON at Function Choice of Analog Output Point Object, the saved values are cleared and it saves current min./max. value of current input.

● Min./Max. save when Peak/Bottom Hold signal is ON

It memorizes the max./min. value while Peak/Bottom signal is ON. When Peak/Bottom signal is OFF, they are saved.
It is able to read by Configurator or Explicit message.
It is applied when Peak/Bottom is set as ON at Function Choice of Analog Input Point Object. You can check the value of Peak/Bottom at Peak Value and Bottom Value.

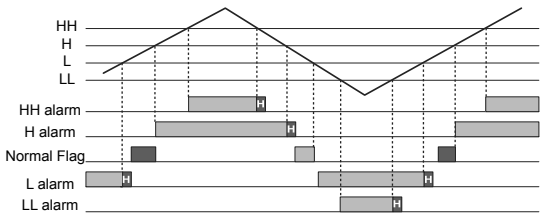


◎ Disconnection detection

- When operating analog input cable (voltage/current input) is disconnected, Broken Wire Flag Bit turns ON at Analog Status Flag Read of Analog Input Point Object. (It operates only for 1-5V, 4-20mA input range.) It is able to read by Configurator or Explicit message.
- If this value is below -5%, it recognizes disconnection and displays '32767' as data value.

◎ Input comparison

- It compares analog input value or the operation value and alarm set value (HH, H, L, LL) and Analog Status Bit flag turns ON at Function Choice of Analog Input Point Object. It is able to read by Configurator or Explicit message.
- If the value is within the set range between 'H' and 'L', it is available to apply by turning ON Pass Signal Flag bit at Analog Status Flag Read of Analog Input Point Object and turning ON/OFF Comparator Flag bit at Function Choice.



◎ Hysteresis

- In case of comparison output, this function is to increase stability of comparison output against vibration of input signal or chattering.
  It is able to read by Configurator or Explicit message.
- It is applied when Compare Bit flag turns ON at Function Choice of Analog Input Point Object.
  Set the value at Hysteresis Value.
- Set range: 0 to 16,383 (factory default: 0)

◎ Output value setting for com. error

- When communication error occurs, this function is to set output value of output unit by each channel. It is able to read by Configurator or Explicit message.
- Set Fault state at Fault Action of Analog Output Point.
- Set range: 0 to 3 (factory default: 1)
  0: Hold Last State-maintains the last status
  2: High Limit-outputs max. value
  1: Low Limit-outputs min. value
  3: Zero Count-outputs 0%

◎ Status flag monitoring

- When the network power voltage is lower than the set value or unit operation time is over the set value, monitoring is available by Status Bit of Application Object.
  It is able to read by Configurator or Explicit message.

※ Flag Bit
Bit 0: Reserved
Bit 1: Network Power Voltage Drops (below the set level)
Bit 2: Life State (Unit)
Bit 3: Reserved
Bit 4: Reserved
Bit 5: Reserved
Bit 6: Reserved
Bit 7: Reserved

◎ Analog data allotment

- This function is to allot analog data. Select the desired data to transmit it to the master unit. It is able to read by Configurator or Explicit message.
- Set the allotment at Analog Data 1/2 Allocation selection of Analog Output Point.
- Set range: 0 to 2 (factory default: 0)
  0: Analog Input Value
  1: Peak Value
  2: Bottom Value

▣ I/O range

Analog I/O specifications

No.	I/O range	Max. allowable I/O range
0	0-5VDC	-0.25-5.25VDC
1	1-5VDC	0.8-5.2VDC
2	0-10VDC	-0.5-10.5VDC
3	-5-5VDC	-5.5-5.5VDC
4	-10-10VDC	-11-11VDC
5	DC4-20mA	DC3.2-20.8mA
6	DC0-20mA	DC0-21mA

▣ Assembly Instance ID assignment

◎ Produced I/O assignment (Input)

It is available to assign I/O data by the selected data at master. When changing Produced I/O data assignment, re-supply the network power of ARD unit to apply the changed assignment.

1) Analog Data1 (Default I/O Data)

Analog Data 1 is assigned as Produced I/O data by Configurator or Explicit message. By property setting, assignment is available as Analog Input Value, Peak Value, Bottom Value.

- Assembly Instance ID: 103,
- Default: 0
- Set range: 0 to 2 (Analog Input Value: 0, Peak Value: 1, Bottom Value: 2)
- Data type: Word, Data size: 4Word

15	0
Assigned value to Analog Data 1 of Input point 0	
Assigned value to Analog Data 1 of Input point 1	

15	0
Assigned value to Analog Data 1 of Input point 2	
Assigned value to Analog Data 1 of Input point 3	

2) Analog Data2

Analog Data 2 is assigned as Produced I/O data by Configurator or Explicit message. By property setting, assignment is available as Analog Input Value, Peak Value, Bottom Value.

- Assembly Instance ID: 104
- Default: 0
- Set range: 0 to 2 (Analog Input Value: 0, Peak Value: 1, Bottom Value: 2)
- Data type: Word, Data size: 4Word

15	0	15	0
Assigned value to Analog Data 2 of Input point 0		Assigned value to Analog Data 2 of Input point 2	
Assigned value to Analog Data 2 of Input point 1		Assigned value to Analog Data 2 of Input point 3	

3) Generic Status

Generic Status is assigned as Produced I/O data by Configurator or Explicit message.

- Assembly Instance ID: 100
- Data type: Byte, Data size: 1Byte
- Generic Status

Bit 0: Reserved.
Bit 1: Network Power Voltage Drops.
Bit 2: Life State (Unit)
Bit 3: Reserved.
Bit 4: Reserved.
Bit 5: Reserved.
Bit 6: Reserved.
Bit 7: Reserved.

15	0
—	Generic Status

4) Analog Status

Analog Status is assigned as Produced I/O data by Configurator or Explicit message.

- Assembly Instance ID: 105
- Data type: Byte, Data size: 4Byte
- Analog Status

Bit 0: Low Alarm (LL)
Bit 1: Low Warning (L)
Bit 2: Pass Signal (Nomal)
Bit 3: High Warning (H)
Bit 4: High Alarm (HH)
Bit 5: Broken Wire
Bit 6: Under Range
Bit 7: Over Range

15	0
Analog Status of Input point 1	Analog Status of Input point 0
Analog Status of Input point 3	Analog Status of Input point 2

5) Analog Data1+Analog Data2

Analog Data 1 + Analog Data 2 is assigned as Produced I/O data by Configurator or Explicit message. By property setting, assignment is available as Analog Input Value, Peak Value, Bottom Value.

- Assembly Instance ID: 106
- Default: 0
- Set range: 0 to 2 (Analog Input Value: 0, Peak Value: 1, Bottom Value: 2)
- Data type: Word, Data size: 8Word

15	0	15	0
Assigned value to Analog Data 1 of Input point 0		Assigned value to Analog Data 1 of Input point 2	
Assigned value to Analog Data 2 of Input point 0		Assigned value to Analog Data 2 of Input point 2	
Assigned value to Analog Data 1 of Input point 1		Assigned value to Analog Data 1 of Input point 3	
Assigned value to Analog Data 2 of Input point 1		Assigned value to Analog Data 2 of Input point 3	

6) Analog Status+Generic Status

Analog Status + Generic Status is assigned as Produced I/O data by Configurator or Explicit message.

- Assembly Instance ID: 107
- Data type: Byte, Data size: 5Byte

15	0
Analog Status of Input point 1	Analog Status of Input point 0
Analog Status of Input point 3	Analog Status of Input point 2
—	Generic Status

7) Analog Data+Analog Status

Analog Data 1 + Analog Status is assigned as Produced I/O data by Configurator or Explicit message. By property setting, assignment is available as Analog Input Value, Peak Value, Bottom Value.

- Assembly Instance ID: 108
- Default: 0
- Set range: 0 to 2 (Analog Input Value: 0, Peak Value: 1, Bottom Value: 2)
- Data type: Byte, Data size: 12Byte

15	0
Assigned value to Analog Data 1 of Input point 0	
Assigned Low Byte at Analog Data 1 of Input point 1	Analog Status of Input point 0
Analog Status of Input point 1	Assigned High Byte at Analog Data 1 of Input point 1
Assigned value to Analog Data 1 of Input point 2	
Assigned Low Byte at Analog Data 1 of Input point 3	Analog Status of Input point 2
Analog Status of Input point 3	Assigned High Byte at Analog Data 1 of Input point 3

▣ Caution During Use

- Node addresses of connected units should not be duplicated. If you change node address during operation, the Unit status (MS) flashes in red and it communicates with the previous node address.
  Re-supply the power and the changed node address is applied.
- Communication speed which is set on Master is set automatically. If you change communication speed during operation, the Network status (NS) LED turns ON in red and it does not communicate.
  Re-supply the power and it operates normally.
- Make sure to use the communication cables, and taps which are DeviceNet standards.
  It may cause communication error if non-standard products are used.
- Make sure to examine disconnection or short-circuit before connecting cables.
- Do not install the unit where severe dust exists or where corrosion may occur.
- This unit may be used in the following environments.

• Indoor
• Altitude: Under 2,000m
• Pollution degree 2
• Installation category II