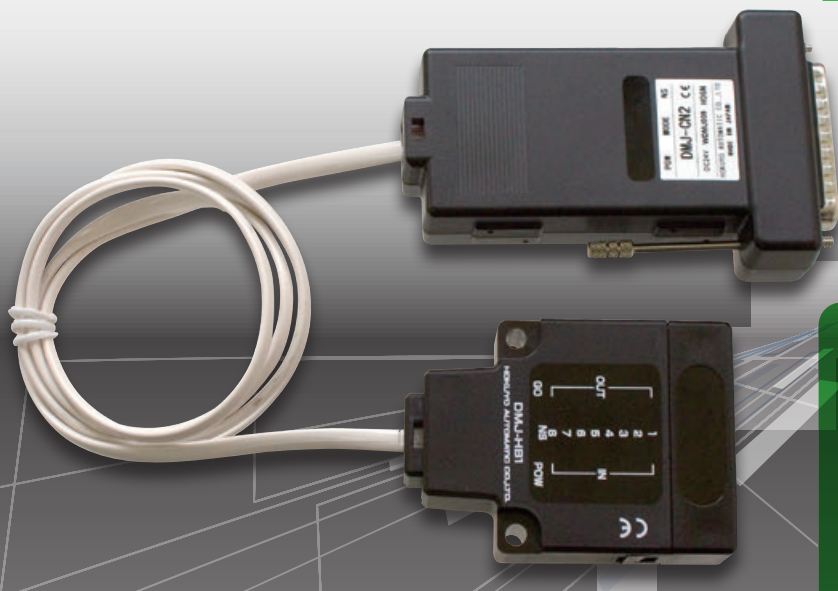


# DM Series



## DMJ Series



### At a glance

- SEMI E84 compatible
- Wiring is easy as the head and connector can be connected using an RJ-11 cable
- Logging function
- Transmission distance : 1m
- Communication capacity : 8 BITS
- Transmission direction : Head-ON / Side-ON
- Compact (sensor head : 50g, connector : 70g)

### DMJ Line-up

	Model	Feature
Sensor head	DMJ-□B1	Standard model with logging capacity of 100 times
Connector	DMJ-CN□	
<b>DMJ-Z01 series</b>		
Sensor head	DMJ-□B1-Z01	High frequency noise resistance model
Connector	DMJ-CN□-Z01	
<b>DMJ-Z50 series</b>		
Sensor head	DMJ-□B1-Z50	Ambient light resistance model with logging capacity of 1,000 times
Connector	DMJ-CN□-Z50	

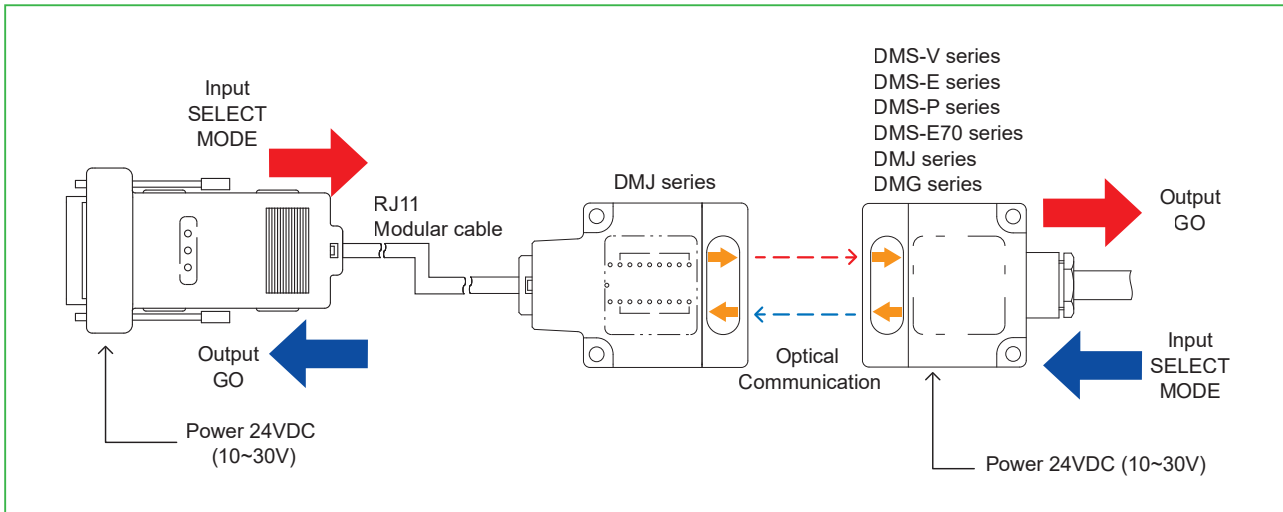
### Product description

- A device that uses LED light to send and receive binary data over short distances.
- It complies with the SEMI E84 standard for semiconductor manufacturing equipment.
- Compact. Easy to install on systems to communicate with OHT.

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## Composition



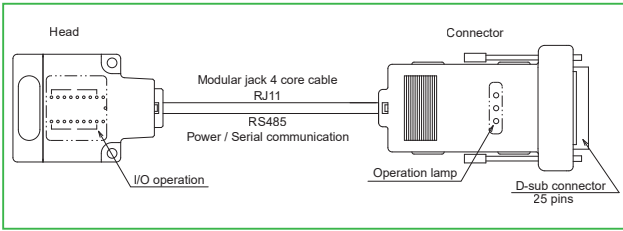
## Specification

	DMJ-GB1	DMJ-HB1
	Head-ON	Side-ON
Communication capacity	8 BITS	
Transmission distance (0m~)	1m	
Directional angle	± 15°	
Light source	LED (850nm)	
Ambient illuminance	4,000lx or less (Incandescent lamp)	
Ambient temperature and humidity	-10~50°C, 85%RH or less	
Shock resistance	500m/s <sup>2</sup> , each 10 time in X, Y and Z directions	
IP protection	IP40	
Weight	50g	
Size W x D x H (mm)	50 x 69.5 x 20	

Connector	DMJ-CN1	DMJ-CN2	DMJ-CN3	DMJ-CN4
SEMI E84 compliant Dsub-25pin connector	Metric screw	Inch screw	Metric screw	Inch screw
Mode setting	Transmit / Receive standby switchable		Receive standby	
Supply voltage	24VDC (10 to 30VDC)			
Current consumption	100mA Max.			
Transmission time	45msec or less			
Input	ON current 2.5mA or more, OFF current 1mA or less, Operating threshold current 1.5 to 2mA			
Output	NPN open-collector (30VDC, 50mA or less, Residual voltage 1.8V or less)			
Logging data capacity	Max.100 times			
Log data	Input, Output, GO, SELECT			
Ambient temperature and humidity	-10~50°C, 85%RH or less			
Shock resistance	500m/s <sup>2</sup> , each 10 time in X, Y and Z directions			
IP protection	IP40			
Weight	70g			
Size W x D x H (mm)	58.4 x 90.5 x 24.6			

## Connection

### 8 BITS type



Pin No.	Function	Specification
1	IN 1	Input 1
2	IN 2	Input 2
3	IN 3	Input 3
4	IN 4	Input 4
5	IN 5	Input 5
6	IN 6	Input 6
7	IN 7	Input 7
8	IN 8	Input 8
9	Non connection	Non connection
10	SELECT *2	When shorted to COM (No.25) : Stop to communicate When opened : Communication is available
11	MODE *1	When shorted to COM (No.25) : Reception standby mode When opened : Transmittion standby mode
12	GO *3	ON : Normal data reception OFF : Interrupting the light
13	Non connection	Non connection

Pin No.	Function	Specification
14	OUT 1	Output 1
15	OUT 2	Output 2
16	OUT 3	Output 3
17	OUT 4	Output 4
18	OUT 5	Output 5
19	OUT 6	Output 6
20	OUT 7	Output 7
21	OUT 8	Output 8
22	+VIN	Power (24VDC ± 10%)
23	+VIN	
24	-VIN	Power (0V)
25	COM	COM Common for I/O

#### \*1 MODE input

This is to choose transmission/reception mode when standing by  
 \*Transmission stand-by mode by opened between mode and I/O COM  
 \*Reception stand-by mode by short-circuited between mode and I/O COM

#### \*2 SELECT input

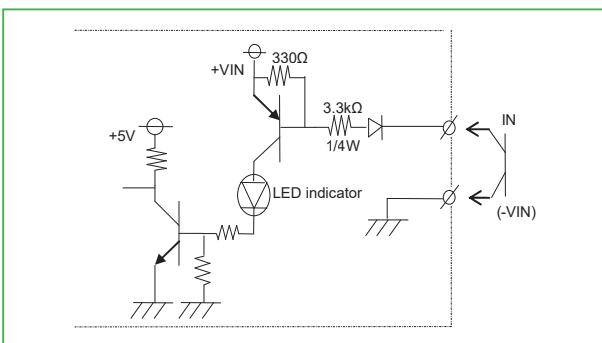
This is to stop transmission/reception optionally by outer signal  
 \*Operating by opened between select and I/O COM  
 \*Stopping by short-circuited between select and I/O COM

#### \*3 GO output

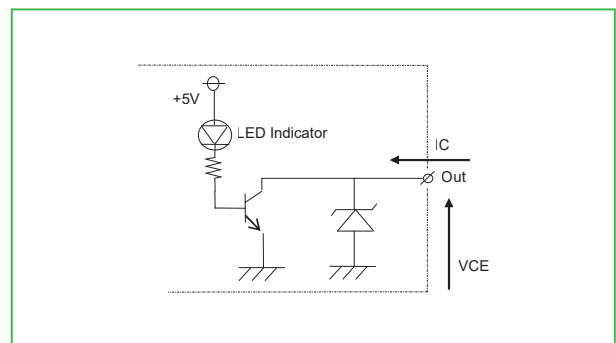
This is to check correct optical signal  
 \*ON when receiving correct data  
 \*OFF when interrupting optical axis (Not-receiving)

## I/O circuit

### Input

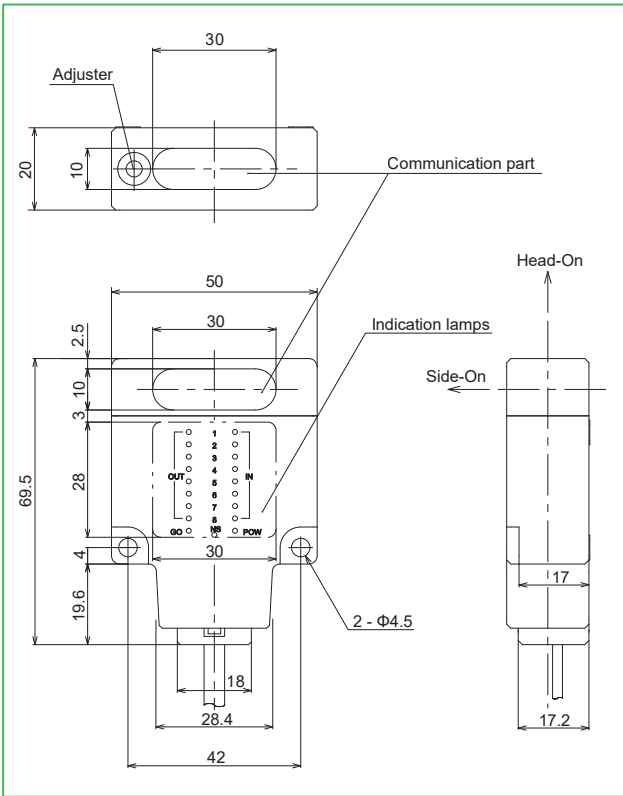


### Output

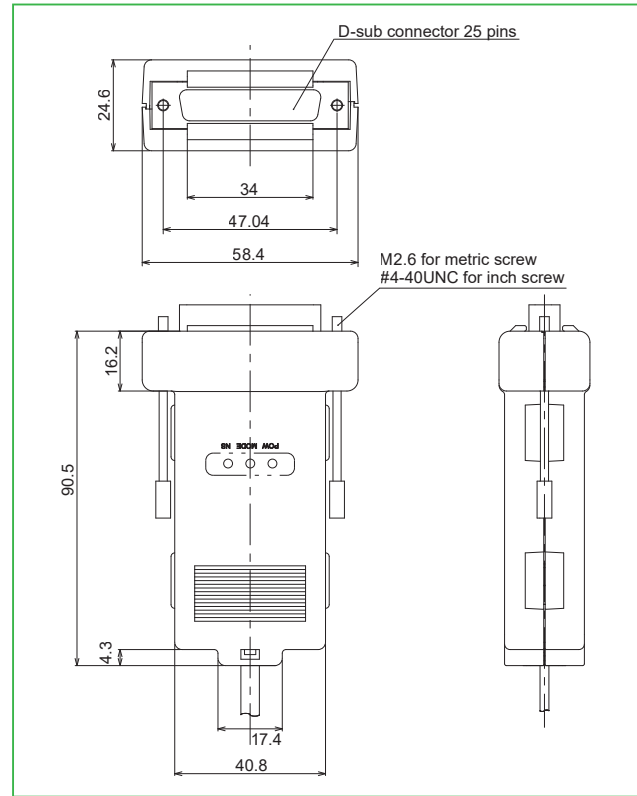


## External dimension

Sensor head (DMJ- □ B1)



Connector (DMJ-CN □ )



## Option

RJ-11 Modular cable for DMJ series

Code	Ref.
WZ00072	Cable : 5m / white
WZ00073	Cable : 5m / black
WZ00069	Cable : 10m / black

## DMJ series / Other models

High frequency noise resistance type (-Z01 series)

Sensor head

Model	Code	Transmission direction
DMJ-GB1-Z01	WDMJ010	Head-ON
DMJ-HB1-Z01	WDMJ011	Side-ON

Connector

Model	Code	Fixing screw
DMJ-CN3-Z01	WDMJ013	Metric screw
DMJ-CN4-Z01	WDMJ014	Inch screw

Ambient light resistance type (-Z50 series)

Sensor head

Model	Code	Transmission direction
DMJ-GB1-Z50	WDMJ020	Head-ON
DMJ-HB1-Z50	WDMJ015	Side-ON

Connector

Model	Code	Fixing screw
DMJ-CN3-Z50	WDMJ016	Metric screw
DMJ-CN4-Z50	WDMJ017	Inch screw