

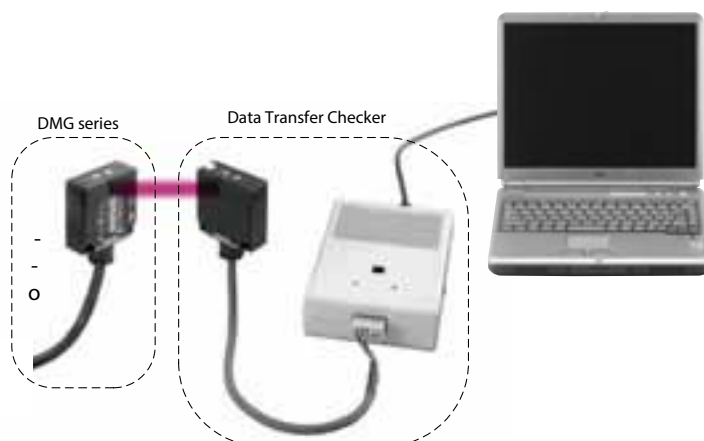
# Optical Data Transmission Device with Logging Function



## DMG SERIES

Useful to solve some troubles such as interlocking!

When some troubles such as interlocking etc. happened, memo rized data(Logging data) in DMG series can be read out by opti cal remote controller type, Data Transfer Checker(Optional). Als its data can be displayed on PC by application software(SFOC).

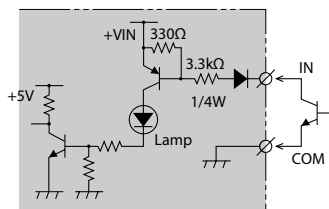


### Specifications

Type	Parallel type			
Model	DMG-GB1	DMG-GB2	DMG-HB1	DMG-HB2
Direction	Head-on		Side-on	
Transmission distance	1m	3m	1m	3m
Directional angle (full angle)	30°	10°	30°	10°
Transmission capacity	8BIT			
Transmission method	Half duplex two-way transmission			
Transmission time	40msec or less			
Modulation method	Pulse modulation			
Detection method	Parity check			
Light-projecting element	Near infrared LED			
Light-receiving element	Photo transistor			
Power source	10V to 30VDC (Available voltage range)			
Current consumption	100mA or less			
Input	Contact or contactless open-collector (ON current 2.5mA or more, OFF current 1mA or less)			
Output	NPN Open-collector (30V, 50mA or less)			
Ambient illuminance	4,000lux or less (incandescent light)			
Ambient temperature/humidity	-10 to +50 , 85%RH or less			
Connection	Lead wire (0.2mm <sup>2</sup> 15 cores shield wire in 2m)			
Protective structure	IP64 (IEC Standard)			
Case material	Polycarbonate			
Weight	Approx. 280g			

### Input/Output circuit

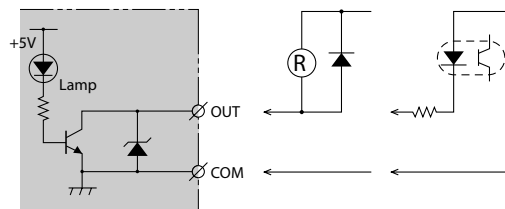
#### Input section(common)



Contact or contactless open-collector  
ON current: 2.5mA or more, OFF current: 1mA or less  
Note) 2-wire type sensor can't be used. (operating threshold cu

rrrent: 1.5 to 2mA)

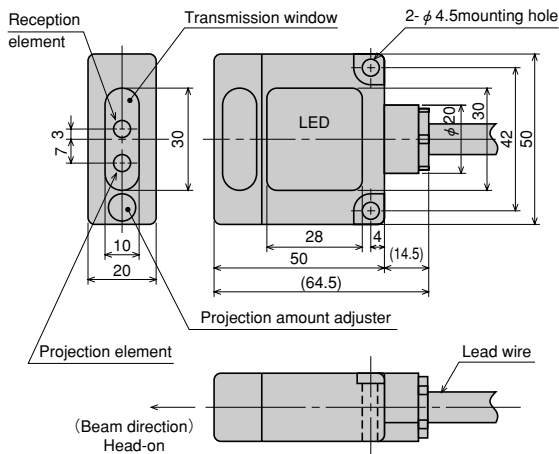
#### Output section(common)



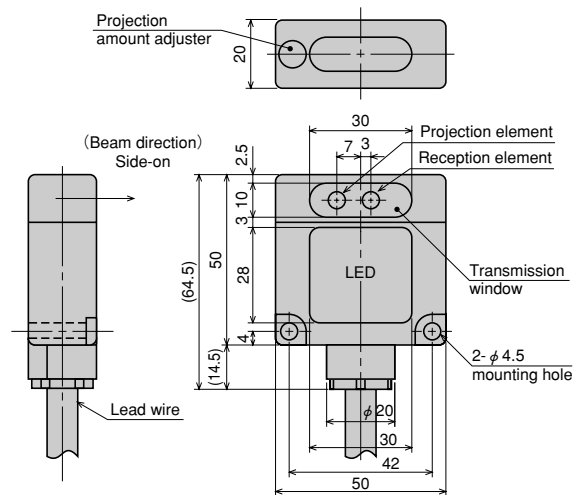
NPN open-collector output  
30VDC 50mA Residual voltage 1.8V or less

## External dimensions

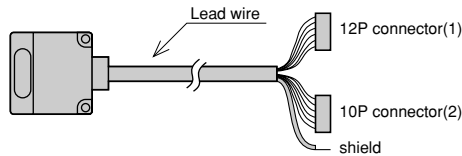
### Head-on type



### Side-on type



## Connection



Connector(1)		
Lead wire	Pin No.	Spec.
Light blue	1	COM(OV)
Pink	2	MODE* <sup>1</sup>
White	3	SELECT* <sup>2</sup>
White/Black	4	GO* <sup>3</sup>
Brown	5	IN1
Brown/Black	6	OUT1
Red	7	IN2
Red/Black	8	OUT2
Orange	9	IN3
Orange/Black	10	OUT3
Yellow	11	IN4
Yellow/Black	12	OUT4

Connector(2)		
Lead wire	Pin No.	Spec.
Green	1	IN5
Green/Black	2	OUT5
Blue	3	IN6
Blue/Black	4	OUT6
Purple	5	IN7
Purple/Black	6	OUT7
Gray	7	IN8
Gray/Black	8	OUT8
Pink/Black	9	+VIN
Light blue/Black	10	-VIN
Shield	Shield	

#### \*1. Mode input

This is designed to select standby transmission and reception mode.

- Transmission standby mode when it is opened between MODE and I/O COM.
- Reception standby mode when it is short circuited between MODE and I/O COM.

#### \*2. Select input

This is designed to arbitrarily stop transmission and reception operation by outside signal arbitrarily.

- Operates when it is opened between SELECT and I/O COM.
- Stops operation when it is short circuited between SELECT and I/O COM.

#### \*3. GO output

This is designed to check for correct reception of optical signal.

- it is ON when optical signal is received.
- it is OFF when optical signal is interrupted (or non-receiving state).

Note) Terminal ends handling of not using input, output, GO out the other lead wires. If handled in one treatment, it will cause malfunction.

Note) The connector attached on the end of lead wire can not be used as connecting terminal.

Note) It is short-circuited between COM & -VIN inside.

put, SELECT input, MODE input and NC(4BIT type) are to be treated individually and not used as connecting terminal.

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## SEMI standard

D-sub with 25 pins in conformity with SEMI E84 provides and it

can be connected to load port immediately.

### Model No.

Model No.	Beam direction	Cable length	Remarks
DMG-HB1-Z01	Side-ON	2m	Fitting screw: Inch screw
DMG-HB1-Z02			Fitting screw: Millimeter screw
DMG-HB1-Z03		5m	

\* Equipment in corresponding to SEMI E84-0699 and -0999 may use millimeter screw. Inch screw is specified on the version after SEMI E84-0200A.

☆DMG series are compatible with DMS series(8BIT type) on the communication.