DMS

Optical Data Transmission Devices

This device is parallel type, data transmission device with infrared ray.

This is small size and right weight with 50×50×20mm. It is suitable for data transmission such as interlocking with carrier robots, indicating destination of AGV's. This device provides light-projecting amount adjuster and so area adjustment can be made by it.

Specifications

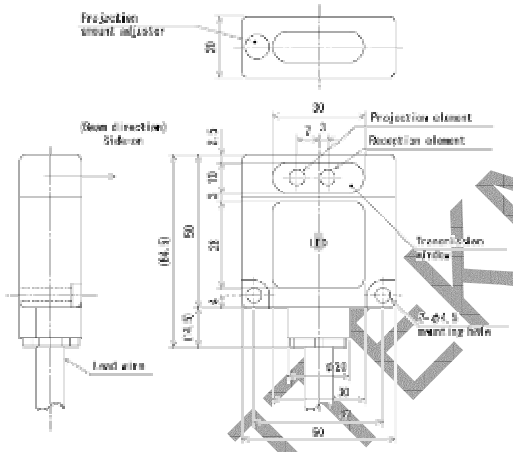
Type	Parallel type							
	4-bit type				8-bit type			
Model No.	DMS-GA1-V	DMS-GA2-V	DMS-HA1-V	DMS-HA2-V	DMS-GB1-V	DMS-GB2-V	DMS-HB1-V	DMS-HB2-V
Transmission distance	0 to 1m	0 to 3m	0 to 1m	0 to 3m	0 to 1m	0 to 3m	0 to 1m	0 to 3m
Directional angle (Full angle)	30°	10°	30°	10°	30°	10°	30°	10°
Transmission method	Half-duplex two-way transmission							
Transmission time	40msec or less							
Modulation method	Pulse modulation							
Detection method	Parity check							
Power source	24VDC(10 to 30VDC)							

Input	Contact or open-collector(ON current 2.5mA or more, OFF current 1mA or less, Operating threshold current 1.5 to 2mA)
Output	NPN open-collector(35VDC, 50mA or less, Residual voltage 1.8V or less)
Current consumption	100mA Max.
Ambient illuminance	4,000lux or less(Incandescent lamp)
Ambient temperature/humidity	-10 to +50° C, 85%RH or less
Impact resistance	500m/s^2, each 10 time in X, Y and Z directions
Connection	Lead wire 2m long
Protective structure	IP64(IEC standard)

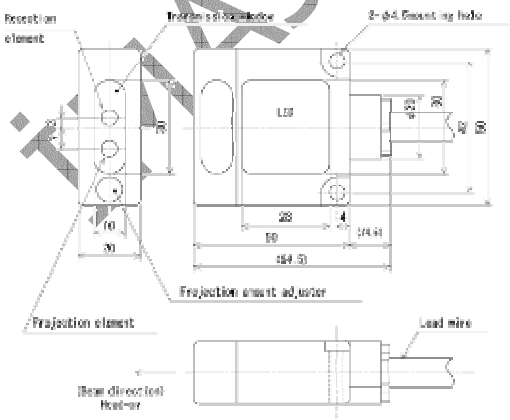
DMS-GA1-C/HA1-C which can be communicated with old type, DM-GA1/HA1 are lined-up.

External dimension

DMS-HA1-V/HA2-V, DMS-HB1-V/HB2-V(SIDE-ON type)

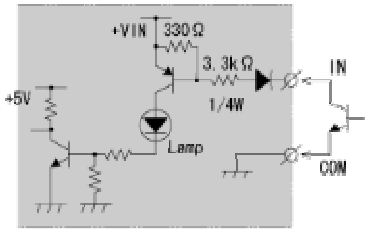


DMS-GA1-V/GA2-V, DMS-GB1-V/GB2-V(HEAD-ON type)



Input/output circuit

Input



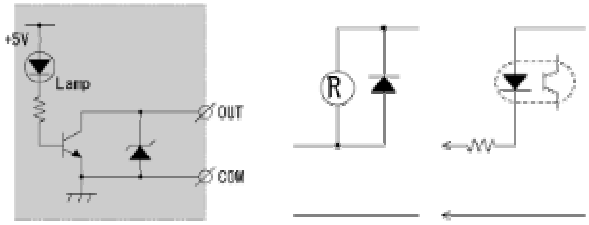
ON current 2.5mA or more,

OFF current 1mA or less,

Note) Don't use the sensor with 2-wire.

Operating threshold current 1.5 to 2mA

Output



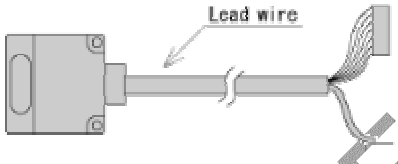
NPN open-collector output

35VDC 50mA

Residual voltage 1.8V or less

Connection

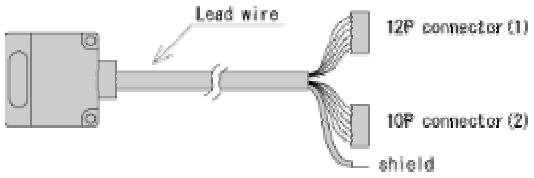
DMS-GA1-V/GA1-V, DMS-HA1-V/HA2-V(4-bit type)



Colors	Pin No.	Functions
Black	1	IN1
Brown	2	IN2
Brown	3	IN3
Orange	4	IN4
White/yellow	5	MODE*1
Yellow	6	SELECT*2
White/blue	7	NC
Green	8	OUT1
Blue	9	OUT2

Purple	10	OUT3
Gray	11	OUT4
White	12	GO*3
Yellow/green	13	COM(0V)
Yellow/red	14	+VIN
Yellow/black	15	-VIN(0V)
Shield	Shield	

DMS-GB1-V/GB2-V, DMS-HB1-V/HB2-V(8-bit type)



Connector (1)

Colors	Pin No.	Functions
Pale blue	1	COM(0V)
Pink	2	MODE*1
White	3	SELECT*2
White/black	4	GO*3
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)

Colors	Pin No.	Functions
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
Pale blue / black	10	-VIN
Shield	Shield	

*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 single

*ON when receiving correct optical axis

*OFF when interrupting optical axis(Not-receiving)

Note) Cable ends for unused input/output, GO output, SELECT input, MODE input, NC(4-bit type) should be processed individually and don't connect with other cable. It may cause unstable operation if package processing.

Note) Don't use the connector attached to the cables as connecting terminal.

Note) If one side is set to transmission stand-by mode, other one should be set to reception standby mode.

Caution	I/O direction is appeared in accordance with DMS.

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