

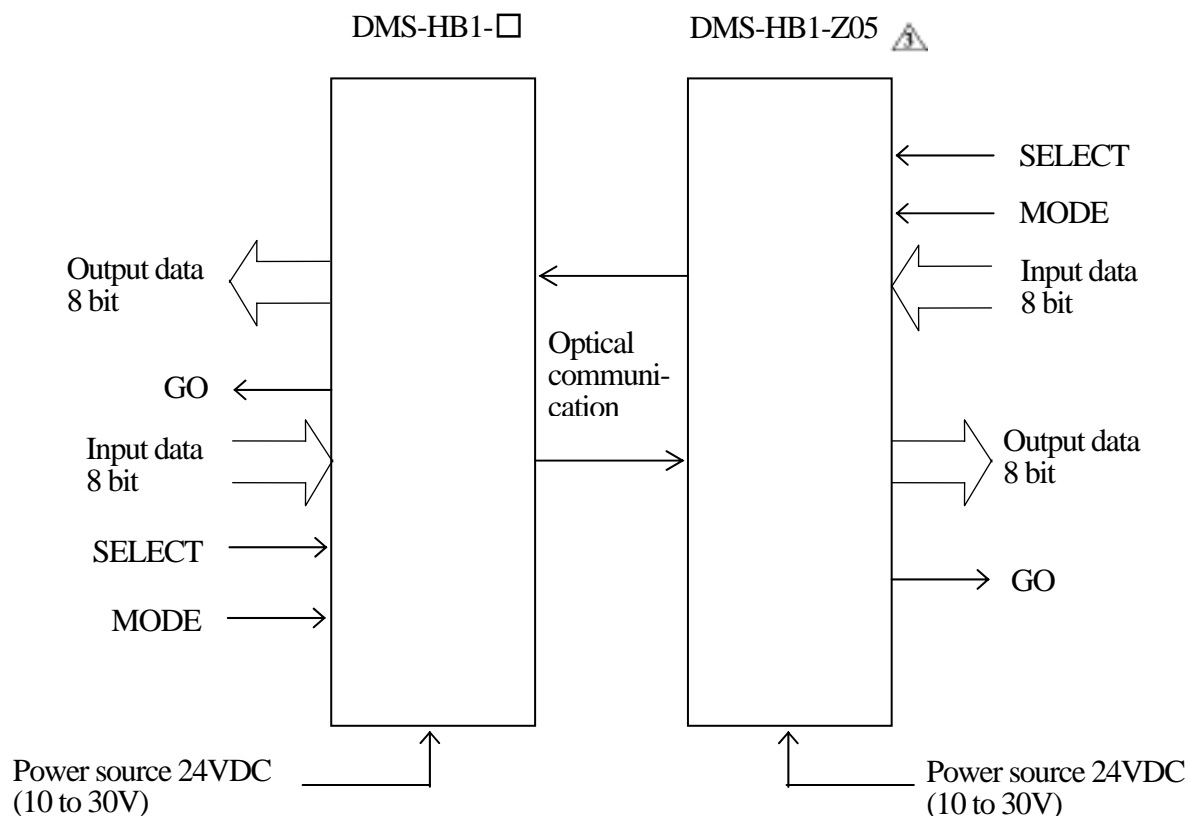
SPECIFICATIONS
OPTICAL DATA TRANSMISSION DEVICE
(WITH D-SUB CONNECTOR
CABLE 5M LONG)

△ DMS-HB1-Z05(WDMS021) △
CORRESPONDING TO SEMI

Corresponding to SI unit

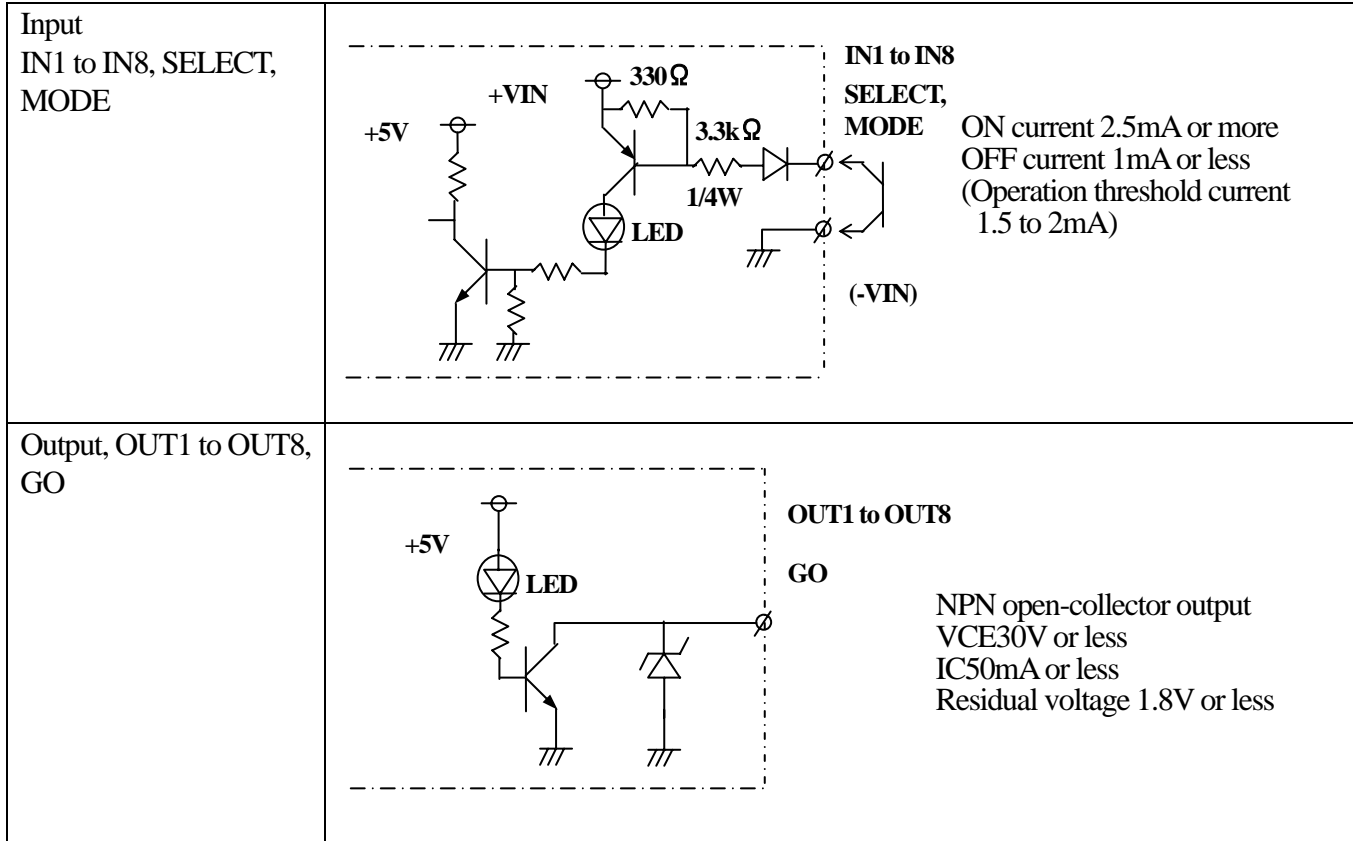
△ × 3	Model No. changed			1, 2	Apr.12'02	Hoshino	FA4575
△ × 2	Addition of products code No.			1, 2	Dec.7'00	Hoshino	FA4091
△ × 1	Renewal of SEMI standard(Change of pin arrangement)			4	Jun.26'00	Hoshino	FA3899
Symbol	Amended reason			Pages	Date	Corrector	Amended No.
Approved by	Checked by	Drawn by	Designed by	Title	Optical Data Transmission Device DMS-HB1-Z05 Specifications		
MAEJIMA	KITADA	HOSHINO	HOSHINO	Drawing No.	C-42-2966	1/5	

1. Configuration



2. Specifications

Model No.	DMS-HB1-Z(WDMS021)
Transmission distance	0 to 1.0m(Changeable by adjuster)
Directive angle	30 degrees(Full angle)
Transmission directions	SIDE-ON
Transmission capacity (Input/Output)	8 bit/8 bit
Transmission method	Half-duplex two-way transmission
Transmission time	40msec
Modulation method	Pulse modulation
Verification method	Parity check
Power source	24VDC(10 to 30V)
Current consumption	100mA Max.
Ambient illuminance	4,000lux or less
Ambient temperature/ humidity	-10 to 50 degrees C/85%RH or less
Vibration resistance	Double amplitude 1.5mm, 10 to 30Hz, Each 2 hour in X, Y and Z directions
Impact resistance	500m/s ² Each 10 times in X, Y and Z directions
Connection	D-sub connector 25 pins
Protective structure	IP64(Except for connector part)



3. Transmission characteristics

(1) Characteristics data

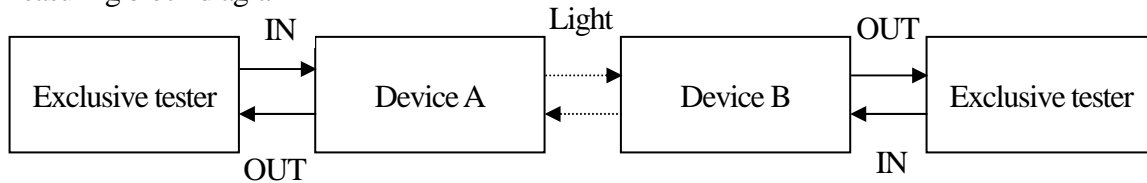
Items	Symbols	Unit(msec)	
		MIN	MAX
Input data holding time	tIH	30	-
Transmission time	tON, tOFF	13	40
Transmission starting delay time (Against optical axis coincidence)	tSD	30	110
Output holding time(Against SELECT A)	tOH1	50	90
Output holding time(Against SELECT B)	tOH2	-	5
Output holding time(Against light-interruption)	tOH3	50	90

(2) Characteristics measuring condition

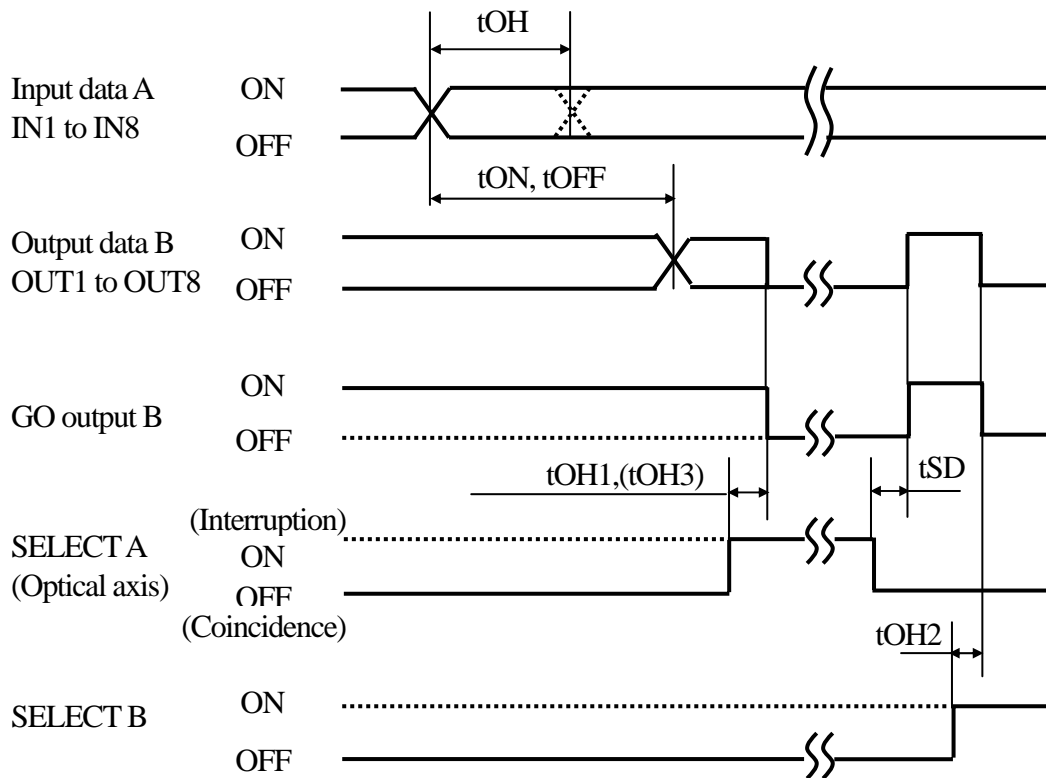
*Mode : Side A – Reception stand-by mode, Side B – Transmission stand-by mode

*It was measured under input(side A) and output(side B).

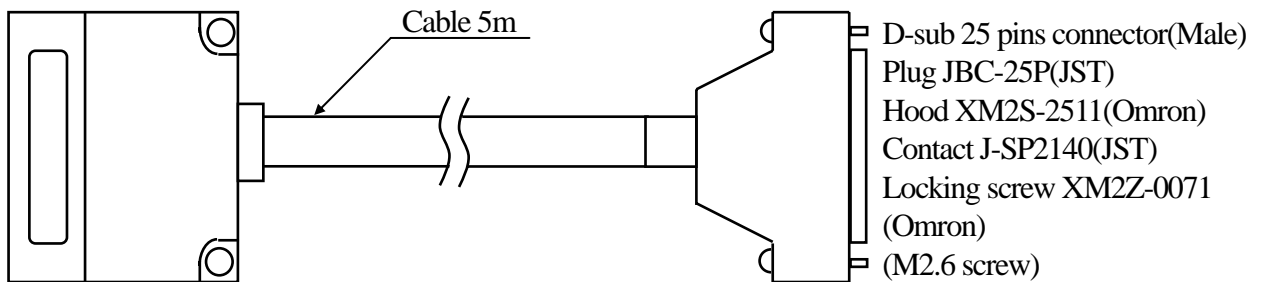
(3) Measuring block diagram



(4) Transmission timing



4. External wiring



Colors	Pin No.	Functions	Colors	Pin No.	Functions
Brown	1	IN1	Brown/Black	14	OUT1
Red	2	IN2	Red/Black	15	OUT2
Orange	3	IN3	Orange/Black	16	OUT3
Yellow	4	IN4	Yellow/Black	17	OUT4
Green	5	IN5	Green/Black	18	OUT5
Blue	6	IN6	Blue/Black	19	OUT6
Purple	7	IN7	Purple/Black	20	OUT7
Gray	8	IN8	Gray/Black	21	OUT8
White	10	SELECT	Pink/Black	23	+VIN
Pink	11	MODE	----	22	+VIN
White/black	12	GO	Pale blue/Black	24	-VIN
			Pale blue	25	COM

Shorted between 22 and 23 ⚠

5.Function for each terminal

Terminals	Functions	
IN1 to IN 8	Input data	
OUT1 to OUT8	Output data	
SELECT	It is shorted to COM : Transmission/reception is stopped It is opened : Transmission/reception is operated	
MODE	It is opened : Transmission standby mode It is shorted to COM : Reception standby mode	
GO	It is ON when normal data was received and OFF when light was interrupted	
COM	Common for input/output	
+VIN	+24V(10 to 30V)	Power source
-VIN	0V	

Note) Make sure to set other one to reception standby mode.

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