

SPECIFICATIONS

DMS-GB1-Z35

(with IR filter)

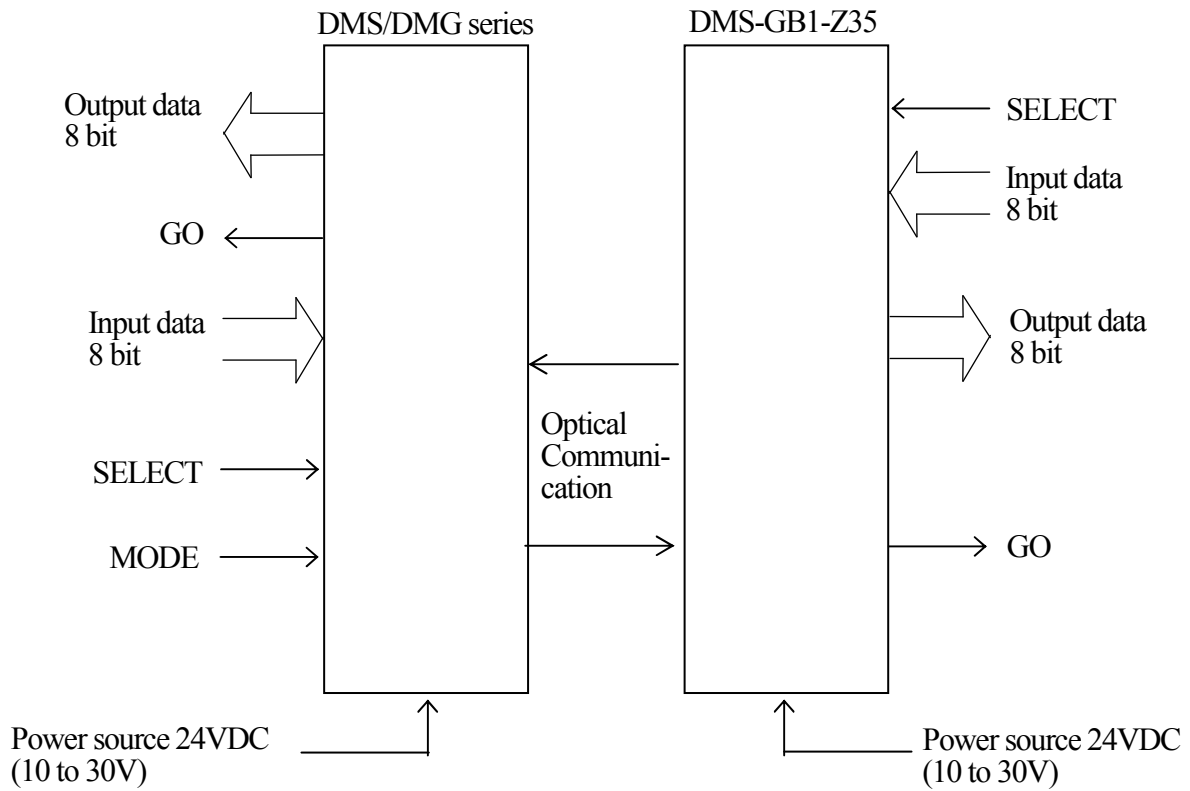
OPTICAL DATA TRANSMISSION DEVICE
(WITH PROJECTING AMOUNT ADJUSTER,
D-SUB CONNECTOR & CABLE 5M)
(RECEPTION STANDBY MODE)

Symbol	Amended reason			Pages	Date	Corrector	Amended No.
Approved by	Checked by	Drawn by	Designed by	Title	Optical Data Transmission Device DMS-GB1-Z35 Specifications		
			HINO				

1. General

This is a 8-bit type data transmission device with countermeasures against disturbance light. Characteristics against disturbance light is improved because optical filter(IR-82) is attached to inner optical cover and light with 820nm or less of wavelength is shut out.

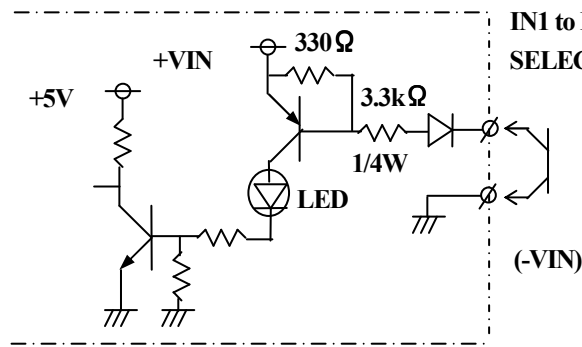
2. Configuration



3. Specifications

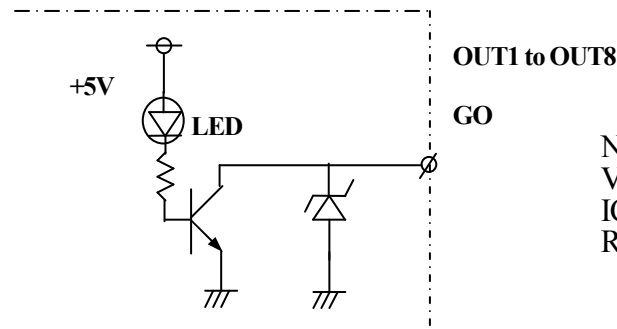
Model No.	DMS-GB1-Z35
Transmission distance	1.0m(Changeable by adjuster)
Directive angle	30 degrees(Full angle)
Transmission directions	HEAD-ON
Transmission capacity (Input/Output)	8 bits/8 bits
Transmission method	Half-duplex two-way transmission
Transmission time	40msec
Modulation method	Pulse modulation
Verification method	Parity check
Power source	24VDC(10~30V)
Current consumption	100mA Max.
Ambient illuminance	4,000lux or less
Ambient temperature/humidity	-10~50°C/ 85%RH or less
Vibration resistance	Double amplitude 1.5mm, 10 to 55Hz, 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 with 25 pins
Protective structure	IP64(excluding the connector)

Input
IN1 to IN8, SELECT,



ON current 2.5mA or more
OFF current 1mA or less
(Operation threshold current 1.5~2mA)

Output, OUT1 to OUT8,
GO



NPN open-collector output
VCE30V or less
IC50mA or less
Residual voltage 1.8V or less

4. Transmission characteristics

(1) Characteristics data

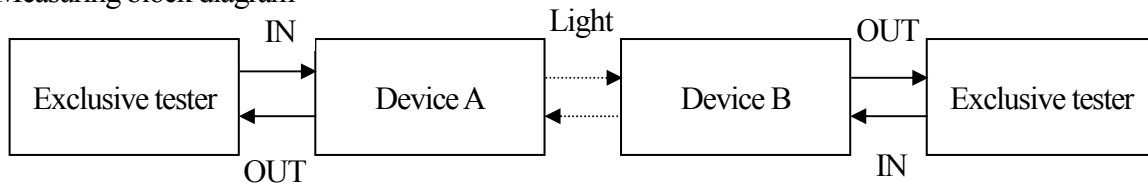
Items	Symbols	Unit(msec)	
		MIN	MAX
Input data holding time	tIH	30	-
Transmission time	tON, tOFF	13	40
Transmission starting delay time (Against optical axis coincidence)	tSD	30	110
Output holding time(Against SELECT A)	tOH1	50	90
Output holding time(Against SELECT B)	tOH2	-	5
Output holding time(Against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



Title

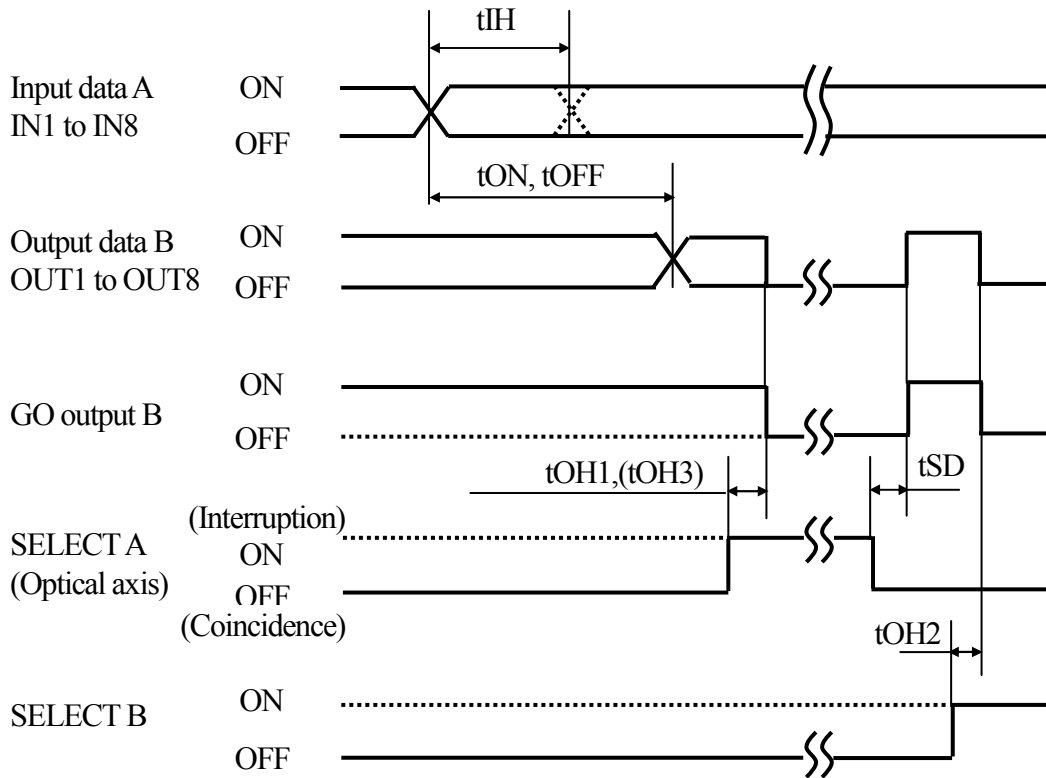
Optical Data Transmission Device
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Drawing
No.

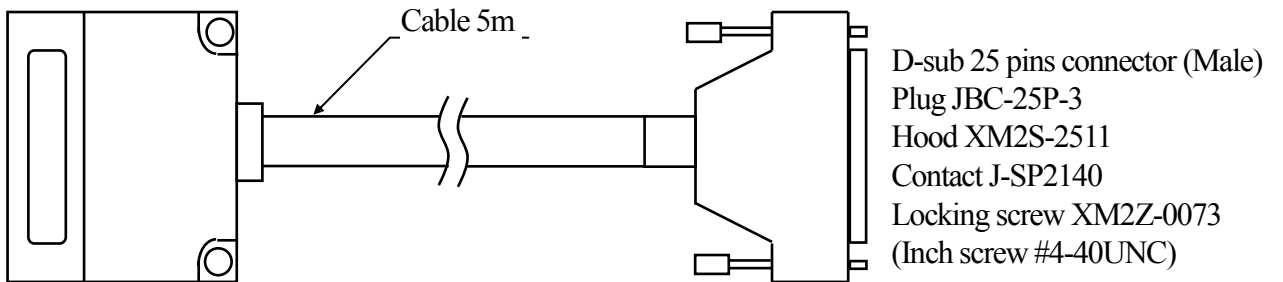
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(4) Transmission timing



5. External wiring



Colors	Pin No.	Functions
Brown	1	IN1
Red	2	IN2
Orange	3	IN3
Yellow	4	IN4
Green	5	IN5
Blue	6	IN6
Purple	7	IN7
Gray	8	IN8
White	10	SELECT
--	11	--
White/black	12	GO

Colors	Pin No.	Functions
Brown/black	14	OUT1
Red/black	15	OUT2
Orange/black	16	OUT3
Yellow/black	17	OUT4
Green/black	18	OUT5
Blue/black	19	OUT6
Purple/black	20	OUT7
Gray/black	21	OUT8
Pink/black	23	+VIN
--	22	+VIN
Pale blue/black Pink	24	-VIN
Pale blue	25	COM

Pin No.22 is connected to pin No.23 inside.

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 fixed to 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 transmission standby mode.

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