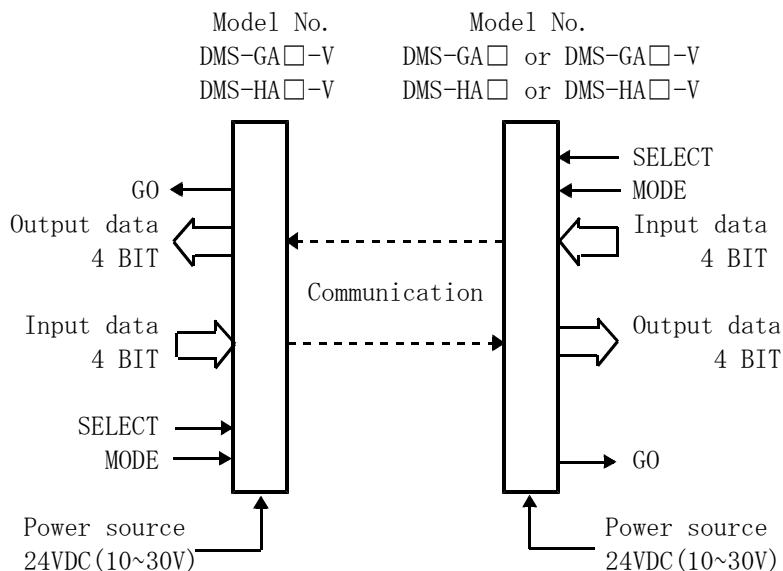


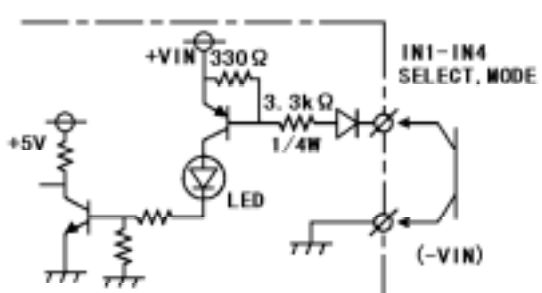
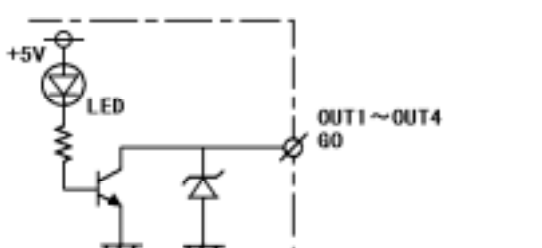
MINI-SIZE OPTICAL DATA
TRANSMISSION DEVICE
(PROJECTION AMOUNT ADJUSTER)
SPECIFICATIONS
DMS-GA□-V (4BIT HEAD-ON TYPE)
DMS-HA□-V (4BIT SIDE-ON TYPE)

	SOME MODELS WERE ADDED			ALL PAGES	JAN. 14' 00	OJIMA	FA-3716
SYMBOL	CORRECTED REASON			PAGES	DATE	CORRECTOR	NO.
APPROVED BY	CHECKED BY	DRAWN BY	DESIGNED BY	TITLE	OPTICAL DATA TRANSMISSION DEVICE (PROJECTION AMOUNT ADJUSTER) DMS-G/HA□-V SPECIFICATIONS		
MAEJIMA	MAEJIMA	OJIMA	OJIMA	DRAWING NO.			
				C - 4 2 - 2 8 1 6		1 / 4	

1. Configuration



2. Specifications

Specifications				
Model No.	DMS-GA1-V	DMS-HA1-V	DMS-GA2-V	DMS-HA2-V
Transmission distance	0~1.0m(changeable by adjuster)		0~3.0m(changeable by adjuster)	
Directive angle	30° (full angle)			
Transmission direction	HEAD-ON	SIDE-ON	HEAD-ON	SIDE-ON
Transmission capacity (Input/output)	4 bits/4 bits			
Transmission method	Half-duplex two-way transmission			
Transmission time	40ms			
Modulation method	Pulse modulation			
Verification method	Parity check			
Supply voltage	24VDC(10~30V)			
Current consumption	100mA Max.			
Ambient illuminance	4000lx or less			
Ambient temperature/ humidity	-10℃~+50℃ 85%RH or less			
Vibration resistance	Double amplitude 1.5mm 10~55Hz each 2 hour in X, Y & Z directions			
Impact resistance	500m/s ² each 10 time in X, Y & Z directions			
Connection method	Lead wire(0.2sq. 15-core shield)			
Protective structure	IP64			
Input IN1~IN4, SELECT, MODE			ON current 2.5mA or more OFF current 1mA or less (Operated threshold current 1.5~2mA) *Can't use 2 wire sensor	
Output OUT1~OUT4, GO			NPN open-collector output VCE 30V or less, IC 50mA or less Residual voltage 1.8V or less	

TITLE

OPTICAL DATA TRANSMISSION DEVICE (PROJECTION
AMOUNT ADJUSTER) DMS-G/HA□-V SPECIFICATIONS

DRAWING
NO.

C-42-2816

2/4

HOKUYO AUTOMATIC CO., LTD.

3. Transmission characteristics

(1) Characteristics data

Items	Abbreviation	Unit (mS)	
		MIN.	MAX.
Input data hold time	t I H	30	—
Transmission time	tON, tOFF	13	40
Transmission start delay time (against optical axis coincidence)	t S D	30	1 1 0
Output hold time (against SELECT A)	tOH1	50	90
Output hold time (against SELECT B)	tOH2	—	5
Output hold time (against light-interruption)	tOH3	50	90

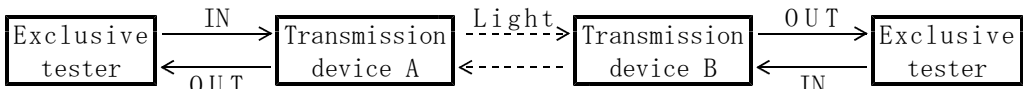
(2) Characteristics measurement conditions

*MODE --- Side A - Reception standby mode

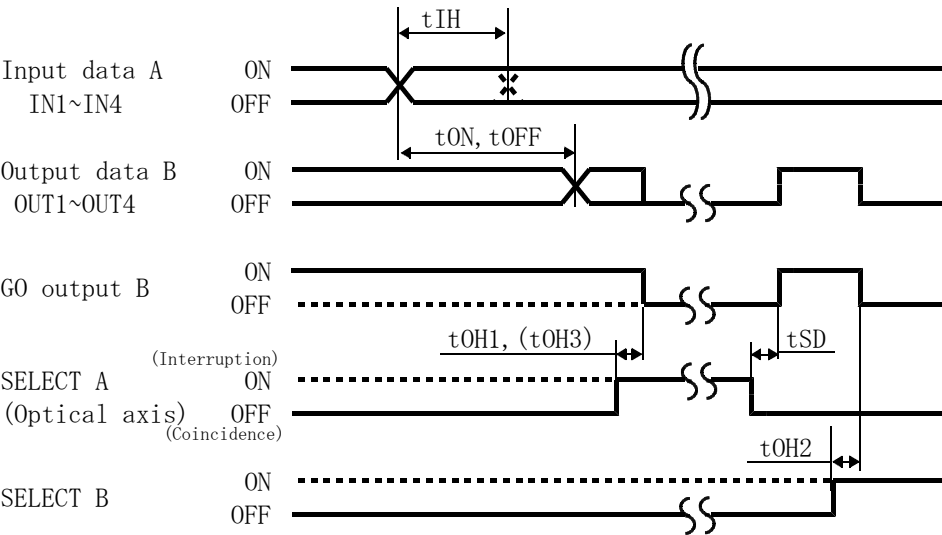
Side B - Transmission standby mode

*It is measured executed with input at A side & output at B side.

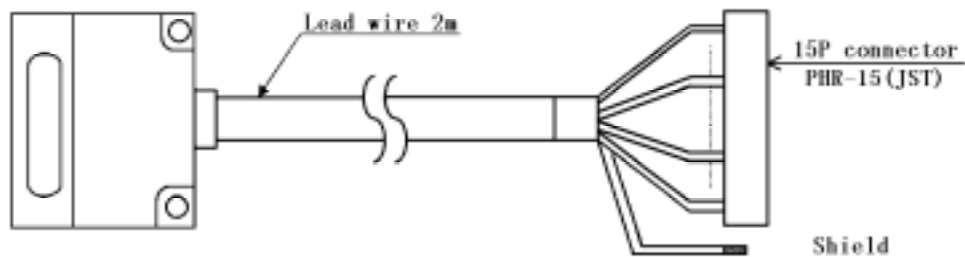
(3) Measurement block diagram



(4) Transmission timing



4. External connections



Colors	Pin No.	Functions
Black	1	I N 1
Brown	2	I N 2
Red	3	I N 3
Orange	4	I N 4
White/yellow	5	MODE
Yellow	6	SELECT
White/blue	7	NC
Green	8	OUT1
Blue	9	OUT2
Purple	1 0	OUT3
Gray	1 1	OUT4
White	1 2	G 0
Yellow/green	1 3	COM (0V)
Yellow/red	1 4	+VIN
Yellow/black	1 5	-VIN (0V)
Shield	Shield	

Note)It is connected between No.13 & 15 inside.

5. Terminal functions

Names	Functions	
IN1~IN4	Input data	
OUT1~OUT4	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	
G 0	It is ON at normal data reception and OFF at interruption	
COM	Common for input & output	
+V IN	+24V (10~30V)	Power source
-V IN	0V	

(Note)Make sure to set the opposite side to reception standby mode.