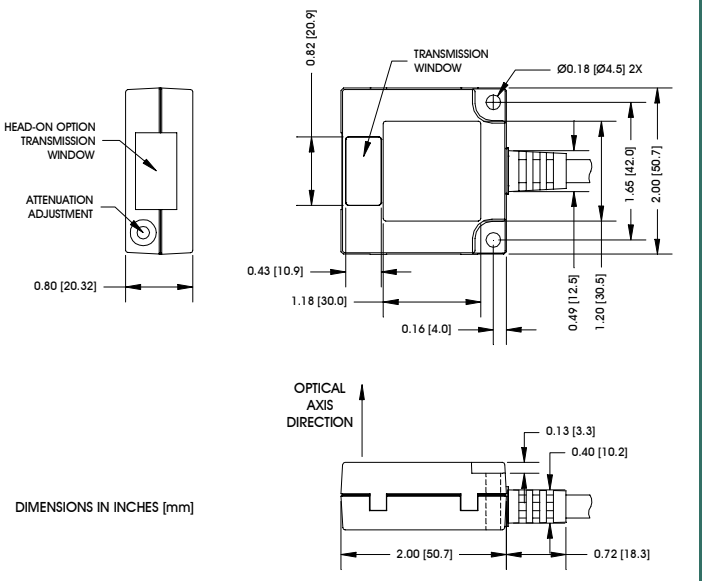
GCI04002 E84 PI/O Optical Transceiver Data Sheet

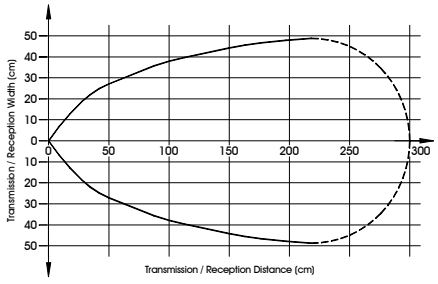
Pin	Male DB-25	
	Transceiver Signal	Related E84 Signal
1	IN 1	L_REQ
2	IN 2	U_REQ
3	IN 3	VA[4]
4	IN 4	READY
5	IN 5	VS_0[4]
6	IN 6	VS_1[4]
7	IN 7	HO_AVBL
8	IN 8	ES
9	NC[1]	-
10	SELECT	Reserved[2]
11	MODE	Reserved[2]
12	GO	Reserved[2]
13	NC[1]	-
14	OUT 1	VALID
15	OUT 2	CS_0
16	OUT 3	CS_1
17	OUT 4	AM_AVBL[4]
18	OUT 5	TR_REQ
19	OUT 6	BUSY
20	OUT 7	COMPT
21	OUT 8	CONT
22	NC[1]	-
23	Power	24 Vdc
24	Power GND[3]	Signal GND
25	Signal GND[3]	Power COM

NOTE 1: Not Connected
NOTE 2: The SEMI® E84 Specification states that Reserved signals may be used to support signals required for interface units.
NOTE 3: Ground pins 24 and 25 are internally connected together.
NOTE 4: For use with passive OHS vehicles.

DB-25 Pin Assignments



Mounting Details



Optical Transmission Area

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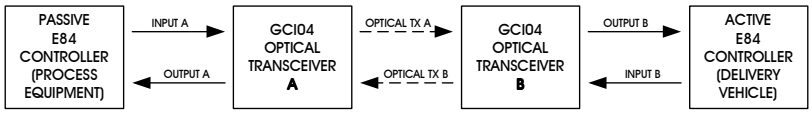
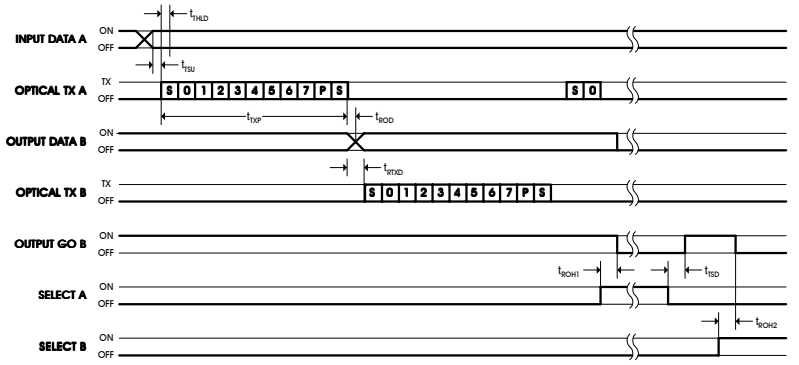




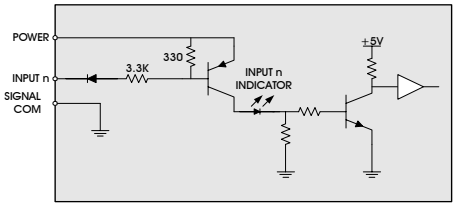
PARAMETER	DESCRIPTION	MIN	MAX	UNIT
t_{TSU}	Input setup time prior to transmission, all inputs	10		uS
t_{THLD}	Input hold time, all inputs	0		uS
t_{TXP}	Transmission Time	13	40	mS
t_{ROD}	Delay from valid reception to updated output		10	uS
t_{RTXD}	Delay from valid reception to transmission		10	uS
t_{ROH1}	Output hold time from Select A	50	90	mS
t_{TSD}	Transmission start delay from Select A	30	110	mS
t_{ROH2}	Output hold time from Select B	50	90	mS

Timing Details

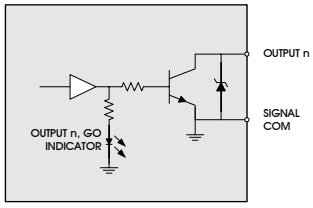
Power Source	18 to 30 VDC @ 100 mA max
Input	On 10 mA max, 1.8 VDC max Off 200 uA max, 30 VDC max
Output	On 25 mA min Sink, 1.8 VDC max Off 100 uA max Source, 30 VDC max
Termination	Molded DB-25 connector w/4-40 male thumbscrews -2M: 2m (6.5') cable -5M: 5m [14.4'] cable -18IN: 0.5m [1.6'] cable
Compatibility	DMS-HB1 and DM-HB1
Dimensions	50mm x 50mm x 20mm (2.0" x 2.0" x 0.80")
Transmission Capacity	Input: 8 bit Output: 8 bit
Transmission Method	Half-Duplex Two-Way Transmission
Transmission Time	Less than 40 milliseconds
Modulation Type	Pulse Modulation
Verification Method	Parity Check
Projection Element	Infrared LED, 875 nm, 120 mW/sr
Transmission Distance	1 meter (3' 4")
Reception Element	PIN Diode, 880 nm, 500 mW/cm^2

Specifications

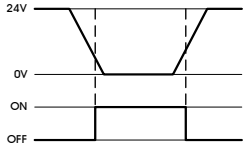
INPUT CIRCUIT
IN1-IN8, MODE and SELECT



OUTPUT CIRCUIT
OUT1-OUT8 and GO



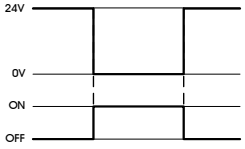
INPUT SWITCHING CHARACTERISTICS



I_{OFF} = 1mA max
I_{ON} = 2.5mA typ

MODE and SELECT do not have indicators

OUTPUT SWITCHING CHARACTERISTICS



V_{OFF} = 24 @ -100uA max
V_{ON} = 0.05V @ 5mA

Input and Output Sections