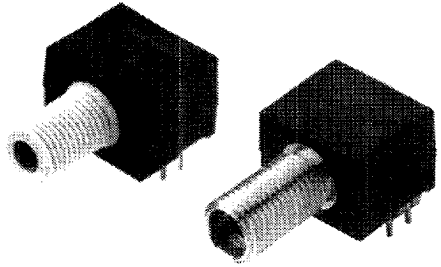


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FOR INDUSTRIAL BUS SYSTEMS

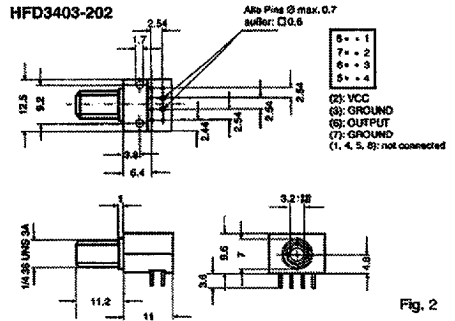
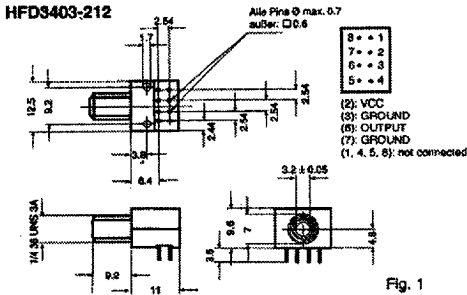
FEATURES

- Designed to meet SERCOS specification
- Converts optical input signals to TTL digital output
- Typical sensitivity 5µw (-23 dBm) (660nm)
- Single 5 volg supply
- Direct coupled receiver circuit
- Open collector output
- Microlens optics for efficient fiber coupling
- Metal barrel for high mechanical stability (HFD3403-202) Fig.2
- Separate grounding of barrel for optimum EM/RFI shielding (HFD3403-202) Fig.2
- Lost cost plastic barrel for General Purpose Bus-Applcation (HFD3403-212) Fig.1



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OUTLINE DIMENSIONS in inches (mm)



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Honeywell reserves the right to make changes in order to improve design and supply the best products possible.

HFD3403-2XX

FOR INDUSTRIAL BUS SYSTEMS

ELECTRO-OPTICAL CHARACTERISTICS (Temperature = 25°C, $V_{CC} = 5.0$ VDC unless otherwise noted)

PARAMETER	SYMBOL	MIN	TYP	MAX	UNITS	TEST CONDITIONS
Minimum input sensitivity	P_{IN} (Peak)		5.0	10.0	μ W	$\lambda_P = 660$ nm into 1000 μ m optical fiber $f = 2.5$ Mhz, Duty Cycle = 50%, PWD \leq 10%
			-23	-20	dBm	
High level logic output voltage	V_{OH}	2.4	4.5		V	$P_{IN} \leq 10$ μ W, $R_L = 560$ Ω
Low level logic output voltage	V_{OL}		0.25	0.4		V $P_{IN} \leq 10$ μ W, $R_L = 560$ Ω
Rise Time	t_R		6	9		ns $P_{IN} \leq 10$ μ W, $V_O = 0.4$ to 2.4 V $R_L = 560$ Ω
Fall Time	t_F		6	9		ns $P_{IN} \leq 10$ μ W, $V_O = 2.4$ to 0.4 V $R_L = 560$ Ω
Supply Current	I_{OCL} I_{OCH}	13.0	15.0		mA	$P_{IN} \geq 10$ μ W $P_{IN} \leq 10$ μ W
		4.5	6.5			
Pulse width distortion	PWD		10	25		% $P_{IN} \leq 10$ μ W peak, $f = 2.5$ Mhz Duty Cycle = 50%
	PWD		25	30		% $P_{IN} \leq 10$ μ W peak, $f = 2.5$ Mhz Duty Cycle = 50%

ABSOLUTE MAXIMUM RATINGS

(25°C Free-Air Temperature unless otherwise noted)

Forward current	70 mA
Peak forward current	300 mA
Reverse voltage	+4 V
Power dissipation	140 mW
Operating temperature	-30 to +85°C
Storage temperature	260°C, 5 sec (3,0 mm from body)

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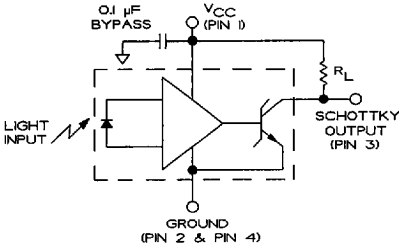
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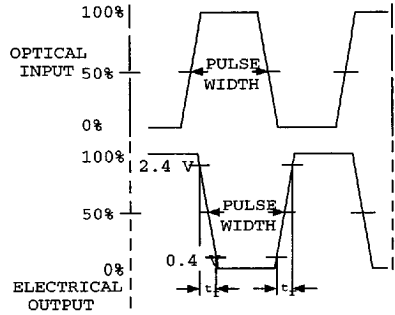
FOR INDUSTRIAL BUS SYSTEMS

BLOCK DIAGRAM



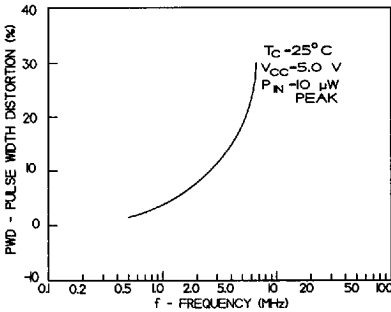
FIBER-4.SCH

SWITCHING WAVEFORM



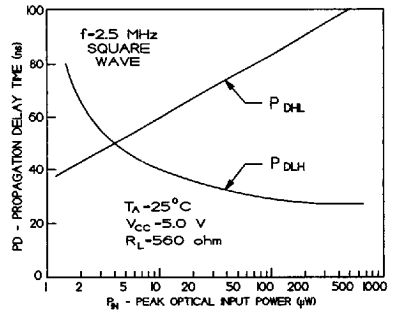
FIBER202.CIR

Pulse Width Distortion vs Frequency



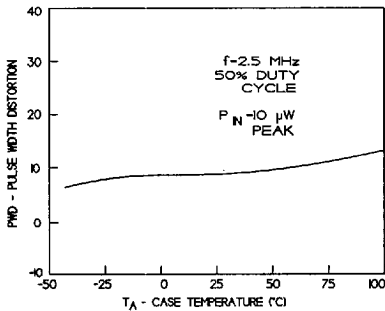
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Propagation Delay Time vs Peak Optical Input Power



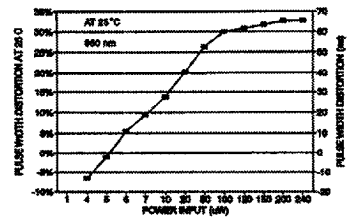
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Pulse Width Distortion vs Temperature



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PULSE WIDTH DISTORTION VS OPTICAL INPUT POWER



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