

FOD8001, FODM8061, FODM8071

HIGH SPEED LOGIC GATE OPTOCOUPLERS

Fairchild's Offering

The FOD8001, FODM8061 and FODM8071 are 3.3V/5V high speed logic gate optocouplers that support isolated communications between systems without conducting ground loops or hazardous voltages. Each high speed logic gate optocoupler utilizes Fairchild's patented coplanar packaging technology, Optoplanar® and optimized design. This achieves excellent noise immunity, characterized by high common mode transient immunity and power supply rejection specifications. In addition, Fairchild offers the FOD07xx series and FODM611, a family of 5V high speed logic gate optocouplers.

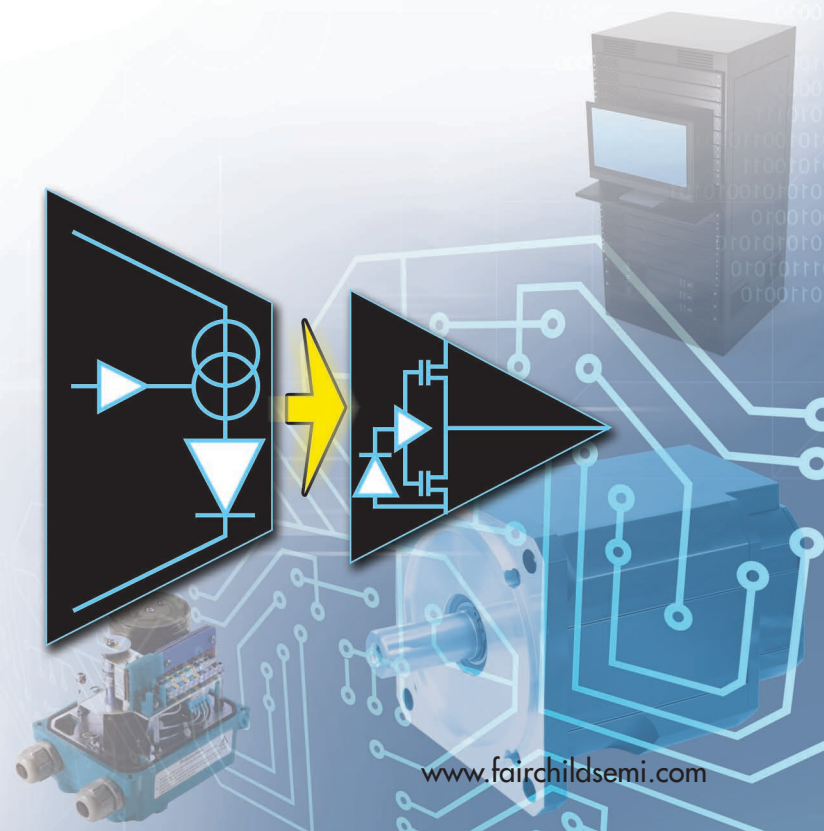
Features & Benefits

- Excellent noise immunity characterized by common mode transient immunity (CMTI) and power supply rejection (PSR) specifications
 - 40kV/μs static CMTI @ $V_{CM} = 1000V$
 - 25kV/μs dynamic CMTI @ $V_{CM} = 1500V$, 20MBaud Rate
 - PSR in excess of 10% of the supply voltages
- High bandwidth up to 25Mbps and 6ns pulse width distortion
- Dual supply voltages, 3.3V and 5V, enabling CMOS and level translation capabilities
- Electrical characteristics guaranteed beyond the full industrial temperature range (-40°C to +105°C)
- UL1577 (3,750 VAC_{RMS} for 1 min) and IEC60747-5-2 certified* for increased reliability
- FOD8001, FOD0721, FOD0720, FOD0710 in SO 8-Pin package
- FODM8071, FODM8061, FODM611 in Mini-Flat, SO 5-Pin package
- Lead-free and RoHS compliant

*IEC certification pending

Applications

- Industrial fieldbus communications with programmable logic control via Profibus, Interbus, Modbus, DeviceNet, CAN, RS485
- Isolated system interface via I²C, SPI, USB
- Isolated data acquisition systems
- Isolated integrated power modules eg. (SPM®)



For data sheets, application notes, samples and more, please visit: www.fairchildsemi.com

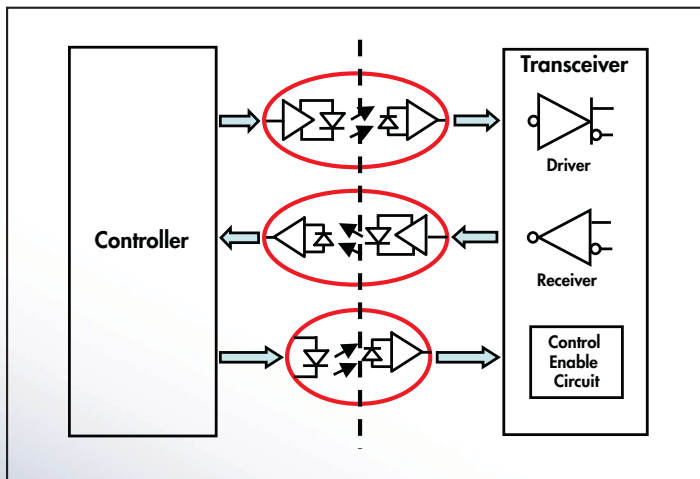
Logic Gate Optocouplers Selection Guide

Part Number	V_{DD1}/V_{DD2} (V)	I_{DD1L}/I_{DD1H} Max. (mA)	I_{DD2L}/I_{DD2H} Max. (mA)	t_{PHL}/t_{PLH} Max. (ns)	Data Rate Max. (Mbd)	PWD Max. (ns)	CM_H/CM_L Min. (kV/ μ s)	V_{ISO} Min. (V)	T_{OPR} ($^{\circ}$ C)	Cross Reference (Avago)
FOD8001*	3.0 - 5.5	10/3	9/9	40/40	25.0	6	20/20	3750	-40 to +105	ACPL-072L
FOD0721	4.5 - 5.5	10/3	9/9	40/40	25.0	6	20/20	3750	-40 to +100	HCPL-0721
FOD0720	4.5 - 5.5	10/3	9/9	40/40	25.0	8	20/20	3750	-40 to +100	HCPL-0720
FOD0710	4.5 - 5.5	10/3	9/9	40/40	12.5	8	20/20	3750	-40 to +100	HCPL-0710

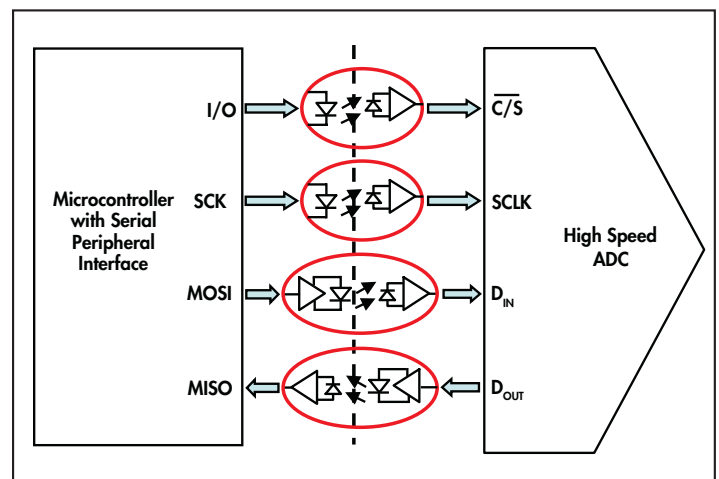
*Excellent noise immunity, characterized by high common mode transient immunity and power supply rejection specifications

Input LED Drive, Logic Gate Optocouplers Selection Guide

Product Number	V_{DD} (V)	$I_{FT(HL)}$ Max. (mA)	I_{CCH} & I_{CCL} Max. (mA)	t_{PHL}/t_{PLH} Max. (ns)	Data Rate Max. (Mbd)	PWD Max. (ns)	CM_H/CM_L Min. (kV/ μ s)	V_{ISO} Min. (V)	T_{OPR} ($^{\circ}$ C)	Cross Reference (Avago)
FODM8071	3.0 - 5.5	5	4.8/4.8	55/55	20.0	20	20/20	3750	-40 to +110	ACPL-M75L
FODM8061	3.0 - 5.5	5	7.0/8.5	80/80	10.0	25	20/20	3750	-40 to +110	ACPL-M60L
FODM611	4.5 - 5.5	5	9.0/10.0	100/100	10.0	35	20/20	3750	-40 to +85	HCPL-M611, -M601, -M600



Isolating Fieldbus Interface



Isolating Data Acquisition System

For additional information, please visit www.fairchildsemi.com/products/opto