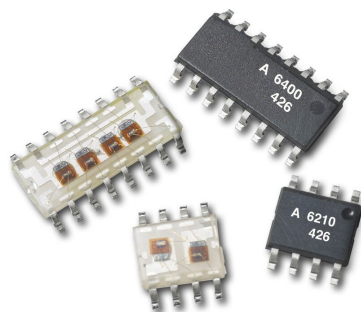


# Agilent ACSL-6xx0 Multi-Channel & Bi-Directional 15MBd Digital Logic Gate Optocoupler Selection Guide



## Description

ACSL-6xx0 series are opto-isolated, multi-channel and bi-directional, high-speed optocouplers. Integration of multiple optocouplers in monolithic form is achieved through patented process technology. These devices provide full duplex and bi-directional isolated data transfer and communication capability in compact surface mount packages. They are available in 15Mbd speed option, wide supply voltage range and wide temperature range.

The isolated data acquisition system is ideal for digitizing the output of the sensors that operate in hostile environment. The ADC, in this case, is a 24-bit sigma delta or fast

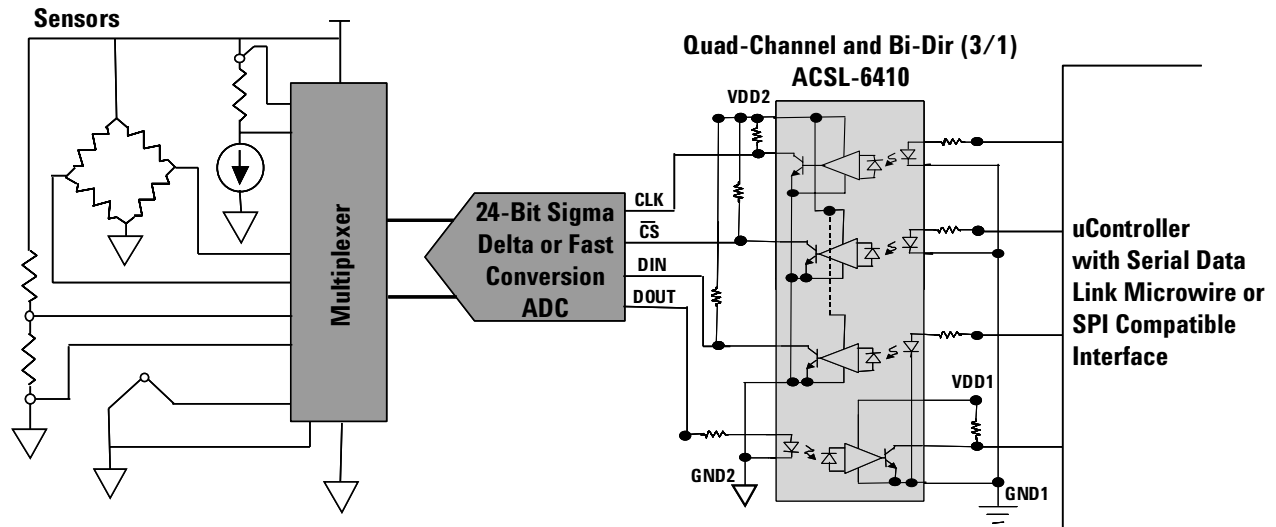
conversion type, converts the analog voltage to a digital number. The digital number represents the input voltage in discrete steps with finite resolution. The quad-channel and bi-directional, ACSL-6410, provides high CMR of 10kV/us and electrical isolation of 2500Vrms between the host system and the data acquisition circuitry and sensors. The power supply is also isolated, usually via a transformer to isolate the AC line voltage from the DC voltages generated to power the data acquisition system.

## Applications

- Full Duplex Communication
- Isolated Line Receiver
- Computer-Peripheral Interfaces
- Microprocessor System Interfaces
- Digital Isolation for A/D and D/A Conversion
- Switching Power Supply
- Instrument Input/Output Isolation
- Ground Loop Elimination
- Pulse Transformer Replacement



## Block Diagram



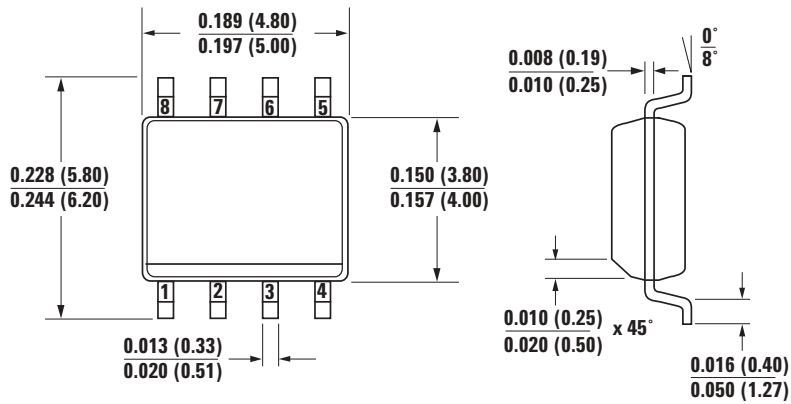
## Selection Guide

Device	Part No.	Package	$I_{F(ON)}$ min (mA)	$t_{plh}$ max (ns)	$t_{phl}$ max (ns)	PWD max (ns)	$t_{psk}$ max (ns)	CMR		$V_{iso\ min}$ ( $V_{rms}$ )	$V_{iorm}$ ( $V_{peak}$ )
								min ( $V/\mu s$ )	$V_{cm}$ (V)		
Dual, Bi-Directional	ACSL-6210-00R	S08									
Triple, All-in-One	ACSL-6300-00T*										
Triple, Bi-Directional, 2/1	ACSL-6310-00T*										
Quad, All-in-One	ACSL-6400-00T	S016	7	100	100	35	40	10000	1000	2500	560
Quad, Bi-Directional, 3/1	ACSL-6410-00T*										
Quad, Bi-Directional, 2/2	ACSL-6420-00T*										

Note:

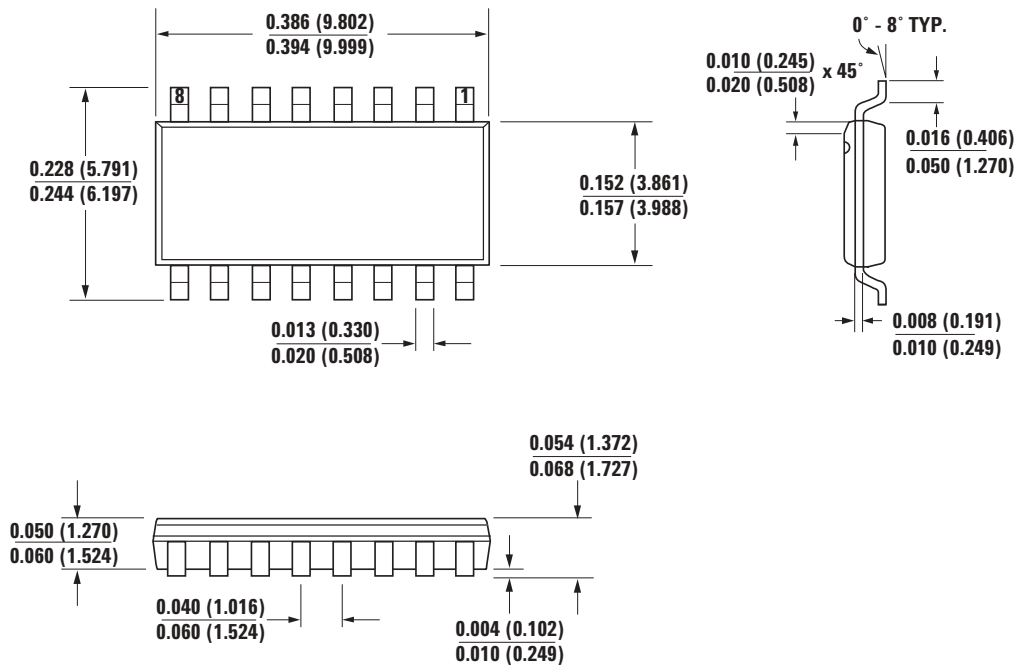
- \* Advanced Information,
- AC Specifications are based on  $V_{DD} = 5V$

**ACSL-6210 Small Outline SO-8 Package**



DIMENSIONS: INCHES (MILLIMETERS)  $\frac{\text{MIN}}{\text{MAX}}$

**ACSL-6300\*, ACSL-6310\*, ACSL-6400, ACSL-6410\* and ACSL-6420\* Small Outline SO-16 Package**



DIMENSIONS: INCHES (MILLIMETERS)  $\frac{\text{MIN}}{\text{MAX}}$

## Options Available

- 5XX – Tape & Reel Packaging Option
- X6X – IEC/EN/DIN EN60747-5-2 Option
- XXXE – Lead Free Option

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