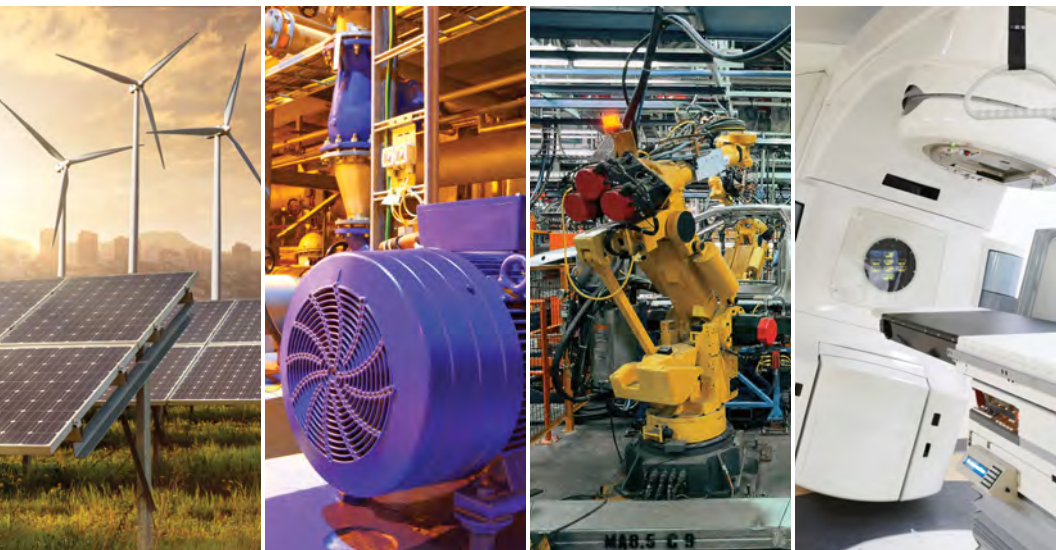




REFERENCE GUIDE

Optoisolation Products

Application
Block Diagrams

Optoisolation Products

Application Block Diagrams

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Optoisolation Products

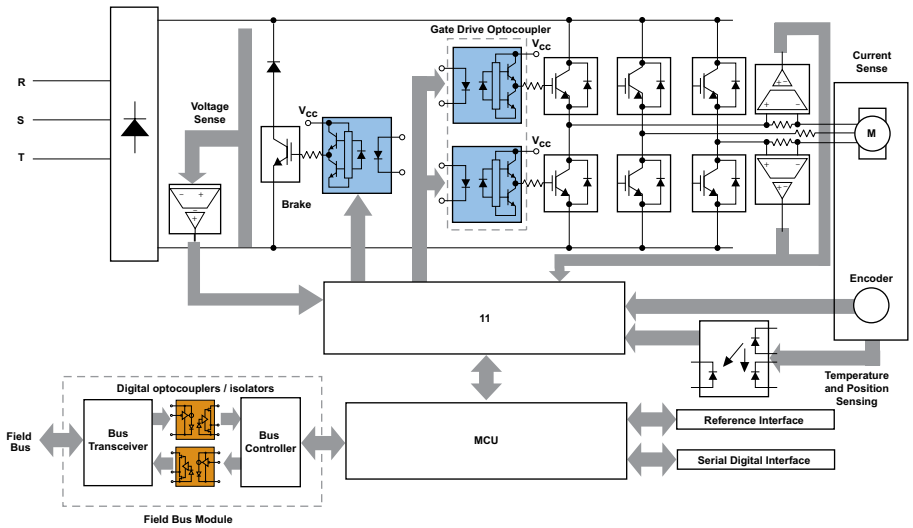
Application Block Diagrams for

Motor Control

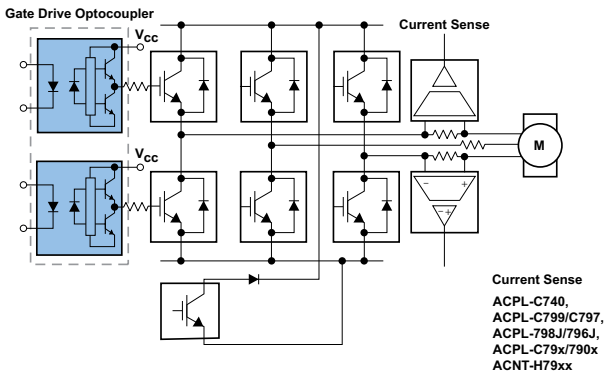


- 4 AC Servo Motor Driver
- 4 Inverter - IGBT/MOSFET
- 5 Switched Reluctance Motor Inverter
- 9 Inverter - Intelligent Power Module (IPM) Based

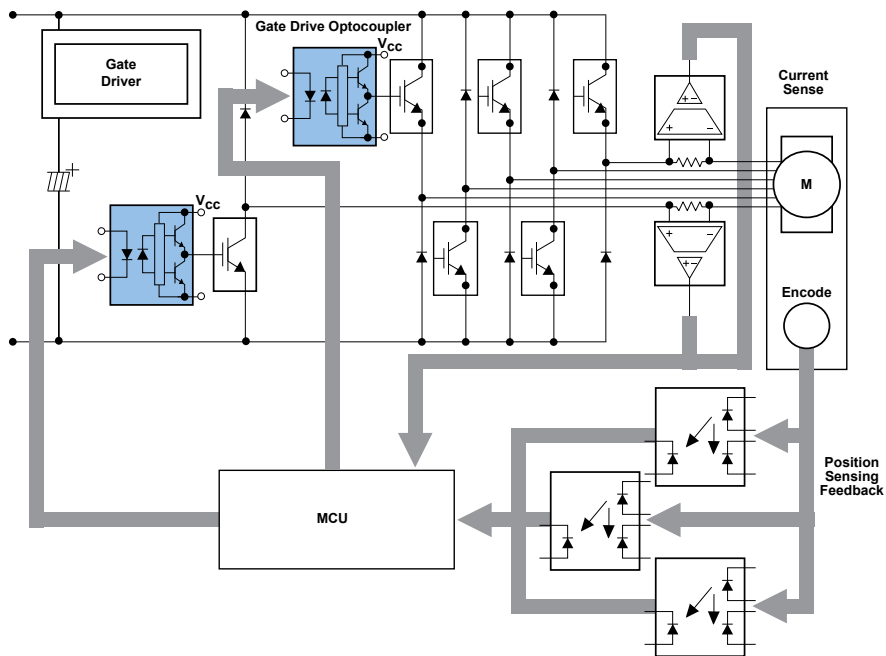
AC Servo Motor Drive



Inverter - IGBT/MOSFET Based



Switched Reluctance Motor Inverter



Smart Gate Drive Optocouplers

Part No.	Package	$I_{F(on)}$ mA Min	I_{OUT} A Min	I_{OUT} A Max	t_{PLH} μ s Max	t_{PHL} μ s Max	PDD μ s Max	V_{CC} V Max	CMR - V/ μ s@ V_{CM}		V_{ISO} V_{RMS} Min	V_{IORM} V_{peak}
									CMR V/ μ s (Min)	V_{CM} V		
ACPL-352J	SO16	8	4.5	5.0	0.15	0.15	0.075	30	100000	1500	5000	1414
	- 5A gate drive optocoupler for IGBT and SiC/GaN MOSFET - Low Propagation Delay (<150ns) - Over current, UVLO, GATE status detection with isolated feedback											
ACPL-302J	SO16	10	-	2.5	0.25	0.25	0.16	25	30000	1500	5000	1230
	- Integrated DC-DC Controller for floating power supply - Integrated short circuit protection and fault feedback - Under Voltage Lockout(UVLO) protection with feedback - Integrated Active Miller Clamp											
ACPL-339J	SO16	6	1.0	-	0.30	0.30	0.2	30	25000	1500	5000	1414
	- Scalable & Efficient gate drive design - Dual Rail-to-Rail output to drive external MOSFET buffer - Active timing control to prevent cross conduction in MOSFET buffer - Integrated short circuit protection and fault feedback											
ACPL-337J	SO16	9	3.0	4.0	0.22	0.25	0.15	30	30000	1500	5000	1414
ACPL-336J	SO16	9	2.0	2.5	0.22	0.25	0.15	30	30000	1500	5000	1414
	- Rail-to-rail output voltage - Integrated short circuit protection and fault feedback - Under Voltage Lockout(UVLO) protection with feedback - Integrated Active Miller Clamp and LED driver											
ACPL-335J	SO16	10	2.5	2.0	0.25	0.25	0.10	20	50000	1500	5000	1230
	- 2.5A MOSFET gate drive optocoupler - UVLO threshold for MOSFET protection - Over current threshold for MOSFET protection - Hard shut down for fast MOSFET protection											

Basic Gate Drive Optocouplers

Part No.	Package	$I_{F(on)}$ mA Min	I_{OUT} A Min	I_{OUT} A Max	t_{PLH} μ s Max	t_{PHL} μ s Max	PDD μ s Max	V_{CC} V Max	CMR - V/ μ s@ V_{CM}		V_{ISO} V_{RMS} Min	V_{IORM} V_{peak}
									CMR V/ μ s (Min)	V_{CM} V		
ACNT-H343	15mm Stretched SO8	12	4.0	5.0	0.15	0.15	0.09	30	100000	1500	7500	2262
ACNU-3430	11mm SSO8	7	4.0	5.0	0.15	0.15	0.09	30	100000	1500	5000	1414
ACNU-3410	11mm SSO8	7	2.5	3.0	0.15	0.15	0.09	30	100000	1500	5000	1414
ACPL-P349	Stretched SO6	7	2.0	2.5	0.11	0.11	0.05	30	100000	1500	3750	891*
ACPL-W349	Stretched SO6	7	2.0	2.5	0.11	0.11	0.05	30	100000	1500	5000	1140*
ACPL-P346	Stretched SO6	7	2.0	2.5	0.12	0.12	0.05	20	100000	1500	3750	891*
ACPL-W346	Stretched SO6	7	2.0	2.5	0.12	0.12	0.05	20	100000	1500	5000	1140*
ACPL-P347	Stretched SO6	7	0.8	1.0	0.11	0.11	0.05	30	100000	1500	3750	891*
ACPL-W347	Stretched SO6	7	0.8	1.0	0.11	0.11	0.05	30	100000	1500	5000	1140*
ACPL-P345	Stretched SO6	7	0.8	1.0	0.12	0.12	0.05	20	100000	1500	3750	891*
ACPL-W345	Stretched SO6	7	0.8	1.0	0.12	0.12	0.05	20	100000	1500	5000	1140*
ACPL-P343	Stretched SO6	7	3.0	4.0	0.20	0.20	0.1	30	35000	1500	3750	891*
ACPL-W343	Stretched SO6	7	3.0	4.0	0.20	0.20	0.1	30	35000	1500	5000	1140*

• With IEC/EN/DIN EN 60747-5-5 Option 060.

Hermetic

Part No.	Package	I_{OUT} A Min	I_{OUT} A Max	t_{PLH} μ s Max	V_{CC} V Max	V_{CC} V Max	CMR V/ μ s (Min)	VCM /V
HCPL-5120	CDIP	0.5	2.0	0.50	0.50	35	10000	1000
HCPL-5160	CDIP	0.5	2.5	0.50	0.50	35	15000	1000

Isolated Current/Voltage Sensing

Part No.	Output	Description	Gain Tolerance	Package
ACPL-C740	Digital	±200mV, Optically Isolated, 20MHz Internally Clocked, Sigma-Delta Modulator	±1%	SSO-8
ACPL-C799	Digital	±50mV, Optically Isolated, 10MHz Internally Clocked, Sigma-Delta Modulator	±1%	SSO-8
ACPL-C797	Digital	±200mV, Optically Isolated, 10MHz Internally Clocked, Sigma-Delta Modulator	±1%	SSO-8
ACPL-798J	Digital	±200mV, Optically Isolated, up to 25MHz Externally Clocked, LVDS Output, Sigma-Delta Modulator	±1%	SO-16
ACPL-796J	Digital	±200mV, Optically Isolated, up to 20MHz Externally Clocked, Sigma-Delta Modulator	±1%	SO-16
ACNT-H79B/A/0	Differential	Optical Isolation Amplifier, ±200mV Input Range	±0.5%, ±1%, ±3%	SSO-8
ACNT-H87B/A/0	Differential	Optical Isolation Amplifier, 0-2V Input Range	±0.5%, ±1%, ±3%	SSO-8
ACPL-C79B/C79A/C790	Differential	Optical Isolation Amplifier, ±200mV Input Range	±0.5%, ±1%, ±3%	SSO-8
ACPL-C87B/C87A/C870	Differential	Optically Isolated Voltage Sensor, 0-2V Input Range	±0.5%, ±1%, ±3%	SSO-8
HCPL-7510/7520	Single-Ended	Optical Isolation Amplifier, ±200mV Input Range	±3%, ±5%	DIP-6
HCPL-788J/ACPL-785J	Single-Ended	Optical Isolation Amplifier, ±200mV Input Range, with Fault Detection	±3%, ±5%	SO-16

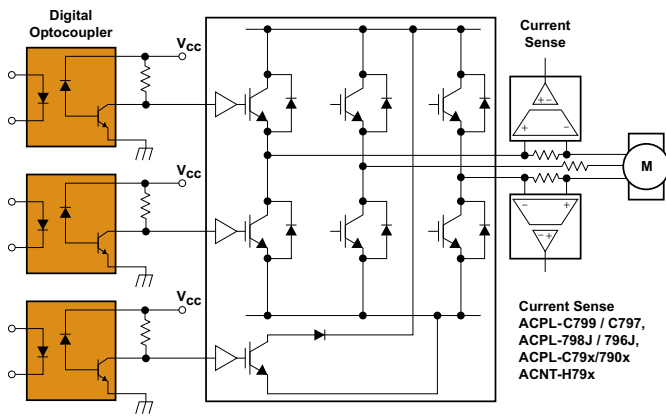
Hermetic

Part No.	Output	Description	Gain Tolerance	Package
HCPL-7850	Differential	Hermetically Sealed Optical Isolation Amplifier +/-200mV input range	+/-5%	CDIP

Isolated Voltage Feedback

Part No.	Package	Gain	Non-Linearity
HCNR200	DIP-8	+/-15%	0.25%
HCNR201	DIP-8	+/-5%	0.05%

Inverter - Intelligent Power Module (IPM) Based



Intelligent Power Module Interface Optocouplers

Part No.	Package	I _{F(ON)} mA Min	t _{PLH} μs Max	t _{PHL} μs Max	P _{DD} μs Max	CMR - V/μs@V _{CM}		V _{ISO} V _{RMS} Min	V _{IORM} V _{PEAK}
						CMR V/μs (Min)	V _{CM} V		
ACPL-M484	SO5	4.0	0.12	0.15	0.13	30000	1000	3750	567
ACPL-P484/ W484	Stretched SO6	4.0	0.12	0.15	0.13	30000	1000	3750/5000	891/1140
ACPL-M483	SO5	4.0	0.12	0.12	0.10	30000	1000	3750	567
ACPL-P483/ W483	Stretched SO6	4.0	0.12	0.12	0.10	30000	1000	3750/5000	891/1140
ACNV4506	500 mil DIP10	5.0	0.55	0.40	0.50	30000	1500	7500	2262
ACNU-4803 / 4804	11mm SSO8	12	0.12	0.15	0.13	50000	1500	5000	1414

Hermetic

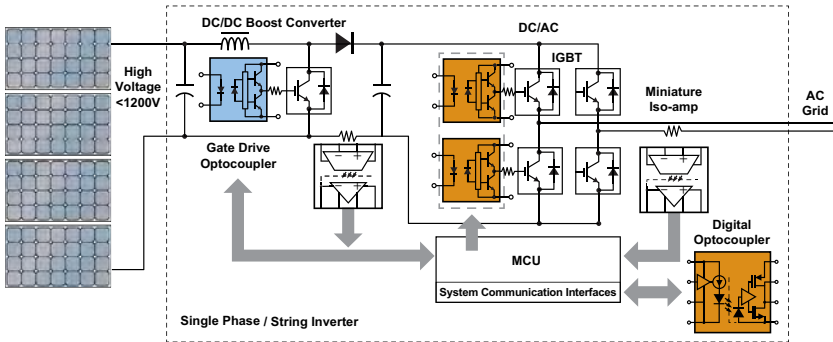
Part No.	Package	I _{F(ON)} mA Min	t _{PLH} μs Max	t _{PHL} μs Max	CMR V/μs (Min)	V _{CM} /V
HCPL-5300	CDIP	10	0.65	0.45	10000	1000

Optoisolation Products Application Block Diagrams for Renewable Energy Inverter and Energy Storage System

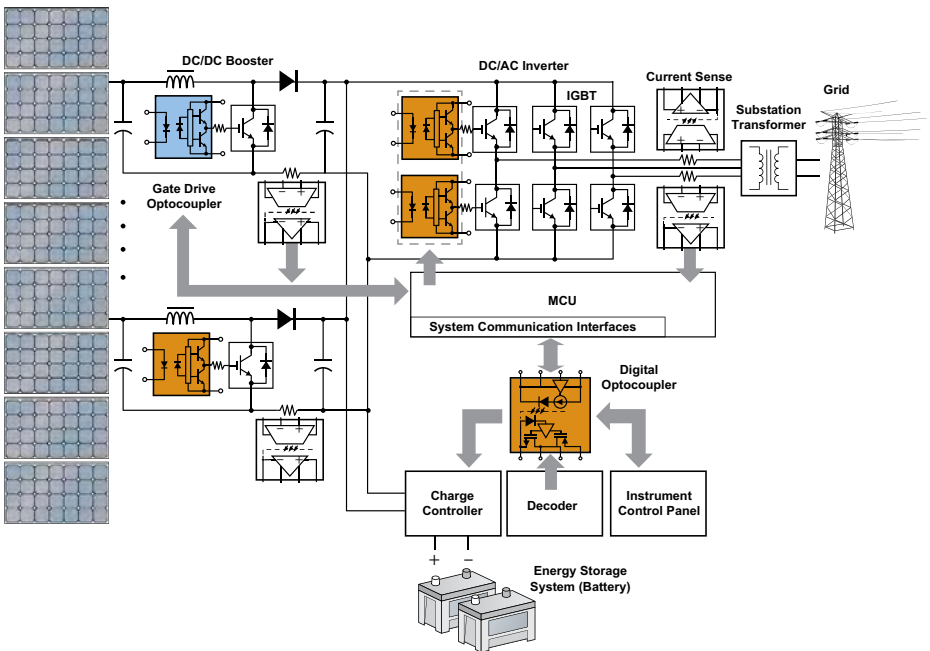


- 11 String Inverter (Single Phase)
- 11 Central Inverter (Three Phase) with Energy Storage System

String Inverter (Single Phase)



Central Inverter (Three Phase) with Energy Storage System



Renewable Energy Inverter and Energy Storage System

Smart Gate Drive Optocouplers

Part No.	Package	$I_{F(on)}$ mA Min	I_{OUT} A Min	I_{OUT} A Max	t_{PLH} μ s Max	t_{PHL} μ s Max	PDD μ s Max	V_{CC} V Max	CMR - V/ μ s@ V_{CM}		V_{ISO} V_{RMS} Min	V_{IORM} V_{peak}
									CMR V/ μ s (Min)	V_{CM} V		
ACPL-352J	SO16	8	4.5	5.0	0.15	0.15	0.075	30	100000	1500	5000	1414
	- 5A gate drive optocoupler for IGBT and SiC/GaN MOSFET - Low Propagation Delay (<150ns) - Over current, UVLO, GATE status detection with isolated feedback											
ACPL-302J	SO16	10	-	2.5	0.25	0.25	0.16	25	30000	1500	5000	1230
	- Integrated DC-DC Controller for floating power supply - Integrated short circuit protection and fault feedback - Under Voltage Lockout(UVLO) protection with feedback - Integrated Active Miller Clamp											
ACPL-339J	SO16	6	1.0	-	0.30	0.30	0.2	30	25000	1500	5000	1414
	- Scalable & Efficient gate drive design - Dual Rail-to-Rail output to drive external MOSFET buffer - Active timing control to prevent cross conduction in MOSFET buffer - Integrated short circuit protection and fault feedback											
ACPL-337J	SO16	9	3.0	4.0	0.22	0.25	0.15	30	30000	1500	5000	1414
ACPL-336J	SO16	9	2.0	2.5	0.22	0.25	0.15	30	30000	1500	5000	1414
	- Rail-to-rail output voltage - Integrated short circuit protection and fault feedback - Under Voltage Lockout(UVLO) protection with feedback - Integrated Active Miller Clamp and LED driver											
ACPL-335J	SO16	10	2.5	2.0	0.25	0.25	0.10	20	50000	1500	5000	1230
	- 2.5A MOSFET gate drive optocoupler - UVLO threshold for MOSFET protection - Over current threshold for MOSFET protection - Hard shut down for fast MOSFET protection											

Basic Gate Drive Optocouplers

Part No.	Package	I _{F(on)} mA Min	I _{OUT} A Min	I _{OUT} A Max	t _{PLH} μs Max	t _{PHL} μs Max	PDD μs Max	V _{CC} V Max	CMR - V/μs@ V _{CM}		V _{ISO} V _{RMS} Min	V _{IORM} V _{peak}
									CMR V/μs (Min)	V _{CM} V		
ACNT-H343	15mm Stretched SO8	12	4.0	5.0	0.15	0.15	0.09	30	100000	1500	7500	2262
ACNU-3430	11mm SSO8	7	4.0	5.0	0.15	0.15	0.09	30	100000	1500	5000	1414
ACNU-3410	11mm SSO8	7	2.5	3.0	0.15	0.15	0.09	30	100000	1500	5000	1414
ACPL-P349	Stretched SO6	7	2.0	2.5	0.11	0.11	0.05	30	100000	1500	3750	891*
ACPL-W349	Stretched SO6	7	2.0	2.5	0.11	0.11	0.05	30	100000	1500	5000	1140*
ACPL-P346	Stretched SO6	7	2.0	2.5	0.12	0.12	0.05	20	100000	1500	3750	891*
ACPL-W346	Stretched SO6	7	2.0	2.5	0.12	0.12	0.05	20	100000	1500	5000	1140*
ACPL-P347	Stretched SO6	7	0.8	1.0	0.11	0.11	0.05	30	100000	1500	3750	891*
ACPL-W347	Stretched SO6	7	0.8	1.0	0.11	0.11	0.05	30	100000	1500	5000	1140*
ACPL-P345	Stretched SO6	7	0.8	1.0	0.12	0.12	0.05	20	100000	1500	3750	891*
ACPL-W345	Stretched SO6	7	0.8	1.0	0.12	0.12	0.05	20	100000	1500	5000	1140*
ACPL-P343	Stretched SO6	7	3.0	4.0	0.20	0.20	0.1	30	35000	1500	3750	891*
ACPL-W343	Stretched SO6	7	3.0	4.0	0.20	0.20	0.1	30	35000	1500	5000	1140*

• With IEC/EN/DIN EN 60747-5-5 Option 060.

Low Power Digital Optocouplers

Part No.	Channel	Package	Data Rate Bd	t _{PLH} ns Max	t _{PHL} ns Max	PWD ns Max	t _{PSK} ns Max	V _{ISO} V _{RMS} Min	V _{IORM} V _{PEAK}
ACNT-H61L	1	Stretched SO8	10	100	100	40	40	7500	2262
ACNV2601	1	500mil DIP10	10	100	100	40	40	7500	2262
ACNW261L	1	400mil DIP8	10	95	95	40	30	5000	1414
ACPL-C61L	1	Stretched SO8	10	90	90	40	30	5000	1230
ACPL-W61L	1	Stretched SO6	10	80	80	30	30	5000	1140
ACPL-K64L	2	Stretched SO8	10	80	80	30	30	5000	1140
ACPL-M61L	1	SO5	10	80	80	30	30	3750	567
ACPL-O64L	2	SO8	10	80	80	30	30	3750	567
ACPL-W50L	1	Stretched SO6	1	1000	1000	-	-	5000	1140
ACPL-K54L	2	Stretched SO8	1	1000	1000	-	-	5000	1140
ACPL-M49U*	1	SO5	0.02	20000	20000	-	-	3750	567
ACPL-K49U*	1	Stretched SO8	0.02	20000	20000	-	-	5000	1140
ACPL-M71U*	1	SO5	25	35	35	12	15	3750	567
ACPL-M72U*	1	SO5	10	100	100	50	60	3750	567
ACNT-H50L/H511	1	15mm Stretched SO8	1	1000/2000	1000/2000	-	-	7500	2262

* R2Coupler extended temperature up to 125C.

Isolated Current/Voltage Sensing

Part No.	Output	Description	Gain Tolerance	Package
ACPL-C740	Digital	±200mV, Optically Isolated, 20MHz Internally Clocked, Sigma-Delta Modulator	±1%	SSO-8
ACPL-C799	Digital	±50mV, Optically Isolated, 10MHz Internally Clocked, Sigma-Delta Modulator	±1%	SSO-8
ACPL-C797	Digital	±200mV, Optically Isolated, 10MHz Internally Clocked, Sigma-Delta Modulator	±1%	SSO-8
ACPL-798J	Digital	±200mV, Optically Isolated, up to 25MHz Externally Clocked, LVDS Output, Sigma-Delta Modulator	±1%	SO-16
ACPL-796J	Digital	±200mV, Optically Isolated, up to 20MHz Externally Clocked, Sigma-Delta Modulator	±1%	SO-16
ACNT-H79B/A/O	Differential	Optical Isolation Amplifier, ±200mV Input Range	±0.5%, ±1%, ±3%	SSO-8
ACNT-H87B/A/O	Differential	Optical Isolation Amplifier, 0-2V Input Range	±0.5%, ±1%, ±3%	SSO-8
ACPL-C79B/C79A/C790	Differential	Optical Isolation Amplifier, ±200mV Input Range	±0.5%, ±1%, ±3%	SSO-8
ACPL-C87B/C87A/C870	Differential	Optically Isolated Voltage Sensor, 0-2V Input Range	±0.5%, ±1%, ±3%	SSO-8
HCPL-7510/7520	Single-Ended	Optical Isolation Amplifier, ±200mV Input Range	±3%, ±5%	DIP-6
HCPL-788J/ACPL-785J	Single-Ended	Optical Isolation Amplifier, ±200mV Input Range, with Fault Detection	±3%, ±5%	SO-16

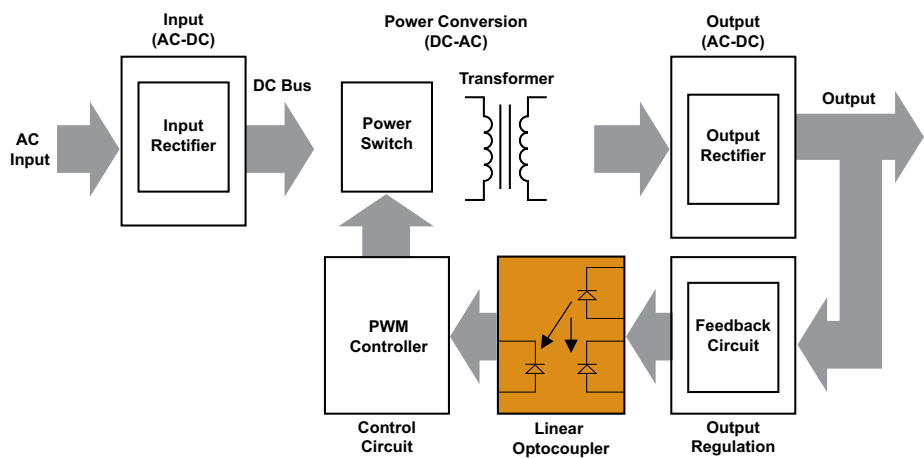
Optoisolation Products

Application Block Diagrams for Power Supply



- 16 Isolated Voltage Feedback
- 17 Isolated High-Low Gate Drive by Integrated Gate Drive Optocoupler
- 20 Isolated High-Low Gate Drive Interface by Digital Optocoupler
- 22 Secondary Controlled DC/DC with Sync Rectification
- 25 UPS (Data Center and Base Station)
- 27 Low Power Alarm Control Circuit

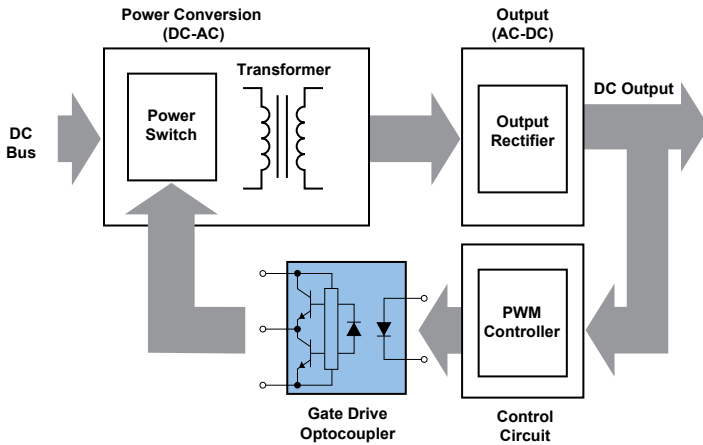
Isolated Voltage Feedback



Isolated Voltage Feedback

Part No.	Description	Gain Tolerance	Non-Linearity	Package
HCNR201/200	High Linearity Optocoupler	±5%, ±15%	0.05%, 0.25%	DIP-8
ACPL-C87B/ C87A/C870	Optically Isolated Voltage Sensor	±0.5%, ±1%, ±3%	0.05%	SSO-8

Isolated High-Low Gate Drive by Integrated Gate Drive Optocoupler



Smart Gate Drive Optocouplers

Part No.	Package	$I_{F(on)}$ mA Min	I_{OUT} A Min	I_{OUT} A Max	t_{PLH} μ s Max	t_{PHL} μ s Max	PDD μ s Max	V_{CC} V Max	CMR - V/ μ s@ V_{CM}		V_{ISO} V_{RMS} Min	V_{IORM} V_{peak}
									CMR V/ μ s (Min)	V_{CM} V		
ACPL-352J	SO16	8	4.5	5.0	0.15	0.15	0.075	30	100000	1500	5000	1414
	- 5A gate drive optocoupler for IGBT and SiC/GaN MOSFET - Low Propagation Delay (<150ns) - Over current, UVLO, GATE status detection with isolated feedback											
ACPL-302J	SO16	10	-	2.5	0.25	0.25	0.16	25	30000	1500	5000	1230
	- Integrated DC-DC Controller for floating power supply - Integrated short circuit protection and fault feedback - Under Voltage Lockout(UVLO) protection with feedback - Integrated Active Miller Clamp											
ACPL-339J	SO16	6	1.0	-	0.30	0.30	0.2	30	25000	1500	5000	1414
	- Scalable & Efficient gate drive design - Dual Rail-to-Rail output to drive external MOSFET buffer - Active timing control to prevent cross conduction in MOSFET buffer - Integrated short circuit protection and fault feedback											
ACPL-337J	SO16	9	3.0	4.0	0.22	0.25	0.15	30	30000	1500	5000	1414
ACPL-336J	SO16	9	2.0	2.5	0.22	0.25	0.15	30	30000	1500	5000	1414
	- Rail-to-rail output voltage - Integrated short circuit protection and fault feedback - Under Voltage Lockout(UVLO) protection with feedback - Integrated Active Miller Clamp and LED driver											
ACPL-335J	SO16	10	2.5	2.0	0.25	0.25	0.10	20	50000	1500	5000	1230
	- 2.5A MOSFET gate drive optocoupler - UVLO threshold for MOSFET protection - Over current threshold for MOSFET protection - Hard shut down for fast MOSFET protection											

Basic Gate Drive Optocouplers

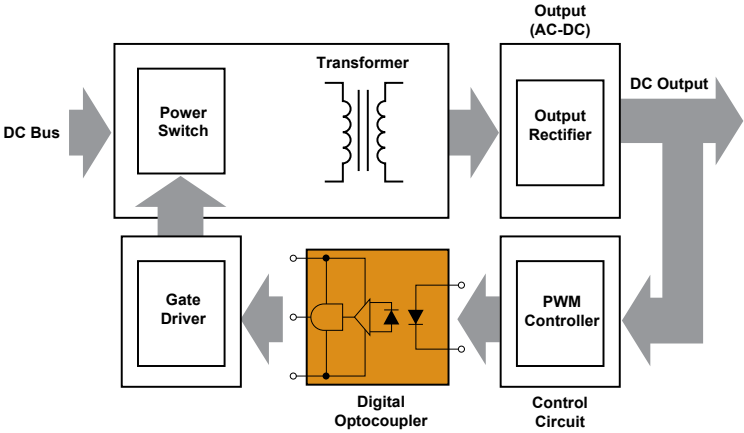
Part No.	Package	I _{F(on)} mA Min	I _{OUT} A Min	I _{OUT} A Max	t _{PLH} μs Max	t _{PHL} μs Max	PDD μs Max	V _{CC} V Max	CMR - V/μs@ V _{CM}		V _{ISO} V _{RMS} Min	V _{IORM} V _{peak}
									CMR V/μs (Min)	V _{CM} V		
ACNT-H343	15mm Stretched SO8	12	4.0	5.0	0.15	0.15	0.09	30	100000	1500	7500	2262
ACNU-3430	11mm SSO8	7	4.0	5.0	0.15	0.15	0.09	30	100000	1500	5000	1414
ACNU-3410	11mm SSO8	7	2.5	3.0	0.15	0.15	0.09	30	100000	1500	5000	1414
ACPL-P349	Stretched SO6	7	2.0	2.5	0.11	0.11	0.05	30	100000	1500	3750	891*
ACPL-W349	Stretched SO6	7	2.0	2.5	0.11	0.11	0.05	30	100000	1500	5000	1140*
ACPL-P346	Stretched SO6	7	2.0	2.5	0.12	0.12	0.05	20	100000	1500	3750	891*
ACPL-W346	Stretched SO6	7	2.0	2.5	0.12	0.12	0.05	20	100000	1500	5000	1140*
ACPL-P347	Stretched SO6	7	0.8	1.0	0.11	0.11	0.05	30	100000	1500	3750	891*
ACPL-W347	Stretched SO6	7	0.8	1.0	0.11	0.11	0.05	30	100000	1500	5000	1140*
ACPL-P345	Stretched SO6	7	0.8	1.0	0.12	0.12	0.05	20	100000	1500	3750	891*
ACPL-W345	Stretched SO6	7	0.8	1.0	0.12	0.12	0.05	20	100000	1500	5000	1140*
ACPL-P343	Stretched SO6	7	3.0	4.0	0.20	0.20	0.1	30	35000	1500	3750	891*
ACPL-W343	Stretched SO6	7	3.0	4.0	0.20	0.20	0.1	30	35000	1500	5000	1140*

• With IEC/EN/DIN EN 60747-5-5 Option 060.

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Part No.	Package	I _{OUT} A Min	I _{OUT} A Max	t _{PLH} μs Max	t _{PHL} μs Max	V _{CC} V Max	CMR V/μs (Min)	V _{CM} /V
HCPL-5120	CDIP	0.5	2.0	0.50	0.50	35	10000	1000
HCPL-5160	CDIP	0.5	2.5	0.50	0.50	35	15000	1000

Isolated High-Low Gate Drive Interface by Digital Optocoupler



High Speed Digital Isolators

Part No.	Channel	Package	Max Data Rate MBd Min	t _{PLH} & t _{PHL} (V _{CC} =5.0V) ns Max	t _{PLH} & t _{PHL} (V _{CC} =3.3V) ns Max	PWD ns Max	t _{PSK} ns Max	CMR - V/μs@V _{CM}		V _{ISO} V _{RMS} Min
								CMR V/μs (Min)	V _{CM} V	
ACML-7400	Quad	SO16 Wide Body	100	32	36	2	5	25000	1000	5600
ACML-7410	Quad, 3/1 Bi-dir	SO16 Wide Body	100	32	36	2	5	25000	1000	5600
ACML-7420	Quad, 2/2 Bi-dir	SO16 Wide Body	100	32	36	2	5	25000	1000	5600
HCPL-090J	Quad	SO16 Nar-row Body	100	15	18	3	6	15000	1000	2500
HCPL-900J	Quad	SO16 Wide Body	100	15	18	3	6	15000	1000	2500

10 MBd (3.3V/5V) CMOS Optocouplers

Part No.	Channel	Package	I _{F(on)} mA Min	t _{PLH} ns Max	t _{PHL} ns Max	P _{WD} ns Max	t _{PSK} ns Max	CMR – V/μs@V _{CM}		V _{ISO} V _{RMS} Min	V _{IORM} V _{PEAK}
								CMR V/μs (Min)	V _{CM} V		
ACNT-H61L	1	Stretched SO8	4.5	100	100	40	40	20000	1000	7500	2262
ACPL-M61L	1	SO5	1.6	80	80	30	30	20000	1000	3750	567
ACPL-O61L	1	SO8	1.6	80	80	30	30	20000	1000	3750	567
ACPL-C61L	1	Stretched SO8	3	90	90	40	30	20000	1000	5000	1230
ACPL-W61L	1	Stretched SO6	1.6	80	80	30	30	20000	1000	5000	1140
ACNW261L	1	400mil DIP8	4	95	95	40	30	20000	1000	5000	1414
ACPL-O64L	2	SO8	1.6	80	80	30	30	20000	1000	3750	567
ACPL-K64L	2	Stretched SO8	1.6	80	80	30	30	20000	1000	5000	1140

Hermetic

Part No.	Channel	Package	I _{F(on)} mA Min	t _{PLH} ns Max	t _{PHL} ns Max
ACPL-5600L	1	CDIP	10	100	100

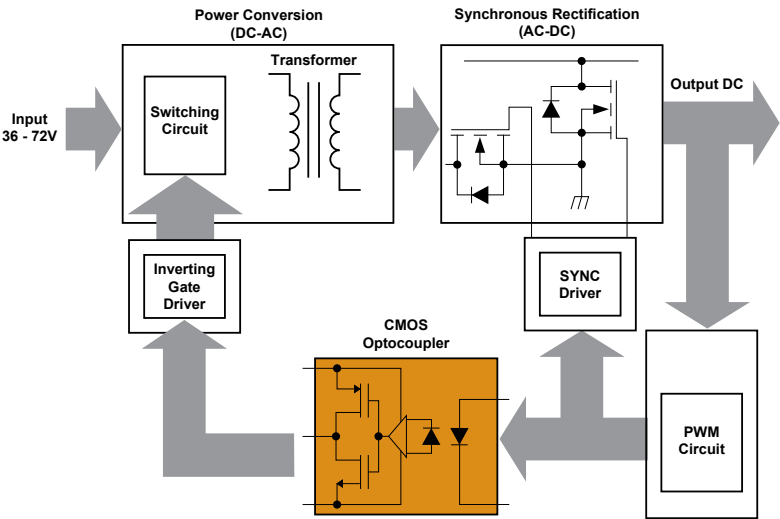
5 MBd CMOS/Logic Gate Optocouplers

Part No	Package	CMR V/μs	V _{CM}	Insulation V _{rms} /1 minute
ACPL-M21L	SO-5	25000	1000	3750
ACPL-O21L	SO-8	25000	1000	3750
ACPL-O24L	SO-8	25000	1000	3750
ACPL-W21L	SSO-6	25000	1000	5000
ACPL-K24L	SSO-8	25000	1000	5000
HCNW2211	DIP8 Wide Body	10000	1000	5000

Hermetic

HCPL-5201	CDIP	1000	50	1500 V _{DC} /5sec
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Secondary Controlled DC/DC with Sync Rectification



PWM Signal Isolation

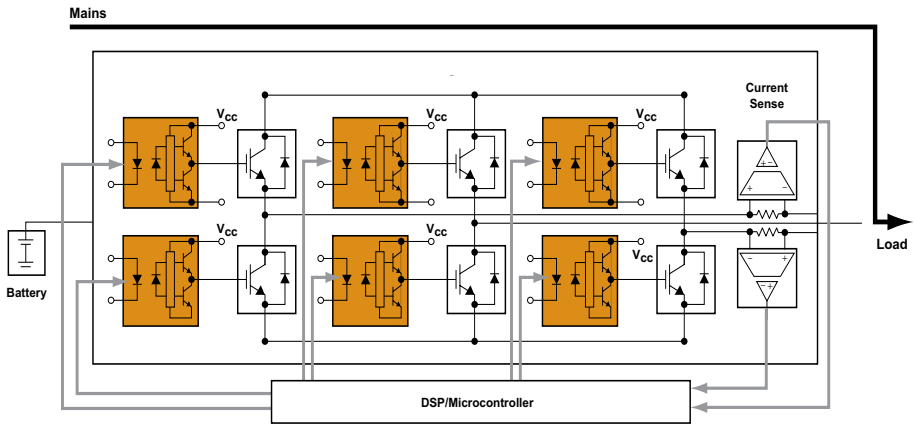
Part No.	Channel	Package	Data Rate MBd	I _{F(on)} mA Min	t _{PLH} ns Max	t _{PHL} ns Max	PWD ns Max	V _{ISO} V _{RMS} Min	V _{IORM} V _{PEAK}
ACPL-M71U*	1	SO5	25	4	35	35	12	3750	567
ACPL-M72U*	1	SO5	10	4	100	100	50	3750	567
ACPL-M61L	1	SO5	10	1.6	80	80	30	3750	567
ACNT-H61L	1	Stretched SO8	10	4.5	100	100	40	7500	2262
ACPL-O61L	1	SO8	10	1.6	80	80	30	3750	567
ACPL-C61L	1	Stretched SO8	10	3	90	90	40	5000	1230
ACPL-W61L	1	Stretched SO6	10	1.6	80	80	30	5000	1140
ACNW261L	1	400mil DIP8	10	4	95	95	40	5000	1414

* R2Coupler extended temperature up to 125C.

Hermetic

Part No.	Package	Data Rate MBd	V _{CC} V	Prop Delay ns Max
ACPL-5600L	CDIP	10	3.3	100
HCPL-5601		10	5	100

UPS (Data Center and Base Station)



Smart Gate Drive Optocouplers

Part No.	Package	$I_{F(on)}$ mA Min	I_{OUT} A Min	I_{OUT} A Max	t_{PLH} μ s Max	t_{PHL} μ s Max	PDD μ s Max	V_{CC} V Max	CMR - V/ μ s@ V_{CM}		V_{ISO} V_{RMS} Min	V_{IORM} V_{peak}
									CMR V/ μ s (Min)	V_{CM} V		
ACPL-352J	SO16	8	4.5	5.0	0.15	0.15	0.075	30	100000	1500	5000	1414
	- 5A gate drive optocoupler for IGBT and SiC/GaN MOSFET - Low Propagation Delay (<150ns) - Over current, UVLO, GATE status detection with isolated feedback											
ACPL-302J	SO16	10	-	2.5	0.25	0.25	0.16	25	30000	1500	5000	1230
	- Integrated DC-DC Controller for floating power supply - Integrated short circuit protection and fault feedback - Under Voltage Lockout(UVLO) protection with feedback - Integrated Active Miller Clamp											
ACPL-339J	SO16	6	1.0	-	0.30	0.30	0.2	30	25000	1500	5000	1414
	- Scalable & Efficient gate drive design - Dual Rail-to-Rail output to drive external MOSFET buffer - Active timing control to prevent cross conduction in MOSFET buffer - Integrated short circuit protection and fault feedback											
ACPL-337J	SO16	9	3.0	4.0	0.22	0.25	0.15	30	30000	1500	5000	1414
ACPL-336J	SO16	9	2.0	2.5	0.22	0.25	0.15	30	30000	1500	5000	1414
	- Rail-to-rail output voltage - Integrated short circuit protection and fault feedback - Under Voltage Lockout(UVLO) protection with feedback - Integrated Active Miller Clamp and LED driver											
ACPL-335J	SO16	10	2.5	2.0	0.25	0.25	0.10	20	50000	1500	5000	1230
	- 2.5A MOSFET gate drive optocoupler - UVLO threshold for MOSFET protection - Over current threshold for MOSFET protection - Hard shut down for fast MOSFET protection											

UPS (Data Center and Base Station)

Basic Gate Drive Optocouplers

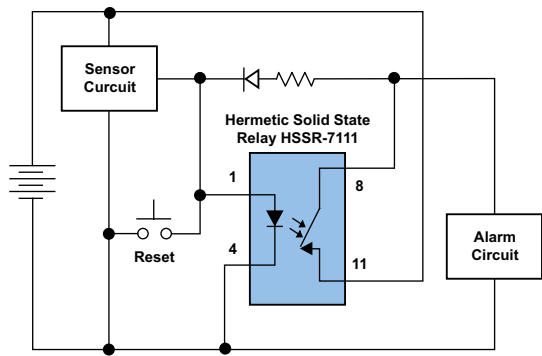
Part No.	Package	I _{F(on)} mA Min	I _{OUT} A Min	I _{OUT} A Max	t _{PLH} μs Max	t _{PHL} μs Max	PDD μs Max	V _{CC} V Max	CMR - V/μs@ V _{CM}		V _{ISO} V _{RMS} Min	V _{IORM} V _{peak}
									CMR V/μs (Min)	V _{CM} V		
ACNT-H343	15mm Stretched SO8	12	4.0	5.0	0.15	0.15	0.09	30	100000	1500	7500	2262
ACNU-3430	11mm SSO8	7	4.0	5.0	0.15	0.15	0.09	30	100000	1500	5000	1414
ACNU-3410	11mm SSO8	7	2.5	3.0	0.15	0.15	0.09	30	100000	1500	5000	1414
ACPL-P349	Stretched SO6	7	2.0	2.5	0.11	0.11	0.05	30	100000	1500	3750	891*
ACPL-W349	Stretched SO6	7	2.0	2.5	0.11	0.11	0.05	30	100000	1500	5000	1140*
ACPL-P346	Stretched SO6	7	2.0	2.5	0.12	0.12	0.05	20	100000	1500	3750	891*
ACPL-W346	Stretched SO6	7	2.0	2.5	0.12	0.12	0.05	20	100000	1500	5000	1140*
ACPL-P347	Stretched SO6	7	0.8	1.0	0.11	0.11	0.05	30	100000	1500	3750	891*
ACPL-W347	Stretched SO6	7	0.8	1.0	0.11	0.11	0.05	30	100000	1500	5000	1140*
ACPL-P345	Stretched SO6	7	0.8	1.0	0.12	0.12	0.05	20	100000	1500	3750	891*
ACPL-W345	Stretched SO6	7	0.8	1.0	0.12	0.12	0.05	20	100000	1500	5000	1140*
ACPL-P343	Stretched SO6	7	3.0	4.0	0.20	0.20	0.1	30	35000	1500	3750	891*
ACPL-W343	Stretched SO6	7	3.0	4.0	0.20	0.20	0.1	30	35000	1500	5000	1140*

• With IEC/EN/DIN EN 60747-5-5 Option 060.

Isolated Current/Voltage Sensing

Part No.	Output	Description	Gain Tolerance	Package
ACPL-C740	Digital	±200mV, Optically Isolated, 20MHz Internally Clocked, Sigma-Delta Modulator	±1%	SSO-8
ACPL-C799	Digital	±50mV, Optically Isolated, 10MHz Internally Clocked, Sigma-Delta Modulator	±1%	SSO-8
ACPL-C797	Digital	±200mV, Optically Isolated, 10MHz Internally Clocked, Sigma-Delta Modulator	±1%	SSO-8
ACPL-798J	Digital	±200mV, Optically Isolated, up to 25MHz Externally Clocked, LVDS Output, Sigma-Delta Modulator	±1%	SO-16
ACPL-796J	Digital	±200mV, Optically Isolated, up to 20MHz Externally Clocked, Sigma-Delta Modulator	±1%	SO-16
ACNT-H79B/A/0	Differential	Optical Isolation Amplifier, ±200mV Input Range	±0.5%, ±1%, ±3%	SSO-8
ACNT-H87B/A/0	Differential	Optical Isolation Amplifier, 0-2V Input Range	±0.5%, ±1%, ±3%	SSO-8
ACPL-C79B/C79A/C790	Differential	Optical Isolation Amplifier, ±200mV Input Range	±0.5%, ±1%, ±3%	SSO-8
ACPL-C87B/C87A/C870	Differential	Optically Isolated Voltage Sensor, 0-2V Input Range	±0.5%, ±1%, ±3%	SSO-8
HCPL-7510/7520	Single-Ended	Optical Isolation Amplifier, ±200mV Input Range	±3%, ±5%	DIP-6
HCPL-788J/ACPL-785J	Single-Ended	Optical Isolation Amplifier, ±200mV Input Range, with Fault Detection	±3%, ±5%	SO-16

Low Power Alarm Control Circuit



Hermetic

Part No.	Usage	Switching Type	Current Capacity	On Resistance	Package	Withstand Voltage	Switching Speed	CMR
HSSR-7111	AC/DC Power	SPST	0.8A or 1.6A	0.6 ohms	CDIP	90 V	1.25 ms	1000V/ μ s

Optoisolation Products

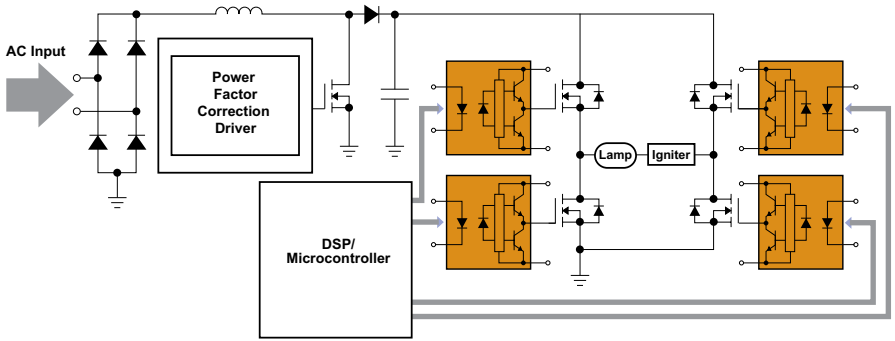
Application Block Diagrams for

Lighting



- 29 Power Supply for High Intensity Discharge (HID) and LED Lighting
- 31 Isolated Thermistor Sensing
- 32 Low Power AC/DC Switching
- 33 Isolated Relay Coil Driver

Power Supply for High Intensity Discharge (HID) and LED Lighting

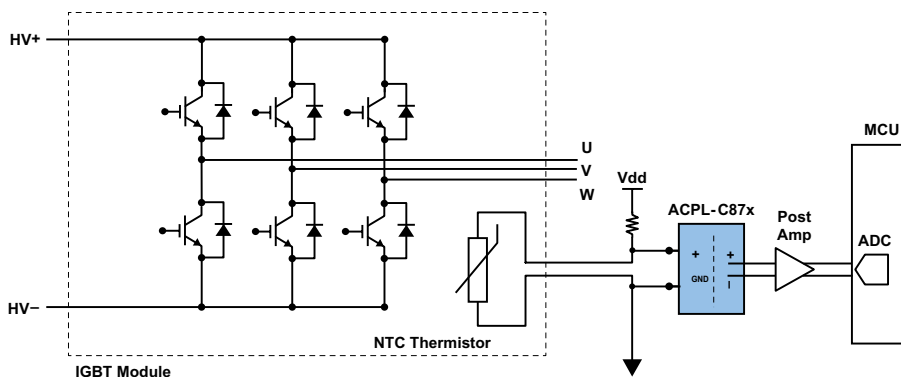


Basic Gate Drive Optocouplers

Part No.	Package	I _{F(on)} mA Min	I _{OUT} A Min	I _{OUT} A Max	t _{PLH} μs Max	t _{PHL} μs Max	PDD μs Max	V _{CC} V Max	CMR - V/μs@ V _{CM}		V _{ISO} V _{RMS} Min	V _{IORM} V _{peak}
									CMR V/μs (Min)	V _{CM} V		
ACPL-P349	Stretched SO6	7	2.0	2.5	0.11	0.11	0.05	30	100000	1500	3750	891*
ACPL-W349	Stretched SO6	7	2.0	2.5	0.11	0.11	0.05	30	100000	1500	5000	1140*
ACPL-P346	Stretched SO6	7	2.0	2.5	0.12	0.12	0.05	20	100000	1500	3750	891*
ACPL-W346	Stretched SO6	7	2.0	2.5	0.12	0.12	0.05	20	100000	1500	5000	1140*
ACPL-P347	Stretched SO6	7	0.8	1.0	0.11	0.11	0.05	30	100000	1500	3750	891*
ACPL-W347	Stretched SO6	7	0.8	1.0	0.11	0.11	0.05	30	100000	1500	5000	1140
ACPL-P345	Stretched SO6	7	0.8	1.0	0.12	0.12	0.05	20	100000	1500	3750	891*
ACPL-W345	Stretched SO6	7	0.8	1.0	0.12	0.12	0.05	20	100000	1500	5000	1140*
ACPL-P343	Stretched SO6	7	3.0	4.0	0.20	0.20	0.1	30	35000	1500	3750	891*
ACPL-W343	Stretched SO6	7	3.0	4.0	0.20	0.20	0.1	30	35000	1500	5000	1140*
ACPL-P341	Stretched SO6	7	2.5	3.0	0.20	0.20	0.1	30	35000	1500	3750	891*
ACPL-W341	Stretched SO6	7	2.5	3.0	0.20	0.20	0.1	30	35000	1500	5000	1140*
ACPL-P340	Stretched SO6	7	0.8	1.0	0.20	0.20	0.1	30	35000	1500	3750	891*
ACPL-W340	Stretched SO6	7	0.8	1.0	0.20	0.20	0.1	30	35000	1500	5000	1140*
ACPL-H342	Stretched SO8	7	2.0	2.5	0.35	0.25	-0.2	30	40000	1500	3750	891*
ACPL-K342	Stretched SO8	7	2.0	2.5	0.35	0.25	-0.2	30	40000	1500	5000	1140*

* With IEC/EN/DIN EN 60747-5-5 Option 060.

Isolated Thermistor Sensing



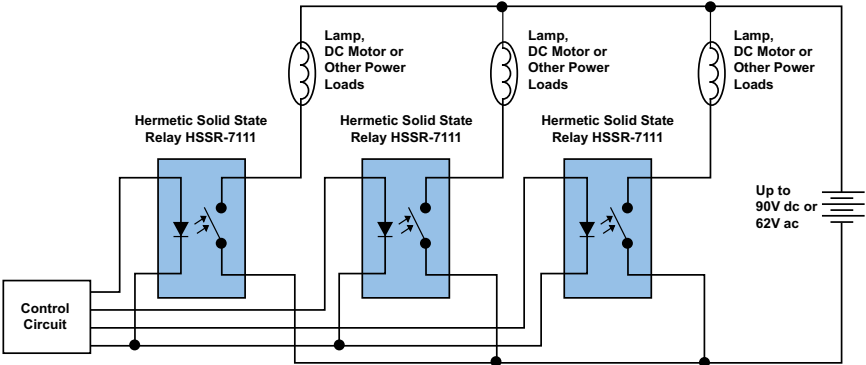
Isolated Current/Voltage Sensing

Part No.	Description	Gain Tolerance	Non-Linearity	Package
ACPL-C87B/C87A/ C870	Optically Isolated Voltage Sensor	±0.5%, ±1%, ±3%	0.05%	SSO-8

Hermetic

Part No.	Output	Description	Package	Gain Tol.
HCPL-7851	Differential	Isolation Amplifier	CDIP	5%

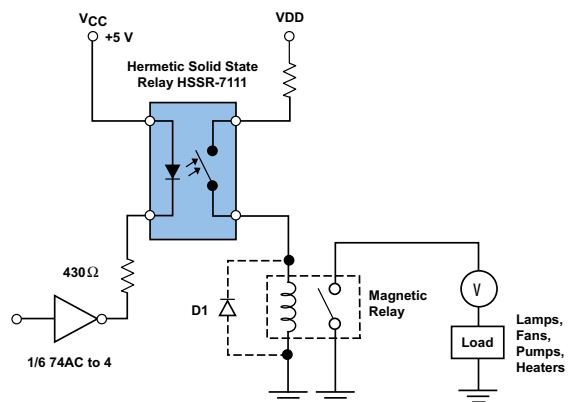
Low Power AC/DC Switching



Hermetic

Part No.	Usage	Switching Type	Current Capacity	On Resistance	Package	Withstand Voltage	Switching Speed	CMR
HSSR-7111	AC/DC Power	SPST	0.8A or 1.6A	0.6 ohms	CDIP	90 V	1.25 ms	1000V/ μ s

Isolated Relay Coil Driver



Hermetic

Part No.	Usage	Switching Type	Current Capacity	On Resistance	Package	Withstand Voltage	Switching Speed	CMR
HSSR-7111	AC/DC Power	SPST	0.8A or 1.6A	0.6 ohms	CDIP	90 V	1.25 ms	1000V/μs

Optoisolation Products

Application Block Diagrams for

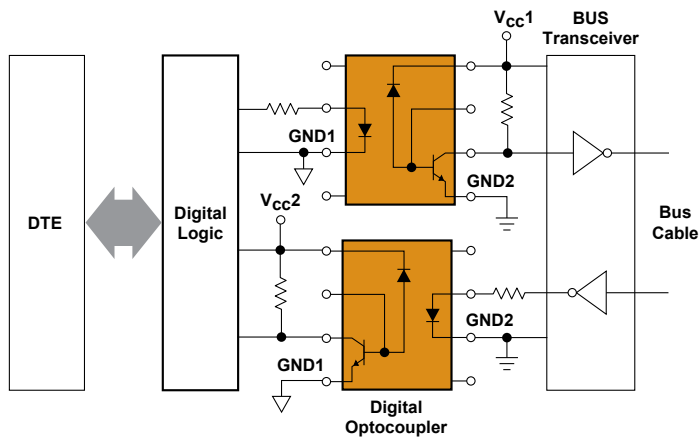
Data Communication Interface



- 35 Serial Bus Interface Isolation RS-232, RS-422, RS-485...
- 36 Fieldbus Networks Profibus/RS-485, DeviceNet/CAN, ...
- 37 A/D Conversion with SPI
- 38 Parallel A/D Conversion Isolation
- 39 AC/DC Logic Isolation Interface in Industrial Control Systems
- 40 4-20mA Current Loop Communications
- 41 High Speed Data Transmission LVDS Interface
- 42 Data Acquisition
- 43 High End Data Acquisition
- 44 Test & Measurement Market Digital Interface
- 45 Communications Network RS422/485 Interface

Serial Bus Interface Isolation

RS-232, RS-422, RS-485, ...



Digital Optocouplers

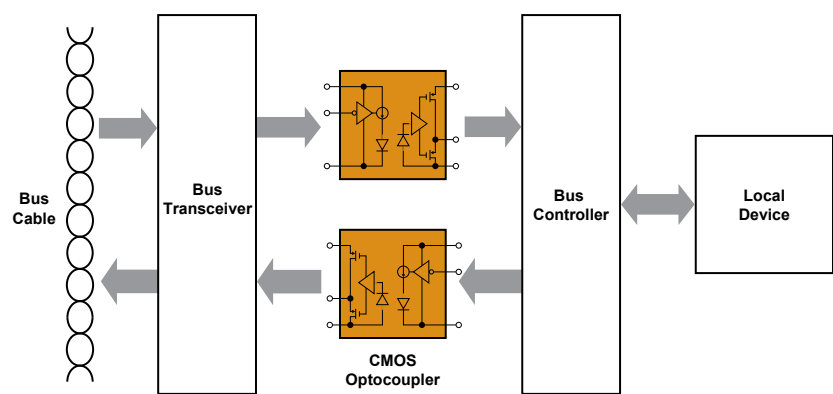
Part No.	Speed	Part No.	Speed	Part No.	Speed
ACPL-077L	25 MBd	ACPL-x2xL	5 MBd	HCPL-07XX	100 kBd
ACPL-M71U	25 MBd	ACPL-x5xL	1 MBd	HCPL-27XX	100 kBd
ACPL-M72U	10 MBd	ACPL-M49U	20 kBd	HCPL-47XX	100 kBd
ACPL-x6xL	10 MBd	ACPL-K49U	20 kBd	ACFL-5211U	1 MBd
ACNW261L	10 MBd	HCPL-x723	50 MBd	ACNT-H61L	10 MBd
ACNT-H50L/H51I	1 MBd				

Hermetic

HCPL-5401	20 MBd	HCPL-5601	10 MBd	HCPL-5201	5 MBd
HCPL-5501	1 MBd	HCPL-5701	100 kBd	ACPL-5600L	10 MBd
ACPL-5700L	100 KBd				

Fieldbus Networks

Profibus/RS-485, DeviceNet/CAN, ...



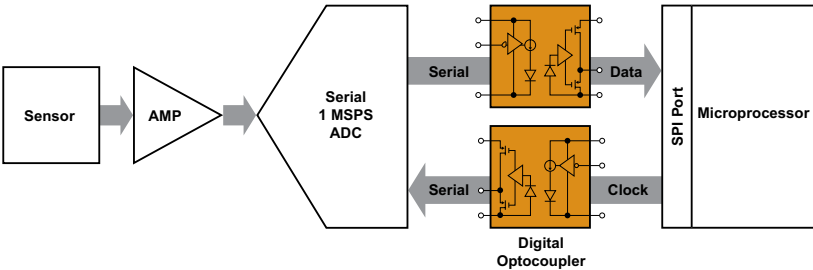
Digital CMOS Optocouplers

Part No.	Channel	Package	Data Rate MBd	t _{PLH} ns Max	t _{PHL} ns Max	PWD ns Max	t _{PSK} ns Max	V _{ISO} V _{RMS} Min	V _{IORM} V _{PEAK}
ACFL-621IU	2	SSO12	15	35	35	12	-	5000	1140
ACFL-6212U	2	SSO12	10	100	100	50	-	5000	1140
ACPL-077L	1	SO8	25	40	40	6	15	3750	567
ACPL-M71U*	1	SO5	25	35	35	12	15	3750	567
ACPL-M72U*	1	SO5	10	100	100	50	60	3750	567
ACPL-M61L	1	SO5	10	80	80	30	30	3750	567
ACPL-061L	1	SO8	10	80	80	30	30	3750	567
ACPL-C61L	1	Stretched SO8	10	90	90	40	30	5000	1230
ACPL-W61L	1	Stretched SO6	10	80	80	30	30	5000	1140
ACNT-H61L	1	Stretched SO8	10	100	100	40	40	7500	2262
ACNW261L	1	400mil DIP8	10	95	95	40	30	5000	1414
HCPL-0723	1	SO8	50	22	22	2	16	3750	567
HCPL-7723	1	300mil DIP8	50	22	22	2	16	3750/5000	630

Hermetic

Part No.	Channel	Package	Data Rate MBd	t _{PLH} ns Max	t _{PHL} ns Max
ACPL-5600L	1	CDIP	10	100	100
HCPL-5400L	1	CDIP	20	60	60

A/D Conversion with SPI



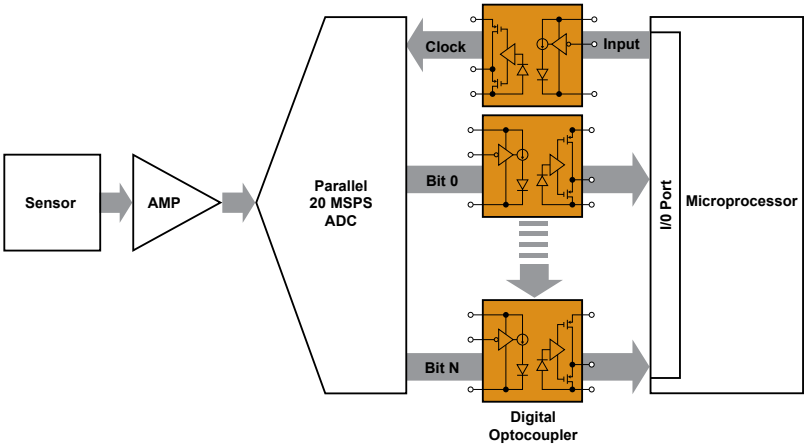
Digital CMOS Optocouplers

Part No.	Channel	Package	Data Rate MBd	t _{PLH} ns Max	t _{PHL} ns Max	PWD ns Max	t _{PSK} ns Max	V _{ISO} V _{RMS} Min	V _{IORM} V _{PEAK}
ACPL-077L	1	SO8	25	40	40	6	15	3750	567
ACPL-M71U	1	SO5	25	35	35	12	15	3750	567
ACPL-772L	1	300mil DIP8	25	40	40	6	20	3750/5000	630
ACPL-M75L	1	SO5	15	55	55	25	40	3750	567
ACPL-071L	1	SO8	15	40	40	25	30	3750	560
ACPL-074L	2	SO8	15	40	40	25	30	3750	560
HCPL-2400	1	300mil DIP8	20	60	60	25	35	3750	630
HCPL-2430	2	300mil DIP8	20	60	60	25	35	3750	630
HCPL-0723	1	SO8	50	22	22	2	16	3750	567
HCPL-7723	1	300mil DIP8	50	22	22	2	16	3750/5000	630

Hermetic

Part No.	Channel	Package	Data Rate MBd	t _{PLH} ns Max	t _{PHL} ns Max
ACPL-5600L	1	CDIP	10	100	100
HCPL-5400L	1	CDIP	20	60	60

Parallel A/D Conversion Isolation



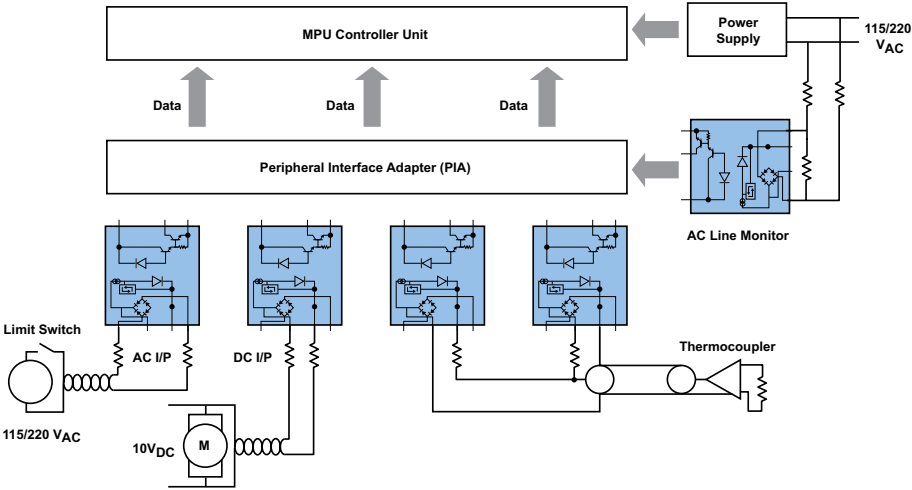
Digital Optocouplers

Part No.	Speed	Max. PD	Min. Pulse Width	Max. PWD	Max. T _{psk}	Package Type
HCPL-2400	20 MBd	60 ns	-	25 ns	35 ns	DIP-8
HCPL-2430	20 MBd	60 ns	-	25 ns	35 ns	DIP-8
HCPL-7720	25 MBd	40 ns	40 ns	8 ns	20 ns	DIP-8
ACPL-077L	25 MBd	40 ns	40 ns	6 ns	15 ns	SO-8
HCPL-7721	25 MBd	40 ns	40 ns	6 ns	20 ns	DIP-8
HCPL-0721	25 MBd	40 ns	40 ns	6 ns	20 ns	SO-8
HCPL-7723	50 MBd	22 ns	20 ns	2 ns	16 ns	DIP-8
HCPL-0723	50 MBd	22 ns	20 ns	2 ns	16 ns	SO-8

Hermetic

HCPL-5401	20 MBd	60 ns	-	35 ns	-	CDIP
HCPL-5431	20 MBd	60 ns	-	35 ns	-	CDIP

AC/DC Logic Isolation Interface in Industrial Control Systems



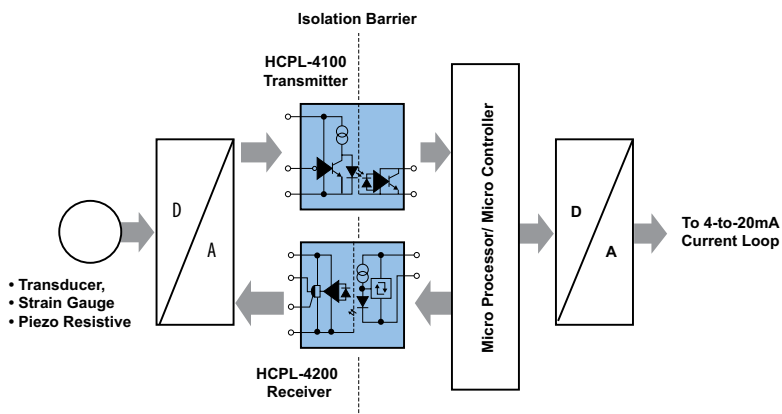
AC/DC Logic Interface

Part No.	Package	CMR @V _{CM}		V _{ISO} Min	Min I _{th}	Max I _{th}	Hysteresis
		CMR (Min)	V _{CM}				
ACPL-K370	SSO-8	1000 V/μs	500 V	5000 V	1.96 mA	3.11 mA	1.2 mA
ACPL-K376	SSO-8	1000 V/μs	500 V	5000 V	0.87 mA	1.56 mA	0.6 mA
HCPL-0370	SO-8	600 V/μs	140 V	3750 V	1.96 mA	3.11 mA	1.2 mA
HCPL-3700	DIP-8	600 V/μs	140 V	3750 V	1.96 mA	3.11 mA	1.2 mA
HCPL-3760	DIP-8	600 V/μs	140 V	3750 V	0.87 mA	1.56 mA	0.6 mA

Hermetic

Part No.	Package	Min I _{th} mA	Data Rate MBd	Hysteresis mA
HCPL-5760	CDIP	0.93	1.62	1.2

4-20mA Current Loop Communications

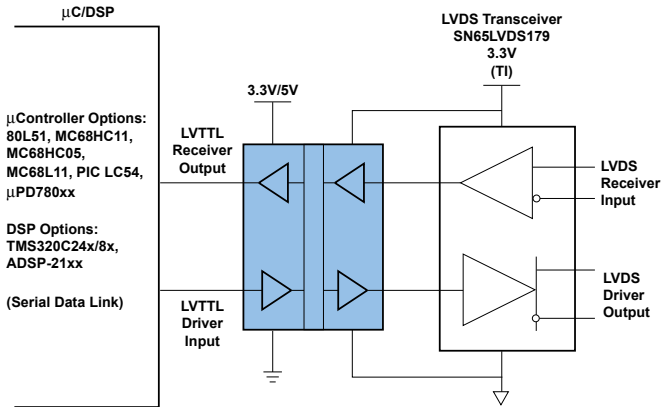


Optically Coupled 20mA Current loop Transmitter/Reveiver

Part No.	Package	Data Rate kBd @ (Meters)	t _{PLH} μs (Max)	t _{pHL} μs (Max)	CMR V/μs (Min)
Transmitter					
HCPL-4100	DIP-8	20 (400)	1.6	1.0	1000
Receiver					
HCPL-4200	DIP-8	20 (1400)	1.6	1.0	1000

High Speed Data Transmission

LVDS Interface

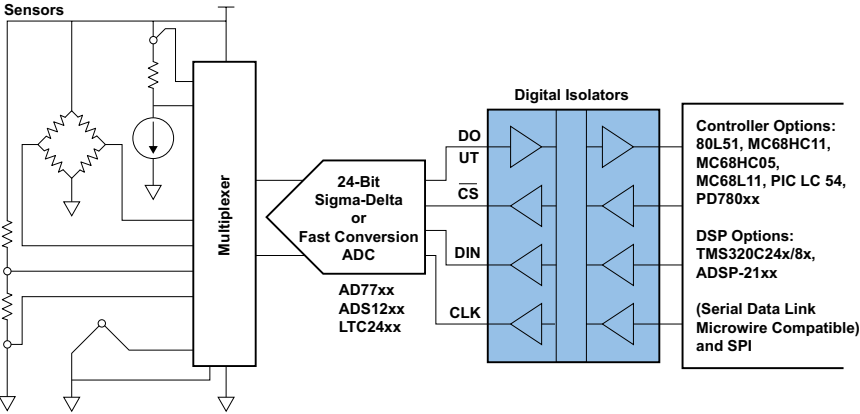


Note: The illustration is one of the many configurations that use digital isolators with LVDS transceivers.

High Speed Digital Isolators

Part No.	Channel Configuration	Package	Data Rate (Mbps)	Max. PWD (ns)	Max. Prop. Delay (ns)
HCPL-9000	Single	300mil DIP	100	3	15
HCPL-0900	Single	SO8			
HCPL-9030	Dual	300mil DIP			
HCPL-0930	Dual	SO8			
HCPL-9031	"Dual, Bi-Dir"	300mil DIP			
HCPL-0931	"Dual, Bi-Dir"	SO8			

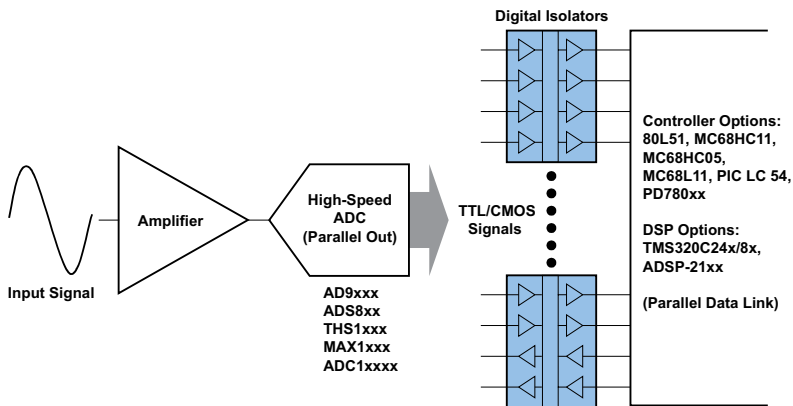
Data Acquisition



High Speed Digital Isolators

Part No.	Channel	Package	Max Data Rate MBit Min	$t_{PLH} \text{ \& } t_{PHL}$ ($V_{CC}=5.0V$) ns Max	$t_{PLH} \text{ \& } t_{PHL}$ ($V_{CC}=3.3V$) ns Max	PWD ns Max	t_{PSK} ns Max	CMR - $V/\mu s @ V_{CM}$		V_{ISO} V_{RMS} Min
								CMR $V/\mu s$ (Min)	V_{CM} V	
ACML-7400	Quad	SO16 Wide Body	100	32	36	2	5	25000	1000	5600
ACML-7410	Quad, 3/1 Bi-dir	SO16 Wide Body	100	32	36	2	5	25000	1000	5600
ACML-7420	Quad, 2/2 Bi-dir	SO16 Wide Body	100	32	36	2	5	25000	1000	5600
HCPL-090J	Quad	SO16 Narrow Body	100	15	18	3	6	15000	1000	2500
HCPL-900J	Quad	SO16 Wide Body	100	15	18	3	6	15000	1000	2500
HCPL-091J	Quad, 2/2 Bi-dir	SO16 Narrow Body	100	15	18	3	6	15000	1000	2500
HCPL-901J	Quad, 2/2 Bi-dir	SO16 Wide Body	100	15	18	3	6	15000	1000	2500
HCPL-092J	Quad, 3/1 Bi-dir	SO16 Narrow Body	100	15	18	3	6	15000	1000	2500
HCPL-902J	Quad, 3/1 Bi-dir	SO16 Wide Body	100	15	18	3	6	15000	1000	2500

High End Data Acquisition

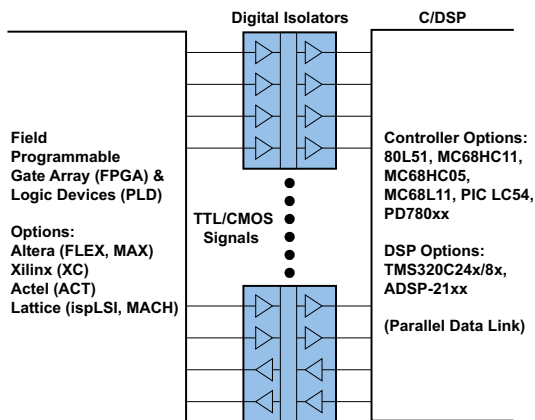


High Speed Digital Isolators

Part No.	Channel	Package	Max Data Rate MBd Min	t _{PLH} & t _{PHL} (V _{CC} =5.0V) ns Max	t _{PLH} & t _{PHL} (V _{CC} =3.3V) ns Max	PWD ns Max	t _{PSK} ns Max	CMR - V/ μ s@V _{CM}		V _{ISO} V _{RMS} Min
								CMR V/ μ s (Min)	V _{CM} V	
ACML-7400	Quad	SO16 Wide Body	100	32	36	2	5	25000	1000	5600
ACML-7410	Quad, 3/1 Bi-dir	SO16 Wide Body	100	32	36	2	5	25000	1000	5600
ACML-7420	Quad, 2/2 Bi-dir	SO16 Wide Body	100	32	36	2	5	25000	1000	5600
HCPL-9031	Dual, 1/1 Bi-dir	300mil DIP8	100	15	18	3	6	15000	1000	2500
HCPL-0931	Dual, 1/1 Bi-dir	SO8	100	15	18	3	6	15000	1000	2500
HCPL-9030	Dual	300mil DIP8	100	15	18	3	6	15000	1000	2500
HCPL-0930	Dual	SO8	100	15	18	3	6	15000	1000	2500
HCPL-9000	Single	300mil DIP8	100	15	18	3	6	15000	1000	2500
HCPL-0900	Single	SO8	100	15	18	3	6	15000	1000	2500

Test & Measurement Market

Digital Interface

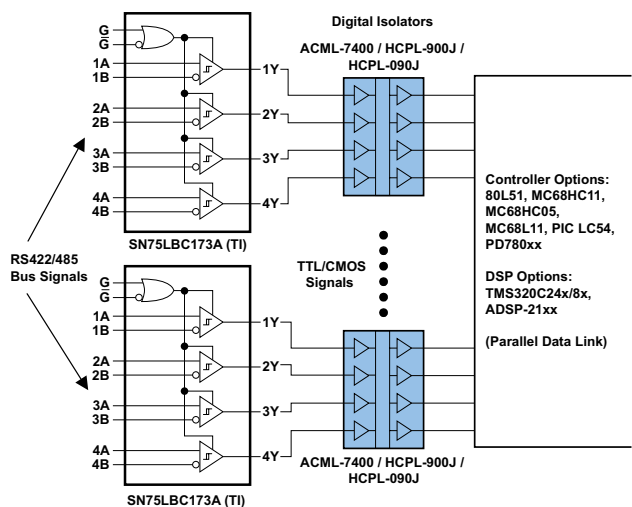


High Speed Digital Isolators

Part No.	Channel	Package	Max Data Rate MBd Min	t _{PLH} & t _{PHL} (V _{CC} =5.0V) ns Max	t _{PLH} & t _{PHL} (V _{CC} =3.3V) ns Max	PWD ns Max	t _{PSK} ns Max	CMR - V/ μ s@V _{CM}		Viso V _{RMS} Min
								CMR V/ μ s (Min)	V _{CM} V	
ACML-7400	Quad	SO16 Wide Body	100	32	36	2	5	25000	1000	5600
ACML-7410	Quad, 3/1 Bi-dir	SO16 Wide Body	100	32	36	2	5	25000	1000	5600
ACML-7420	Quad, 2/2 Bi-dir	SO16 Wide Body	100	32	36	2	5	25000	1000	5600
HCPL-090J	Quad	SO16 Narrow Body	100	15	18	3	6	15000	1000	2500
HCPL-900J	Quad	SO16 Wide Body	100	15	18	3	6	15000	1000	2500
HCPL-091J	Quad, 2/2 Bi-dir	SO16 Narrow Body	100	15	18	3	6	15000	1000	2500
HCPL-901J	Quad, 2/2 Bi-dir	SO16 Wide Body	100	15	18	3	6	15000	1000	2500
HCPL-092J	Quad, 3/1 Bi-dir	SO16 Narrow Body	100	15	18	3	6	15000	1000	2500
HCPL-902J	Quad, 3/1 Bi-dir	SO16 Wide Body	100	15	18	3	6	15000	1000	2500
HCPL-9031	Dual, 1/1 Bi-dir	300mil DIP8	100	15	18	3	6	15000	1000	2500
HCPL-0931	Dual, 1/1 Bi-dir	SO8	100	15	18	3	6	15000	1000	2500
HCPL-9030	Dual	300mil DIP8	100	15	18	3	6	15000	1000	2500
HCPL-0930	Dual	SO8	100	15	18	3	6	15000	1000	2500
HCPL-9000	Single	300mil DIP8	100	15	18	3	6	15000	1000	2500
HCPL-0900	Single	SO8	100	15	18	3	6	15000	1000	2500

Communications Network

RS422/485 Interface



Note: Two or more RS422/485 Receivers may be connected to Quad-channel Digital Isolators.

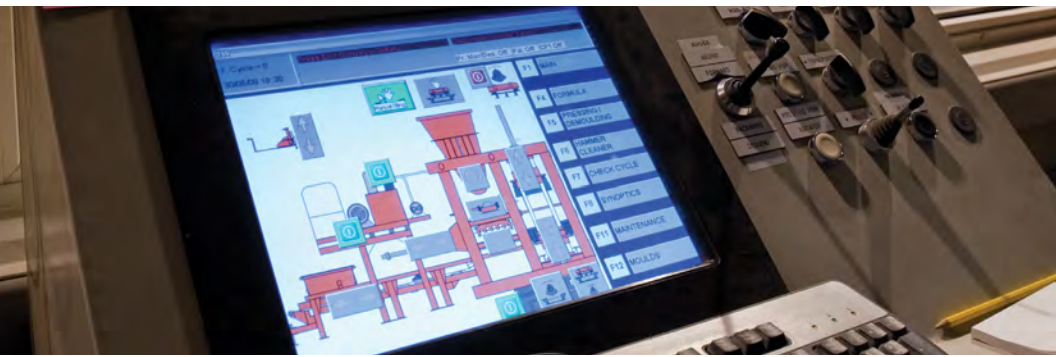
High Speed Digital Isolators

Part No.	Channel	Package	Max Data Rate MBd Min	t _{PLH} & t _{PHL} (V _{CC} =5.0V) ns Max	t _{PLH} & t _{PHL} (V _{CC} =3.3V) ns Max	P _{WD} ns Max	t _{PSK} ns Max	CMR - V/ μ s@V _{CM}		V _{ISO} V _{RMS} Min
								CMR V/ μ s (Min)	V _{CM} V	
ACML-7400	Quad	SO16 Wide Body	100	32	36	2	5	25000	1000	5600
HCPL-090J	Quad	SO16 Narrow Body	100	15	18	3	6	15000	1000	2500
HCPL-900J	Quad	SO16 Wide Body	100	15	18	3	6	15000	1000	2500

Optoisolation Products

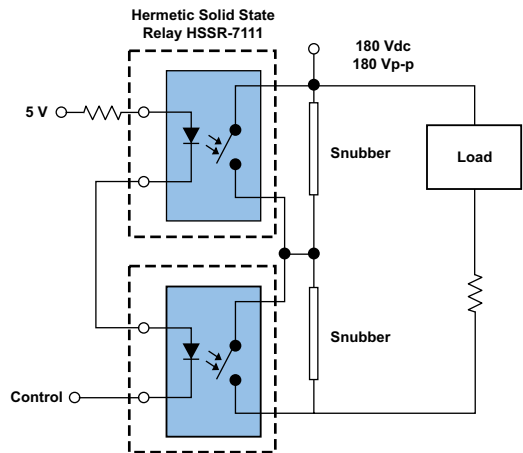
Application Block Diagrams for

Analog Signal Conditioning & Interface



- 48 Stacking Relays for Higher Switching Loads
- 49 Analog Signal Multiplexing
- 50 Isolated Gain Selection
- 51 Analog Signal Sensing

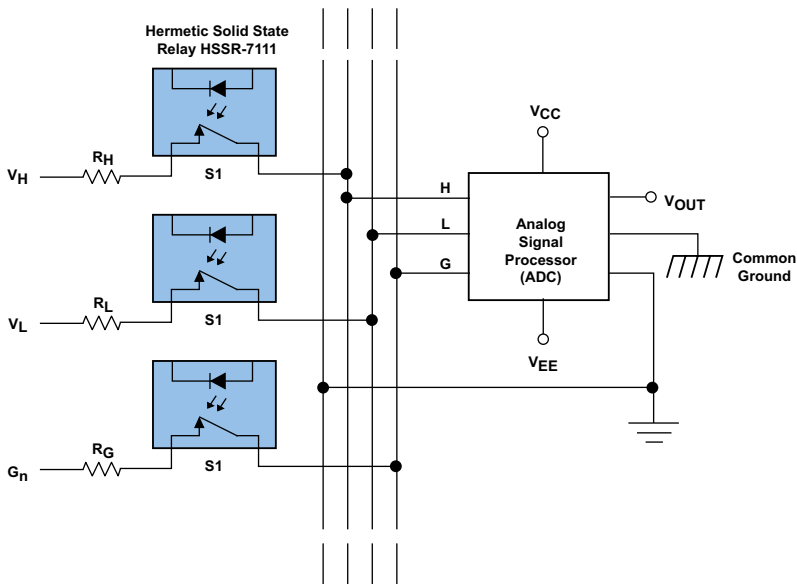
Stacking Relays for Higher Switching Loads



Hermetic

Part No.	Usage	Switching Type	Current Capacity	On Resistance	Package	Withstand Voltage	Switching Speed	CMR
HSSR-7111	AC/DC Power	SPST	0.8A or 1.6A	0.6 ohms	CDIP	90 V	1.25 ms	1000V/ μ s

Analog Signal Multiplexing

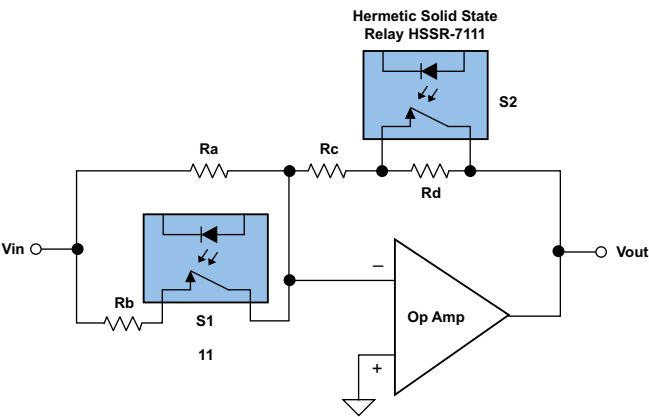


Hermetic

Part No.	Usage	Switching Type	Current Capacity	On Resistance	Package	Withstand Voltage	Switching Speed	CMR
HSSR-7111	AC/DC Power	SPST	0.8A or 1.6A	0.6 ohms	CDIP	90 V	1.25 ms	1000V/ μ s

Isolated Gain Selection

Gain Selection for Op-Amps Using Solid State Relay Switching Matrix

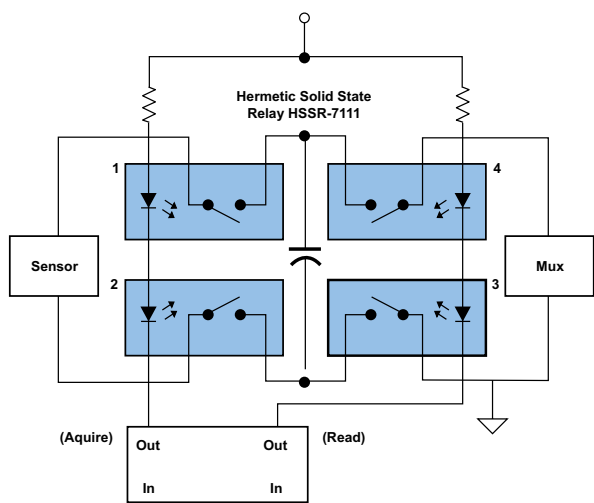


Hermetic

Part No.	Usage	Switching Type	Current Capacity	On Resistance	Package	Withstand Voltage	Switching Speed	CMR
HSSR-7111	AC/DC Power	SPST	0.8A or 1.6A	0.6 ohms	CDIP	90 V	1.25 ms	1000V/ μ s

Analog Signal Sensing

Analog Signal Sensing - Flying Capacitor Technique



Hermetic

Part No.	Usage	Switching Type	Current Capacity	On Resistance	Package	Withstand Voltage	Switching Speed	CMR
HSSR-7111	AC/DC Power	SPST	0.8A or 1.6A	0.6 ohms	CDIP	90 V	1.25 ms	1000V/ μ s

Optoisolation Products

Application Block Diagrams for

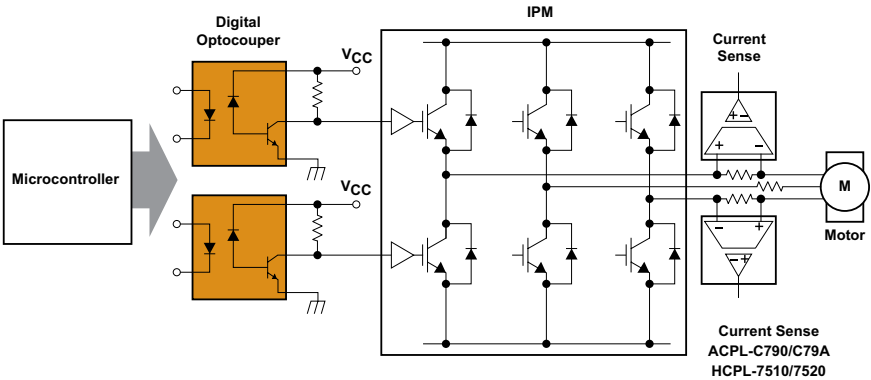
Consumer Appliances



- 53 Consumer Inverter-Air Conditioner, Refrigerator, Washing Machine
- 54 Consumer Inverter-Ice Shredder/Refrigerator
- 55 Consumer Inverter-Ebike (Bike Assist)
- 56 Electric Cooker Quasi-Resonant Induction Heating Cooking (Single IGBT Design)
- 57 Electric Cooker Half-Bridge Series Resonant Induction Heating Cooking

Consumer Inverter – IPM Based (HV 3Phase)

Air Conditioner, Refrigerator, Washing Machine



Intelligent Power Module Interface Optocouplers

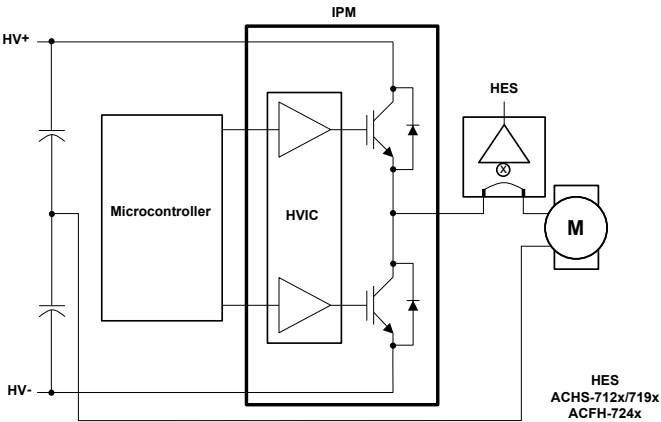
Part No.	Package	I _{F(ON)} mA Min	t _{PLH} μs Max	t _{PHL} μs Max	P _{DD} μs Max	CMR - V/μs@V _{CM}		V _{ISO} V _{RMS} Min	V _{IORM} V _{PEAK}
						CMR V/μs (Min)	V _{CM} V		
ACPL-M484	SO5	4.0	0.12	0.15	0.13	30000	1000	3750	567
ACPL-P484/ W484	Stretched SO6	4.0	0.12	0.15	0.13	30000	1000	3750/5000	891/1140
ACPL-M483	SO5	4.0	0.12	0.12	0.10	30000	1000	3750	567
ACPL-P483/ W483	Stretched SO6	4.0	0.12	0.12	0.10	30000	1000	3750/5000	891/1140
ACNV4506	500 mil DIP10	5.0	0.55	0.40	0.50	30000	1500	7500	2262
ACNU-4803/ 4804	11mm SSO8	12	0.12	0.15	0.13	50000	1500	5000	1414

Isolated Current/Voltage Sensing

Part No.	Output	Description	Gain Tolerance	Package
ACPL-C79A/C790	Differential	Optical Isolation Amplifier, ±200mV Input Range	±1%, ±3%	SSO-8
HCPL-7510/7520	Single-ended	Optical Isolation Amplifier, ±200mV Input Range	±3%, ±5%	DIP-6

Consumer Inverter – IPM Based (HV 1Phase)

ICE Shredder/Refrigerator

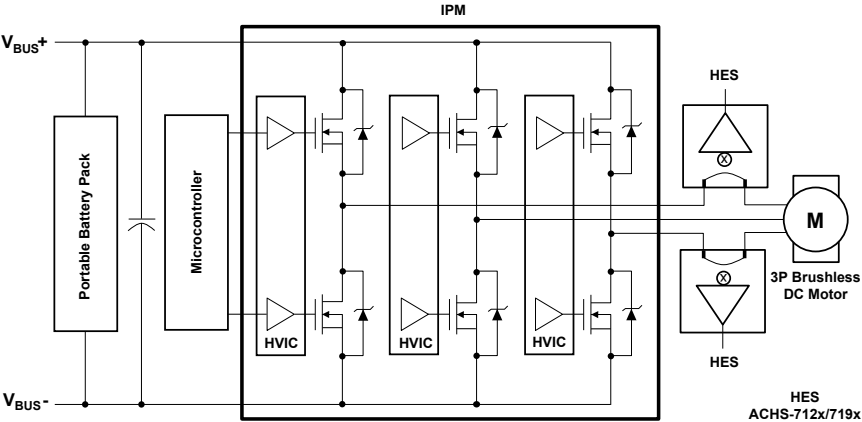


Isolated HES Current Sensing

Part No.	Current Rating	Description	Gain Tolerance	Package
ACHS-712x	±10/20/30/40/50A	4mm 80kHz BW Hall Effect Current Sensor	1.5%(typ)	SO8
ACHS-719x	±10/20/30/40/50A	4mm 80kHz BW Hall Effect Current Sensor	6% across temp	SO8
ACFH-724x	±10/20/30/40/50A	8mm 80kHz BW Hall Effect Current Sensor	6% across temp	SSO12

Consumer Inverter – IPM Based (LV 3Phase)

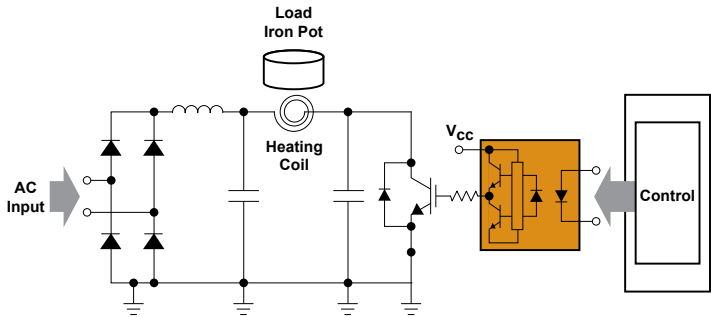
Ebike (Bike Assist)



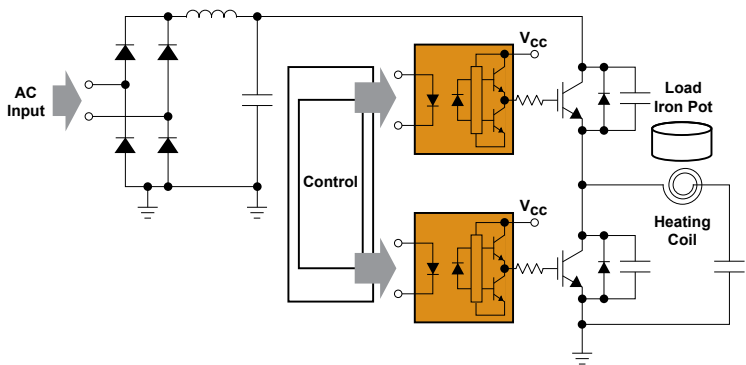
Isolated HES Current Sensing

Part No.	Current Rating	Description	Gain Tolerance	Package
ACHS-712x	±10/20/30/40/50A	4mm 80kHz BW Hall Effect Current Sensor	1.5%(typ)	SO8
ACHS-719x	±10/20/30/40/50A	4mm 80kHz BW Hall Effect Current Sensor	6% across temp	SO8

Electric Cooker Quasi-Resonant Induction Heating Cooking (Single IGBT Design)



Electric Cooker Half-Bridge Series Resonant Induction Heating Cooking



Basic Gate Drive Optocouplers

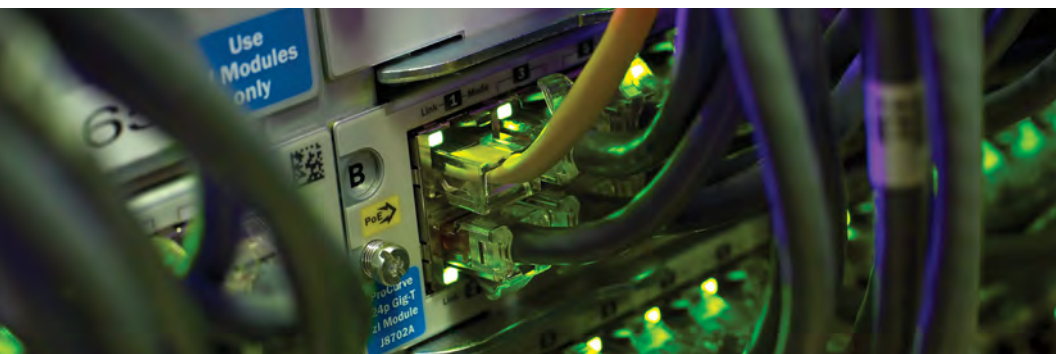
Part No.	Package	I _{F(on)} mA Min.	I _{OUT} A Min.	I _{OUT} A Max.	t _{PLH} μs Max.	t _{PHL} μs Max.	PDD μs Max.	V _{CC} V Max.	CMR - V/μs@ V _{CM}		V _{ISO} V _{RMS} Min.	V _{IORM} V _{peak}
									CMR V/μs (Min.)	V _{CM} V		
ACPL-P349	Stretched SO6	7	2.0	2.5	0.11	0.11	0.05	30	100000	1500	3750	891*
ACPL-W349	Stretched SO6	7	2.0	2.5	0.11	0.11	0.05	30	10000	1500	5000	1140*
ACPL-P346	Stretched SO6	7	2.0	2.5	0.12	0.12	0.05	20	10000	1500	3750	891*
ACPL-W346	Stretched SO6	7	2.0	2.5	0.12	0.12	0.05	20	10000	1500	5000	1140*
ACPL-P347	Stretched SO6	7	0.8	1.0	0.11	0.11	0.05	30	10000	1500	3750	891*
ACPL-W347	Stretched SO6	7	0.8	1.0	0.11	0.11	0.05	30	10000	1500	5000	1140
ACPL-P345	Stretched SO6	7	0.8	1.0	0.12	0.12	0.05	20	10000	1500	3750	891*
ACPL-W345	Stretched SO6	7	0.8	1.0	0.12	0.12	0.05	20	10000	1500	5000	1140*
ACPL-P343	Stretched SO6	7	3.0	4.0	0.20	0.20	0.1	30	35000	1500	3750	891*
ACPL-W343	Stretched SO6	7	3.0	4.0	0.20	0.20	0.1	30	35000	1500	5000	1140*
ACPL-P341	Stretched SO6	7	2.5	3.0	0.20	0.20	0.1	30	35000	1500	3750	891*
ACPL-W341	Stretched SO6	7	2.5	3.0	0.20	0.20	0.1	30	35000	1500	5000	1140*
ACPL-P340	Stretched SO6	7	0.8	1.0	0.20	0.20	0.1	30	35000	1500	3750	891*
ACPL-W340	Stretched SO6	7	0.8	1.0	0.20	0.20	0.1	30	35000	1500	5000	1140*
ACPL-H342	Stretched SO8	7	2.0	2.5	0.35	0.25	-0.2	30	40000	1500	3750	891*
ACPL-K342	Stretched SO8	7	2.0	2.5	0.35	0.25	-0.2	30	40000	1500	5000	1140*

* With IEC/EN/DIN EN 60747-5-5 Option 060.

Optoisolation Products

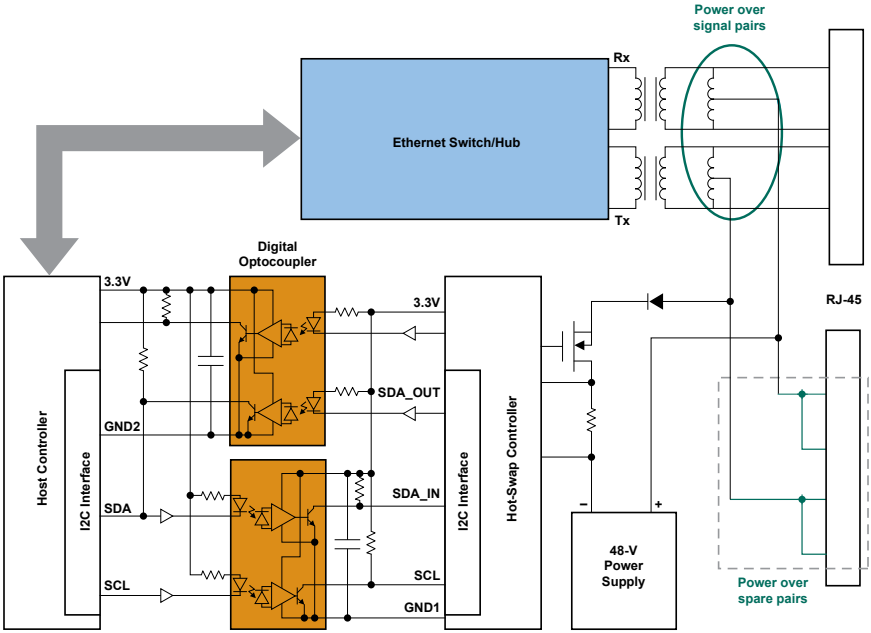
Application Block Diagrams for

Telecommunications



- 60 Isolate I²C Bus in Power Over Ethernet Module
- 62 Telephone Line Detection
- 63 ISDN Interface

Isolated I²C Bus in Power Over Ethernet Module



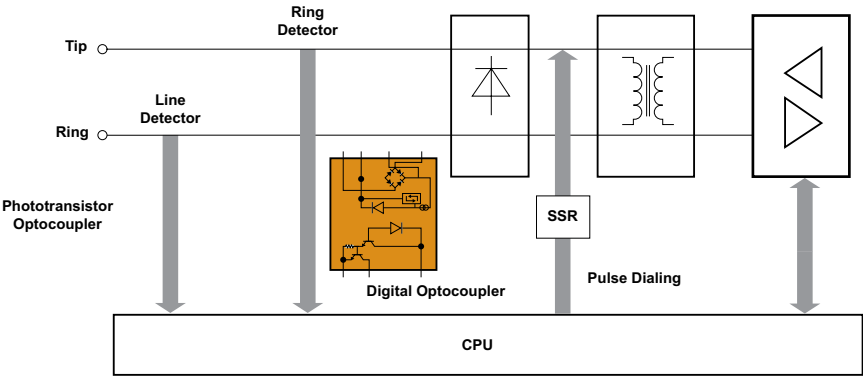
High Speed Digital Isolators

Part No.	Channel	Package	Max Data Rate MBd Min	tPLH & tPHL (V _{CC} =5.0V) ns Max	tPLH & tPHL (V _{CC} =3.3V) ns Max	PWD ns Max	tPSK ns Max	CMR – V/μs@V _{CM}		V _{ISO} V _{RMS} Min
								CMR V/μs (Min)	V _{CM} V	
ACML-7400	Quad	SO16 Wide Body	100	32	36	2	5	25000	1000	5600
HCPL-090J	Quad	SO16 Narrow Body	100	15	18	3	6	15000	1000	2500
HCPL-900J	Quad	SO16 Wide Body	100	15	18	3	6	15000	1000	2500

Digital Optocouplers

Part No.	Package	tPLH ns Max	tPHL ns Max	I _{F(ON)} mA Min	CMR V/μs	V _{CM}	V _{ISO}
ACPL-064L	SO-8	80	80	1.6	20000	1000	3750
ACPL-K64L	SSO-8	80	80	1.6	20000	1000	5000
ACPL-054L	SO-8	1000	1000	3	15000	1500	3750
ACPL-K54L	SSO-8	1000	1000	3	15000	1500	5000
ACNT-H50L/H511	15mm Stretched	1000/2000	1000/2000	10	15000/4000 typ	1500	7500

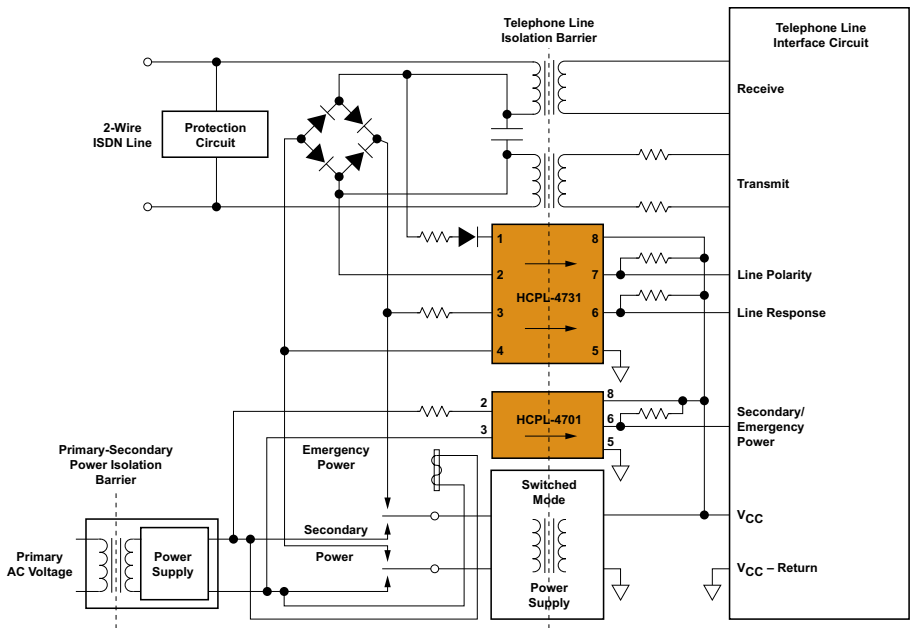
Telephone Line Detection



AC/DC Logic Interface

Part No.	Package	CMR @V _{CM}		V _{ISO} Min	Min I _{th}	Max I _{th}	Hysteresis
		CMR (Min)	V _{CM}				
ACPL-K370	SSO-8	1000 V/μs	500 V	5000 V	1.96 mA	3.11 mA	1.2 mA
ACPL-K376	SSO-8	1000 V/μs	500 V	5000 V	0.87 mA	1.56 mA	0.6 mA
HCPL-0370	SO-8	600 V/μs	140 V	3750 V	1.96 mA	3.11 mA	1.2 mA
HCPL-3700	DIP-8	600 V/μs	140 V	3750 V	1.96 mA	3.11 mA	1.2 mA
HCPL-3760	DIP-8	600 V/μs	140 V	3750 V	0.87 mA	1.56 mA	0.6 mA

ISDN Interface



100kBd Digital Optocouplers

Part No.	Package	Channel	CTR	I _F
HCPL-070A	SO8	Single	800%	40 μA
HCPL-073A	SO8	Dual	800%	40 μA
HCPL-4701	DIP-8	Single	800%	40 μA
HCPL-4731	DIP-8	Dual	800%	40 μA

Optoisolation Products

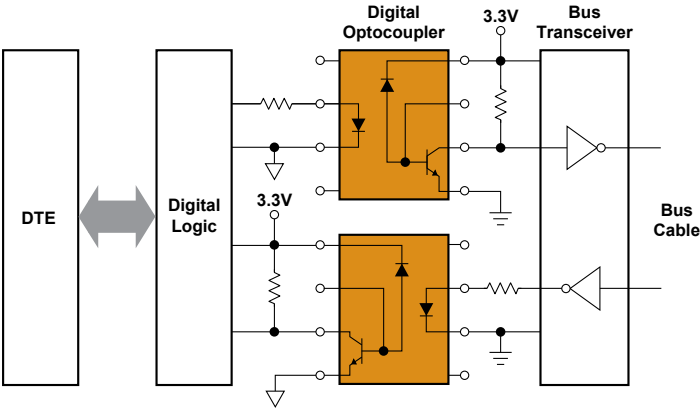
Application Block Diagrams for

Computing



65 3.3 V RS232 / UART Interface Isolation

3.3 V RS232 / UART Interface Isolation



Digital Optocouplers

Part No.	Channel	Package	Max Data Rate Min
HCPL-070L	1	SO8	100 KBd
HCPL-270L	1	300mil DIP8	100 KBd
HCPL-073L	2	SO8	100 KBd
HCPL-273L	2	300mil DIP8	100 KBd
ACFL-521IU*	2	Stretched SO12	1 MBd
ACPL-M50L / M51L	1	SO5	1 MBd
ACPL-W50L	1	Stretched SO6	1 MBd
ACPL-054L	2	SO8	1 MBd
ACPL-K54L	2	Stretched SO8	1 MBd
ACNT-H50L/H51I	1	15mm SSO8	1 MBd
ACPL-M61L	1	SO5	10 MBd
ACPL-061L	1	SO8	10 MBd
ACPL-W61L	1	Stretched SO6	10 MBd
ACPL-064L	2	SO8	10 MBd
ACPL-K64L	2	Stretched SO8	10 MBd
ACNT-H61L	1	15mm C/C SSO8	10 MBd

Hermetic

ACPL-5600	1	CDIP	10 MBd
HCPL-5500	1	CDIP	700 kBd
ACPL-5700L	1	CDIP	100 kBd

Optoisolation Products

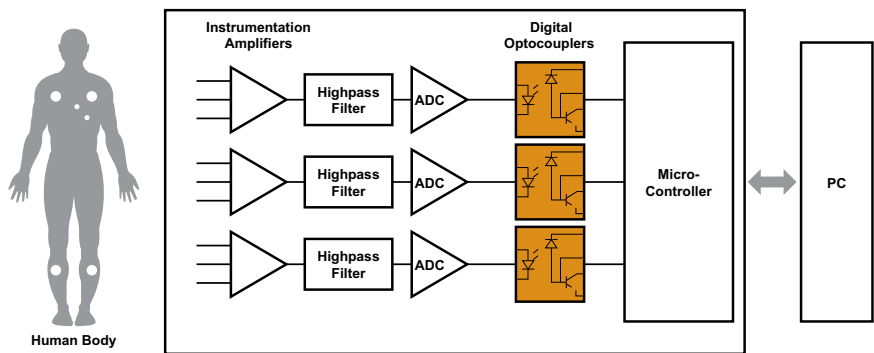
Application Block Diagrams for

Medical



- 67 Patient Monitoring System/ Electrocardiogram
- 68 Defibrillators – High Voltage Storage and Discharge Circuit
- 71 X-Ray Systems – High Voltage Switching Power Supply
- 73 CT Scanner – High Voltage Switching Power Supply
- 75 Magnetic Resonance Imaging (MRI) Gradient Amplifier
- 79 Imaging Data Interface Isolation in Endoscope

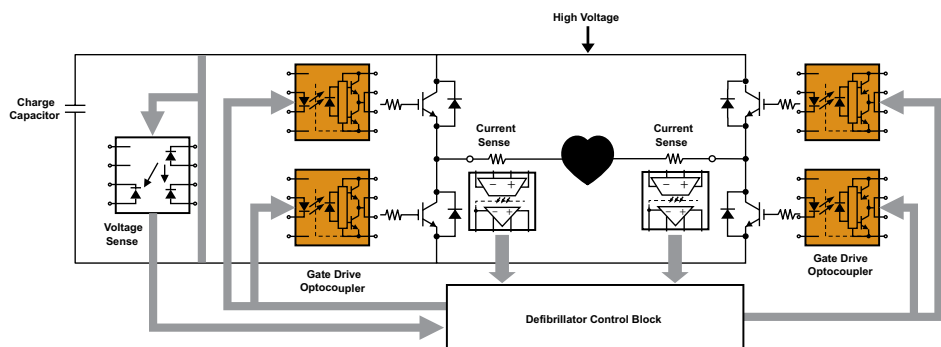
Patient Monitoring System/ Electrocardiogram – Front-End Module



Digital Optocouplers

Part No. Part No.	Input/Output Type	Data Rate MBd	Benefits
ACFL-5211U	LED/Open Collector	1	Bi-Directional, Direct Drive in Stretched SO12
ACPL-M50L/054L/ W50L/K54L, ACNT-H50L/H511	LED/Open Collector	1	High CTR
ACPL-M21L/021L/024L/ W21L/K24L	LED/CMOS	5	Low Power Consumption
ACPL-C61L	LED/CMOS	10	0.5mm DTI for compliant IEC 61010-1 Type2, Low Power
ACPL-M62L	LED/Open Drain	10	High CMR, Low Power, Direct Drive
ACPL-O61L/M61L/W61L/ O64L/K64L, ACNW261L, ACNT-H61L	LED/CMOS	10	High CMR, Low Power, Direct Drive
ACFL-6211U/6212U	LED/CMOS	15/10	Bi-Directional, Direct Drive in Stretched SO12
ACSL-6210, ACSL-300/10, ACSL-6400/10/20	LED/Open Collector	15	Multi-channels, Bi-Directional Channels
ACPL-071L/M75L/ W70L/074L/K73L	LED/CMOS	15	CMOS Output Eliminate Need for Pull-up Resistor
ACPI-077L/772L	CMOS/CMOS	25	Low t _{PLH} , t _{PHL} , PWD

Defibrillators - High Voltage Storage and Discharge Circuit



Voltage Sense

Part No.	Package Type	Output Type
HCNR200	400 mil DIP8	Analog
HCNR201	400 mil DIP8	Analog
ACPL-C87B/C87A/C870	SSO-8	Differential

Basic Gate Drive Optocouplers

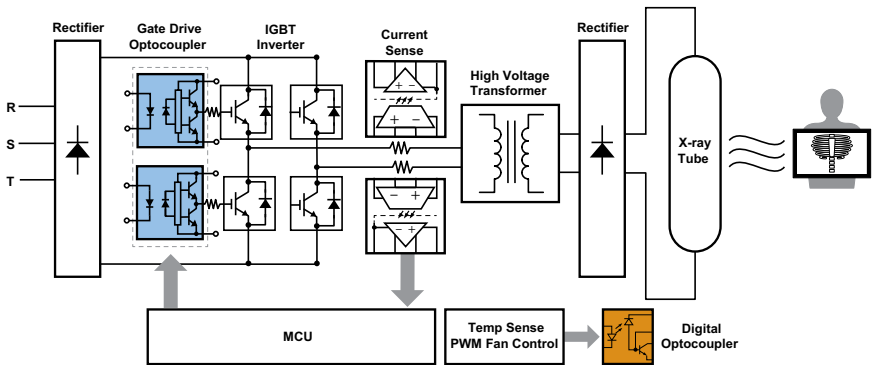
Part No.	Package	I _{F(on)} mA Min	I _{OUT} A Min	I _{OUT} A Max	t _{PLH} μs Max	t _{PHL} μs Max	PDD μs Max	V _{CC} V Max	CMR - V/μs@ V _{CM}		V _{ISO} V _{RMS} Min	V _{IORM} V _{peak}
									CMR V/μs (Min)	V _{CM} V		
ACNT-H343	15mm Stretched SO8	12	4.0	5.0	0.15	0.15	0.09	30	100000	1500	7500	2262
ACNU-3430	11mm SSO8	7	4.0	5.0	0.15	0.15	0.09	30	100000	1500	5000	1414
ACNU-3410	11mm SSO8	7	2.5	3.0	0.15	0.15	0.09	30	100000	1500	5000	1414
ACPL-P349	Stretched SO6	7	2.0	2.5	0.11	0.11	0.05	30	100000	1500	3750	891*
ACPL-W349	Stretched SO6	7	2.0	2.5	0.11	0.11	0.05	30	100000	1500	5000	1140*
ACPL-P346	Stretched SO6	7	2.0	2.5	0.12	0.12	0.05	20	100000	1500	3750	891*
ACPL-W346	Stretched SO6	7	2.0	2.5	0.12	0.12	0.05	20	100000	1500	5000	1140*
ACPL-P347	Stretched SO6	7	0.8	1.0	0.11	0.11	0.05	30	100000	1500	3750	891*
ACPL-W347	Stretched SO6	7	0.8	1.0	0.11	0.11	0.05	30	100000	1500	5000	1140*
ACPL-P345	Stretched SO6	7	0.8	1.0	0.12	0.12	0.05	20	100000	1500	3750	891*
ACPL-W345	Stretched SO6	7	0.8	1.0	0.12	0.12	0.05	20	100000	1500	5000	1140*
ACPL-P343	Stretched SO6	7	3.0	4.0	0.20	0.20	0.1	30	35000	1500	3750	891*
ACPL-W343	Stretched SO6	7	3.0	4.0	0.20	0.20	0.1	30	35000	1500	5000	1140*

• With IEC/EN/DIN EN 60747-5-5 Option 060.

Isolated Current/Voltage Sensing

Part No.	Output	Description	Gain Tolerance	Package
ACPL-C740	Digital	±200mV, Optically Isolated, 20MHz Internally Clocked, Sigma-Delta Modulator	±1%	SSO-8
ACPL-C799	Digital	±50mV, Optically Isolated, 10MHz Internally Clocked, Sigma-Delta Modulator	±1%	SSO-8
ACPL-C797	Digital	±200mV, Optically Isolated, 10MHz Internally Clocked, Sigma-Delta Modulator	±1%	SSO-8
ACPL-798J	Digital	±200mV, Optically Isolated, up to 25MHz Externally Clocked, LVDS Output, Sigma-Delta Modulator	±1%	SO-16
ACPL-796J	Digital	±200mV, Optically Isolated, up to 20MHz Externally Clocked, Sigma-Delta Modulator	±1%	SO-16
ACNT-H79B/A/O	Differential	Optical Isolation Amplifier, ±200mV Input Range	±0.5%, ±1%, ±3%	SSO-8
ACNT-H87B/A/O	Differential	Optical Isolation Amplifier, 0-2V Input Range	±0.5%, ±1%, ±3%	SSO-8
ACPL-C79B/C79A/C790	Differential	Optical Isolation Amplifier, ±200mV Input Range	±0.5%, ±1%, ±3%	SSO-8
ACPL-C87B/C87A/C870	Differential	Optically Isolated Voltage Sensor, 0-2V Input Range	±0.5%, ±1%, ±3%	SSO-8
HCPL-7510/7520	Single-Ended	Optical Isolation Amplifier, ±200mV Input Range	±3%, ±5%	DIP-6
HCPL-788J/ACPL-785J	Single-Ended	Optical Isolation Amplifier, ±200mV Input Range, with Fault Detection	±3%, ±5%	SO-16

X-Ray Systems – High Voltage Switching Power



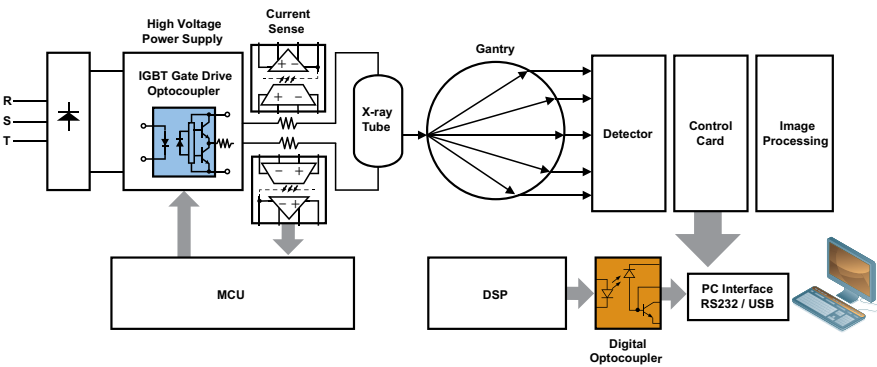
Isolated Current/Voltage Sensing

Part No.	Output	Description	Gain Tolerance	Package
ACPL-C740	Digital	±200mV, Optically Isolated, 20MHz Internally Clocked, Sigma-Delta Modulator	±1%	SSO-8
ACPL-C799	Digital	±50mV, Optically Isolated, 10MHz Internally Clocked, Sigma-Delta Modulator	±1%	SSO-8
ACPL-C797	Digital	±200mV, Optically Isolated, 10MHz Internally Clocked, Sigma-Delta Modulator	±1%	SSO-8
ACPL-798J	Digital	±200mV, Optically Isolated, up to 25MHz Externally Clocked, LVDS Output, Sigma-Delta Modulator	±1%	SO-16
ACPL-796J	Digital	±200mV, Optically Isolated, up to 20MHz Externally Clocked, Sigma-Delta Modulator	±1%	SO-16
ACNT-H79B/A/0	Differential	Optical Isolation Amplifier, ±200mV Input Range	±0.5%, ±1%, ±3%	SSO-8
ACNT-H87B/A/0	Differential	Optical Isolation Amplifier, 0-2V Input Range	±0.5%, ±1%, ±3%	SSO-8
ACPL-C79B/C79A/C790	Differential	Optical Isolation Amplifier, ±200mV Input Range	±0.5%, ±1%, ±3%	SSO-8
ACPL-C87B/C87A/C870	Differential	Optically Isolated Voltage Sensor, 0-2V Input Range	±0.5%, ±1%, ±3%	SSO-8
HCPL-7510/7520	Single-Ended	Optical Isolation Amplifier, ±200mV Input Range	±3%, ±5%	DIP-6
HCPL-788J/ACPL-785J	Single-Ended	Optical Isolation Amplifier, ±200mV Input Range, with Fault Detection	±3%, ±5%	SO-16

Digital Optocouplers

Part No.	Input/Output Type	Data Rate
4N45/46, 6N138/139, HCNW138/139, HCPL-07xx, HCPL-27xx, HCPL-4701/31, HCPL-M700/1	LED/Darlington Transistor	100kBd
ACPL-M50L/054L/W50L/K54L, ACNT-H50L/H511	LED/Open Collector	1MBd
ACPL-M21L/021L/024L/W21L/K24L	LED/CMOS	5MBd
ACPL-C61L, ACPL-W61L/K64L, ACNT-H61L	LED/CMOS	10MBd

CT Scanner - High Voltage Switching Power Supply



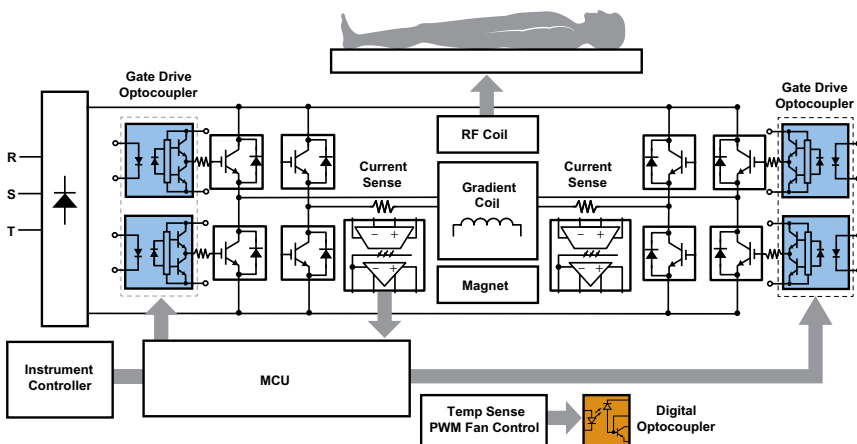
Isolated Current/Voltage Sensing

Part No.	Output	Description	Gain Tolerance	Package
ACPL-C740	Digital	±200mV, Optically Isolated, 20MHz Internally Clocked, Sigma-Delta Modulator	±1%	SSO-8
ACPL-C799	Digital	±50mV, Optically Isolated, 10MHz Internally Clocked, Sigma-Delta Modulator	±1%	SSO-8
ACPL-C797	Digital	±200mV, Optically Isolated, 10MHz Internally Clocked, Sigma-Delta Modulator	±1%	SSO-8
ACPL-798J	Digital	±200mV, Optically Isolated, up to 25MHz Externally Clocked, LVDS Output, Sigma-Delta Modulator	±1%	SO-16
ACPL-796J	Digital	±200mV, Optically Isolated, up to 20MHz Externally Clocked, Sigma-Delta Modulator	±1%	SO-16
ACNT-H79B/A/O	Differential	Optical Isolation Amplifier, ±200mV Input Range	±0.5%, ±1%, ±3%	SSO-8
ACNT-H87B/A/O	Differential	Optical Isolation Amplifier, 0-2V Input Range	±0.5%, ±1%, ±3%	SSO-8
ACPL-C79B/C79A/C790	Differential	Optical Isolation Amplifier, ±200mV Input Range	±0.5%, ±1%, ±3%	SSO-8
ACPL-C87B/C87A/C870	Differential	Optically Isolated Voltage Sensor, 0-2V Input Range	±0.5%, ±1%, ±3%	SSO-8
HCPL-7510/7520	Single-Ended	Optical Isolation Amplifier, ±200mV Input Range	±3%, ±5%	DIP-6
HCPL-788J/ACPL-785J	Single-Ended	Optical Isolation Amplifier, ±200mV Input Range, with Fault Detection	±3%, ±5%	SO-16

Digital Optocouplers

Part No.	Input/Output Type	Data Rate
ACPL-C61L	LED/CMOS	10 MBd
ACNT-H61L	LED/CMOS	10 MBd
ACPL-M62L	LED/Open Drain	10 MBd
ACPL-061L/M61L/W61L/ 064L/K64L, ACNW261L	LED/CMOS	10 MBd
ACSL-6210, ACSL-6300/10, ACSL-6400/10/20	LED/Open Collector	15 MBd
ACPL-071L/M75L/ W70L/074L/K73L	LED/CMOS	15 MBd
ACPL-077L/772L	CMOS/CMOS	25 MBd

Magnetic Resonance Imaging (MRI) Gradient Amplifier



Smart Gate Drive Optocouplers

Part No.	Package	IF(on) mA Min	IOUT A Min	IOUT A Max	tPLH μs Max	tPHL μs Max	PDD μs Max	VCC V Max	CMR - V/μs@ VCM		VISO VRMS Min	VIORM Vpeak
									CMR V/μs (Min)	VCM V		
ACPL-332J	SO16	8	4.5	5.0	0.15	0.15	0.075	30	100000	1500	5000	1414
	- 5A gate drive optocoupler for IGBT and SiC/GaN MOSFET - Low Propagation Delay (<150ns) - Over current, UVLO, GATE status detection with isolated feedback											
ACPL-302J	SO16	10	-	2.5	0.25	0.25	0.16	25	30000	1500	5000	1230
	- Integrated DC-DC Controller for floating power supply - Integrated short circuit protection and fault feedback - Under Voltage Lockout(UVLO) protection with feedback - Integrated Active Miller Clamp											
ACPL-339J	SO16	6	1.0	-	0.30	0.30	0.2	30	25000	1500	5000	1414
	- Scalable & Efficient gate drive design - Dual Rail-to-Rail output to drive external MOSFET buffer - Active timing control to prevent cross conduction in MOSFET buffer - Integrated short circuit protection and fault feedback											
ACPL-337J	SO16	9	3.0	4.0	0.22	0.25	0.15	30	30000	1500	5000	1414
ACPL-336J	SO16	9	2.0	2.5	0.22	0.25	0.15	30	30000	1500	5000	1414
	- Rail-to-rail output voltage - Integrated short circuit protection and fault feedback - Under Voltage Lockout(UVLO) protection with feedback - Integrated Active Miller Clamp and LED driver											
ACPL-335J	SO16	10	2.5	2.0	0.25	0.25	0.10	20	50000	1500	5000	1230
	- 2.5A MOSFET gate drive optocoupler - UVLO threshold for MOSFET protection - Over current threshold for MOSFET protection - Hard shut down for fast MOSFET protection											

Basic Gate Drive Optocouplers

Part No.	Package	I _{F(on)} mA Min	I _{OUT} A Min	I _{OUT} A Max	t _{PLH} μs Max	t _{PHL} μs Max	PDD μs Max	V _{CC} V Max	CMR - V/μs@ V _{CM}		V _{ISO} V _{RMS} Min	V _{IORM} V _{peak}
									CMR V/μs (Min)	V _{CM} V		
ACNT-H343	15mm Stretched SO8	12	4.0	5.0	0.15	0.15	0.09	30	100000	1500	7500	2262
ACNU-3430	11mm SSO8	7	4.0	5.0	0.15	0.15	0.09	30	100000	1500	5000	1414
ACNU-3410	11mm SSO8	7	2.5	3.0	0.15	0.15	0.09	30	100000	1500	5000	1414
ACPL-P349	Stretched SO6	7	2.0	2.5	0.11	0.11	0.05	30	100000	1500	3750	891*
ACPL-W349	Stretched SO6	7	2.0	2.5	0.11	0.11	0.05	30	100000	1500	5000	1140*
ACPL-P346	Stretched SO6	7	2.0	2.5	0.12	0.12	0.05	20	100000	1500	3750	891*
ACPL-W346	Stretched SO6	7	2.0	2.5	0.12	0.12	0.05	20	100000	1500	5000	1140*
ACPL-P347	Stretched SO6	7	0.8	1.0	0.11	0.11	0.05	30	100000	1500	3750	891*
ACPL-W347	Stretched SO6	7	0.8	1.0	0.11	0.11	0.05	30	100000	1500	5000	1140*
ACPL-P345	Stretched SO6	7	0.8	1.0	0.12	0.12	0.05	20	100000	1500	3750	891*
ACPL-W345	Stretched SO6	7	0.8	1.0	0.12	0.12	0.05	20	100000	1500	5000	1140*
ACPL-P343	Stretched SO6	7	3.0	4.0	0.20	0.20	0.1	30	35000	1500	3750	891*
ACPL-W343	Stretched SO6	7	3.0	4.0	0.20	0.20	0.1	30	35000	1500	5000	1140*

* With IEC/EN/DIN EN 60747-5-5 Option 060.

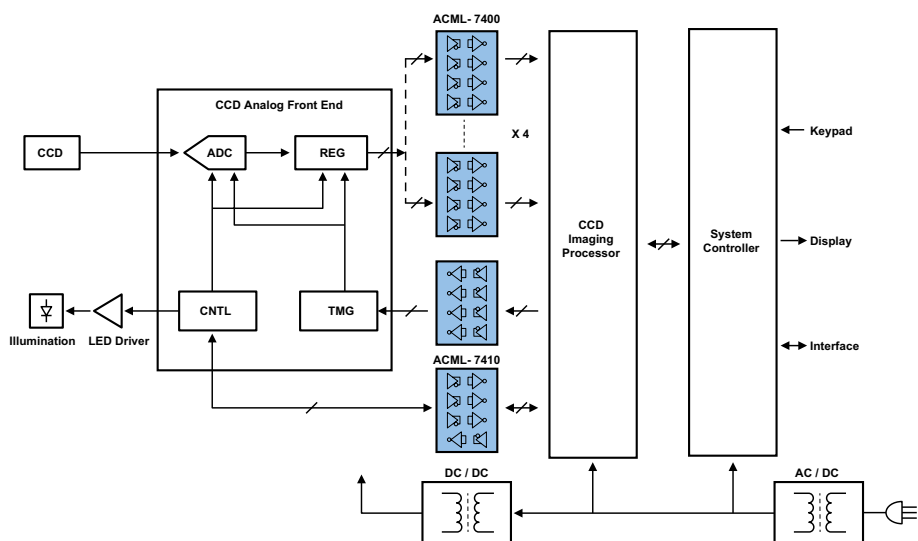
Isolated Current/Voltage Sensing

Part No.	Output	Description	Gain Tolerance	Package
ACPL-C740	Digital	±200mV, Optically Isolated, 20MHz Internally Clocked, Sigma-Delta Modulator	±1%	SSO-8
ACPL-C799	Digital	±50mV, Optically Isolated, 10MHz Internally Clocked, Sigma-Delta Modulator	±1%	SSO-8
ACPL-C797	Digital	±200mV, Optically Isolated, 10MHz Internally Clocked, Sigma-Delta Modulator	±1%	SSO-8
ACPL-798J	Digital	±200mV, Optically Isolated, up to 25MHz Externally Clocked, LVDS Output, Sigma-Delta Modulator	±1%	SO-16
ACPL-796J	Digital	±200mV, Optically Isolated, up to 20MHz Externally Clocked, Sigma-Delta Modulator	±1%	SO-16
ACNT-H79B/A/0	Differential	Optical Isolation Amplifier, ±200mV Input Range	±0.5%, ±1%, ±3%	SSO-8
ACNT-H87B/A/0	Differential	Optical Isolation Amplifier, 0-2V Input Range	±0.5%, ±1%, ±3%	SSO-8
ACPL-C79B/C79A/C790	Differential	Optical Isolation Amplifier, ±200mV Input Range	±0.5%, ±1%, ±3%	SSO-8
ACPL-C87B/C87A/C870	Differential	Optically Isolated Voltage Sensor, 0-2V Input Range	±0.5%, ±1%, ±3%	SSO-8
HCPL-7510/7520	Single-Ended	Optical Isolation Amplifier, ±200mV Input Range	±3%, ±5%	DIP-6
HCPL-788J/ACPL-785J	Single-Ended	Optical Isolation Amplifier, ±200mV Input Range, with Fault Detection	±3%, ±5%	SO-16

Digital Optocouplers

Part No.	Input/Output Type	Data Rate
4N45/46, 6N138/139, HCNW138/139, HCPL-07xx, HCPL-27xx, HCPL-4701/31, HCPL-M700/1	LED/Darlington Transistor	100 kBd
ACPL-M50L/054L/W50L/K54L, ACNT-H50L/H511	LED/Open Collector	1 MBd
ACPL-M21L/021L/024L/W21L/K24L	LED/CMOS	5 MBd
ACPL-C61L	LED/CMOS	10 MBd
ACNT-H61L	LED/CMOS	10 MBd

Imaging Data Interface Isolation in Endoscope



High Speed Digital Isolators

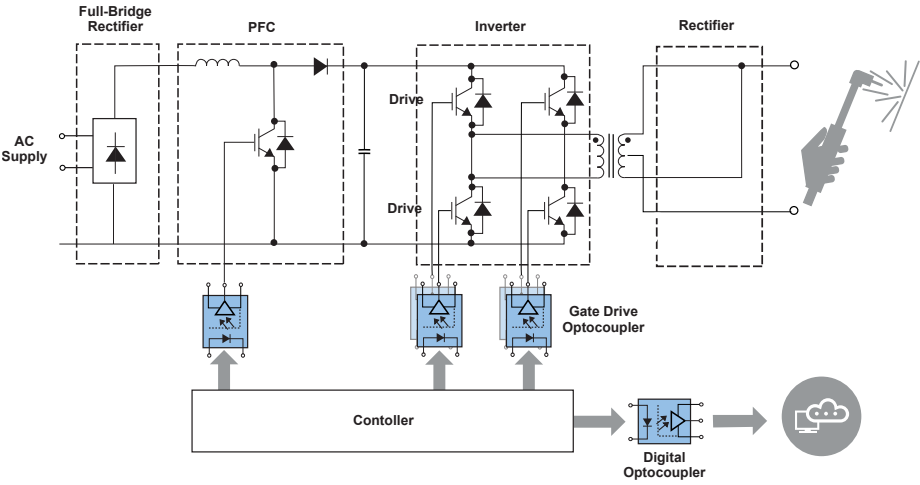
Part No.	Channel	Package	Max Data Rate MBd Min	tPLH & tPHL (VCC=5.0V) ns Max	PWD ns Max	tpSK ns Max	CMR - V/μs@VCM		Viso VRMS Min
							CMR V/μs (Min)	VCM V	
ACML-7400	Quad	SO16 Wide Body	100	32	2	5	25000	1000	5600
ACML-7410	Quad, 3/1 Bi-dir	SO16 Wide Body	100	32	2	5	25000	1000	5600
ACML-7420	Quad, 2/2 Bi-dir	SO16 Wide Body	100	32	2	5	25000	1000	5600

Optoisolation Products Application Block Diagrams for Industrial



81 Welder

Welder



Basic Gate Drive Optocouplers

Part No.	Package	IF(on) mA Min	IOUT A Min	IOUT A Max	tPLH μs Max	tPHL μs Max	PDD μs Max	VCC V Max	CMR - V/μs@ VCM		VISO VRMS Min	VIORM Vpeak
									CMR V/μs (Min)	VCM V		
ACNT-H343	15mm Stretched SO8	12	4.0	5.0	0.15	0.15	0.09	30	100000	1500	7500	2262
ACNU-3430	11mm SSO8	7	4.0	5.0	0.15	0.15	0.09	30	100000	1500	5000	1414
ACNU-3410	11mm SSO8	7	2.5	3.0	0.15	0.15	0.09	30	100000	1500	5000	1414
ACPL-P349	Stretched SO6	7	2.0	2.5	0.11	0.11	0.05	30	100000	1500	3750	891*
ACPL-W349	Stretched SO6	7	2.0	2.5	0.11	0.11	0.05	30	100000	1500	5000	1140*
ACPL-P346	Stretched SO6	7	2.0	2.5	0.12	0.12	0.05	20	100000	1500	3750	891*
ACPL-W346	Stretched SO6	7	2.0	2.5	0.12	0.12	0.05	20	100000	1500	5000	1140*
ACPL-P347	Stretched SO6	7	0.8	1.0	0.11	0.11	0.05	30	100000	1500	3750	891*
ACPL-W347	Stretched SO6	7	0.8	1.0	0.11	0.11	0.05	30	100000	1500	5000	1140*
ACPL-P345	Stretched SO6	7	0.8	1.0	0.12	0.12	0.05	20	100000	1500	3750	891*
ACPL-W345	Stretched SO6	7	0.8	1.0	0.12	0.12	0.05	20	100000	1500	5000	1140*
ACPL-P343	Stretched SO6	7	3.0	4.0	0.20	0.20	0.1	30	35000	1500	3750	891*
ACPL-W343	Stretched SO6	7	3.0	4.0	0.20	0.20	0.1	30	35000	1500	5000	1140*

Low Power Digital Optocouplers

Part No.	Channel	Package	Data Rate MBd	tPLH ns Max	tPHL ns Max	PWD ns Max	tPSK ns Max	VISO VRMS Min	VIORM VPEAK
ACNT-H61L	1	Stretched SO8	10	100	100	40	40	7500	2262
ACNV2601	1	500mil DIP10	10	100	100	40	40	7500	2262
ACNW261L	1	400mil DIP8	10	95	95	40	30	5000	1414
ACPL-C61L	1	Stretched SO8	10	90	90	40	30	5000	1230
ACPL-W61L	1	Stretched SO6	10	80	80	30	30	5000	1140
ACPL-K64L	2	Stretched SO8	10	80	80	30	30	5000	1140
ACPL-M61L	1	SO5	10	80	80	30	30	3750	567
ACPL-O64L	2	SO8	10	80	80	30	30	3750	567
ACPL-W50L	1	Stretched SO6	1	1000	1000	-	-	5000	1140
ACPL-K54L	2	Stretched SO8	1	1000	1000	-	-	5000	1140
ACPL-M49U*	1	SO5	0.02	20000	20000	-	-	3750	567
ACPL-K49U*	1	Stretched SO8	0.02	20000	20000	-	-	5000	1140
ACPL-M71U*	1	SO5	25	35	35	12	15	3750	567
ACPL-M72U*	1	SO5	10	100	100	50	60	3750	567
ACNT-H50L/H511	1	15mm Stretched SO8	1	1000/2000	1000/2000	-	-	7500	2262

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