

A/D Converters with Display Drivers

Integrating A/D Converters are characterized by high inherent accuracy, excellent noise rejection, non-critical associated components and low cost. They are relatively slow, with conversion rates up to 30 conversions per second. All Harris integrating converters provide fully precise Auto-Zero,

Auto-Polarity (including $\pm$ null indication), single reference operation, very high input impedance, true input integration over a constant period (for maximum EMI rejection), fully ratiometric operation, overrange indication and a medium-quality built-in reference.

Type	Special Features	Conversions/ Sec	V _{SUPPLY} / I _{SUPPLY}	Package Number of Pins*
3½-Digit Types for direct Drive of LCD 7-Segment Displays				
ICL7106	- Auto zero to <10μV - Zero input drift: <1μV/°C - Rollover and linearity errors: <1 count - Input voltage range: 0 to 2V - Hold reading input retains display reading in ICL7116	0.1 to 15	+9V (typ.)	JL, M44, PL
			1.8mA (max.)	
ICL7116		0.1 to 15	+9V (typ.)	PL, M44
			1.8mA (max.)	
ICL7126	- ICL7126 plug-in replacement for ICL7106 with change in passive components - ICL7136 low-power version of ICL7106 but with max. supply current of only 100μA ideally suited for 9-volt battery operation	0.1 to 4	+9V (typ.)	PL, M44
			100μA (max.)	
ICL7136		0.1 to 4	+9V (typ.)	PL, M44
			100μA (max.)	
3½-Digit Types for Direct Drive of LED 7-Segment Displays				
ICL7137	- Features same as above - ICL7137 improved version of ICL7107 - ICL7107 similar to ICL7137, but requires 1.8mA max. supply current - ICL7117 has all the features of the ICL7107 with the addition of a HOLD Reading Input	0.1 to 4	±5V (typ.)	PL
			200μA (max.)	
ICL7107		0.1 to 15	±5V (typ.)	IL, PL
			1.8mA (max.)	
ICL7117		0.1 to 15	±5V (typ.)	PL
			1.8mA (max.)	
3¾-Digit Auto Ranging DMM's with On-Chip Duplex LCD Display Drive				
ICL7139	- Input voltage range to 400 volts - DC current to 4A; resistance to 4MΩ - Power dissipation <20mW - ICL7139 has 13 ranges (one for AC voltage) - ICL7149 has 18 ranges (two for AC voltage with optional AC circuit)	2.4	+9V (typ.)	PL, M44
			2.4mA (max.)	
ICL7149		2.4	+9V	PL, M44
			2.4mA (max.)	
4½-Digit Single-Chip Type for Direct Drive of Multiplexed LCD Displays				
ICL7129	- For high-quality battery-operated equipment - Accuracy full-scale/better than 0.005%, and resolution down to 10μV/count	2	+9V (typ.)	PL
			1.5mA (max.)	
101-Segment LCD Bargraph for Direct Drive of Multiplexed LCD Displays				
ICL7182	- Differential input voltage range: 200mV to 1.1V - Precision on-chip reference: 50 ppm/°C, can extend operating supply voltage range from 3 to 40V	25	+5V (typ.)	PL, M44
			1.8mA (max.)	

Operating Temperature Range: 0 to $+70^\circ\text{C}$ (ICL7182 also -25 to $+85^\circ\text{C}$)

* See interpretation guide and packaging section