



Life Energy Motion

INTEGRATED CURRENT SENSOR SELECTION GUIDE



Precise, Compact, & Efficient Solutions

As the power density of electronic systems continues to rise, the demand for compact, efficient, and easy-to-integrate current sensing solutions is more critical than ever. Integrated Current Sensors (ICS) are designed to meet these evolving challenges by combining advanced sensing technology, signal processing, isolation, and system protection into a single, streamlined device. Leveraging decades of expertise in semiconductor design and packaging, LEM has developed a range of ICS that deliver highly accurate current measurements, ensuring optimal performance and safety in both current and future electronic designs.

From power supplies and battery management systems to e-motor drives and renewable energy networks, reliable current sensing is critical for maintaining efficiency, protection, and performance. However, shrinking PCB footprints and increasing power levels present challenges in thermal management, isolation, and EMI. ICS overcome these issues, offering a plug-and-play solution that integrates easily into space-constrained designs without compromising performance, embodying the principle of achieving more with less.

With LEM's range of ICS, engineers can confidently design high-performance electronics that support the growing demand for smarter, more energy-efficient solutions.



Integrated Current Sensor Portfolio

	Model	Measuring Range	Sensitivity	Nominal Current	Supply Voltage	Package	Bandwidth	Overcurrent Detection	Temperature Range	Mounting	Primary Signal Type	AEC-Q100 Grade 1	Visual Appearance
GO-SME	GO 8-SME/SP4	20 A	62.5 mV/A	8 A	3.3 V	SOIC 8	0 to 300 kHz	No	-40...125°C	PCB	AC + DC	Yes	
	GO 10-SME	25 A	80 mV/A	10 A	5 V	SOIC 8	0 to 300 kHz	No	-40...125°C	PCB	AC + DC	Yes	
	GO 10-SME/SP3	25 A	50 mV/A	10 A	3.3 V	SOIC 8	0 to 300 kHz	No	-40...125°C	PCB	AC + DC	Yes	
	GO 12-SME/SP2	30.3 A	66 mV/A	12 A	5 V	SOIC 8	0 to 300 kHz	No	-40...125°C	PCB	AC + DC	Yes	
	GO 15-SME/SP4	37.5 A	33.333 mV/A	15 A	3.3 V	SOIC 8	0 to 300 kHz	No	-40...125°C	PCB	AC + DC	Yes	
	GO 20-SME	50 A	40 mV/A	20 A	5 V	SOIC 8	0 to 300 kHz	No	-40...125°C	PCB	AC + DC	Yes	
	GO 20-SME/SP2	50 A	40 mV/A	20 A	5 V	SOIC 8	0 to 300 kHz	No	-40...125°C	PCB	AC + DC	Yes	
	GO 20-SME/SP3	50 A	25 mV/A	20 A	3.3 V	SOIC 8	0 to 300 kHz	No	-40...125°C	PCB	AC + DC	Yes	
GO-SMS	GO 8-SMS/SP4	20 A	62.5 mV/A	8 A	3.3 V	SOIC 16	0 to 300 kHz	Yes	-40...125°C	PCB	AC + DC	Yes	
	GO 10-SMS	25 A	80 mV/A	10 A	5 V	SOIC 16	0 to 300 kHz	Yes	-40...125°C	PCB	AC + DC	Yes	
	GO 10-SMS/SP3	25 A	50 mV/A	10 A	3.3 V	SOIC 16	0 to 300 kHz	Yes	-40...125°C	PCB	AC + DC	Yes	
	GO 20-SMS	50 A	40 mV/A	20 A	5 V	SOIC 16	0 to 300 kHz	Yes	-40...125°C	PCB	AC + DC	Yes	
	GO 20-SMS/SP3	50 A	25 mV/A	20 A	3.3 V	SOIC 16	0 to 300 kHz	Yes	-40...125°C	PCB	AC + DC	Yes	
	GO 30-SMS	75 A	26.667 mV/A	30 A	5 V	SOIC 16	0 to 300 kHz	Yes	-40...125°C	PCB	AC + DC	Yes	
	GO 30-SMS/SP3	75 A	16.667 mV/A	30 A	3.3 V	SOIC 16	0 to 300 kHz	Yes	-40...125°C	PCB	AC + DC	Yes	
HMSR-SMS	HMSR 6-SMS	15 A	133.333 mV/A	6 A	5 V	SOIC 10	0 to 300 kHz	Yes	-40...125°C	PCB	AC + DC	Yes	
	HMSR 8-SMS	20 A	100 mV/A	8 A	5 V	SOIC 10	0 to 300 kHz	Yes	-40...125°C	PCB	AC + DC	Yes	
	HMSR 10-SMS	25 A	80 mV/A	10 A	5 V	SOIC 10	0 to 300 kHz	Yes	-40...125°C	PCB	AC + DC	Yes	
	HMSR 15-SMS	37.5 A	53.333 mV/A	15 A	5 V	SOIC 10	0 to 300 kHz	Yes	-40...125°C	PCB	AC + DC	Yes	
	HMSR 20-SMS	50 A	40 mV/A	20 A	5 V	SOIC 10	0 to 300 kHz	Yes	-40...125°C	PCB	AC + DC	Yes	
	HMSR 30-SMS	75 A	26.667 mV/A	30 A	5 V	SOIC 10	0 to 300 kHz	Yes	-40...125°C	PCB	AC + DC	Yes	
HMSR-DA	HMSR DA 15-6-50000	15 A	2.666%/A ($\Sigma\Delta$ Output)	6 A	5 V	SOIC 10	0 to 300 kHz	Yes	-40...125°C	PCB	AC + DC	No	
	HMSR DA 15-6-54000	15 A	2.666%/A ($\Sigma\Delta$ Output)	6 A	5 V	SOIC 10	0 to 300 kHz	Yes	-40...125°C	PCB	AC + DC	No	
	HMSR DA 25-10-50000	25 A	1.6%/A ($\Sigma\Delta$ Output)	10 A	5 V	SOIC 10	0 to 300 kHz	Yes	-40...125°C	PCB	AC + DC	No	
	HMSR DA 25-10-54000	25 A	1.6%/A ($\Sigma\Delta$ Output)	10 A	5 V	SOIC 10	0 to 300 kHz	Yes	-40...125°C	PCB	AC + DC	No	
	HMSR DA 75-30-50000	75 A	0.533%/A ($\Sigma\Delta$ Output)	30 A	5 V	SOIC 10	0 to 300 kHz	Yes	-40...125°C	PCB	AC + DC	No	
	HMSR DA 75-30-54000	75 A	0.533%/A ($\Sigma\Delta$ Output)	30 A	5 V	SOIC 10	0 to 300 kHz	Yes	-40...125°C	PCB	AC + DC	No	
GXS-ANF	GXS ANF 5-2 30001A	5 A	264 mV/A	2 A	3.3 V	SOIC 8	0 to 400 kHz	No	-40...125°C	PCB	AC + DC	No	
	GXS ANF 5-2 50101A	5 A	400 mV/A	2 A	5 V	SOIC 8	0 to 400 kHz	No	-40...125°C	PCB	AC + DC	No	
	GXS ANF 10-4 30101A	10 A	132 mV/A	4 A	3.3 V	SOIC 8	0 to 400 kHz	No	-40...125°C	PCB	AC + DC	No	
	GXS ANF 10-4 31101A	10 A	264 mV/A	4 A	3.3 V	SOIC 8	0 to 400 kHz	No	-40...125°C	PCB	AC + DC	No	
	GXS ANF 10-4 50001A	10 A	200 mV/A	4 A	5 V	SOIC 8	0 to 400 kHz	No	-40...125°C	PCB	AC + DC	No	
	GXS ANF 10-4 50101A	10 A	200 mV/A	4 A	5 V	SOIC 8	0 to 400 kHz	No	-40...125°C	PCB	AC + DC	No	

	Model	Measuring Range	Sensitivity	Nominal Current	Supply Voltage	Package	Bandwidth	Overcurrent Detection	Temperature Range	Mounting	Primary Signal Type	AEC-Q100 Grade 1	Visual Appearance
GXS-ANF	GXS ANF 10-4 51101A	10 A	400 mV/A	4 A	5 V	SOIC 8	0 to 400 kHz	No	-40...125°C	PCB	AC + DC	No	
	GXS ANF 20-8 30001A	20 A	66 mV/A	8 A	3.3 V	SOIC 8	0 to 400 kHz	No	-40...125°C	PCB	AC + DC	No	
	GXS ANF 20-8 30101A	20 A	66 mV/A	8 A	3.3 V	SOIC 8	0 to 400 kHz	No	-40...125°C	PCB	AC + DC	No	
	GXS ANF 20-8 50001A	20 A	100 mV/A	8 A	5 V	SOIC 8	0 to 400 kHz	No	-40...125°C	PCB	AC + DC	No	
	GXS ANF 20-8 50101A	20 A	100 mV/A	8 A	5 V	SOIC 8	0 to 400 kHz	No	-40...125°C	PCB	AC + DC	No	
	GXS ANF 20-8 51101A	20 A	200 mV/A	8 A	5 V	SOIC 8	0 to 400 kHz	No	-40...125°C	PCB	AC + DC	No	
	GXS ANF 25-10 50001A	25 A	80 mV/A	10 A	5 V	SOIC 8	0 to 400 kHz	No	-40...125°C	PCB	AC + DC	No	
	GXS ANF 25-10 50101A	25 A	80 mV/A	10 A	5 V	SOIC 8	0 to 400 kHz	No	-40...125°C	PCB	AC + DC	No	
	GXS ANF 30-12 30001A	30 A	44 mV/A	12 A	3.3 V	SOIC 8	0 to 400 kHz	No	-40...125°C	PCB	AC + DC	No	
	GXS ANF 30-12 30101A	30 A	44 mV/A	12 A	3.3 V	SOIC 8	0 to 400 kHz	No	-40...125°C	PCB	AC + DC	No	
	GXS ANF 30-12 50001A	30 A	66.67 mV/A	12 A	5 V	SOIC 8	0 to 400 kHz	No	-40...125°C	PCB	AC + DC	No	
	GXS ANF 30-12 50101A	30 A	66.67 mV/A	12 A	5 V	SOIC 8	0 to 400 kHz	No	-40...125°C	PCB	AC + DC	No	
	GXS ANF 30-12 51101A	30 A	133.3 mV/A	12 A	5 V	SOIC 8	0 to 400 kHz	No	-40...125°C	PCB	AC + DC	No	
	GXS ANF 40-16 30101A	40 A	33 mV/A	16 A	3.3 V	SOIC 8	0 to 400 kHz	No	-40...125°C	PCB	AC + DC	No	
	GXS ANF 40-16 50101A	40 A	50 mV/A	16 A	5 V	SOIC 8	0 to 400 kHz	No	-40...125°C	PCB	AC + DC	No	
	GXS ANF 50-20 30101A	50 A	26.4 mV/A	20 A	3.3 V	SOIC 8	0 to 400 kHz	No	-40...125°C	PCB	AC + DC	No	
	GXS ANF 50-20 50001A	50 A	40 mV/A	20 A	5 V	SOIC 8	0 to 400 kHz	No	-40...125°C	PCB	AC + DC	No	
	GXS ANF 50-20 50101A	50 A	40 mV/A	20 A	5 V	SOIC 8	0 to 400 kHz	No	-40...125°C	PCB	AC + DC	No	
	GXS ANF 50-20 51001A	50 A	80 mV/A	20 A	5 V	SOIC 8	0 to 400 kHz	No	-40...125°C	PCB	AC + DC	No	
GXN-ANC	GXN ANC 10-4 30011A	10 A	132 mV/A	4 A	3.3 V	SOIC 8	0 to 320 kHz	Yes	-40...125°C	PCB	AC + DC	No	
	GXN ANC 20-8 30011A	20 A	66 mV/A	8 A	3.3 V	SOIC 16	0 to 320 kHz	Yes	-40...125°C	PCB	AC + DC	No	
	GXN ANC 20-8 50011A	20 A	100 mV/A	8 A	5 V	SOIC 16	0 to 320 kHz	Yes	-40...125°C	PCB	AC + DC	No	
	GXN ANC 25-10 30011A	25 A	52.8 mV/A	10 A	3.3 V	SOIC 16	0 to 320 kHz	Yes	-40...125°C	PCB	AC + DC	No	
	GXN ANC 30-12 31011A	30 A	88 mV/A	12 A	3.3 V	SOIC 16	0 to 320 kHz	Yes	-40...125°C	PCB	AC + DC	No	
	GXN ANC 30-12 50011A	30 A	66.67 mV/A	12 A	5 V	SOIC 16	0 to 320 kHz	Yes	-40...125°C	PCB	AC + DC	No	
	GXN ANC 33-13 30011A	33 A	39.6 mV/A	13 A	3.3 V	SOIC 16	0 to 320 kHz	Yes	-40...125°C	PCB	AC + DC	No	
	GXN ANC 40-16 50011A	40 A	50 mV/A	16 A	5 V	SOIC 16	0 to 320 kHz	Yes	-40...125°C	PCB	AC + DC	No	
	GXN ANC 50-20 50011A	50 A	40 mV/A	20 A	5 V	SOIC 16	0 to 320 kHz	Yes	-40...125°C	PCB	AC + DC	No	
	GXN ANC 66-26 30011A	66 A	20 mV/A	26 A	3.3 V	SOIC 16	0 to 320 kHz	Yes	-40...125°C	PCB	AC + DC	No	
	GXN ANC 66-26 50011A	66 A	30.3 mV/A	26 A	5 V	SOIC 16	0 to 320 kHz	Yes	-40...125°C	PCB	AC + DC	No	
	GXN ANC 80-32 30011A	80 A	16.5 mV/A	32 A	3.3 V	SOIC 16	0 to 320 kHz	Yes	-40...125°C	PCB	AC + DC	No	
	GXN ANC 80-32 50011A	80 A	25 mV/A	32 A	5 V	SOIC 16	0 to 320 kHz	Yes	-40...125°C	PCB	AC + DC	No	
	GXN ANC 100-40 30011A	100 A	13.2 mV/A	40 A	3.3 V	SOIC 16	0 to 320 kHz	Yes	-40...125°C	PCB	AC + DC	No	
	GXN ANC 100-40 50011A	100 A	20 mV/A	40 A	5 V	SOIC 16	0 to 320 kHz	Yes	-40...125°C	PCB	AC + DC	No	

	Model	Measuring Range	Sensitivity	Nominal Current	Supply Voltage	Package	Bandwidth	Overcurrent Detection	Temperature Range	Mounting	Primary Signal Type	AEC-Q100 Grade 1	Visual Appearance
GXN-AND	GXN AND 20-8 30111A	20 A	66 mV/A	8 A	3.3 V	SOIC 8	0 to 320 kHz	Yes	-40...125°C	PCB	AC + DC	No	
	GXN AND 20-8 50011A	20 A	100 mV/A	8 A	5 V	SOIC 8	0 to 320 kHz	Yes	-40...125°C	PCB	AC + DC	No	
	GXN AND 20-8 50111A	20 A	100 mV/A	8 A	5 V	SOIC 8	0 to 320 kHz	Yes	-40...125°C	PCB	AC + DC	No	
	GXN AND 25-10 30011A	25 A	52.8 mV/A	10 A	3.3 V	SOIC 8	0 to 240 kHz	No	-40...125°C	PCB	AC + DC	No	
	GXN AND 30-12 30011A	30 A	44 mV/A	12 A	3.3 V	SOIC 16	0 to 240 kHz	No	-40...125°C	PCB	AC + DC	No	
	GXN AND 30-12 30111A	30 A	44 mV/A	12 A	3.3 V	SOIC 16	0 to 240 kHz	No	-40...125°C	PCB	AC + DC	No	
	GXN AND 30-12 50011A	30 A	66.67 mV/A	12 A	5 V	SOIC 16	0 to 240 kHz	No	-40...125°C	PCB	AC + DC	No	
	GXN AND 30-12 50111A	30 A	66.67 mV/A	12 A	5 V	SOIC 16	0 to 240 kHz	No	-40...125°C	PCB	AC + DC	No	
	GXN AND 30-12 51111A	30 A	133.33 mV/A	12 A	5 V	SOIC 16	0 to 240 kHz	No	-40...125°C	PCB	AC + DC	No	
	GXN AND 40-16 30111A	40 A	33 mV/A	16 A	3.3 V	SOIC 16	0 to 240 kHz	No	-40...125°C	PCB	AC + DC	No	
	GXN AND 40-16 50011A	40 A	50 mV/A	16 A	5 V	SOIC 16	0 to 240 kHz	No	-40...125°C	PCB	AC + DC	No	
	GXN AND 50-20 50011A	50 A	40 mV/A	20 A	5 V	SOIC 16	0 to 240 kHz	No	-40...125°C	PCB	AC + DC	No	
	GXN AND 50-20 50111A	50 A	40 mV/A	20 A	5 V	SOIC 16	0 to 240 kHz	No	-40...125°C	PCB	AC + DC	No	
	GXN AND 50-20 51111A	50 A	80 mV/A	20 A	5 V	SOIC 16	0 to 240 kHz	No	-40...125°C	PCB	AC + DC	No	
	GXN AND 66-26 30011A	66 A	20.3 mV/A	26 A	3.3 V	SOIC 16	0 to 240 kHz	No	-40...125°C	PCB	AC + DC	No	
	GXN AND 66-26 30111A	66 A	20.3 mV/A	26 A	3.3 V	SOIC 16	0 to 240 kHz	No	-40...125°C	PCB	AC + DC	No	
	GXN AND 66-26 50011A	66 A	30.77 mV/A	26 A	5 V	SOIC 16	0 to 240 kHz	No	-40...125°C	PCB	AC + DC	No	
	GXN AND 66-26 50111A	66 A	30.77 mV/A	26 A	5 V	SOIC 16	0 to 240 kHz	No	-40...125°C	PCB	AC + DC	No	
	GXN AND 80-32 50011A	80 A	25 mV/A	32 A	5 V	SOIC 16	0 to 240 kHz	No	-40...125°C	PCB	AC + DC	No	
	GXN AND 100-40 50011A	100 A	20 mV/A	40 A	5 V	SOIC 16	0 to 240 kHz	No	-40...125°C	PCB	AC + DC	No	
	GXN AND 100-40 50111A	100 A	20 mV/A	40 A	5 V	SOIC 16	0 to 240 kHz	No	-40...125°C	PCB	AC + DC	No	
GXM-ANC	GXM ANC 50-20 30010A	50 A	26.4 mV/A	20 A	3.3 V	SOIC 10L	0 to 320 kHz	Yes	-40...150°C	PCB	AC + DC	No	
	GXM ANC 50-20 50010A	50 A	40 mV/A	20 A	5 V	SOIC 10L	0 to 320 kHz	Yes	-40...150°C	PCB	AC + DC	No	
	GXM ANC 75-30 30010A	75 A	17.6 mV/A	30 A	3.3 V	SOIC 10L	0 to 320 kHz	Yes	-40...150°C	PCB	AC + DC	No	
	GXM ANC 75-30 50030A	75 A	26.67 mV/A	30 A	5 V	SOIC 10L	0 to 320 kHz	Yes	-40...150°C	PCB	AC + DC	No	
	GXM ANC 80-32 30010A	80 A	16.5 mV/A	32 A	3.3 V	SOIC 10L	0 to 320 kHz	Yes	-40...150°C	PCB	AC + DC	No	
	GXM ANC 80-32 50010A	80 A	25 mV/A	32 A	5 V	SOIC 10L	0 to 320 kHz	Yes	-40...150°C	PCB	AC + DC	No	
	GXM ANC 100-40 30010A	100 A	13.2 mV/A	40 A	3.3 V	SOIC 10L	0 to 320 kHz	Yes	-40...150°C	PCB	AC + DC	No	
	GXM ANC 100-40 50010A	100 A	20 mV/A	40 A	5 V	SOIC 10L	0 to 320 kHz	Yes	-40...150°C	PCB	AC + DC	No	
	GXM ANC 100-40 50030A	100 A	20 mV/A	40 A	5 V	SOIC 10L	0 to 320 kHz	Yes	-40...150°C	PCB	AC + DC	No	
	GXM ANC 100-40 51030A	100 A	41.2 mV/A	40 A	5 V	SOIC 10L	0 to 320 kHz	Yes	-40...150°C	PCB	AC + DC	No	
	GXM ANC 110-44 30010A	110 A	12 mV/A	44 A	3.3 V	SOIC 10L	0 to 320 kHz	Yes	-40...150°C	PCB	AC + DC	No	
	GXM ANC 150-60 50010A	150 A	13.3 mV/A	60 A	5 V	SOIC 10L	0 to 320 kHz	Yes	-40...150°C	PCB	AC + DC	No	
	GXM ANC 150-60 50030A	150 A	13.3 mV/A	60 A	5 V	SOIC 10L	0 to 320 kHz	Yes	-40...150°C	PCB	AC + DC	No	
	GXM ANC 150-60 51030A	150 A	27.47 mV/A	60 A	5 V	SOIC 10L	0 to 320 kHz	Yes	-40...150°C	PCB	AC + DC	No	
	GXM ANC 200-80 50010A	200 A	10 mV/A	80 A	5 V	SOIC 10L	0 to 320 kHz	Yes	-40...150°C	PCB	AC + DC	No	
	GXM ANC 200-80 50020A	200 A	10 mV/A	80 A	5 V	SOIC 10L	0 to 320 kHz	Yes	-40...150°C	PCB	AC + DC	No	