LEM

Life Energy Motion

INTEGRATED CURRENT SENSOR SELECTION GUIDE

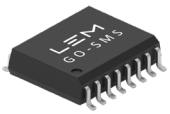
Precise, Compact, & Efficient Solutions

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 16	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 16	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 16	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 16	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 16	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 16	0 to 300 kHz	Yes	-40...125°C	PCB	AC + DC	Yes	
HMSR-DA	HMSR DA 15-6-50000	15 A	2.666%/A (∑Δ Output)	6 A	5 V	SOIC 16 Industry Grade	0 to 300 kHz	Yes	-40...125°C	PCB	AC + DC	No	
	HMSR DA 15-6-54000	15 A	2.666%/A (∑Δ Output)	6 A	5 V	SOIC 16 Industry Grade	0 to 300 kHz	Yes	-40...125°C	PCB	AC + DC	No	
	HMSR DA 25-10-50000	25 A	1.6%/A (∑Δ Output)	10 A	5 V	SOIC 16 Industry Grade	0 to 300 kHz	Yes	-40...125°C	PCB	AC + DC	No	
	HMSR DA 25-10-54000	25 A	1.6%/A (∑Δ Output)	10 A	5 V	SOIC 16 Industry Grade	0 to 300 kHz	Yes	-40...125°C	PCB	AC + DC	No	
	HMSR DA 75-30-50000	75 A	0.533%/A (∑Δ Output)	30 A	5 V	SOIC 16 Industry Grade	0 to 300 kHz	Yes	-40...125°C	PCB	AC + DC	No	
	HMSR DA 75-30-54000	75 A	0.533%/A (∑Δ Output)	30 A	5 V	SOIC 16 Industry Grade	0 to 300 kHz	Yes	-40...125°C	PCB	AC + DC	No	