V9/07.2024

Melexis
INNOVATION WITH HEART

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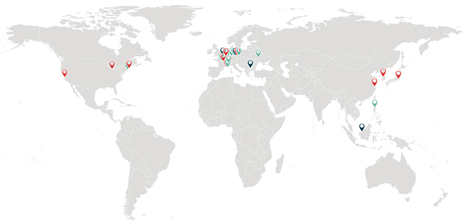
www.melexis.com/sales-contact

Europe, Middle East and Africa
sales_europe@melexis.com

Asia and Oceania
sales_asia@melexis.com

Americas
sales_usa@melexis.com



Research & Development
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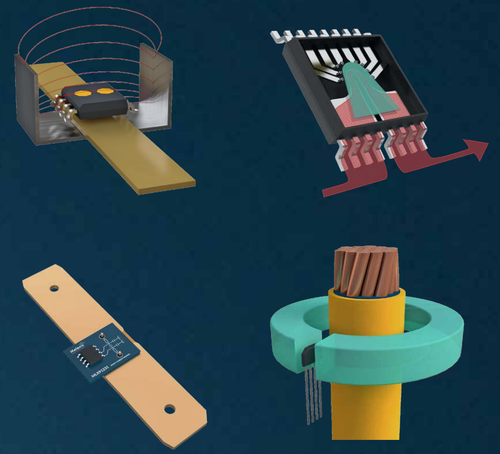


SELECTION GUIDE

CURRENT SENSOR

Our current sensors rely on cutting-edge implementation of Hall Effect technology for leading accuracy current monitoring in cars, domestic and industrial environments.z

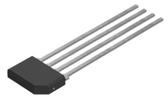
Current Sensors IC Portfolio

Type	Status	Part No.	Grade [4]	Temp	Supply Voltage	Supply Current	Output	Magnetic Saturation [2]	Sensitivity [1]		Over-current detection		Programming Range	Programmable [Daughter Board] [3]	Package	Bandwidth	Overvoltage / reverse polarity protection	Sensing Range [4]	Voltage Isolation UL/IEC62368
				°C	V	mA	Type	mT	mV/mT	mV/A	%FS [A]	A	mV/mT			kHz	V		kV RMS
IMC-HALL®	Prod	MLX91206LDC-CAH-001	AIC	-40...150 °C	5V ±10%	7-9	Analog Ratiometric	25	270	-			210 - 330	Hall03	SOIC8	70	+20 / -10	UB	-
	Prod	MLX91206LDC-CAH-002	AIC	-40...150 °C	5V ±10%	7-9	Analog Ratiometric	25	170	-			130 - 220	Hall03	SOIC8	70	+20 / -10	UB	-
	Prod	MLX91206LDC-CAH-003	AIC	-40...150 °C	5V ±10%	7-9	Analog Ratiometric	25	110	-			80 - 140	Hall03	SOIC8	70	+20 / -10	UB	-
	Prod	MLX91206LDC-CAH-004	AIC	-40...150 °C	5V ±10%	7-9	Analog Ratiometric	25	77,5	-			60 - 110	Hall03	SOIC8	70	+20 / -10	UB	-
	Prod	MLX91206LDC-CAH-005	AIC	-40...150 °C	5V ±10%	7-9	Analog Ratiometric	25	65	-			65	Hall03	SOIC8	70	+20 / -10	UB	-
	Prod	MLX91206LDC-CAH-021	AIC	-40...150 °C	5V ±10%	7-9	Analog Ratiometric	25	270	-			210 - 330	Hall03	SOIC8	70	+20 / -10	UB	-
	Prod	MLX91206LDC-CAH-104	AIC	-40...150 °C	5V ±10%	7-9	PWM	25	2,2	-			0.5 - 5% DC/mT	Hall03	SOIC8	70	+20 / -10	UB	-
	Prod	MLX91208LDC-CAL-000	AIC	-40...150 °C	5V ±10%	12	Analog Ratiometric	10	250	-			100 - 700	Hall05	SOIC8	250	+10 / -0.3	UB	-
	Prod	MLX91208LDC-CAH-000	AIC	-40...150 °C	5V ±10%	12	Analog Ratiometric	25	100	-			50 - 300	Hall05	SOIC8	250	+10 / -0.3	UB	-
	Prod	MLX91208LDC-CAV-000	AIC	-40...150 °C	5V ±10%	12	Analog Ratiometric	60	40	-			30 - 200	Hall05	SOIC8	250	+10 / -0.3	UB	-
	Prod	MLX91208LDC-CAV-001	AIC	-40...150 °C	5V ±10%	12	Analog Ratiometric	60	60	-			30 - 200	Hall05	SOIC8	250	+10 / -0.3	UB	-
	Prod	MLX91216LDC-ACH-000	AIC	-40...150 °C	5V ±10%	10 / 12.5	Analog Ratiometric	25	100	-			50 - 350	Hall05	SOIC8	250 (prog)	+10 / -0.3	UB	-
	Prod	MLX91216LDC-ACV-000	AIC	-40...150 °C	5V ±10%	10 / 12.5	Analog Ratiometric	60	40	-			30 - 200	Hall05	SOIC8	250 (prog)	+10 / -0.3	UB	-
	Prod	MLX91216LDC-ACV-001	AIC	-40...150 °C	5V ±10%	10 / 12.5	Analog Ratiometric	60	60	-			30 - 200	Hall05	SOIC8	250 (prog)	+10 / -0.3	UB	-
	Prod	MLX91216LDC-ACV-002	AIC	-40...150 °C	5V ±10%	10 / 12.5	Analog Ratiometric	60	30	-			30 - 200	Hall05	SOIC8	250 (prog)	+10 / -0.3	UB	-
	Prod	MLX91216LDC-ACX-000	AIC	-40...150 °C	5V ±10%	10 / 12.5	Analog Ratiometric	90	25	-			20 - 125	Hall05	SOIC8	250 (prog)	+10 / -0.3	UB	-
	Prod	MLX91216LDC-ACX-001	AIC	-40...150 °C	5V ±10%	10 / 12.5	Analog Ratiometric	90	30	-			20 - 125	Hall05	SOIC8	250 (prog)	+10 / -0.3	UB	-
	Prod	MLX91216LDC-ACX-002	AIC	-40...150 °C	5V ±10%	10 / 12.5	Analog Ratiometric	90	20	-			20 - 125	Hall05	SOIC8	250 (prog)	+10 / -0.3	UB	-
	Prod	MLX91218LDC-ARV-303	AIC	-40...150 °C	3.3V ±5%	15	Analog Ratiometric	60	30	-	programmable		18 - 125	Hall05	SOIC8	400	+8 / -0.3	B	-
	Prod	MLX91218LDC-ARX-300	AIC	-40...150 °C	3.3V ±5%	15	Analog Ratiometric	90	14	-	programmable		12 - 80	Hall05	SOIC8	400	+8 / -0.3	B	-
	Dev	MLX91218LDC-ARV-5xx	AIC	-40...150 °C	5V ±10%	15.5	Analog Ratiometric	90	40	-	programmable		16 - 170	Hall05	SOIC8	400	+8 / -0.3	B	
CONVENTIONAL HALL	NRND [4]	MLX91207LDC-CAA-005	AIC	-40...150 °C	5V ±10%	9	Analog Ratiometric	-	25	-			15 - 45	Hall03	SOIC8	70	+20 / -10	UB	-
	NRND [4]	MLX91207LDC-CAA-007	AIC	-40...150 °C	5V ±10%	9	Analog Ratiometric	-	10	-			5 - 20	Hall03	SOIC8	70	+20 / -10	UB	-
	NRND [4]	MLX91207LDC-CAA-015	AIC	-40...150 °C	5V ±10%	9	Analog Ratiometric	-	25	-			15 - 45	Hall03	SOIC8	70	+20 / -10	UB	-
	Prod	MLX91209LVA-CAA-000	AIC	-40...150 °C	5V ±10%	12	Analog Ratiometric	-	50	-			5 - 150	Hall05	SIP4-VA	250	+10 / -0.3	UB	-
	Prod	MLX91209LVA-CAA-001	AIC	-40...150 °C	5V ±10%	12	Analog Ratiometric	-	15	-			5 - 150	Hall05	SIP4-VA	250	+10 / -0.3	UB	-
	Prod	MLX91209LVA-CAA-002	AIC	-40...150 °C	5V ±10%	12	Analog Ratiometric	-	7,3	-			5 - 150	Hall05	SIP4-VA	250	+10 / -0.3	UB	-
	Prod	MLX91209LVA-CAA-003	AIC	-40...150 °C	5V ±10%	12	Analog Ratiometric	-	19	-			5 - 150	Hall05	SIP4-VA	250	+10 / -0.3	UB	-
	Prod	MLX91211LUA-ABA-500	AIC	-40...150 °C	5V ±10%	5	Analog Ratiometric	-	18,8	-			-	-	TO92-3L	40	+6.5 / -0.3	B	-
	Prod	MLX91211LUA-ABA-510	AIC	-40...150 °C	5V ±10%	5	Analog Ratiometric	-	25	-			-	-	TO92-3L	40	+6.5 / -0.3	B	-
	Prod	MLX91211LUA-ABA-520	AIC	-40...150 °C	5V ±10%	5	Analog Ratiometric	-	31,25	-			-	-	TO92-3L	40	+6.5 / -0.3	B	-
	Prod	MLX91211LUA-ABA-530	AIC	-40...150 °C	5V ±10%	5	Analog Ratiometric	-	50	-			-	-	TO92-3L	40	+6.5 / -0.3	B	-
	Prod	MLX91211LUA-ABA-540	AIC	-40...150 °C	5V ±10%	5	Analog Ratiometric	-	100	-			-	-	TO92-3L	40	+6.5 / -0.3	B	-
	Prod	MLX91211LUA-ABT-500	AIC	-40...150 °C	5V ±10%	5	Analog Ratiometric	-	18,8	-			-	-	TO92-3L	40	+6.5 / -0.3	B	-
	Prod	MLX91211LUA-ABT-510	AIC	-40...150 °C	5V ±10%	5	Analog Ratiometric	-	25	-			-	-	TO92-3L	40	+6.5 / -0.3	B	-
	Prod	MLX91211LUA-ABT-520	AIC	-40...150 °C	5V ±10%	5	Analog Ratiometric	-	31,25	-			-	-	TO92-3L	40	+6.5 / -0.3	B	-
	Prod	MLX91211LUA-ABT-530	AIC	-40...150 °C	5V ±10%	5	Analog Ratiometric	-	50	-			-	-	TO92-3L	40	+6.5 / -0.3	B	-
	Prod	MLX91211LUA-ABT-540	AIC	-40...150 °C	5V ±10%	5	Analog Ratiometric	-	100	-			-	-	TO92-3L	40	+6.5 / -0.3	B	-
	Prod	MLX91211LSE-ABA-510	AIC	-40...150 °C	5V ±10%	5	Analog Ratiometric	-	18,8	-			-	-	TSOT-3L	40	+6.5 / -0.3	B	-
	Prod	MLX91211LSE-ABA-310	AIC	-40...150 °C	3.3V ±5%	5	Analog Ratiometric	-	17	-			-	-	TSOT-3L	40	+6.5 / -0.3	B	-
	Prod	MLX91217LVA-ACA-000	AIC	-40...150 °C	5V ±10%	10 / 12.5	Analog Ratiometric	-	10	-			5 - 150	Hall05	SIP4-VA	250 (prog)	+10 / -0.3	UB	-
	Prod	MLX91217LVA-ACA-001	AIC	-40...150 °C	5V ±10%	10 / 12.5	Analog Ratiometric	-	15	-			5 - 150	Hall05	SIP4-VA	250 (prog)	+10 / -0.3	UB	-
	Prod	MLX91217LVA-ACA-002	AIC	-40...150 °C	5V ±10%	10 / 12.5	Analog Ratiometric	-	17	-			5 - 150	Hall05	SIP4-VA	250 (prog)	+10 / -0.3	UB	-
	Prod	MLX91217LVA-ACA-003	AIC	-40...150 °C	5V ±10%	10 / 12.5	Analog Ratiometric	-	9	-			5 - 150	Hall05	SIP4-VA	250 (prog)	+10 / -0.3	UB	-
	Prod	MLX91217LVA-ACA-005	AIC	-40...150 °C	5V ±10%	10 / 12.5	Analog Ratiometric	-	13	-			5 - 150	Hall05	SIP4-VA	250 (prog)	+10 / -0.3	UB	-
	Prod	MLX91219LVA-AAA-500	AIC	-40...150 °C	5V ±10%	15,5	Analog Ratiometric	-	7	-	programmable		4 - 105	Hall05	SIP4-VA	400	+8 / -0.3	B	-
	Prod	MLX91219LVA-AAA-501	AIC	-40...150 °C	5V ±10%	15,5	Analog Ratiometric	-	10	-	programmable		4 - 105	Hall05	SIP4-VA	400	+8 / -0.3	B	-
	Prod	MLX91219LVA-AAA-502	AIC	-40...150 °C	5V ±10%	15,5	Analog Ratiometric	-	15	-	programmable		4 - 105	Hall05	SIP4-VA	400	+8 / -0.3	B	-
	Dev	MLX91219LVA-AAA-3xx	AIC	-40...150 °C	3.3V ±5%	15	Analog Ratiometric	-	7	-	programmable		4 - 105	Hall05	SIP4-VA	400	+8 / -0.3	B	-
	Prod	MLX91230KDC-BBA-000	AIC	-40...125 °C	5V ±10%/12V	20	LIN/UART/PWM (OCD)	-	AGC	-	programmable	-	OCD [±100...±650] mT	MUM	SOIC8	2	+36 / -0.3	UB	-
SHUNT	Prod	MLX91231KDC-BBA-000	AIC	-40...125 °C	5V ±10%/12V	20	LIN/UART/PWM (OCD)		AGC		programmable		OCD [-50...-100, 50...256] mV	MUM	SOIC8	2	+36 / -0.3	UB	
INTEGRATED PRIMARY	Prod	MLX91220KDC-ABF-025 RE	AIC	-40...125 °C	5V ±10%	20	Analog Fixed	-	-	80		27,8	-	-	SOIC8	300	+8 / -0.3	B	3.55
	Prod	MLX91220KDC-ABF-050 RE	AIC	-40...125 °C	5V ±10%	20	Analog Fixed	-	-	40		55,6	-	-	SOIC8	300	+8 / -0.3	B	3.55
	Prod	MLX91220KDC-ABR-020 RE	AIC	-40...125 °C	5V ±10%	20	Analog Ratiometric	-	-	100		22,2	-	-	SOIC8	300	+8 / -0.3	B	3.55
	Prod	MLX91220KDC-ABR-025 RE	AIC	-40...125 °C	5V ±10%	20	Analog Ratiometric	-	-	80		27,8	-	-	SOIC8	300	+8 / -0.3	B	3.55
	Prod	MLX91220KDC-ABR-030 RE	AIC	-40...125 °C	5V ±10%	20	Analog Ratiometric	-	-	66		33,7	-	-	SOIC8	300	+8 / -0.3	B	3.55
	Prod	MLX91220KDC-ABR-050 RE	AIC	-40...125 °C	5V ±10%	20	Analog Ratiometric	-	-	40		55,6	-	-	SOIC8	300	+8 / -0.3	B	3.55
	Prod	MLX91220KDF-ABF-117 RE	AIC	-40...125 °C	5V ±10%	20	Analog Fixed	-	-	120		14,8	-	-	SOIC16WB	300	+8 / -0.3	B	5.4
	Prod	MLX91220KDF-ABF-025 RE	AIC	-40...125 °C	5V ±10%	20	Analog Fixed	-	-	80		27,8	-	-	SOIC16WB	300	+8 / -0.3	B	5.4
	Prod	MLX91220KDF-ABF-050 RE	AIC	-40...125 °C	5V ±10%	20	Analog Fixed	-	-	40		55,6	-	-	SOIC16WB	300	+8 / -0.3	B	5.4
	Prod	MLX91220KDF-ABF-075 RE	AIC	-40...125 °C	5V ±10%	20	Analog Fixed	-	-	26,67		83,4	-	-	SOIC16WB	300	+8 / -0.3	B	5.4
	Prod	MLX91220KDF-ABR-025 RE	AIC	-40...125 °C	5V ±10%	20	Analog Ratiometric	-	-	80		27,8	-	-	SOIC16WB	300	+8 / -0.3	B	5.4
	Prod	MLX91220KDF-ABR-050 RE	AIC	-40...125 °C	5V ±10%	20	Analog Ratiometric	-	-	40		55,6	-	-	SOIC16WB	300	+8 / -0.3	B	5.4
	Prod	MLX91220KDF-ABR-075 RE	AIC	-40...125 °C	5V ±10%	20	Analog Ratiometric	-	-	26,7		83,4	-	-	SOIC16WB	300	+8 / -0.3	B	5.4
	Prod	MLX91221KDC-ABF-025 RE	AIC	-40...125 °C	3.3V ±5%	20	Analog Fixed	-	-	50		25,1	-	-	SOIC8	300	+8 / -0.3	B	3.55
	Prod	MLX91221KDC-ABF-050 RE	AIC	-40...125 °C	3.3V ±5%	20	Analog Fixed	-	-	25		57,0	-	-	SOIC8	300	+8 / -0.3	B	3.55
	Prod	MLX91221KDC-ABR-020 RE	AIC	-40...125 °C	3.3V ±5%	20	Analog Ratiometric	-	-	62,5		20,1	-	-	SOIC8	300	+8 / -0.3	B	3.55
	Prod	MLX91221KDC-ABR-050 RE	AIC	-40...125 °C	3.3V ±5%	20	Analog Ratiometric	-	-	25		57,0	-	-	SOIC8	300	+8 / -0.3	B	3.55
	Prod	MLX91221KDF-ABF-010 RE	AIC	-40...125 °C	3.3V ±5%	20	Analog Fixed	-	-	120		10,0	-	-	SOIC16WB	300	+8 / -0.3	B	5.4
	Prod	MLX91221KDF-ABF-020 RE	AIC	-40...125 °C	3.3V ±5%	20	Analog Fixed	-	-	62,5		20,1	-	-	SOIC16WB	300	+8 / -0.3	B	5.4
	Prod	MLX91221KDF-ABF-025 RE	AIC	-40...125 °C	3.3V ±5%	20	Analog Fixed	-	-	50		25,1	-	-	SOIC16WB	300	+8 / -0.3	B	5.4
	Prod	MLX91221KDC-ABR-038 RE	AIC	-40...125 °C	3.3V ±5%	20	Analog Ratiometric	-	-	33,3		42,8	-	-	SOIC8	300	+8 / -0.3	B	3.55
	Prod	MLX91221KDF-ABR-050 RE	AIC	-40...125 °C	3.3V ±5%	20	Analog Ratiometric	-	-	25		57,0	-	-	SOIC16WB	300	+8 / -0.3	B	5.4
	Prod	MLX91221KDF-ABF-050 RE	AIC	-40...125 °C	3.3V ±5%	20	Analog Fixed	-	-	25		57,0	-	-	SOIC16WB	300	+8 / -0.3	B	5.4
	Prod	MLX91221KDF-ABF-075 RE	AIC	-40...125 °C	3.3V ±5%	20	Analog Fixed	-	-	16,67		85,6	-	-	SOIC16WB	300	+8 / -0.3	B	5.4
	Prod	MLX91221KDF-ABR-020 RE	AIC	-40...125 °C	3.3V ±5%	20	Analog Ratiometric	-	-	62,5		20,1	-	-	SOIC16WB	300	+8 / -0.3	B	5.4
	Prod	MLX91221KDF-ABF-120 RE	AIC	-40...125 °C	3.3V ±5%	20	Analog Fixed	-	-	62,5		28,0	-	-	SOIC16WB	300	+8 / -0.3	B	5.4

PACKAGES

VISUAL APPEARANCE

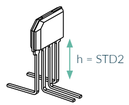
THROUGH-HOLE PACKAGE



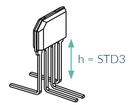
SIP4 (VA) straight [A]
e.g. MLX91219LVA-AAA-500

TO92-3L flat (UA)

SIP4 (VA) shape TFT4K1 [Z]

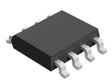


SIP4 (VA) shape STD2 [R]

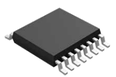


SIP4 (VA) shape STD3 [S]

SURFACE MOUNT PACKAGE



SOIC8 (DC)



SOIC16WB (DF)

TSOT-3L (SE)

(1) Sensitivity at nominal supply voltage, can scale with ratiometry.

(2) (3)

(4) Explanation

A = Automotive (AEC - Q100)
I = Industrial
C = Consumer
U = Unipolar
B = Bipolar
SOIC16WB = SOIC16 Wide Body
EoL = End of life
Prod = In production
NRND = Not Recommended for New Design
Dev = In Development
MUM = Melexis Unviversal Master
AGC = Automatic Gain Control

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