

Hall-Effect Sensors

Latch & Switch IC Portfolio

Quick Reference
Rev. 009 May 2014

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Hall Effect Latch & Switch ICs

Quick Reference

Latch and Switch Portfolio - 2 wire sensors

| Type | Status | Part No. | Typical Bop / Brp | TC | I _{off} | Supply Voltage | Output Type | Package & pole | | Integrated protections | | | |
|--------|------------|---------------------|-------------------|----------|------------------|----------------|----------------|----------------|----|------------------------|-----|----|-----|
| | | | | | | | | TSOT | UA | RVP | OCL | TP | UVL |
| | | | mT | ppm / °C | mA | V | | | | | | | |
| Switch | Prod | MLX92241LUA-AAA-003 | 8 / 5 | -1100 | 3.3 | 2.7 - 24 | Current source | | S | ✓ | | ✓ | ✓ |
| | NEW | MLX92241LUA-AAA-004 | 9 / 7 | 0 | 6 | 2.7 - 24 | Current source | | S | ✓ | | ✓ | ✓ |
| | Prod | MLX92241LUA-AAA-005 | 9 / 7 | 0 | 3.3 | 2.7 - 24 | Current source | | S | ✓ | | ✓ | ✓ |
| | Prod | MLX92241LUA-AAA-006 | 8 / 5 | -1100 | 6 | 2.7 - 24 | Current source | | S | ✓ | | ✓ | ✓ |
| | Prod | MLX92241LUA-AAA-007 | 5.5 / 3.5 | -1100 | 3.3 | 2.7 - 24 | Current source | | S | ✓ | | ✓ | ✓ |
| | Prod | MLX92241LSE-AAA-008 | 17 / 15 | 0 | 6 | 2.7 - 24 | Current source | S | | ✓ | | ✓ | ✓ |
| | NEW | MLX92241LSE-AAA-011 | 5.5 / 3.5 | -1100 | 3.3 | 2.7 - 24 | Current source | S | | ✓ | | ✓ | ✓ |
| Latch | NEW | MLX92221LSE-AAA-001 | 12 / -12 | 0 | 6 | 2.7 - 24 | Current source | S | | ✓ | | ✓ | ✓ |
| | Prod | MLX92221LSE-AAA-002 | 6 / -6 | -2000 | 6 | 2.7 - 24 | Current source | S | | ✓ | | ✓ | ✓ |
| | NEW | MLX92221LSE-AAA-003 | 1.7/-1.7 | 0 | 6 | 2.7 - 24 | Current source | S | | ✓ | | ✓ | ✓ |

| Part No. | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | mT | | | | |
|---------------------|----|----|----|----|----|----|---|---|---|---|---|---|---|---|---|---|---|---|---|-----|-----|-----|----|----|---|----|----|----|----|----|----|----|----|----|----|-----|--|-----|----|
| MLX92241LUA-AAA-003 | | | | | | | | | | | | | | | | | | | | OFF | | | ON | | | | | | | | | | | | | | | | |
| MLX92241LUA-AAA-004 | | | | | | | | | | | | | | | | | | | | | | OFF | | ON | | | | | | | | | | | | | | | |
| MLX92241LUA-AAA-005 | | | | | | | | | | | | | | | | | | | | | | OFF | | ON | | | | | | | | | | | | | | | |
| MLX92241LUA-AAA-006 | | | | | | | | | | | | | | | | | | | | | OFF | | ON | | | | | | | | | | | | | | | | |
| MLX92241LUA-AAA-007 | | | | | | | | | | | | | | | | | | | | OFF | | ON | | | | | | | | | | | | | | | | | |
| MLX92241LSE-AAA-008 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | OFF | | ON | |
| MLX92241LSE-AAA-011 | | | | | | | | | | | | | | | | | | | | | OFF | | ON | | | | | | | | | | | | | | | | |
| MLX92221LSE-AAA-001 | | | | | | | | | | | | | | | | | | | | | | OFF | | | | | | | | | | | | | | | | OFF | ON |
| MLX92221LSE-AAA-002 | | | | | | | | | | | | | | | | | | | | | | OFF | | | | | | | | | | | | | | | | OFF | ON |
| MLX92221LSE-AAA-003 | | | | | | | | | | | | | | | | | | | | | | OFF | | | | | | | | | | | | | | | | OFF | ON |

RVP: Reverse Voltage protection, OCL: Output Current Limitation
 TP: Temperature Protection, UVL: Under Voltage Lock-out

Hall Effect Latch & Switch ICs

Quick Reference



| Latch and Switch Portfolio - 3 wire Sensors | | | | | | | | | | | | | | |
|---|--------|---------------------|-------------------|----------|-----|-----------|----------------|-------------|-----------------------|-----|------------------------|-----|---|--|
| Type | Status | Part No. | Typical Bop / Brp | | TC | Ioff | Supply Voltage | Output Type | Package & pole active | | Integrated protections | | | |
| | | | mT | ppm / °C | mA | V | TSOT | UA | RVP | OCL | TP | UVL | | |
| 3 wire Switch | NEW | MLX92231LSE-AAA-004 | -5.5 / -3.5 | -1100 | 3 | 2.7 - 24 | Open Drain | N | | ✓ | ✓ | ✓ | ✓ | |
| | NEW | MLX92231LSE-AAA-007 | 26 / 20 | -2000 | 3 | 2.7 - 24 | Open Drain | S | | ✓ | ✓ | ✓ | ✓ | |
| | NEW | MLX92231LSE-AAA-009 | 3.5 / 2.5 | 0 | 3 | 2.7 - 24 | Open Drain | S | | ✓ | ✓ | ✓ | ✓ | |
| | NEW | MLX92231LSE-AAA-010 | 10 / 8.5 | -1100 | 3 | 2.7 - 24 | Open Drain | S | | ✓ | ✓ | ✓ | ✓ | |
| | Prod | MLX92212LSE-ABA-000 | 12 / 10.5 | 0 | 2.2 | 2.5 - 5.5 | Open Drain | S | | | | | | |

| Latch and Switch Portfolio - Dual hall sensors | | | | | | | | | | | | | | |
|--|--------|---------------------|-------------------|----------|-----|----------|-----------------|-------------|-----------------------|-----|------------------------|-----|---|--|
| Type | Status | Part No. | Typical Bop / Brp | | TC | Ioff | Supply Voltage | Output Type | Package & pole active | | Integrated protections | | | |
| | | | mT | ppm / °C | mA | V | TSOT | VA | RVP | OCL | TP | UVL | | |
| Dual hall Latch | Prod | MLX90224xVA-ABA-000 | 2.5 / -2.5 | 0 | 4.5 | 4.5 - 16 | Open Drain | | S | | | | | |
| | Prod | MLX92251LSE-AAA-000 | 7.5 / -7.5 | 0 | 4.5 | 2.7 - 24 | Dual Open Drain | S | | ✓ | ✓ | | ✓ | |
| | Prod | MLX92251LSE-ABA-000 | 2.5 / -2.5 | -1100 | 4.5 | 2.7 - 24 | Dual Open Drain | S | | ✓ | ✓ | | ✓ | |

| Part No. | -80 | -14 | -13 | -12 | -11 | -10 | -9 | -8 | -7 | -6 | -5 | -4 | -3 | -2 | -1 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 80 | |
|---------------------|-----|-----|-----|-----|-----|-----|----|-----|-----|----|----|----|-----|----|----|---|---|---|----|-----|---|---|----|-----|---|----|----|----|----|----|----|--|
| MLX92251LSE-AAA-000 | | | | | | | | OFF | | | | | | | | | M | | | | | | ON | | | | | | | | | |
| MLX92251LSE-ABA-000 | | | | | | | | | | | | | OFF | | | | M | | ON | | | | | | | | | | | | | |
| MLX92231LSE-AAA-004 | | | | | | | | | OFF | | | | | | | | | | | | | | | | | | | | | | | |
| MLX92231LSE-AAA-007 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MLX92231LSE-AAA-009 | | | | | | | | | | | | | | | | | | | | OFF | | | ON | | | | | | | | | |
| MLX92231LSE-AAA-010 | | | | | | | | | | | | | | | | | | | | | | | | OFF | | ON | | | | | | |
| MLX90224xVA-ABA-000 | | | | | | | | | | | | | OFF | | | | M | | | ON | | | | | | | | | | | | |



Hall Effect Latch & Switch ICs

Quick Reference

Latch and Switch Portfolio - General purpose sensors

| Type | Status | Part No. | Typical | TC | loff | Supply Voltage | Output Type | Package & pole active | | | |
|---------------|--------|-------------------|-----------|----------|------|----------------|-------------|-----------------------|------|----|-------|
| | | | Bop / Brp | ppm / °C | mA | | | V | TSOT | UA | UTQFN |
| 3 wire Latch | Prod | US1881xxx-AAA-000 | 5 / -5 | 0 | 3 | 3.5 - 24 | Open Drain | N | S | | |
| | Prod | US1883xxx-AAA-000 | 14 / -14 | 0 | 3 | 3.5 - 24 | Open Drain | | S | | |
| | Prod | US2881xxx-AAA-000 | 3 / -3 | 0 | 3 | 3.5 - 24 | Open Drain | N | S | | |
| | Prod | US2882xxx-AAA-000 | 3 / -3 | 0 | 3 | 3.5 - 24 | Open Drain | N | S | | |
| | Prod | US2884xxx-AAA-000 | 3 / -3 | 0 | 3 | 3.5 - 24 | Open Drain | S | | | |
| | Prod | US3881xxx-AAA-000 | 5 / -5 | 0 | 3 | 2.2 - 18 | Open Drain | N | S | | |
| | Prod | US4881xxx-AAA-000 | 3 / -3 | 0 | 3 | 2.2 - 18 | Open Drain | N | S | | |
| 3 wire Switch | Prod | US5681xxx-AAA-000 | 3.5 / 5.5 | 0 | 3 | 3.5 - 24 | Open Drain | S | | | |
| | Prod | US5682xxx-AAA-000 | 3.5 / 5.5 | 0 | 3 | 3.5 - 24 | Open Drain | Srev | | | |
| | Prod | US5683xxx-AAA-000 | 3.5 / 5.5 | 0 | 3 | 3.5 - 24 | Open Drain | N | | | |
| | Prod | US5781xxx-AAA-000 | 7.5 / 12 | 0 | 3 | 3.5 - 24 | Open Drain | N | S | | |
| | Prod | US5782xxx-AAA-000 | 7.5 / 12 | 0 | 3 | 3.5 - 24 | Open Drain | S | | | |
| | Prod | US5881xxx-AAA-000 | 20 / 25 | 0 | 3 | 3.5 - 24 | Open Drain | N | S | | |

| Part No. | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 20 | 21 | 22 | 23 | 24 | 25 | | | | | | | |
|-------------------|-----|----|----|----|----|----|---|---|---|-----|-----|-----|---|---|---|---|---|-----|---|---|---|----|-----|---|---|----|----|----|----|----|----|----|----|----|----|----|----|-----|--|--|--|--|--|--|
| US1881xxx-AAA-000 | | | | | | | | | | OFF | | | | | | M | | | | | | ON | | | | | | | | | | | | | | | | | | | | | | |
| US1883xxx-AAA-000 | OFF | | | | | | | | | | | | | | | M | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| US2881xxx-AAA-000 | | | | | | | | | | | | OFF | | | | | | | | | | ON | | | | | | | | | | | | | | | | | | | | | | |
| US2882xxx-AAA-000 | | | | | | | | | | | | OFF | | | | | | | | | | ON | | | | | | | | | | | | | | | | | | | | | | |
| US2884xxx-AAA-000 | | | | | | | | | | | | OFF | | | | | | | | | | ON | | | | | | | | | | | | | | | | | | | | | | |
| US3881xxx-AAA-000 | | | | | | | | | | | OFF | | | | | | | | | | | | ON | | | | | | | | | | | | | | | | | | | | | |
| US4881xxx-AAA-000 | | | | | | | | | | | | OFF | | | | | | | | | | ON | | | | | | | | | | | | | | | | | | | | | | |
| US5681xxx-AAA-000 | | | | | | | | | | | | | | | | | | OFF | | | | | ON | | | | | | | | | | | | | | | | | | | | | |
| US5682xxx-AAA-000 | | | | | | | | | | | | | | | | | | OFF | | | | | ON | | | | | | | | | | | | | | | | | | | | | |
| US5683xxx-AAA-000 | | | | | | | | | | | | | | | | | | OFF | | | | | ON | | | | | | | | | | | | | | | | | | | | | |
| US5781xxx-AAA-000 | | | | | | | | | | | | | | | | | | | | | | | OFF | | | | | | | | | | | | | | | | | | | | | |
| US5782xxx-AAA-000 | | | | | | | | | | | | | | | | | | | | | | | OFF | | | | | | | | | | | | | | | | | | | | | |
| US5881xxx-AAA-000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | OFF | | | | | | |

Hall Effect Latch & Switch ICs

Quick Reference



Latch and Switch Portfolio - μ Power Sensors

| Type | Status | Part No. | Typical Bop / Brp | TC | Ioff | Supply Voltage | Output Type | Package & pole active | | | |
|-----------|--------|---------------------|-------------------|----------|------------|----------------|-------------|-----------------------|----|-------|----|
| | | | | | | | | TSOT | UA | UTQFN | VA |
| | | | mT | ppm / °C | mA | V | | | | | |
| Latch | Prod | MLX92213ELD-AAA-000 | 2 / -2 | 0 | 36 μ A | 1.6 - 3.6 | Push Pull | | | S | |
| Omnipolar | Prod | MLX90248xxx-AAA-000 | 3.5 / 2.5 | 0 | 3 μ A | 1.5 - 3.6 | Open drain | N & S | | N & S | |

Latch and Switch Portfolio - Customer programmable sensor

| Type | Status | Part No. | Typical Bop / Brp | TC | Ioff | Supply Voltage | Output Type | Package & pole active | | Integrated protections | | | |
|--------|--------|---------------------|-------------------|----------|--------|----------------|----------------|-----------------------|-----|------------------------|-----|----|-----|
| | | | | | | | | TSOT | UA | RVP | OCL | TP | UVL |
| | | | mT | ppm / °C | mA | V | | | | | | | |
| 3-wire | Prod | MLX92232Lxx-AAA-000 | -80...80 | 0- 2000 | 3 | 2.7 - 24 | Open Drain | N / S | N/S | ✓ | ✓ | ✓ | ✓ |
| 2-wire | NEW | MLX92242Lxx-AAA-000 | -100...100 | 0- 2000 | 03-Jun | 2.7 - 24 | Current source | N / S | N/S | ✓ | | ✓ | ✓ |


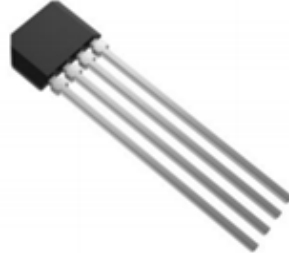






| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------|-------------|-----|-----|-----|-----|-----|----|-----|----|----|----|-----|----|----|----|-----|---|----|---|---|---|---|---|---|---|----|----|----|----|----|----|--|--|--|--|
| MLX92213ELD-AAA-000 | | | | | | | | | | | | OFF | | M | | ON | | | | | | | | | | | | | | | | | | | |
| MLX90248xxx-AAA-000 | | | | | | ON | | OFF | | | | | | | | OFF | | ON | | | | | | | | | | | | | | | | | |
| MLX92232Lxx-AAA-000 | [Green bar] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MLX92242Lxx-AAA-000 | [Green bar] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | [Black bar] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | -80 | -14 | -13 | -12 | -11 | -10 | -9 | -8 | -7 | -6 | -5 | -4 | -3 | -2 | -1 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 80 | | | | |



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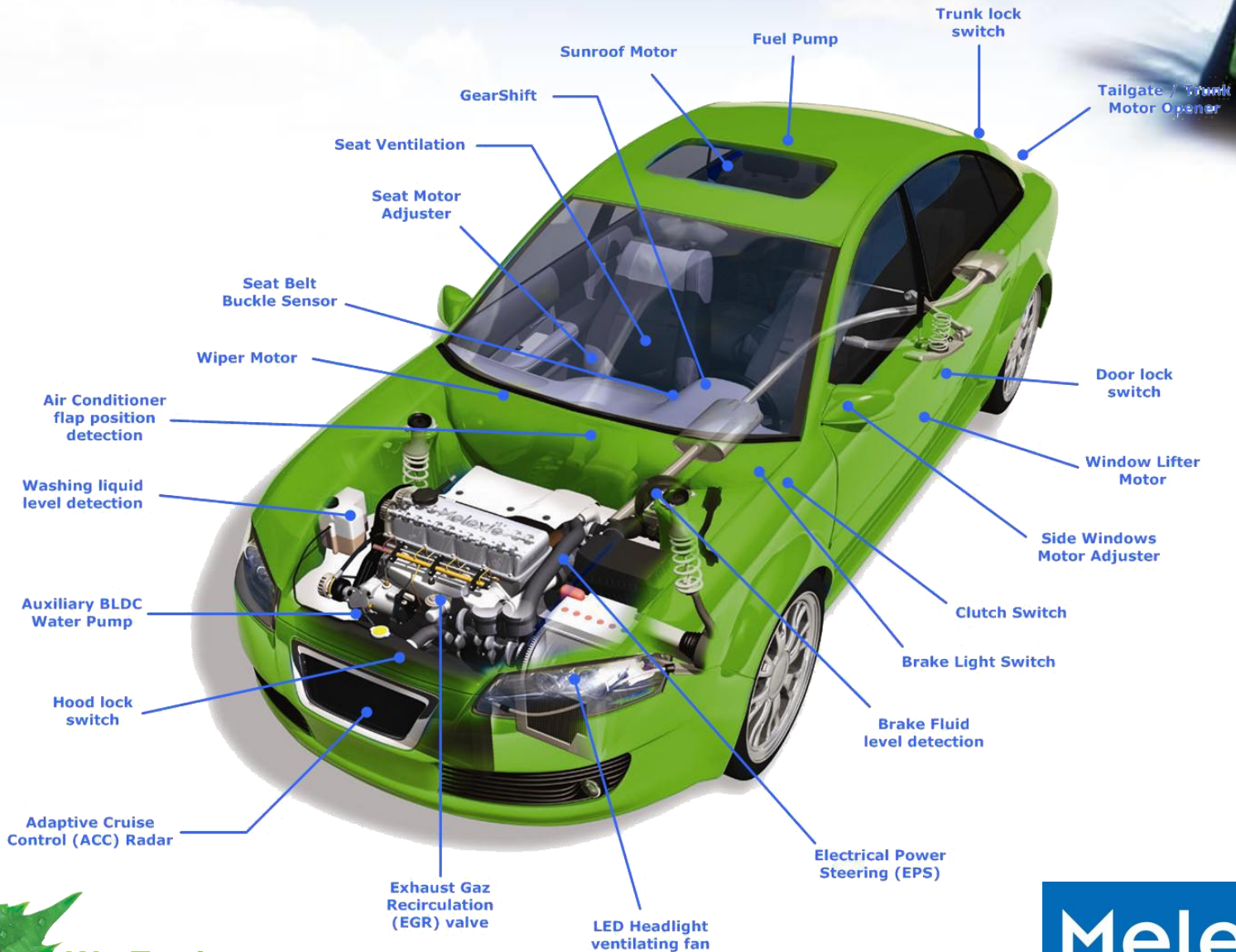
Packages

| | Visual appearance | | Green Compliance |
|-----------------------|---|---|---|
| Through-Hole Package |  <p>UA Package <i>TO92-3L flat</i></p> |  <p>VA Package <i>Thin TO92-4L flat</i></p> |  |
| Surface Mount Package |  <p>SE Package <i>TSOT-3L</i></p> |  <p>SE Package <i>TSOT-5L</i></p> |  |
| Chip size Package |  <p>LD Package <i>UTQFN-6L</i></p> | |  |



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Applications



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