



# Melexis

Microelectronic Integrated Systems

## Catalog Of Products

Revision 10.1



[www.melexis.com](http://www.melexis.com)

# Melexis Catalog Of Products



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**Our Customers** inspire us to create, develop and market advanced integrated circuits primarily used in automotive electronics systems. Hundreds of vehicle models worldwide have Melexis products designed into critical systems working with exceptional reliability under very extreme conditions.

### Helping Cars Go Green

Melexis integrated circuits deliver greener, more environmentally friendly automotive systems and technology. Reduced fuel consumption and lower emissions result directly from improvements in IC and IC sensor technologies created for our customers. Our commitment to environmental concern is further demonstrated in the design of our newest expansion at our Ieper Belgium site. This development and manufacturing site incorporates renewable energy generation and sustainable design practices.

### Innovation and Customer Orientation

As a partner to our customers Melexis strives to focus innovation on technology with value for our customer's customer. Looking beyond the component level to better understand how our parts make a difference in modules, systems, the car and the environment.

Eliminating the pcb in module assemblies, reducing the component counts for LIN Bus nodes, eliminating the need for sensors in motor controls are all examples of how the applications focus drives product improvement to benefit our customer's customer.

The resulting sensors for the automotive electronics market focus on magnetic, optical, infrared, MEMS pressure, gyroscope and accelerometers.

Our sensor interface ICs set the standard for price efficiency and performance in demanding automotive application. Night vision CMOS cameras enable world class safety and ADAS systems. We can support network protocols like LIN and GM-LAN with system basis ICs and intelligent integrated sensor/actuator solutions. Advanced BLDC motor driver technologies are revolutionizing actuators, pumps and belt driven accessories. Our other products include ISM transceivers, receivers and transmitters for all RF or RFID needs.







## **At Melexis, We Care For Our Customers**

Customer focus and a consistent strategic vision have been the foundation of Melexis' growth. Innovative, dynamic teams from across Melexis' global organization are embracing the core values and no-nonsense culture to continue delivering solid financial results. This profitable and stable structure enables us to research and present inflection point technology advances for the benefit of our present and future customers. Melexis will continue its commitment in the automotive market and at the same time expand its presence in other fields of application, leveraging its organizational tools and team spirit.

## **What Can We Do For YOU ?**

Melexis technology and know-how has led to market leading positions in non-automotive arenas including RF transmitters, receivers and transceivers, single chip cooling fan ICs, infrared remote control ICs and power supply control chips for cell phone chargers. A customer oriented approach and an innovative design methodology have allowed our customers to win significant and in certain cases dominant market positions. Melexis' main products continue to be Hall effect ICs (magnetic sensors), Pressure and Acceleration Sensors, Sensor Interface ICs, Automotive Systems-on-a-Chip, Embedded Microcontrollers, Wireless Communication ICs, Bus System Chips, Optical and Infrared sensors. In each case the products are primarily developed for automotive applications with subsequent use in commercial and industrial applications.

## **Automotive Specialist**

The data shows that the market for semiconductors in the automotive sector continues to provide solid growth opportunities. The share of electronics in cars is still growing and these electronics enable car manufacturers to differentiate themselves with their types and models with regard to safety, environmental impact, performance or comfort. Developing advanced, integrated applications and solutions for this sector will certainly continue to be the Melexis core business.

## **Leadership In Semiconductor Solutions**

Melexis has a good team of experienced engineers. Due to their expertise in product definition, design and the testing of integrated analog-digital semiconductor solutions and sensor ICs Melexis has achieved a leadership position.

At Melexis, we make the difference. Many of our loyal customers know this and appreciate it. Our Customers know Melexis is not a "run of the mill" company. They know it as a stable, solid, successful organization with a strong financial position. A company which takes pleasure in working towards integrated solutions, and in doing so makes an essential contribution to the success of its customers in their respective markets and submarkets, whether in the long-standing automotive market, or in consumer electronics, and industrial or medical applications. Melexis appreciates that it's the small things that can make a big difference.

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## Motor Control

Automotive electronics are a means to respond to volatile oil prices, requests for material savings and environmental requirements. Electric motors allow the upgrading of functional units, such as water pumps and oil pumps, from full-time mechanical drive by the engine to on-demand electric drive. This results in reducing CO2 emissions, improved fuel economy and more responsive cars.

To realize these functions in a reliable way, Brushless DC (BLDC) motors controlled in a sensorless manner are the technology of choice. Other functions that see an increase in electronic content due to the shift from a DC motor control to a Sensorless BLDC motor control are fuel pumps and engine cooling fans. Melexis delivers and develops controllers and drivers for these BLDC motors.

Electrically controlled valves are becoming the norm in engine management systems to reduce emissions while maintaining or improving power. This type of electronics under the hood requires high temperature Flash microcontrollers. Melexis responded to this trend already in 2008 with the launch of a unique family of high temperature Flash products for DC and BLDC motor control. The high integration of Melexis motor controllers enables our customers to slash the component count in their mechatronic solutions from 100 to less than 50, leading the path to high quality, compact cost effective and environmental friendly high volume solutions.

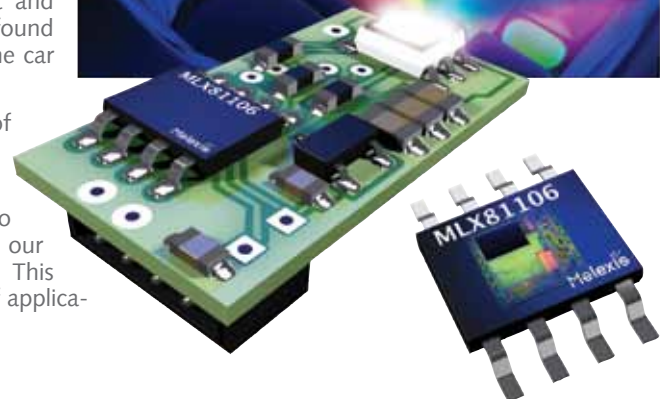
## LIN

The growing functionality in cars also results in an increase in human interactions. Former simple things like switch modules have to become more intelligent in order to reduce wiring effort and to save copper. In today's vehicle architecture, these switch modules are therefore no longer directly wired, but they will be connected to a LIN bus system (Local Interconnect network).

Melexis launched a new chip family of intelligent network capable switch controllers called "UniROM Switch Slaves" to support this trend and to keep the development effort as low as possible. This family of chips accomplishes a unique combination of hardware and software. It is a perfect example of how thoughtful application of technology can remove the need for software development and qualifications. UniROM switch slaves for LIN networks can be found in switch modules on the steering wheel, in the car door, in the car roof and in the center console.

The LIN bus system is also used more often for different kinds of applications such as intelligent sensors or actuators.

LIN applications may be realized with discrete microcontrollers. In such implementations, a System Basis IC (SBC) is required to provide the physical bus interface functionality. SBC's simplify our customer's development efforts and decrease module cost. This enables the deployment of LIN bus control for a wider range of applications.





## Brushless DC Motor Control ICs

3 phase BLDC<sup>(1)</sup> and PMSM<sup>(2)</sup>

MLX Order Number	Description	Temp Range
MLX81200KLQ-BAA-000-TU	TruSense BLDC Motor Controller 30k Flash 48 pin QFN version Gen 1 **	-40°C to 125°C *
MLX81200KLQ-BAA-000-RE	TruSense BLDC Motor Controller 30k Flash 48 pin QFN version Gen 1 **	-40°C to 125°C *
MLX81200KPF-BAA-000-TU	TruSense BLDC Motor Controller 30k Flash 48 pin QFP version Gen 1 **	-40°C to 125°C *
MLX81200KPF-BAA-000-RE	TruSense BLDC Motor Controller 30k Flash 48 pin QFP version Gen 1 **	-40°C to 125°C *
MLX81205LLQ-xAA-000-TU	TruSense BLDC Motor Controller 32k Flash 32 pin QFN version Gen 2	-40°C to 150°C
MLX81205LLQ-xAA-000-RE	TruSense BLDC Motor Controller 32k Flash 32 pin QFN version Gen 2	-40°C to 150°C
MLX81207LLQ-xAA-000-TU	TruSense BLDC Motor Controller 32k Flash 37 pin QFN version Gen 2	-40°C to 150°C
MLX81207LLQ-xAA-000-RE	TruSense BLDC Motor Controller 32k Flash 37 pin QFN version Gen 2	-40°C to 150°C
MLX81207LPF-xAA-000-TR	TruSense BLDC Motor Controller 32k Flash 37 pin QFP version Gen 2	-40°C to 150°C
MLX81207LPF-xAA-000-RE	TruSense BLDC Motor Controller 32k Flash 37 pin QFP version Gen 2	-40°C to 150°C
MLX81210LLQ-xAA-000-TU	TruSense BLDC Motor Controller 32k Flash 48 pin QFN version Gen 2	-40°C to 150°C
MLX81210LLQ-xAA-000-RE	TruSense BLDC Motor Controller 32k Flash 48 pin QFN version Gen 2	-40°C to 150°C
MLX81210LPF-xAA-000-TR	TruSense BLDC Motor Controller 32k Flash 48 pin QFP version Gen 2	-40°C to 150°C
MLX81210LPF-xAA-000-RE	TruSense BLDC Motor Controller 32k Flash 48 pin QFP version Gen 2	-40°C to 150°C
MLX81215LLQ-xAA-000-TU	TruSense BLDC Motor Controller 64k Flash 48 pin QFN version Gen 2	-40°C to 150°C
MLX81215LLQ-xAA-000-RE	TruSense BLDC Motor Controller 64k Flash 48 pin QFN version Gen 2	-40°C to 150°C
MLX81215LPF-xAA-000-TR	TruSense BLDC Motor Controller 68k Flash 48 pin QFP version Gen 2	-40°C to 150°C
MLX81215LPF-xAA-000-RE	TruSense BLDC Motor Controller 68k Flash 48 pin QFP version Gen 2	-40°C to +150°C

\* Indicates the latest design version, please contact MLX Sales for further information

\*\* Embedded MCU-software development setup is necessary

(1) Brushless DC synchronous motor

(2) Permanent Magnet



## Fan Drivers

MLX Order Number	Description	Temp Range
MLX90285LVK-AAA-000-BU	Two Coil Fan Driver - High Voltage & Low Noise 5~30V   350mA continuous   Low Noise with RPM Closed Loop   FG	-40°C to 150°C
MLX90285LVK-ABA-000-BU	Two Coil Fan Driver - High Voltage & Low Noise 5~30V   350mA continuous   Low Noise with RPM Closed Loop   RD	-40°C to 150°C
MLX90285LDC-AAA-000-RE	Two Coil Fan Driver - High Voltage & Low Noise 5~30V   350mA continuous   Low Noise with RPM Closed Loop   FG	-40°C to 150°C
MLX90285LDC-ABA-000-RE	Two Coil Fan Driver - High Voltage & Low Noise 5~30V   350mA continuous   Low Noise with RPM Closed Loop   RD	-40°C to 150°C
MLX90287KDC-AAA-000-RE	12V Single Coil PWM Fan Driver 5~16V   550mA continuous   FG Speed   Control   Minimal Speed Low Noise   Soft Start	-40°C to 125°C
MLX90287LDC-AAA-000-RE	12V Single Coil PWM Fan Driver 5~16V   550mA continuous   FG Speed   Control   Minimal Speed Low Noise   Soft Start	-40°C to 150°C
MLX90287LZC-AAA-000-RX	12V Single Coil PWM Fan Driver 5~16V   550mA continuous   FG Speed   Control   Minimal Speed Low Noise   Soft Start	-40°C to 150°C
US168ESE-AAA-000-RE	Single-Coil Fan Driver - Low Noise & Low Voltage (Tachometer output) 1.8~6.5V   300mA continuous   Low Noise   Tachometer (FG)	-40°C to 85°C
US168ELD-AAA-000-RE	Single-Coil Fan Driver - Low Noise & Low Voltage (Tachometer output) 1.8~6.5V   300mA continuous   Low Noise   Tachometer (FG)	-40°C to 85°C
US169ESE-ABA-000-RE	Single-Coil Fan Driver - Low Noise & Low Voltage (Alarm output) 1.8~6.5V   300mA continuous   Low Noise   Rotation Detection (RD)	-40°C to 85°C
US169ELD-ABA-000-RE	Single-Coil Fan Driver - Low Noise & Low Voltage (Alarm output) 1.8~6.5V   300mA continuous   Low Noise   Rotation Detection (RD)	-40°C to 85°C
US62EVK-AAA-001-BU	Two-Coil Fan Driver (Tachometer output) 3.2~18V   250mA continuous   FG	-40°C to 85°C
US63EVK-AAA-001-BU	Two-Coil Fan Driver (Alarm output) 3.2~18V   250mA continuous   RD	-40°C to 85°C
US79KUA-AAA-000-BU	Two-Coil Smart Fan Motor Driver 3.5~18V   350mA continuous	-40°C to 125°C
US890EVK-AAA-000-BU	Two-Coil Fan Driver - High Output Current (Tachometer output) 2.6~18V   600mA continuous   FG	-40°C to 85°C
US891EVK-AAA-000-BU	Two-Coil Fan Driver - High Voltage (Alarm output) 2.6~18V   600mA continuous   RD	-40°C to 85°C
US90AEVK-AAA-000-BU	Two-Coil Fan Driver - High Output Current (Tachometer output) 4.7~30V   250mA continuous   FG	-40°C to 85°C
US90AEDC-AAA-000-RE	Two-Coil Fan Driver - High Output Current (Tachometer output) 4.7~30V   250mA continuous   FG	-40°C to 85°C
US91AEVK-AAA-000-BU	Two-Coil Fan Driver - High Voltage (Alarm output) 4.7~30V   250mA continuous   RD	-40°C to 85°C
US91AEDC-AAA-000-RE	Two-Coil Fan Driver - High Voltage (Alarm output)4.7~30V   250mA continuous   RD	-40°C to 85°C





## Gauge Driver

MLX Order Number	Description	Temp Range
MLX10407EDF-AAA-000-RE	Five channel Gauge Driver w/serial link	-40°C to 85°C
MLX10420RFR-AAA-000-RE	Three channel Gauge Driver w/serial link	-40°C to 105°C

## Vibration Motors

MLX Order Number	Description	Temp Range
MLX90283ELD-AAA-000-RE	BLDC Vibration Motor Driver 1.8~3.6V   150mA continuous   Active Start	-40°C to 85°C

## DC Motor Control ICs

### DC Motor Control ICs

MLX Order Number	Description	Temp Range
MLX81150LLQ-xAA-000-TU	LIN Slave for relay and DC motor control, 32k Flash, QFN version	-40°C to 150°C
MLX81150LLQ-xAA-000-RE	LIN Slave for relay and DC motor control, 32k Flash, QFN version	-40°C to 150°C
MLX81150LPF-xAA-000-TR	LIN Slave for relay and DC motor control, 32k Flash, TQFP version	-40°C to 150°C
MLX81150LPF-xAA-000-RE	LIN Slave for relay and DC motor control, 32k Flash, TQFP version	-40°C to 150°C

## In Vehicle Networking

### In Vehicle Networking

MLX Order Number	Description	Temp Range
MLX80001KLQ-BAA-001-TU	4 Channel LIN Transceiver	-40°C to 125°C
MLX80001KLQ-BAA-001-RE	4 Channel LIN Transceiver	-40°C to 125°C
MLX80020KDC-BAA-000-RE	2nd Generation LIN Transceiver (LIN2,x)	-40°C to 125°C
MLX80020KDC-BAA-000-TU	2nd Generation LIN Transceiver (LIN2,x)	-40°C to 125°C
MLX80020KDC-BBA-000-RE	2nd Generation LIN Transceiver (J2602)	-40°C to 125°C
MLX80020KDC-BBA-000-TU	2nd Generation LIN Transceiver (J2602)	-40°C to 125°C
MLX80104KLQ-DAF-000-RE	LIN Slave for intelligent Switch modules (LIN2,x and J2602) uniRom version	-40°C to 125°C
MLX80105KLQ-DAA-000-RE	LIN Slave for intelligent Switch modules (LIN2,x and J2602) OTP memroy version	-40°C to 125°C
TH8056KDC-AAA-008-RE	Single Wire CAN Transceiver (GMW3089 V2.x) in SOIC8	-40°C to 125°C
TH8056KDC-AAA-008-TU	Single Wire CAN Transceiver (GMW3089 V2.x) in SOIC8	-40°C to 125°C
TH8056KDC-AAA-014-RE	Single Wire CAN Transceiver (GMW3089 V2.x) in SOIC14	-40°C to 125°C
TH8056KDC-AAA-014-TU	Single Wire CAN Transceiver (GMW3089 V2.x) in SOIC14	-40°C to 125°C
MLX80002KLQ-AAA-000-TU	2nd Gen 2-Channel LIN Transceiver	-40°C to 125°C
MLX80002KLQ-AAA-000-RE	2nd gen 2-Channel LIN Transceiver	-40°C to 125°C
MLX80004KLQ-AAA-000-TU	2nd Gen 4-Channel LIN Transceiver	-40°C to 125°C
MLX80004KLQ-AAA-000-RE	2nd Gen 4-Channel LIN Transceiver	-40°C to 125°C
MLX80030KDC-BAA-000-TU	LIN System Basic IC 3.3V/70mA	-40°C to 125°C
MLX80030KDC-BAA-000-RE	LIN System Basic IC 3.3V/70mA	-40°C to 125°C
MLX80050KDC-BAA-000-TU	LIN System Basic IC 5V/70mA	-40°C to 125°C
MLX80050KDC-BAA-000-RE	LIN System Basic IC 5V/70mA	-40°C to 125°C
MLX80031KLQ-BAA-000-TU	Enhanced LIN System Basic IC 3.3V/70mA	-40°C to 125°C
MLX80031KLQ-BAA-000-RE	Enhanced LIN System Basic IC 3.3V/70mA	-40°C to 125°C
MLX80051KLQ-BAA-000-TU	Enhanced LIN System Basic IC 5V/70mA	-40°C to 125°C
MLX80051KLQ-BAA-000-RE	Enhanced LIN System Basic IC 5V/70mA	-40°C to 125°C

MLX Order Number	Description	Temp Range
MLX81106KDC-BAA-000-TU	microLIN/LIN RGB, 24kB Flash, 4 IO Pins	-40°C to 125°C
MLX81106KDC-BAA-000-RE	microLIN/LIN RGB, 24kB Flash, 4 IO Pins	-40°C to 125°C
MLX81107KLQ-BAA-000-TU	miniLIN, 24kB Flash, 12 IO Pins	-40°C to 125°C
MLX81107KLQ-BAA-000-RE	miniLIN, 24kB Flash, 12 IO Pins	-40°C to 125°C
MLX81108KDC-BAA-000-TU	microLIN/LIN RGB, 32kB Flash, 4 IO Pins	-40°C to 125°C
MLX81108KDC-BAA-000-RE	microLIN/LIN RGB, 32kB Flash, 4 IO Pins	-40°C to 125°C
MLX81109KLQ-BAA-000-TU	miniLIN, 32kB Flash, 12 IO Pins	-40°C to 125°C
MLX81109KLQ-BAA-000-RE	miniLIN, 32kB Flash, 12 IO Pins	-40°C to 125°C

## NFET Predrivers

### NFET Predrivers

MLX Order Number	Description	Temp Range
MLX83100LGO-AAA-000-TU (***)	Full bridge predriver with current sense amplifier (*)	-40°C to 150°C(**)
MLX83100LGO-AAA-000-RE (***)	Full bridge predriver with current sense amplifier (*)	-40°C to 150°C(**)
MLX83202LLQ-AAA-000-TU (***)	25 Ohm 3* half bridge predriver with current sense amplifier (*)	-40°C to 150°C(**)
MLX83202LLQ-AAA-000-RE (***)	25 Ohm 3* half bridge predriver with current sense amplifier (*)	-40°C to 150°C(**)
MLX83203LLQ-AAA-000-TU (***)	8 Ohm 3* half bridge predriver with current sense amplifier	-40°C to 150°C(**)
MLX83203LLQ-AAA-000-RE (***)	8 Ohm 3* half bridge predriver with current sense amplifier	-40°C to 150°C(**)

(\*) IC Variants available on high volume request

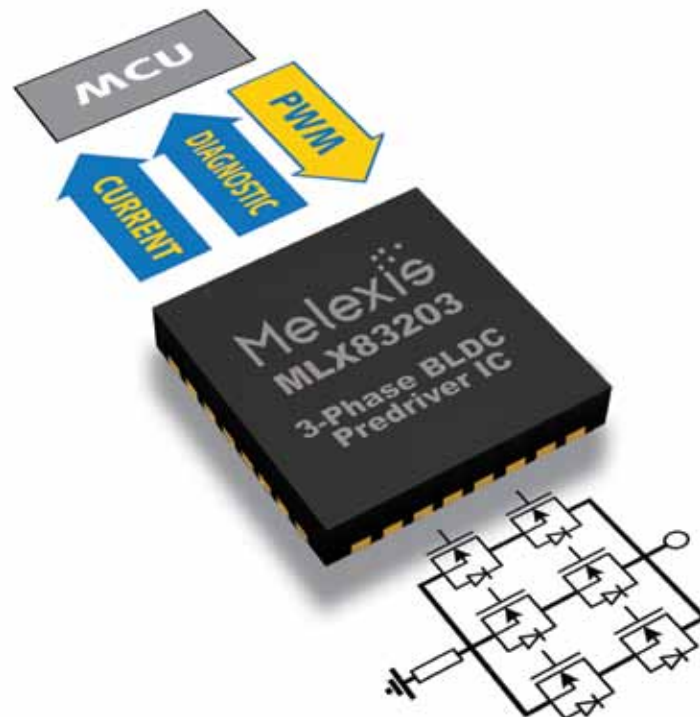
(\*\*) 175°C version on demand

(\*\*\*) Other package variants possible on high volume request

## Power Control ICs

### Power Control ICs

MLX Order Number	Description	Temp Range
MLX10803KDC-AAA-000-RE	High Power LED driver	-40°C to 125°C





## Actuator Products - Hardware and Tools

### Emulators

MLX Order Number	Description	Contents
Mini-E-MLX	Hardware emulator for software development of Melexis MCUs	Hardware emulator for connection of emulation PC software to MLX integrated debug interface, connection to the PC via USB port

### Evaluation Boards and Development Kits

MLX Order Number	Description	Contents
EVB10803-1	Evaluation board for MLX10803 in a buck topology. Not suited for EMC evaluation.	Reference design PCB without high intensity LED
EVB10803-3 Boost/Buck	Evaluation board for cascaded boost-buck topology using an MLX10803 for the boost and another MLX10803 for the buck stage. not suited for EMC evaluation.	Reference design PCB without high intensity LED
EVB10803-5	4W Buck-Boost reference design using MLX10803. validated for emission according CISPR25 class 5	Reference design PCB without high intensity LED
EVB80104-A1	MLX80104 uniROM Evaluation PCB	Equipped with MLX80104 uniROM
EVB80104-A2	MLX80104 Software development PCB Equipped with MLX80108 Flash like IC	Necessary for software development
EVB80104-A3	MLX80105 OTP Evaluation PCB	Equipped with QFN 5x5 Socket for MLX80105
EVB80104-B	Sample Switch board for Connection to MLX80104 Evaluation Board	Sample Application for uniROM
EVB81200-A	MLX81200 Evaluation Board	Evaluation PCB needed for MLX81200 software development
EVB81200-B	MLX81200 Power Board	PCB for connection to MLX81200 evaluation Board. It includes 3 FET bridges for connection of a BLDC Motor
EVB81200-C	MLX81200 Load Control	PCB for connection to the electronically controllable load of EVB81200-D
EVB81200-D	BLDC Motor + electronically controllable load	Works with EVB81200-A EVB81200-B and EVB81200-C
EVB81200-G	MLX81200 High Current Demonstration Board	Single board that contains all needed electronics in order to control a BLDC motor.
EVB81200-H	MLX81200 High Current and High Voltage Demonstration Board Suitable for high voltages up to 60V	Single board that contains all needed electronics in order to control a BLDC motor.
MLX Linmaster	Lin master	
EVB81150-A	MLX81150 evaluation PCB	
EVB81150-B	PCB for connection to MLX81150 evaluation board	
EVB81100-C	DC-motor to work with MLX81150 evaluation board	
EVB81207-A	MLX81207 evaluation PCB	
EVB812xy-B	MLX812xy Power Board	
EVB81207-G	MLX81207 High Current Demonstration Board	
MLX81205/07/10/15 Testinterface	Interface Board	
PTC04-DB-80104	PTC-04 daughterboard for OTP/E2 programming of MLX80104/5	
PTC04-DB-ACT	PTC-04 daughterboard for OTP/E2 programming of MLX80x5x	
MelexCM Testinterface	Interface board to be placed between the Emulator Mini E-MLX and the customer target application board	

# Optical & Temperature Sensors

## ActiveLight Interface IC for Proximity and Simple Gesture Sensing

Proximity sensors can be highly effective for supplementing touch-based Human-Machine Interfaces. With single-zone and multi-zone proximity sensing, engineers are presented with a way to implement more intuitive and safe user experiences. Applications for this technology include:

- Proximity Detection
- Simple Gesture Recognition, (simple swipes)
- Driver/Passenger Discrimination, such as infotainment options deemed too distracting for the driver allowing passenger-only to access.
- Circular Gesture Detection

Melexis has developed a series of highly robust sensor interface ICs. Based on CMOS process technology, the MLX75030 and MLX75031 ActiveLight proximity and simple gesture detection ICs feature proprietary integrated ambient light suppression technology, making them highly tolerant to the effects of static and dynamically varying background light. Furthermore it has proven electro-magnetic compliance, plus a small footprint that is highly suited to space-constrained designs.

## Automotive Imagers

Camera systems in cars are a fast growing market. Melexis focuses on imagers where specific automotive features like High Dynamic Range, high (night time) sensitivity and automotive robustness are important.

Automotive driver assistance (ADAS) and vision enhancement systems dramatically improve road safety by proactively alerting the driver of potential dangers.

With the high dynamic range, and on-chip automatic exposure control and display viewing function, the Melexis image sensor solutions offer the highest performance solution for these application needs.

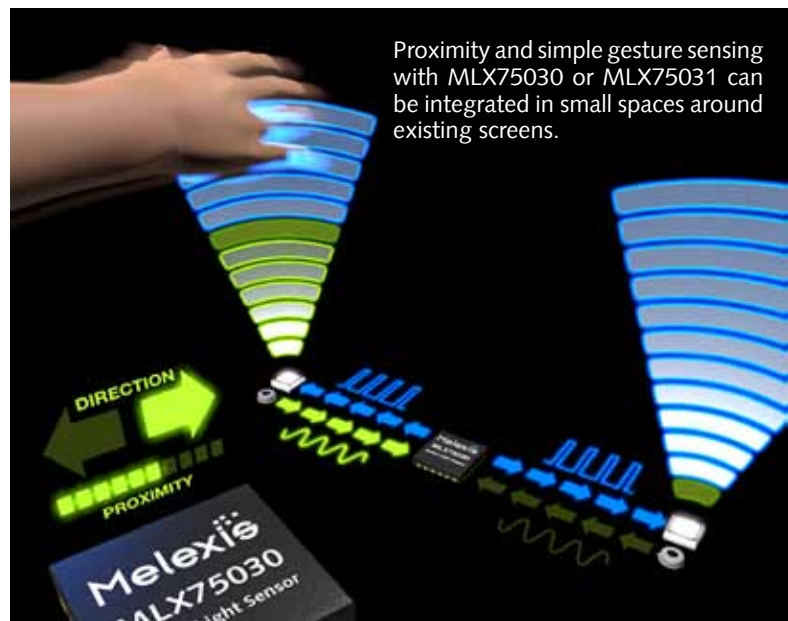
## The SensorEyeC Family

The SensorEyeC family offers customers a specific solution for their application needs: optical switching, optical high-dynamic range measuring and a highly sensitive, linear light-to-voltage sensor.

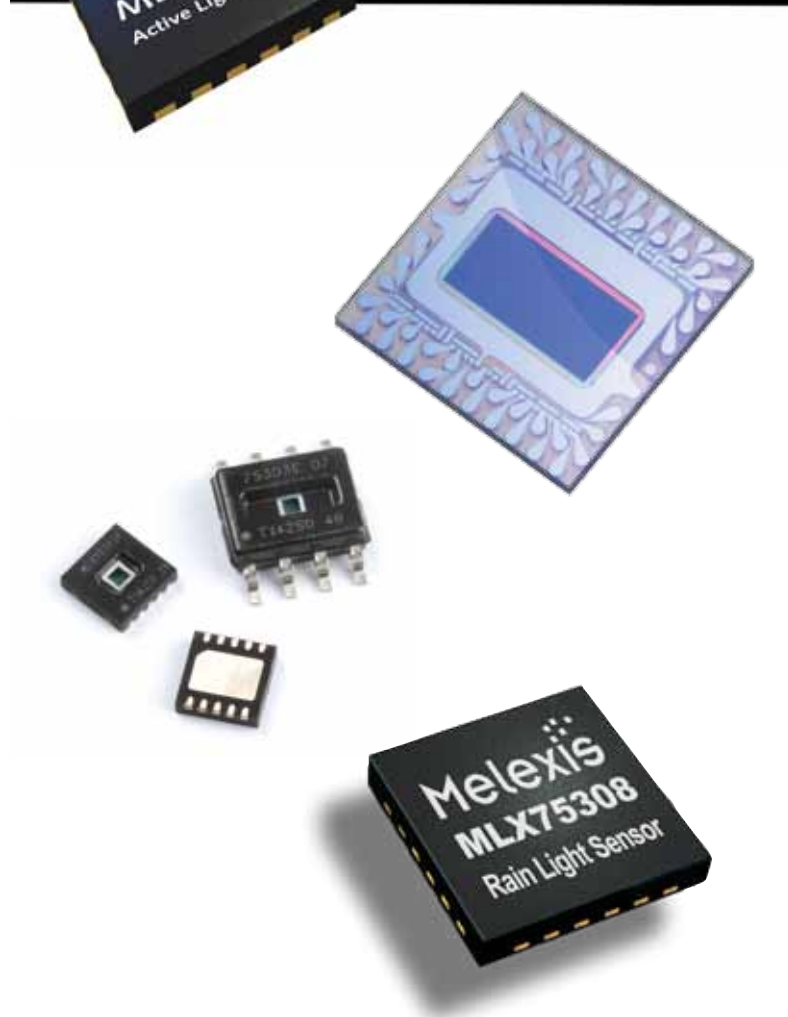
## Rainlight Sensors

In the never-ending quest for higher comfort and safety, several years ago, automatic light and wipers were introduced by many OEMs. Sufficient visibility for the driver under all (dynamic) circumstances is very important, therefore this automatic rain & light control is considered to be a safety-function.

Thanks to the high level of integration, high performance and rich application features the devices offer, the Melexis Rainlight interface solution, will be the reference in the market for this application.



Proximity and simple gesture sensing with MLX75030 or MLX75031 can be integrated in small spaces around existing screens.





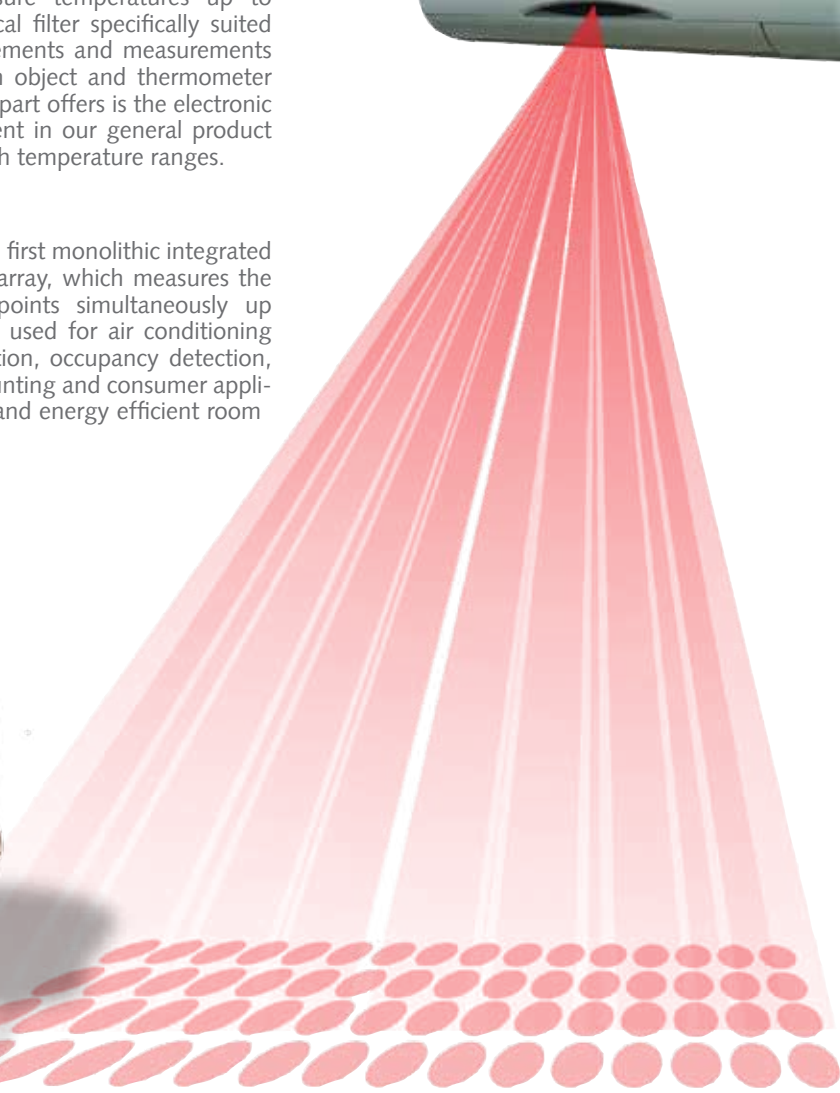
### Intelligent Infrared Thermometers

Melexis continues to expand the product line of intelligent Infrared thermometers by introducing new versions with very narrow Field Of View and medical grade accuracy. Main applications are in forehead thermometers and fever screening equipment. These sensors still offer the same high accuracy, wide temperature range and ease-of-use of the basic device. The market experiences an increased use of Infrared thermometers in the automotive and medical sector as well as consumer medical applications.

Melexis recently launched an intelligent sensor specifically targeted at professional, high range temperature guns. The sensor can measure temperatures up to 1030°C and features an optical filter specifically suited for high temperature measurements and measurements with a long distance between object and thermometer gun. The main advantage this part offers is the electronic stabilization feature also present in our general product line, now also available for high temperature ranges.

### FIRRay

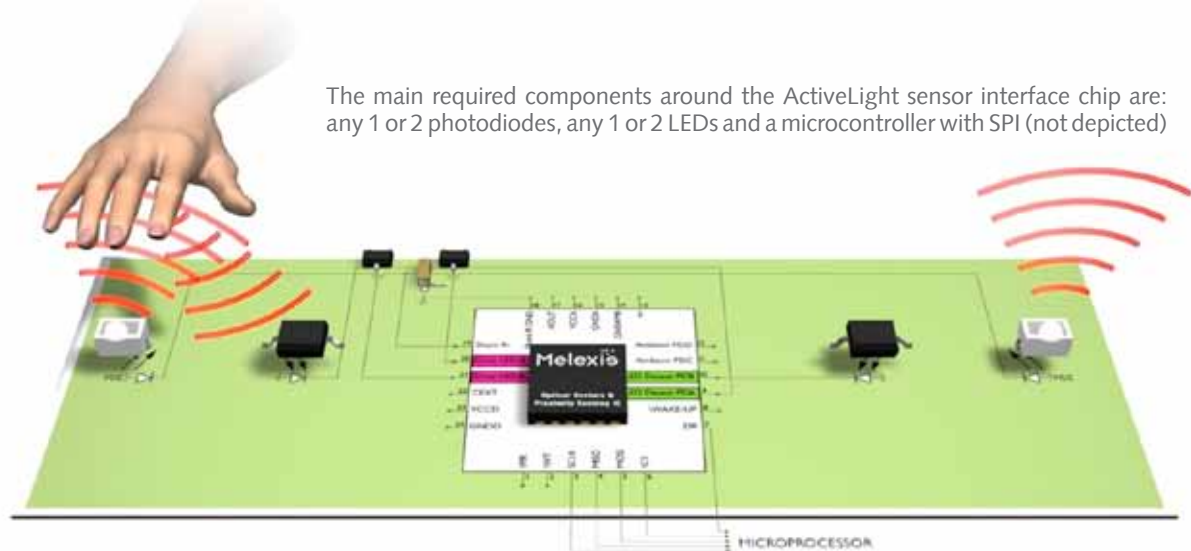
Melexis introduced the world's first monolithic integrated 16X4 active pixel thermopile array, which measures the temperature in 64 distinct points simultaneously up to 256Hz. The FIRRay can be used for air conditioning applications, blind spot detection, occupancy detection, intrusion detection, people counting and consumer applications like microwave ovens and energy efficient room air conditioners.



## Optical Sensors

### Optical Sensing

MLX Order Number	Description	Temp Range
MLX75030-RLQ-AAA-000-RE	ActiveLight Interface IC for Proximity and Simple Gesture Sensing (Tape & Reel)	-40°C to 105°C
MLX75030-RLQ-AAA-000-TU	ActiveLight Interface IC for Proximity and Simple Gesture Sensing (Tube)	-40°C to 105°C
MLX75030-CLQ-AAA-000-RE	ActiveLight Interface IC for Proximity and Simple Gesture Sensing (Tape & Reel)	0°C to 70°C
MLX75030-CLQ-AAA-000-TU	ActiveLight Interface IC for Proximity and Simple Gesture Sensing (Tube)	0°C to 70°C
MLX75031-RLQ-AAA-000-RE	ActiveLight Interface IC for Proximity and Simple Gesture Sensing with integrated LED drivers (Tape & Reel)	-40°C to 105°C
MLX75031-RLQ-AAA-000-TU	ActiveLight Interface IC for Proximity and Simple Gesture Sensing with integrated LED drivers (Tube)	-40°C to 105°C
MLX75031-CLQ-AAA-000-RE	ActiveLight Interface IC for Proximity and Simple Gesture Sensing with integrated LED drivers (Tape & Reel)	0°C to 70°C
MLX75031-CLQ-AAA-000-TU	ActiveLight Interface IC for Proximity and Simple Gesture Sensing with integrated LED drivers (Tube)	0°C to 70°C
MLX75303KXD-AAA-000-RE	Optical Schmitt Trigger	-40°C to 125°C
MLX75303KXD-AAA-000-TU	Optical Schmitt Trigger	-40°C to 125°C
MLX75303SXD-EAA-000-RE	Optical Schmitt Trigger	-20°C to 85°C
MLX75303SXD-EAA-000-TU	Optical Schmitt Trigger	-20°C to 85°C
MLX75305KXD-AAA-000-RE	Light to voltage converter	-40°C to 125°C
MLX75305KXD-AAA-000-TU	Light to voltage converter	-40°C to 125°C
MLX75305SXD-AAA-000-RE	Light to voltage converter	-20°C to 85°C
MLX75305SXD-AAA-000-TU	Light to voltage converter	-20°C to 85°C
MLX75306KXZ-BAA-000-RE	3rd Generation Linear Optical Array	-40°C to 125°C
MLX75306KXZ-BAA-000-TU	3rd Generation Linear Optical Array	-40°C to 125°C
MLX90255KWB-BAM-000-TR	Linear Optical Array in GLP5 w glass	-40°C to 125°C
MLX90255KXA-BCR-000-RE	Linear Optical Array in SO24 wo glass	-40°C to 125°C
MLX90255KXA-BCR-000-TU	Linear Optical Array in SO24 wo glass	-40°C to 125°C
MLX75412VTF-MAA-000-WB	Avocet HDR image sensor, monochrome, Glass-BGA package with ARC, including Autobrite and Autoview	-40°C to 115°C
MLX75412VTF-RAA-000-TR	Avocet HDR image sensor, RCCC, Glass-BGA package with ARC, including Autobrite and Autoview	-40°C to 115°C
MLX75412VTF-GAA-000-TR	Avocet HDR image sensor, RGBG color, Glass-BGA package with ARC, including Autobrite and Autoview	-40°C to 115°C
MLX75412VTF-IAA-000-TR	Avocet HDR image sensor, RGBI color, Glass-BGA package with ARC, including Autobrite and Autoview	-40°C to 115°C





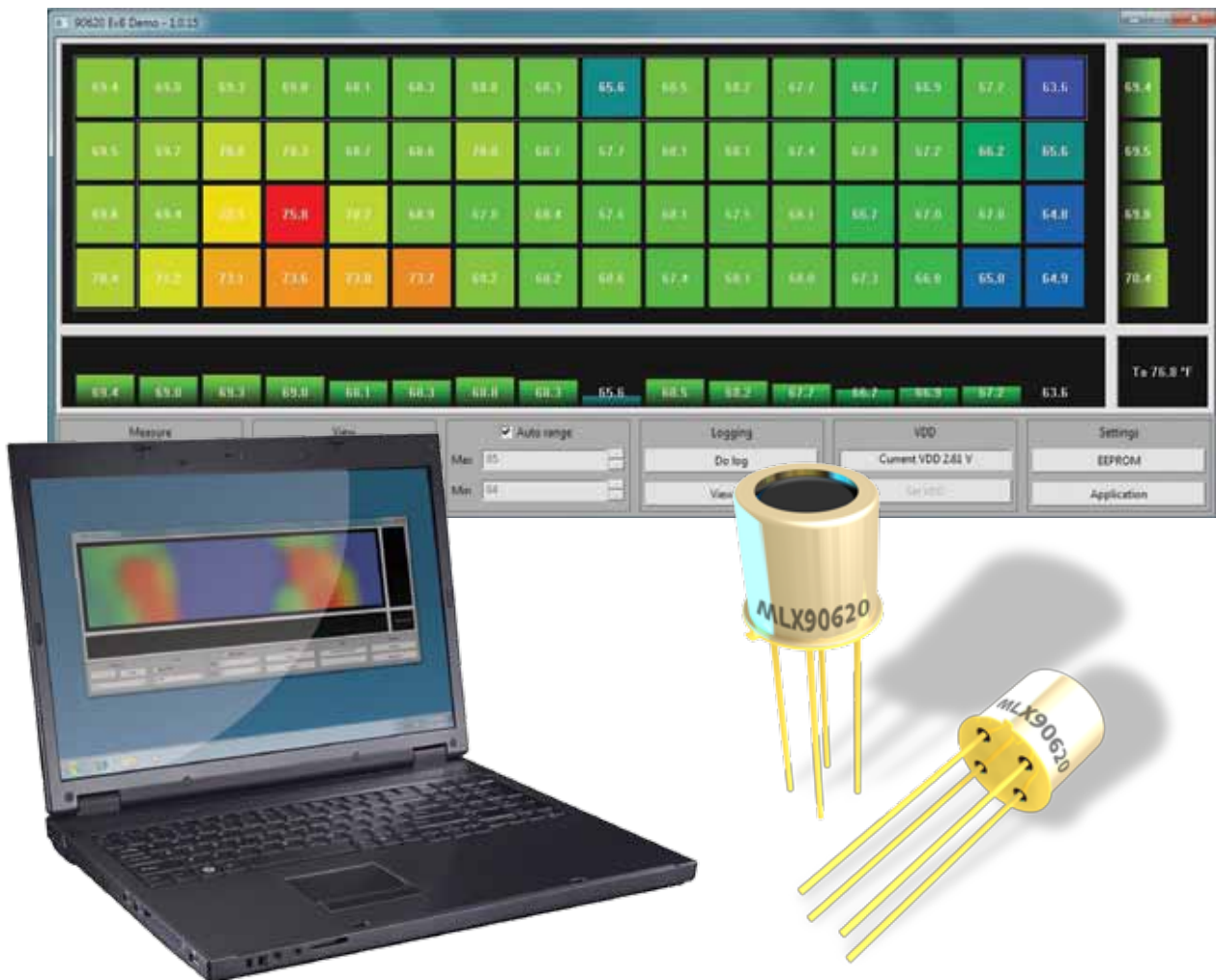


## Infrared Thermometer Sensors

### Infrared Thermometer Sensors

MLX Order Number	Description	Object (Calib) Temp Range	Operating Temp Range
MLX90614ESF-AAA-000-TU	Integrated Infrared Thermometer 5V, single zone, standard accuracy	-70°C to 380°C	-40°C to 85°C
MLX90614ESF-ABA-000-TU	Integrated Infrared Thermometer 5V, dual zone, standard accuracy	-70°C to 380°C	-40°C to 85°C
MLX90614ESF-ACA-000-TU	Integrated Infrared Thermometer 5V, single zone, standard accuracy, gradient compensated	-70°C to 380°C	-40°C to 85°C
MLX90614ESF-ACC-000-TU	Integrated Infrared Thermometer 5V, single zone, thermal gradient compensated, 35° viewing angle	-70°C to 380°C	-40°C to 85°C
MLX90614ESF-ACF-000-TU	Integrated Infrared Thermometer 5V, single zone, thermal gradient compensated, 10° viewing angle	-70°C to 380°C	-40°C to 85°C
MLX90614ESF-BAA-000-TU	Integrated Infrared Thermometer 3V, single zone standard accuracy	-70°C to 380°C	-40°C to 85°C
MLX90614ESF-BBA-000-TU	Integrated Infrared Thermometer 3V, dual zone, standard accuracy	-70°C to 380°C	-40°C to 85°C
MLX90614ESF-BCA-000-TU	Integrated Infrared Thermometer 3V, single zone, standard accuracy, gradient compensated	-70°C to 380°C	-40°C to 85°C
MLX90614ESF-BCC-000-TU	Integrated Infrared Thermometer 3V, single zone, thermal gradient compensated, 35° viewing angle	-70°C to 380°C	-40°C to 85°C
MLX90614ESF-BCF-000-TU	Integrated Infrared Thermometer 3V, single zone, thermal gradient compensated, 10° viewing angle	-70°C to 380°C	-40°C to 85°C
MLX90614ESF-BCI -000-TU	Integrated Infrared Thermometer 3V, single zone, thermal gradient compensated, 5° viewing angle	-70°C to 380°C	-40°C to 85°C
MLX90614ESF-DAA-000-TU	Integrated Infrared Thermometer 3V, single sensor, medical accuracy	-70°C to 380°C	-40°C to 85°C
MLX90614ESF-DCA-000-TU	Integrated Infrared Thermometer 3V, single sensor, gradient compensated, medical accuracy	-70°C to 380°C	-40°C to 85°C

MLX Order Number	Description	Object (Calib) Temp Range	Operating Temp Range
MLX90614ESF-DCH-000-TU	Integrated Infrared Thermometer 3V, single sensor, gradient compensated, medical accuracy, 12° viewing angle	-70°C to 380°C	-40°C to 85°C
MLX90614ESF-DCI -000-TU	Integrated Infrared Thermometer 3V, single sensor, gradient compensated, medical accuracy, 5° viewing angle	-70°C to 380°C	-40°C to 85°C
MLX90614KSF-AAA-000-TU	Integrated Infrared Thermometer 5V, single zone, standard accuracy	-70°C to 380°C	-40°C to 125°C
MLX90614KSF-ABA-000-TU	Integrated Infrared Thermometer 5V, dual zone, standard accuracy	-70°C to 380°C	-40°C to 125°C
MLX90614KSF-ACC-000-TU	Integrated Infrared Thermometer 5V, single zone, thermal gradient compensated, 35° viewing angle	-70°C to 380°C	-40°C to 125°C
MLX90615SSG-DAA-000-TU	Integrated Infrared Thermometer 3V, single sensor, medical accuracy, 100° field of view	-40°C to 115°C	-20°C to 85°C
MLX90615SSG-DAG-000-TU	Integrated Infrared Thermometer 3V, single sensor, medical accuracy, 80° field of view	-40°C to 115°C	-20°C to 85°C
MLX90616ESF-HCA-000-TU	Integrated Infrared Sensor, 3V, ambient calibration only, 80° field of view >1,000°C Object Temperature	-40°C to 115°C	-40°C to 85°C
MLX90620ESF-BAB-000-TU	16X4 Pixel Infrared Thermal Array Sensor 3V 60° total viewing angle	-20°C to 300°C	-40°C to 85°C
MLX90620ESF-BAD-000-TU	16X4 Pixel Infrared Thermal Array Sensor 3V, 40° total viewing angle	-20°C to 300°C	-40°C to 85°C

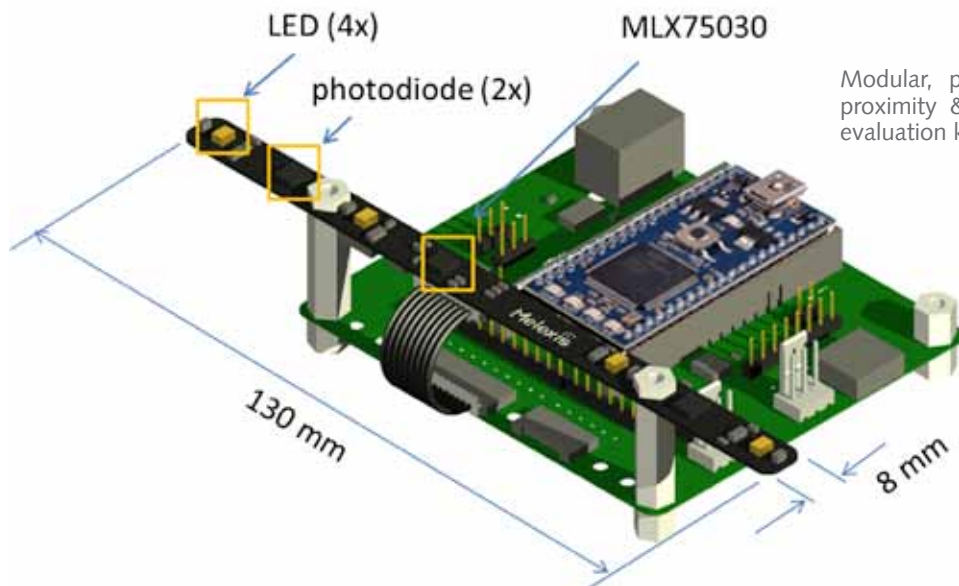




## Opto Products - Hardware and Tools

### Evaluation Boards and Development Kits

MLX Order Number	Description	Contents
EVB75030-V2	Evaluation kit for MLX75030 ActiveLight interface IC	<ul style="list-style-type: none"> <li>• EVB75030BB10</li> <li>• EVB75030LRP11</li> <li>• EVB75030CC95</li> <li>• Evaluation Software (+access to source code)</li> <li>• Technical Support</li> </ul>
EVB75030BB10	MLX75030 Interface Board	<ul style="list-style-type: none"> <li>• mBed LP1768 32-bit ARM Cortex M3 microcontroller board</li> <li>• USB connection cable</li> </ul>
EVB75030LRP11	MLX75030 Application Board for proximity & simple left/right detection	(1 )MLX75030, (4) LEDs, (2) photodiodes integrated on narrow form factor PCB (130 x 8 x 0.8 mm3)
EVB75030CC95	Connection cable for evaluation kit	Cable to connect EVB75030BB Interface Board to MLX75030 Application Board(s) / 9pin / Length 5cm
EVB75412-M	RapidView2 evaluation board for MLX75411 and MLX75412 Avocet monochrome imagers	Camera head with 50° FOV lens, processor board, software and Cameralink frame grabber card for laptops (ExpressCardI54)
EVB75413-I	RapidView2 evaluation board for MLX75413 Avocet color imagers	Camera head with 50° FOV lens, processor board, software and Cameralink frame grabber card for laptops (ExpressCardI54)
EVB90614	Evaluation board for MLX90614 Infrared Thermometer	Evaluation/configuration board with USB interface cable and 2 sensors
EVB90615	Evaluation board for MLX90615 Infrared Thermometer	Evaluation/configuration board with USB interface cable and 2 sensors
EVB90620	Evaluation board for MLX90620 thermal array	Evaluation board with USB interface cable and 1 sensor



Modular, plug & play ActiveLight proximity & simple gesture sensing evaluation kit EVB75030-V2



### Hall effect Sensors

Melexis is a recognized world leader for magnetic sensing devices, mainly based on the Hall effect. Typical uses are for movement, position and speed sensing and also current sensing. Magnetic sensors perform contactless measurements and are therefore immune to wear, dust, dirt, humidity and vibration.

Millions of Melexis Hall ICs are used in cars today for: Sensing pedal, throttle and steering wheel position, steering torque and transmission shifter, sensing rotation of the cam- and crankshafts in engines, monitoring movement in motors and actuators, measuring the current flowing from and to the battery. Other high volume applications for Hall ICs include mobile telephony, gaming, computing, personal portable devices and automation equipment.

Melexis markets a patented Hall technology under the brand Triaxis®. This technology enables the realization of cutting edge contactless magnetic position sensors. Triaxis® ICs are designed in rotary, linear and 3D-joystick position sensors. The final products are used to improve the fuel efficiency, reduce the engine emission, improve the transmission, enhance the vehicle stability control and increase the performances of mechatronic systems (serving applications such as steering, braking or shifting).

For instance, Triaxis® technology enables Melexis to actively contribute to innovative programs such as “engine down-sizing”, “start/stop” or “robotized gearbox” introduced by the vehicle manufacturers across the world.

Human-machine interface (HMI) applications are also addressed by Triaxis® ICs: they enable novel generation of smart shifters (manual and automatic transmission) or controllers for entertainment systems.

Triaxis® technology is also used for advanced current sensors whose market growth is linked to the increase of electrical systems in today's vehicles as well as the positive trend for hybrid and electrical powertrain.

Melexis portfolio of magnetic sensors offers solutions for robust and reliable contactless switches replacing the traditional mechanical switches for various applications such as seat belt buckle, brake and clutch pedals, wiper and window lift motors.



**Triaxis™**

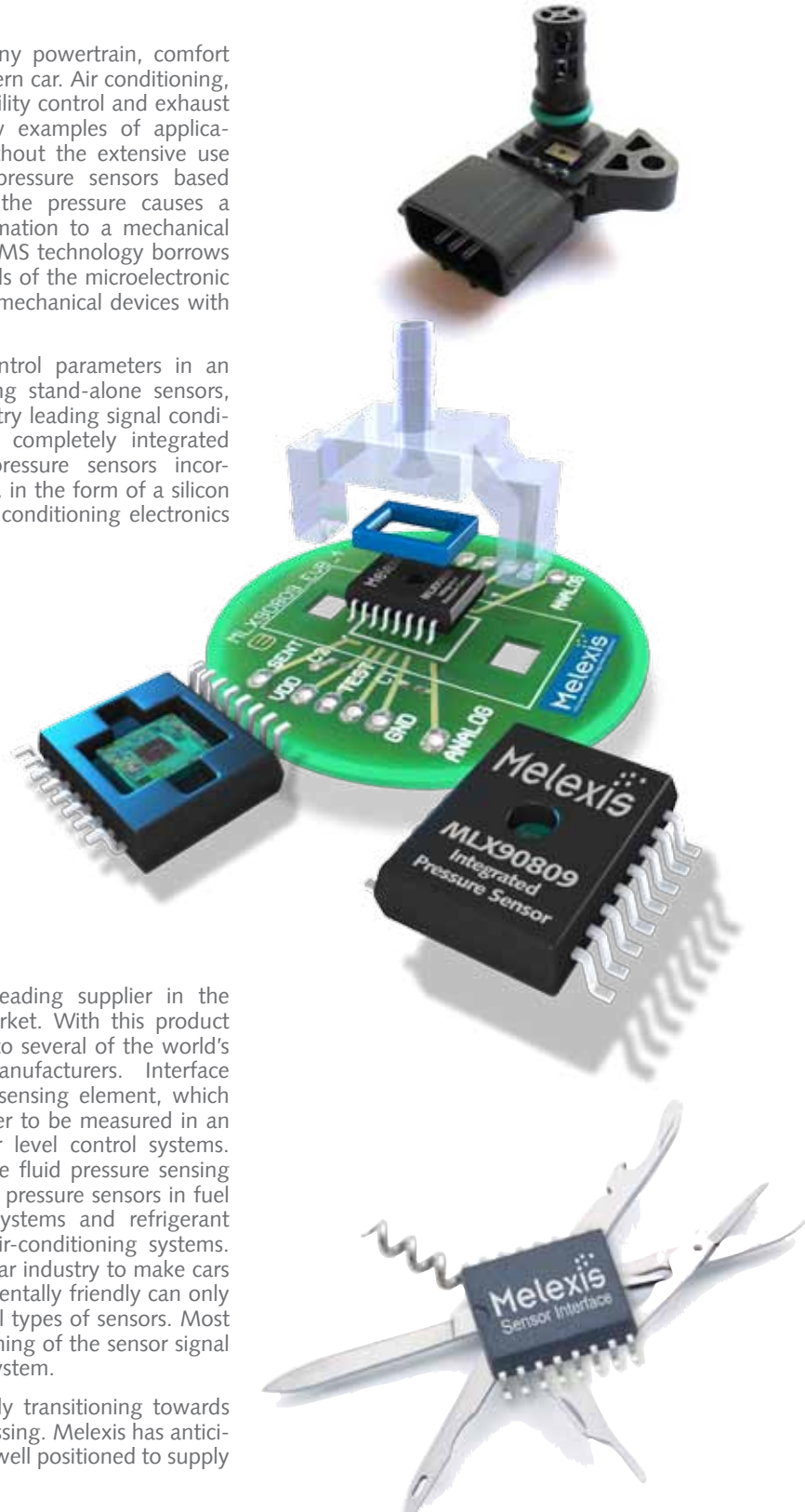


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## Pressure Sensors

Sensors are the enablers of many powertrain, comfort and safety applications in a modern car. Air conditioning, diesel particle filters, vehicle stability control and exhaust after treatment are only a few examples of applications that simply can't exist without the extensive use of sensors. Melexis develops pressure sensors based on MEMS technology, where the pressure causes a temporary and reversible deformation to a mechanical structure etched into the IC. MEMS technology borrows the batch manufacturing methods of the microelectronic industry to produce micro-scale mechanical devices with outstanding performance.

Pressure is one of the key control parameters in an automobile. It is measured using stand-alone sensors, for which Melexis supplies industry leading signal conditioning interface ICs, or using completely integrated pressure sensors. Integrated pressure sensors incorporate both the sensing element, in the form of a silicon deformable membrane, and the conditioning electronics on the same chip.



## Sensor Interface ICs

Melexis continues to be the leading supplier in the automotive segment of this market. With this product line it is an established supplier to several of the world's largest automotive sensor manufacturers. Interface ICs form the link between the sensing element, which transforms the physical parameter to be measured in an electrical signal, and the higher level control systems. Typical applications include brake fluid pressure sensing in Antilock Braking Systems, fuel pressure sensors in fuel economy enhancing injection systems and refrigerant liquid pressure in automotive air-conditioning systems. The challenges imposed on the car industry to make cars more fuel efficient and environmentally friendly can only be met by an extensive use of all types of sensors. Most types of sensors require conditioning of the sensor signal in order to be used in a control system.

The automotive market is rapidly transitioning towards more digitally based signal processing. Melexis has anticipated this trend and is therefore well positioned to supply appropriate solutions.

## Digital Hall effect Sensor ICs

### Next Generation 3-wire Hall effect Bipolar Switches or Latches

MLX Order Number	Description	Temp Range
MLX92211LSE-AAA-000	Bop/Brp: 3 / -3 mT   TC= -1100ppm/°C   Vdd= 2.7 - 24V	-40°C to 150°C
MLX92211LUA-AAA-000	Bop/Brp: 3 / -3 mT   TC= -1100ppm/°C   Vdd= 2.7 - 24V	-40°C to 150°C
MLX92211LSE-ACA-000	Bop/Brp: 3 / -3 mT   TC= -2000ppm/°C   Vdd= 2.7 - 24V	-40°C to 150°C
MLX92211LSE-ADA-000	Bop/Brp: 14 / -14 mT   TC= -2000ppm/°C   Vdd= 2.7 - 24V	-40°C to 150°C
MLX92211LUA-ADA-000	Bop/Brp: 14 / -14 mT   TC= -2000ppm/°C   Vdd= 2.7 - 24V	-40°C to 150°C
MLX92211LSE-BAA-003	Bop/Brp: 0.5 / -0.5 mT   TC = 0ppm/°C   Vdd= 2.7 - 24V	-40°C to 150°C
MLX92211LSE-BAA-006	Bop/Brp: 1.5 / -1.5 mT   TC = 0ppm/°C   Vdd= 2.7 - 24V	-40°C to 150°C
MLX92211LSE-BAA-008	Bop/Brp: 7 / -7 mT   TC = -2000ppm/°C   Vdd= 2.7 - 24V	-40°C to 150°C
MLX92211LUA-BAA-015	Bop/Brp: 0.5 / -0.5 mT   TC = 0ppm/°C   Vdd= 2.7 - 24V	-40°C to 150°C
MLX92211Lxx-BAA-yyy	CONTINUOUSLY EVOLVING Check www.melexis.com for new option codes	-40°C to 150°C

### General Purpose 3-wire Hall effect Bipolar Switches or Latches

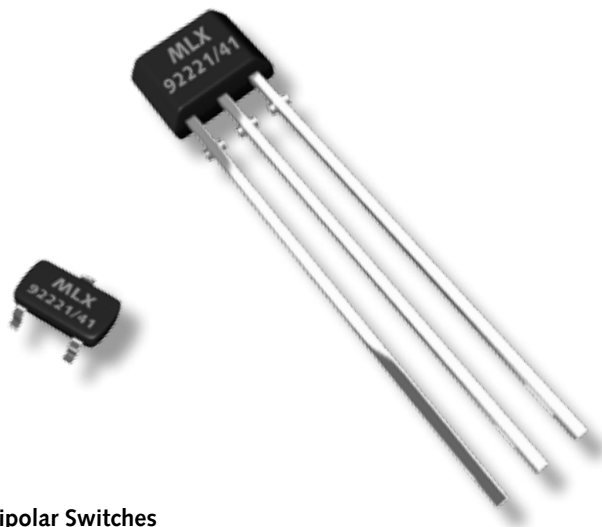
MLX Order Number	Description	Temp Range
US1881ESE-AAA-000	Bop/Brp: 5 / -5 mT   TC= 0ppm/°C   Vdd= 3.5 - 24V	-40°C to 85°C
US1881EUA-AAA-000	Bop/Brp: 5 / -5 mT   TC= 0ppm/°C   Vdd= 3.5 - 24V	-40°C to 85°C
US1881LSE-AAA-000	Bop/Brp: 5 / -5 mT   TC= 0ppm/°C   Vdd= 3.5 - 24V	-40°C to 150°C
US1881LUA-AAA-000	Bop/Brp: 5 / -5 mT   TC= 0ppm/°C   Vdd= 3.5 - 24V	-40°C to 150°C
US1883LUA-AAA-000	Bop/Brp: 14 / -14 mT   TC= 0ppm/°C   Vdd= 3.5 - 24V	-40°C to 150°C
US2881ESE-AAA-000	Bop/Brp: 3 / -3 mT   TC= 0ppm/°C   Vdd= 3.5 - 24V	-40°C to 85°C
US2881EUA-AAA-000	Bop/Brp: 3 / -3 mT   TC= 0ppm/°C   Vdd= 3.5 - 24V	-40°C to 85°C
US2881LSE-AAA-000	Bop/Brp: 3 / -3 mT   TC= 0ppm/°C   Vdd= 3.5 - 24V	-40°C to 150°C
US2881LUA-AAA-000	Bop/Brp: 3 / -3 mT   TC= 0ppm/°C   Vdd= 3.5 - 24V	-40°C to 150°C
US2882ESE-AAA-000	Bop/Brp: 3 / -3 mT   TC= 0ppm/°C   Vdd= 3.5 - 24V	-40°C to 85°C
US2882EUA-AAA-000	Bop/Brp: 3 / -3 mT   TC= 0ppm/°C   Vdd= 3.5 - 24V	-40°C to 85°C
US2882LSE-AAA-000	Bop/Brp: 3 / -3 mT   TC= 0ppm/°C   Vdd= 3.5 - 24V	-40°C to 150°C
US2882LUA-AAA-000	Bop/Brp: 3 / -3 mT   TC= 0ppm/°C   Vdd= 3.5 - 24V	-40°C to 150°C
US2884LSE-AAA-000	Bop/Brp: 3 / -3 mT   TC= 0ppm/°C   Vdd= 3.5 - 24V	-40°C to 150°C
US3881ESE-AAA-000	Bop/Brp: 5 / -5 mT   TC= 0ppm/°C   Vdd= 2.2 - 18V	-40°C to 85°C
US3881EUA-AAA-000	Bop/Brp: 5 / -5 mT   TC= 0ppm/°C   Vdd= 2.2 - 18V	-40°C to 85°C
US3881LSE-AAA-000	Bop/Brp: 5 / -5 mT   TC= 0ppm/°C   Vdd= 2.2 - 18V	-40°C to 150°C
US3881LUA-AAA-000	Bop/Brp: 5 / -5 mT   TC= 0ppm/°C   Vdd= 2.2 - 18V	-40°C to 150°C
US4881ESE-AAA-000	Bop/Brp: 3 / -3 mT   TC= 0ppm/°C   Vdd= 2.2 - 18V	-40°C to 85°C
US4881EUA-AAA-000	Bop/Brp: 3 / -3 mT   TC= 0ppm/°C   Vdd= 2.2 - 18V	-40°C to 85°C
US4881LSE-AAA-000	Bop/Brp: 3 / -3 mT   TC= 0ppm/°C   Vdd= 2.2 - 18V	-40°C to 150°C
US4881LUA-AAA-000	Bop/Brp: 3 / -3 mT   TC= 0ppm/°C   Vdd= 2.2 - 18V	-40°C to 150°C

### Next Generation 3-wire Hall effect Unipolar Switches

MLX Order Number	Description	Temp Range
MLX92231LSE-AAA-004	Bop/Brp: -5.5 / -3.5 mT   TC = -1100ppm/°C   Vdd= 2.7 - 24V	-40°C to 150°C
MLX92231LSE-AAA-007	Bop/Brp: 26 / 20 mT   TC = 0ppm/°C   Vdd= 2.7 - 24V	-40°C to 150°C
MLX92231LSE-AAA-009	Bop/Brp: 3.5 / 2.5 mT   TC = 0ppm/°C   Vdd= 2.7 - 24V	-40°C to 150°C
MLX92231LSE-AAA-010	Bop/Brp: 10 / 8.5 mT   TC = -1100ppm/°C   Vdd= 2.7 - 24V	-40°C to 150°C
MLX92231Lxx-AAA-yyy	CONTINUOUSLY EVOLVING Check www.melexis.com for new option codes	-40°C to 150°C

### General Purpose 3-wire Hall effect Unipolar Switches

MLX Order Number	Description	Temp Range
US5681ESE-AAA-000	Bop/Brp: 3.5 / 5.5 mT   TC= 0ppm/°C   Vdd= 3.5 - 24V	-40°C to 85°C
US5681KSE-AAA-000	Bop/Brp: 3.5 / 5.5 mT   TC= 0ppm/°C   Vdd= 3.5 - 24V	-40°C to 125°C
US5682ESE-AAA-000	Bop/Brp: 3.5 / 5.5 mT   TC= 0ppm/°C   Vdd= 3.5 - 24V	-40°C to 85°C
US5682KSE-AAA-000	Bop/Brp: 3.5 / 5.5 mT   TC= 0ppm/°C   Vdd= 3.5 - 24V	-40°C to 125°C
US5683ESE-AAA-000	Bop/Brp: 3.5 / 5.5 mT   TC= 0ppm/°C   Vdd= 3.5 - 24V	-40°C to 85°C
US5683KSE-AAA-000	Bop/Brp: 3.5 / 5.5 mT   TC= 0ppm/°C   Vdd= 3.5 - 24V	-40°C to 125°C
US5781ESE-AAA-000	Bop/Brp: 7.5 / 12 mT   TC= 0ppm/°C   Vdd= 3.5 - 24V	-40°C to 85°C
US5781EUA-AAA-000	Bop/Brp: 7.5 / 12 mT   TC= 0ppm/°C   Vdd= 3.5 - 24V	-40°C to 85°C
US5781LSE-AAA-000	Bop/Brp: 7.5 / 12 mT   TC= 0ppm/°C   Vdd= 3.5 - 24V	-40°C to 150°C
US5781LUA-AAA-000	Bop/Brp: 7.5 / 12 mT   TC= 0ppm/°C   Vdd= 3.5 - 24V	-40°C to 150°C
US5782ESE-AAA-000	Bop/Brp: 7.5 / 12 mT   TC= 0ppm/°C   Vdd= 3.5 - 24V	-40°C to 85°C
US5782LSE-AAA-000	Bop/Brp: 7.5 / 12 mT   TC= 0ppm/°C   Vdd= 3.5 - 24V	-40°C to 150°C
US5881ESE-AAA-000	Bop/Brp: 20 / 25 mT   TC= 0ppm/°C   Vdd= 3.5 - 24V	-40°C to 85°C
US5881EUA-AAA-000	Bop/Brp: 20 / 25 mT   TC= 0ppm/°C   Vdd= 3.5 - 24V	-40°C to 85°C
US5881LSE-AAA-000	Bop/Brp: 20 / 25 mT   TC= 0ppm/°C   Vdd= 3.5 - 24V	-40°C to 150°C
US5881LUA-AAA-000	Bop/Brp: 20 / 25 mT   TC= 0ppm/°C   Vdd= 3.5 - 24V	-40°C to 150°C



### Next Generation 2-wire Hall effect Unipolar Switches

MLX Order Number	Description	Temp Range
MLX92241LUA-AAA-003	Bop/Brp: 8 / 5 mT   TC= -1100ppm/°C   Ioff= 3.3mA   Vdd= 2.7 - 24V	-40°C to 150°C
MLX92241LUA-AAA-004	Bop/Brp: 9 / 7 mT   TC= 0ppm/°C   Ioff= 6mA   Vdd= 2.7 - 24V	-40°C to 150°C
MLX92241LUA-AAA-005	Bop/Brp: 9 / 7 mT   TC= 0ppm/°C   Ioff= 3.3mA   Vdd= 2.7 - 24V	-40°C to 150°C
MLX92241LUA-AAA-006	Bop/Brp: 8 / 5 mT   TC= -1100ppm/°C   Ioff= 6mA   Vdd= 2.7 - 24V	-40°C to 150°C
MLX92241LUA-AAA-007	Bop/Brp: 5.5 / 3.5 mT   TC= -1100ppm/°C   Ioff= 3.3mA   Vdd= 2.7 - 24V	-40°C to 150°C
MLX92241LSE-AAA-008	Bop/Brp: 17 / 15 mT   TC= 0ppm/°C   Ioff= 6mA   Vdd= 2.7 - 24V	-40°C to 150°C
MLX92241LSE-AAA-011	Bop/Brp: 5.5 / 3.5 mT   TC= -1100ppm/°C   Ioff= 3.3mA   Vdd= 2.7 - 24V	-40°C to 150°C
MLX92241LSE-AAA-012	Bop/Brp: 5.5 / 3.5 mT   TC= -1100ppm/°C   Ioff= 6mA   Vdd= 2.7 - 24V	-40°C to 150°C
MLX92241LSE-AAA-013	Bop/Brp: 9 / 7 mT   TC= 0ppm/°C   Ioff= 6mA   Vdd= 2.7 - 24V	-40°C to 150°C
MLX92241LSE-AAA-014	Bop/Brp: 9 / 7 mT   TC= 0ppm/°C   Ioff= 3.3mA   Vdd= 2.7 - 24V	-40°C to 150°C
MLX92241LSE-AAA-015	Bop/Brp: 9 / 7 mT   TC= -2000ppm/°C   Ioff= 6mA   Vdd= 2.7 - 24V	-40°C to 150°C
MLX92241LSE-AAA-016	Bop/Brp: 5.5 / 3.5 mT   TC= -1100ppm/°C   Ioff= 6mA   Vdd= 2.7 - 24V	-40°C to 150°C
MLX92241LSE-AAA-017	Bop/Brp: 9 / 7 mT   TC= -2000ppm/°C   Ioff= 3.3mA   Vdd= 2.7 - 24V	-40°C to 150°C
MLX92241Lxx-AAA-yyy	CONTINUOUSLY EVOLVING Check <a href="http://www.melexis.com">www.melexis.com</a> for new option codes	-40°C to 150°C



### Next Generation 2-wire Hall effect Bipolar Switches or Latches

MLX Order Number	Description	Temp Range
MLX92221LSE-AAA-001	Bop/Brp: 12 / -12 mT   TC= 0ppm/°C   Ioff= 6mA   Vdd= 2.7 - 24V	-40°C to 150°C
MLX92221LSE-AAA-002	Bop/Brp: 6 / -6 mT   TC= -2000ppm/°C   Ioff= 6mA   Vdd= 2.7 - 24V	-40°C to 150°C
MLX92221LSE-AAA-003	Bop/Brp: 1.7/-1.7 mT   TC= 0ppm/°C   Ioff= 6mA   Vdd= 2.7 - 24V	-40°C to 150°C
MLX92221LUA-AAA-004	Bop/Brp: 6 / -6 mT   TC= -1100ppm/°C   Ioff= 6mA   Vdd= 2.7 - 24V	-40°C to 150°C
MLX92221Lxx-AAA-yyy	CONTINUOUSLY EVOLVING - CHECK MELEXIS WEBSITE FOR NEW OPTION CODES	-40°C to 150°C

### Dual Hall effect Bipolar Switches or Latches

MLX Order Number	Description	Temp Range
MLX90224EVA-AAA-000	Bop/Brp: 2.5 / -2.5 mT   TC= 0ppm/°C   Dual Speed Output   Vdd= 4.5 - 16V	-40°C to 85°C
MLX90224LVA-AAA-000	Bop/Brp: 2.5 / -2.5 mT   TC= 0ppm/°C   Dual Speed Output   Vdd= 4.5 - 16V	-40°C to 85°C
MLX92251LSE-AAA-000	Bop/Brp: 7.5 / -7.5 mT   TC= 0ppm/°C   Speed & Direction Output   Vdd= 2.7 - 24V	-40°C to 85°C
MLX92251LSE-ABA-000	Bop/Brp: 2.5 / -2.5 mT   TC= -1100ppm/°C   Speed & Direction Output   Vdd= 2.7 - 24V	-40°C to 85°C

### MicroPower Hall effect Bipolar Switches or Latches, and Omnipolar Switches

MLX Order Number	Description	Temp Range
MLX92213ELD-AAA-000	Bop/Brp: 2 / -2 mT   TC= 0ppm/°C   Isleep= 1µA   Vdd= 1.6 - 3.6V	-40°C to 85°C
MLX90248ESE-EBA-000	Bop/Brp: ±3.5 / ±2.5 mT   TC= 0ppm/°C   Isleep= 3.5µA   Vdd= 1.5 - 3.6V	-40°C to 85°C
MLX90248ELD-EBA-000	Bop/Brp: ±3.5 / ±2.5 mT   TC= 0ppm/°C   Isleep= 3.5µA   Vdd= 1.5 - 3.6V	-40°C to 85°C

### Embedded Design Hall effect Unipolar and Bipolar Switches

MLX Order Number	Description	Temp Range
MLX92212LSE-AAA-000	Bop/Brp: 2 / -2 mT   TC= 0ppm/°C   Vdd= 2.5 - 5.5V	-40°C to 150°C
MLX92212LSE-ABA-000	Bop/Brp: 12 / 10.5 mT   TC= 0ppm/°C   Vdd= 2.5 - 5.5V	-40°C to 150°C

### Customer Fully Programmable Hall effect Unipolar/Bipolar Switches

MLX Order Number	Description	Temp Range
MLX92232LSE-AAA-000	3-wire   Bop/Brp: -64...+64 mT   TC= 0ppm/°C   Vdd= 2.7 - 24V	-40°C to 150°C
MLX92232LUA-AAA-000	3-wire   Bop/Brp: -64...+64 mT   TC= 0ppm/°C   Vdd= 2.7 - 24V	-40°C to 150°C
MLX92232LSE-AAA-001	3-wire   Bop/Brp: -64...+64 mT   TC= -400ppm/°C   Vdd= 2.7 - 24V	-40°C to 150°C
MLX92232LUA-AAA-001	3-wire   Bop/Brp: -64...+64 mT   TC= -400ppm/°C   Vdd= 2.7 - 24V	-40°C to 150°C
MLX92232LSE-AAA-002	3-wire   Bop/Brp: -64...+64 mT   TC= -1100ppm/°C   Vdd= 2.7 - 24V	-40°C to 150°C
MLX92232LUA-AAA-002	3-wire   Bop/Brp: -64...+64 mT   TC= -1100ppm/°C   Vdd= 2.7 - 24V	-40°C to 150°C
MLX92232LSE-AAA-003	3-wire   Bop/Brp: -64...+64 mT   TC= -2000ppm/°C   Vdd= 2.7 - 24V	-40°C to 150°C
MLX92232LUA-AAA-003	3-wire   Bop/Brp: -64...+64 mT   TC= -2000ppm/°C   Vdd= 2.7 - 24V	-40°C to 150°C
MLX92242LSE-AAA-000	2-wire   Bop/Brp: -100...+100 mT   TC= programmable   Ioff= programmable   Vdd= 2.7 - 24V	-40°C to 150°C
MLX92242LUA-AAA-000	2-wire   Bop/Brp: -100...+100 mT   TC= programmable   Ioff= programmable   Vdd= 2.7 - 24V	-40°C to 150°C



## Linear Hall effect Sensor ICs

### Programmable Linear Hall ICs (Gen. I)

MLX Order Number	Description	Temp Range
MLX90215EVA-AAA-106-BU	SIP-4 (1.2 mm) - Ratiometric analog output	-40°C to 85°C
MLX90215LVA-AAA-111-BU	SIP-4 (1.2 mm) - Ratiometric analog output	-40°C to 150°C



### Programmable Linear Hall ICs (Gen. II)

MLX Order Number	Description	Temp Range
MLX90251EVA-FAA-000-BU	SIP-4 (1.2 mm) - Ratiometric analog output Sensitivity Range = 2.6-15 mV/mT	-40°C to 85°C
MLX90251EVA-FAA-100-BU	SIP-4 (1.2 mm) - Ratiometric analog output Sensitivity Range = 10-35 mV/mT	-40°C to 85°C
MLX90251EVA-FAA-200-BU	SIP-4 (1.2 mm) - Ratiometric analog output Sensitivity Range = 18-90 mV/mT	-40°C to 85°C
MLX90251EVA-FAA-300-BU	SIP-4 (1.2 mm) - Ratiometric analog output Sensitivity Range = 50-210 mV/mT	-40°C to 85°C
MLX90251LVA-FAA-000-BU	SIP-4 (1.2 mm) - Ratiometric analog output Sensitivity Range = 2.6-15 mV/mT	-40°C to 150°C
MLX90251LVA-FAA-100-BU	SIP-4 (1.2 mm) - Ratiometric analog output Sensitivity Range = 10-35 mV/mT	-40°C to 150°C
MLX90251LVA-FAA-200-BU	SIP-4 (1.2 mm) - Ratiometric analog output Sensitivity Range = 18-90 mV/mT	-40°C to 150°C
MLX90251LVA-FAA-300-BU	SIP-4 (1.2 mm) - Ratiometric analog output Sensitivity Range = 50-210 mV/mT	-40°C to 150°C
MLX90295EVC-FAA-000-BU	SIP-4 (1.0 mm) - Ratiometric analog output Sensitivity Range = 2.6-15 mV/mT	-40°C to 85°C
MLX90295EVC-FAA-100-BU	SIP-4 (1.0 mm) - Ratiometric analog output Sensitivity Range = 10-35 mV/mT	-40°C to 85°C
MLX90295EVC-FAA-200-BU	SIP-4 (1.0 mm) - Ratiometric analog output Sensitivity Range = 18-90 mV/mT	-40°C to 85°C
MLX90295EVC-FAA-300-BU	SIP-4 (1.0 mm) - Ratiometric analog output Sensitivity Range = 50-210 mV/mT	-40°C to 85°C

### Programmable Linear Hall ICs (Gen. III)

MLX Order Number	Description	Temp Range
MLX90288KDC-CAA-000-TU	SOIC-8 - Ratiometric analog output - Sensitivity TC LUT#1	-40°C to 125°C
MLX90288KDC-CAA-000-RE	SOIC-8 - Ratiometric analog output - Sensitivity TC LUT#1	-40°C to 125°C
MLX90288LDC-CAA-000-TU	SOIC-8 - Ratiometric analog output - Sensitivity TC LUT#1	-40°C to 150°C
MLX90288LDC-CAA-000-RE	SOIC-8 - Ratiometric analog output - Sensitivity TC LUT#1	-40°C to 150°C
MLX90288KDC-CAB-000-TU	SOIC-8 - Ratiometric analog output - Sensitivity TC LUT#2	-40°C to 125°C
MLX90288KDC-CAB-000-RE	SOIC-8 - Ratiometric analog output - Sensitivity TC LUT#2	-40°C to 125°C
MLX90288LDC-CAB-000-TU	SOIC-8 - Ratiometric analog output - Sensitivity TC LUT#2	-40°C to 150°C
MLX90288LDC-CAB-000-RE	SOIC-8 - Ratiometric analog output - Sensitivity TC LUT#2	-40°C to 150°C
MLX90291KDC-BCA-000-TU	SOIC-8 - PWM Output (125 Hz)	-40°C to 125°C
MLX90291KDC-BCA-000-RE	SOIC-8 - PWM Output (125 Hz)	-40°C to 125°C
MLX90292LVC-CAE-000-BU	SIP-4 (1.0 mm) - PWM (up to 2 kHz), PAS4 and PSI5 outputs	-40°C to 150°C
MLX90292LDC-CAE-000-RE	SOIC-8 - PWM (up to 2 kHz), PAS4 and PSI5 outputs	-40°C to 150°C
MLX90292LDC-CAE-000-TU	SOIC-8 - PWM (up to 2 kHz), PAS4 and PSI5 outputs	-40°C to 150°C
MLX90292LGO-CAE-000-RE	TSSOP-16 - Dual Die - PWM (up to 2 kHz), PAS4 and PSI5 outputs	-40°C to 150°C
MLX90292LGO-CAE-000-TU	TSSOP-16 - Dual Die - PWM (up to 2 kHz), PAS4 and PSI5 outputs	-40°C to 150°C
MLX90293LDC-ABL-000-RE	SOIC-8 - Ratiometric analog, PWM (up to 1 kHz) and SENT (2010) outputs	-40°C to 150°C
MLX90293LDC-ABL-000-TU	SOIC-8 - Ratiometric analog, PWM (up to 1 kHz) and SENT (2010) outputs	-40°C to 150°C
MLX90293LGO-ABL-000-RE	TSSOP-16 - Dual Die - Ratiometric analog, PWM (up to 1 kHz) and SENT (2010) outputs	-40°C to 150°C
MLX90293LGO-ABL-000-TU	TSSOP-16 - Dual Die - Ratiometric analog, PWM (up to 1 kHz) and SENT (2010) outputs	-40°C to 150°C

### Pre-Programmed Linear Hall ICs

MLX Order Number	Description	Temp Range
MLX90290LUA-AAA-###-BU	SIP-3 (TO-92UA) - Voq and Sensitivity according to the code ###	-40°C to 150°C
MLX90290LUA-AAA-###-RE	SIP-3 (TO-92UA) - Voq and Sensitivity according to the code ###	-40°C to 150°C
MLX90290ESE-AAA-###-RE	TSOT-23 - Voq and Sensitivity according to the code ###	-40°C to 85°C

### Linear Hall ICs - Fixed Programmed (Ratiometric analog output)

MLX Order Number	Description	Temp Range
MLX90242LUA-GAA-000-BU	SIP-3 (TO-92UA) - Typ. Voq = 2.5 V - Typ. Sensitivity = 39 mV/mT	-40°C to 150°C
MLX90242LUA-GAA-000-RE	SIP-3 (TO-92UA) - Typ. Voq = 2.5 V - Typ. Sensitivity = 39 mV/mT	-40°C to 150°C
MLX90242LUC-GAA-000-WB	Probed wafer (KGD) - Typ. Voq = 2.5 V - Typ. Sensitivity = 39 mV/mT	-40°C to 150°C
MLX90242ESE-GAA-000-RE	TSOT-23 - Typ. Voq = 2.5 V - Typ. Sensitivity = 39 mV/mT	-40°C to 85°C
MLX90242ESE-GDA-000-RE	TSOT-23 - Typ. Voq = 2.5 V - Typ. Sensitivity = 15 mV/mT	-40°C to 85°C
MLX90242EUC-GAA-000-WB	Probed wafer (KGD) - Typ. Voq = 2.5 V - Typ. Sensitivity = 39 mV/mT	-40°C to 85°C



### Triaxis® Programmable Rotary Position Sensor featuring Ratiometric Analog, PWM & SPI Outputs (Gen. I)

MLX Order Number	Description	Temp Range
MLX90316SDC-BCG-000-RE	SOIC-8	-20°C to 85°C
MLX90316SDC-BCG-000-TU	SOIC-8	-20°C to 85°C
MLX90316EDC-BCG-000-RE	SOIC-8	-40°C to 85°C
MLX90316EDC-BCG-000-TU	SOIC-8	-40°C to 85°C
MLX90316KDC-BCG-000-RE	SOIC-8	-40°C to 125°C
MLX90316KDC-BCG-000-TU	SOIC-8	-40°C to 125°C
MLX90316LDC-BCG-000-RE	SOIC-8	-40°C to 150°C
MLX90316LDC-BCG-000-TU	SOIC-8	-40°C to 150°C
MLX90316EGO-BCG-000-RE	TSSOP-16 - Dual Die	-40°C to 85°C
MLX90316EGO-BCG-000-TU	TSSOP-16 - Dual Die	-40°C to 85°C
MLX90316KGO-BCG-000-RE	TSSOP-16 - Dual Die	-40°C to 125°C
MLX90316KGO-BCG-000-TU	TSSOP-16 - Dual Die	-40°C to 125°C
MLX90316LGO-BCG-000-RE	TSSOP-16 - Dual Die	-40°C to 150°C
MLX90316LGO-BCG-000-TU	TSSOP-16 - Dual Die	-40°C to 150°C

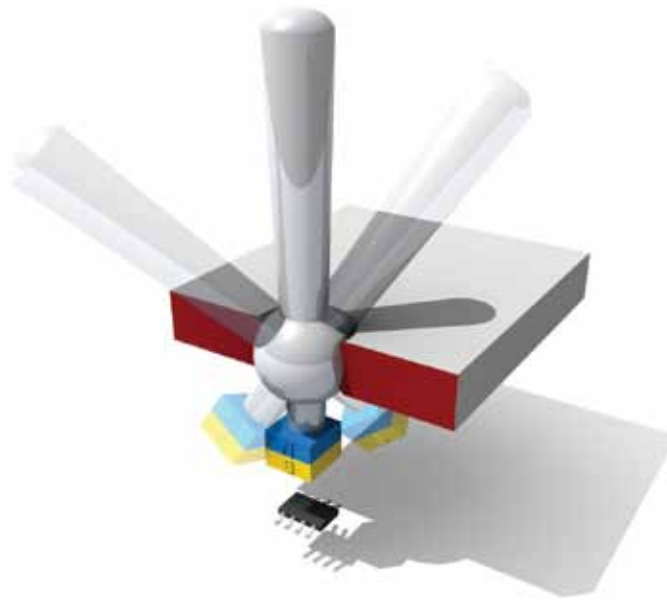


### Triaxis® Pre-Programmed 360 Degree Rotary Position Sensor (Gen. I)

MLX Order Number	Description	Temp Range
MLX90316EDC-BDG-100-RE	SOIC-8 - SPI	-40°C to 85°C
MLX90316EDC-BDG-100-TU	SOIC-8 - SPI	-40°C to 85°C
MLX90316KDC-BDG-100-RE	SOIC-8 - SPI	-40°C to 125°C
MLX90316KDC-BDG-100-TU	SOIC-8 - SPI	-40°C to 125°C
MLX90316LDC-BDG-100-RE	SOIC-8 - SPI	-40°C to 150°C
MLX90316LDC-BDG-100-TU	SOIC-8 - SPI	-40°C to 150°C
MLX90316EGO-BDG-100-RE	TSSOP-16 - Dual Die - SPI	-40°C to 85°C
MLX90316EGO-BDG-100-TU	TSSOP-16 - Dual Die - SPI	-40°C to 85°C
MLX90316KGO-BDG-100-RE	TSSOP-16 - Dual Die - SPI	-40°C to 125°C
MLX90316KGO-BDG-100-TU	TSSOP-16 - Dual Die - SPI	-40°C to 125°C
MLX90316LGO-BDG-100-RE	TSSOP-16 - Dual Die - SPI	-40°C to 150°C
MLX90316LGO-BDG-100-TU	TSSOP-16 - Dual Die - SPI	-40°C to 150°C
MLX90316LDC-BDG-102-RE	SOIC-8 - SPI - 75%AGC (Automatic Gain Control)	-40°C to 150°C
MLX90316LDC-BDG-102-TU	SOIC-8 - SPI - 75%AGC (Automatic Gain Control)	-40°C to 150°C
MLX90316KDC-BCG-200-RE	SOIC-8 - Ratiometric analog output - 10%VDD-90%VDD	-40°C to 125°C
MLX90316KDC-BCG-200-TU	SOIC-8 - Ratiometric analog output - 10%VDD-90%VDD	-40°C to 125°C
MLX90316KGO-BCG-200-RE	TSSOP-16 - Dual Die - Ratiometric analog output - 10%VDD-90%VDD	-40°C to 125°C
MLX90316KGO-BCG-200-TU	TSSOP-16 - Dual Die - Ratiometric analog output - 10%VDD-90%VDD	-40°C to 125°C
MLX90316KDC-BCG-300-RE	SOIC-8 - PWM Output - 1kHz - 10%DC-90%DC	-40°C to 125°C
MLX90316KDC-BCG-300-TU	SOIC-8 - PWM Output - 1kHz - 10%DC-90%DC	-40°C to 125°C
MLX90316KGO-BCG-300-RE	TSSOP-16 - Dual Die - PWM Output - 1kHz - 10%DC-90%DC	-40°C to 125°C
MLX90316KGO-BCG-300-TU	TSSOP-16 - Dual Die - PWM Output - 1kHz - 10%DC-90%DC	-40°C to 125°C

**Triaxis® Programmable Linear & 3D-Joystick Position Sensor featuring Ratiometric Analog, PWM & SPI Outputs (Gen. I)**

MLX Order Number	Description	Temp Range
MLX90333EDC-BCH-100-RE	SOIC-8 - SPI	-40°C to 85°C
MLX90333EDC-BCH-100-TU	SOIC-8 - SPI	-40°C to 85°C
MLX90333EDC-BCT-000-RE	SOIC-8 - Optimized Linearization Algorithm	-40°C to 85°C
MLX90333EDC-BCT-000-TU	SOIC-8 - Optimized Linearization Algorithm	-40°C to 85°C
MLX90333EDC-BCH-001-RE	SOIC-8 - Licensed IP	-40°C to 85°C
MLX90333EDC-BCH-001-TU	SOIC-8 - Licensed IP	-40°C to 85°C
MLX90333KDC-BCH-100-RE	SOIC-8 - SPI	-40°C to 125°C
MLX90333KDC-BCH-100-TU	SOIC-8 - SPI	-40°C to 125°C
MLX90333KDC-BCT-000-RE	SOIC-8 - Optimized Linearization Algorithm	-40°C to 125°C
MLX90333KDC-BCT-000-TU	SOIC-8 - Optimized Linearization Algorithm	-40°C to 125°C
MLX90333KDC-BCH-001-RE	SOIC-8 - Licensed IP	-40°C to 125°C
MLX90333KDC-BCH-001-TU	SOIC-8 - Licensed IP	-40°C to 125°C
MLX90333LDC-BCH-100-RE	SOIC-8 - SPI	-40°C to 150°C
MLX90333LDC-BCH-100-TU	SOIC-8 - SPI	-40°C to 150°C
MLX90333LDC-BCT-000-RE	SOIC-8 - Optimized Linearization Algorithm	-40°C to 150°C
MLX90333LDC-BCT-000-TU	SOIC-8 - Optimized Linearization Algorithm	-40°C to 150°C
MLX90333LDC-BCH-001-RE	SOIC-8 - Licensed IP	-40°C to 150°C
MLX90333LDC-BCH-001-TU	SOIC-8 - Licensed IP	-40°C to 150°C
MLX90333EGO-BCH-100-RE	TSSOP-16 - Dual Die - SPI	-40°C to 85°C
MLX90333EGO-BCH-100-TU	TSSOP-16 - Dual Die - SPI	-40°C to 85°C
MLX90333EGO-BCT-000-RE	TSSOP-16 - Dual Die - Optimized Linearization Algorithm (e.g. improved Dual-Die Correlation)	-40°C to 85°C
MLX90333EGO-BCT-000-TU	TSSOP-16 - Dual Die - Optimized Linearization Algorithm (e.g. improved Dual-Die Correlation)	-40°C to 85°C
MLX90333EGO-BCH-001-RE	SOIC-8 - Licensed IP	-40°C to 85°C
MLX90333EGO-BCH-001-TU	SOIC-8 - Licensed IP	-40°C to 85°C
MLX90333KGO-BCH-100-RE	TSSOP-16 - Dual Die - SPI	-40°C to 125°C
MLX90333KGO-BCH-100-TU	TSSOP-16 - Dual Die - SPI	-40°C to 125°C
MLX90333KGO-BCT-000-RE	TSSOP-16 - Dual Die - Optimized Linearization Algorithm (e.g. improved Dual-Die Correlation)	-40°C to 125°C
MLX90333KGO-BCT-000-TU	TSSOP-16 - Dual Die - Optimized Linearization Algorithm (e.g. improved Dual-Die Correlation)	-40°C to 125°C
MLX90333KGO-BCH-001-RE	SOIC-8 - Licensed IP	-40°C to 125°C
MLX90333KGO-BCH-001-TU	SOIC-8 - Licensed IP	-40°C to 125°C
MLX90333LGO-BCH-100-TU	TSSOP-16 - Dual Die - SPI	-40°C to 150°C
MLX90333LGO-BCH-100-RE	TSSOP-16 - Dual Die - SPI	-40°C to 150°C
MLX90333LGO-BCT-000-RE	TSSOP-16 - Dual Die - Optimized Linearization Algorithm (e.g. improved Dual-Die Correlation)	-40°C to 150°C
MLX90333LGO-BCT-000-TU	TSSOP-16 - Dual Die - Optimized Linearization Algorithm (e.g. improved Dual-Die Correlation)	-40°C to 150°C
MLX90333LGO-BCH-001-RE	SOIC-8 - Licensed IP	-40°C to 150°C
MLX90333LGO-BCH-001-TU	SOIC-8 - Licensed IP	-40°C to 150°C



**Triaxis® Programmable Rotary Position Sensor feat. SENT-2007 & SPI Protocols (Gen. I½)**

MLX Order Number	Description	Temp Range
MLX90324LDC-DBO-000-TU	SOIC-8 - SENT-2007	-40°C to 150°C
MLX90324LDC-DBO-000-RE	SOIC-8 - SENT-2007	-40°C to 150°C
MLX90324LDC-DBO-100-TU	SOIC-8 - SPI	-40°C to 150°C
MLX90324LDC-DBO-100-RE	SOIC-8 - SPI	-40°C to 150°C
MLX90324LGO-DBO-000-TU	TSSOP-16 - Dual Die - SENT-2007	-40°C to 150°C
MLX90324LGO-DBO-000-RE	TSSOP-16 - Dual Die - SENT-2007	-40°C to 150°C
MLX90324LGO-DBO-100-TU	TSSOP-16 - Dual Die - SPI	-40°C to 150°C
MLX90324LGO-DBO-100-RE	TSSOP-16 - Dual Die - SPI	-40°C to 150°C

**Triaxis® Programmable Rotary Position Sensor feat. Dual Matched Ratiometric Analog & PWM Outputs (Gen. I¾)**

MLX Order Number	Description	Temp Range
MLX90316LDC-BCS-000-TU	SOIC-8	-40°C to 150°C
MLX90316LDC-BCS-000-RE	SOIC-8	-40°C to 150°C

**Triaxis® Programmable Rotary & Linear Position Sensor feat. Ratiometric Analog & PWM Outputs (Gen. II)**

MLX Order Number	Description	Temp Range
MLX90360EDC-ACD-000-RE	SOIC-8	-40°C to 85°C
MLX90360EDC-ACD-000-TU	SOIC-8	-40°C to 85°C
MLX90360EGO-ACD-000-RE	TSSOP-16 - Dual Die	-40°C to 85°C
MLX90360EGO-ACD-000-TU	TSSOP-16 - Dual Die	-40°C to 85°C
MLX90360KDC-ACD-000-RE	SOIC-8	-40°C to 125°C
MLX90360KDC-ACD-000-TU	SOIC-8	-40°C to 125°C
MLX90360KGO-ACD-000-RE	TSSOP-16 - Dual Die	-40°C to 125°C
MLX90360KGO-ACD-000-TU	TSSOP-16 - Dual Die	-40°C to 125°C
MLX90360LDC-ACD-000-RE	SOIC-8	-40°C to 150°C
MLX90360LDC-ACD-000-TU	SOIC-8	-40°C to 150°C
MLX90360LGO-ACD-000-RE	TSSOP-16 - Dual Die	-40°C to 150°C
MLX90360LGO-ACD-000-TU	TSSOP-16 - Dual Die	-40°C to 150°C



**Triaxis® Pre-Programmed 360 Degree Rotary Position Sensor (Gen. II)**

MLX Order Number	Description	Temp Range
MLX90360LDC-ACD-200-RE	SOIC-8 - Ratiometric analog output - 10%VDD-90%VDD	-40°C to 150°C
MLX90360LDC-ACD-200-TU	SOIC-8 - Ratiometric analog output - 10%VDD-90%VDD	-40°C to 150°C

**Triaxis® Programmable Rotary, Linear & 3D Position Sensor feat. SPI Protocol (Gen. II)**

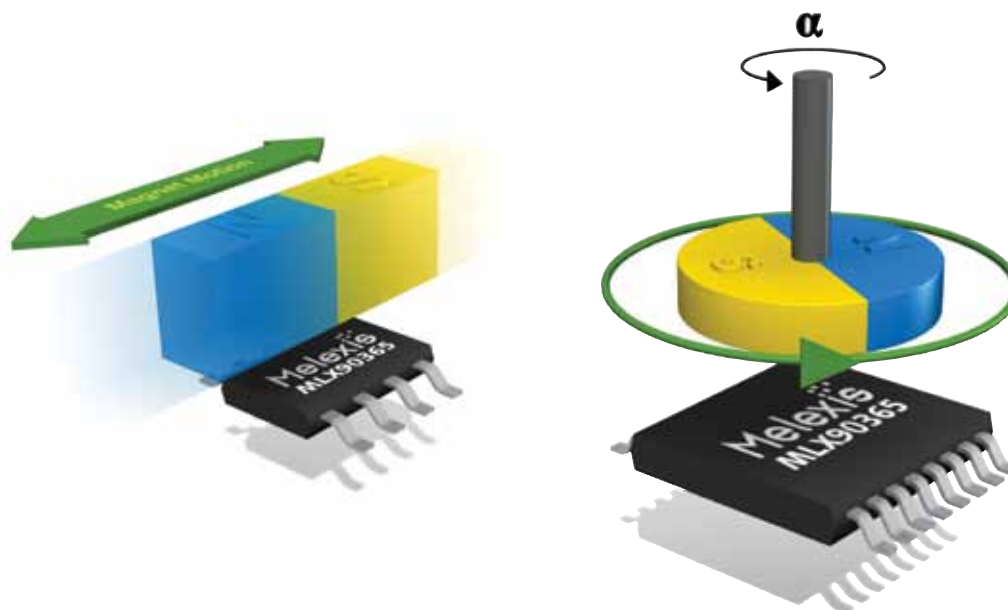
MLX Order Number	Description	Temp Range
MLX90363EDC-ABB-000-RE	SOIC-8	-40°C to 85°C
MLX90363EDC-ABB-000-TU	SOIC-8	-40°C to 85°C
MLX90363EGO-ABB-000-RE	TSSOP-16 - Dual Die	-40°C to 85°C
MLX90363EGO-ABB-000-TU	TSSOP-16 - Dual Die	-40°C to 85°C
MLX90363KDC-ABB-000-RE	SOIC-8	-40°C to 125°C
MLX90363KDC-ABB-000-TU	SOIC-8	-40°C to 125°C
MLX90363KGO-ABB-000-RE	TSSOP-16 - Dual Die	-40°C to 125°C
MLX90363KGO-ABB-000-TU	TSSOP-16 - Dual Die	-40°C to 125°C
MLX90363LDC-ABB-000-RE	SOIC-8	-40°C to 150°C
MLX90363LDC-ABB-000-TU	SOIC-8	-40°C to 150°C
MLX90363LGO-ABB-000-RE	TSSOP-16 - Dual Die	-40°C to 150°C
MLX90363LGO-ABB-000-TU	TSSOP-16 - Dual Die	-40°C to 150°C

**Triaxis® Programmable Rotary & Linear Position Sensor feat. Ratiometric Analog & PWM Outputs (Gen II½)**

MLX Order Number	Description	Temp Range
MLX90364LVS-ADD-200-TU	Dual Mold Package for "No-PCB" design Straight Leads 1.27 mm	-40°C to 150°C
MLX90364LVS-ADD-200-RE	Dual Mold Package for "No-PCB" design Straight Leads 1.27 mm	-40°C to 150°C
MLX90364LVS-ADD-200-RX	Dual Mold Package for "No-PCB" design Straight Leads 1.27 mm	-40°C to 150°C
MLX90364LVS-ADD-201-RE	Dual Mold Package for "No-PCB" design Trimmed & Formed Leads 2.54 mm - Std #1	-40°C to 150°C
MLX90364LVS-ADD-201-RX	Dual Mold Package for "No-PCB" design Trimmed & Formed Leads 2.54 mm - Std #1	-40°C to 150°C
MLX90364LVS-ADD-203-RE	Dual Mold Package for "No-PCB" design Trimmed & Formed Leads 2.54 mm - Std #2	-40°C to 150°C
MLX90364LVS-ADD-203-RX	Dual Mold Package for "No-PCB" design Trimmed & Formed Leads 2.54 mm - Std #2	-40°C to 150°C
MLX90365EDC-ABD-000-RE	SOIC-8	-40°C to 85°C
MLX90365EDC-ABD-000-TU	SOIC-8	-40°C to 85°C
MLX90365EGO-ABD-000-RE	TSSOP-16 - Dual Die	-40°C to 85°C
MLX90365EGO-ABD-000-TU	TSSOP-16 - Dual Die	-40°C to 85°C
MLX90365KDC-ABD-000-RE	SOIC-8	-40°C to 125°C
MLX90365KDC-ABD-000-TU	SOIC-8	-40°C to 125°C
MLX90365KGO-ABD-000-RE	TSSOP-16 - Dual Die	-40°C to 125°C
MLX90365KGO-ABD-000-TU	TSSOP-16 - Dual Die	-40°C to 125°C
MLX90365LDC-ABD-000-RE	SOIC-8	-40°C to 150°C
MLX90365LDC-ABD-000-TU	SOIC-8	-40°C to 150°C
MLX90365LGO-ABD-000-RE	TSSOP-16 - Dual Die	-40°C to 150°C
MLX90365LGO-ABD-000-TU	TSSOP-16 - Dual Die	-40°C to 150°C

Triaxis® Pre-Programmed 360 Degree Rotary Position Sensor (Gen. II½)

MLX Order Number	Description	Temp Range
MLX90365LDC-ABD-200-RE	SOIC-8 - Ratiometric analog output - 10%VDD-90%VDD	-40°C to 150°C
MLX90365LDC-ABD-200-TU	SOIC-8 - Ratiometric analog output - 10%VDD-90%VDD	-40°C to 150°C



Triaxis® Programmable Rotary & Linear Position Sensor feat. SENT 2010 Protocol (Gen II½)

MLX Order Number	Description	Temp Range
MLX90366LVS-ADS-200-TU	Dual Mold Package for "No-PCB" design Straight Leads 1.27 mm	-40°C to 150°C
MLX90366LVS-ADS-200-RE	Dual Mold Package for "No-PCB" design Straight Leads 1.27 mm	-40°C to 150°C
MLX90366LVS-ADS-200-RX	Dual Mold Package for "No-PCB" design Straight Leads 1.27 mm	-40°C to 150°C
MLX90366LVS-ADS-201-RE	Dual Mold Package for "No-PCB" design Trimmed & Formed Leads 2.54 mm - Std #1	-40°C to 150°C
MLX90366LVS-ADS-201-RX	Dual Mold Package for "No-PCB" design Trimmed & Formed Leads 2.54 mm - Std #1	-40°C to 150°C
MLX90366LVS-ADS-203-RE	Dual Mold Package for "No-PCB" design Trimmed & Formed Leads 2.54 mm - Std #2	-40°C to 150°C
MLX90366LVS-ADS-203-RX	Dual Mold Package for "No-PCB" design Trimmed & Formed Leads 2.54 mm - Std #2	-40°C to 150°C
MLX90367EDC-ABS-090-RE	SOIC-8	-40°C to 85°C
MLX90367EDC-ABS-090-TU	SOIC-8	-40°C to 85°C
MLX90367EGO-ABS-090-RE	TSSOP-16 - Dual Die	-40°C to 85°C
MLX90367EGO-ABS-090-TU	TSSOP-16 - Dual Die	-40°C to 85°C
MLX90367KDC-ABS-090-RE	SOIC-8	-40°C to 125°C
MLX90367KDC-ABS-090-TU	SOIC-8	-40°C to 125°C
MLX90367KGO-ABS-090-RE	TSSOP-16 - Dual Die	-40°C to 125°C
MLX90367KGO-ABS-090-TU	TSSOP-16 - Dual Die	-40°C to 125°C
MLX90367LDC-ABS-090-RE	SOIC-8	-40°C to 150°C
MLX90367LDC-ABS-090-TU	SOIC-8	-40°C to 150°C
MLX90367LGO-ABS-090-RE	TSSOP-16 - Dual Die	-40°C to 150°C
MLX90367LGO-ABS-090-TU	TSSOP-16 - Dual Die	-40°C to 150°C

**Triaxis® Programmable Rotary & Linear Position Sensor featuring SENT-2007/2010/2014 Protocol (Gen. II¾)**

MLX Order Number	Description	Temp Range
MLX90366LVS-ADT-200-TU	Dual Mold Package for "No-PCB" design Straight Leads 1.27 mm	-40°C to 150°C
MLX90366LVS-ADT-200-RE	Dual Mold Package for "No-PCB" design Straight Leads 1.27 mm	-40°C to 150°C
MLX90366LVS-ADT-200-RX	Dual Mold Package for "No-PCB" design Straight Leads 1.27 mm	-40°C to 150°C
MLX90366LVS-ADT-201-RE	Dual Mold Package for "No-PCB" design Trimmed & Formed Leads 2.54 mm - Std #1	-40°C to 150°C
MLX90366LVS-ADT-201-RX	Dual Mold Package for "No-PCB" design Trimmed & Formed Leads 2.54 mm - Std #1	-40°C to 150°C
MLX90366LVS-ADT-203-RE	Dual Mold Package for "No-PCB" design Trimmed & Formed Leads 2.54 mm - Std #2	-40°C to 150°C
MLX90366LVS-ADT-203-RX	Dual Mold Package for "No-PCB" design Trimmed & Formed Leads 2.54 mm - Std #2	-40°C to 150°C
MLX90367EDC-ABT-090-RE	SOIC-8	-40°C to 85°C
MLX90367EDC-ABT-090-TU	SOIC-8	-40°C to 85°C
MLX90367EGO-ABT-090-RE	TSSOP-16 - Dual Die	-40°C to 85°C
MLX90367EGO-ABT-090-TU	TSSOP-16 - Dual Die	-40°C to 85°C
MLX90367KDC-ABT-090-RE	SOIC-8	-40°C to 125°C
MLX90367KDC-ABT-090-TU	SOIC-8	-40°C to 125°C
MLX90367KGO-ABT-090-RE	TSSOP-16 - Dual Die	-40°C to 125°C
MLX90367KGO-ABT-090-TU	TSSOP-16 - Dual Die	-40°C to 125°C
MLX90367LDC-ABT-090-RE	SOIC-8	-40°C to 150°C
MLX90367LDC-ABT-090-TU	SOIC-8	-40°C to 150°C
MLX90367LGO-ABT-090-RE	TSSOP-16 - Dual Die	-40°C to 150°C
MLX90367LGO-ABT-090-TU	TSSOP-16 - Dual Die	-40°C to 150°C

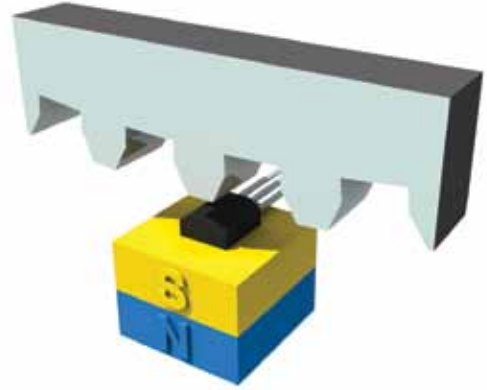
**Triaxis® Pre-Programmed Hi-Speed Resolver feat. Analog Output (Gen. I)**

MLX Order Number	Description	Temp Range
MLX91204KDC-ABA-001-TU	SOIC-8 - Analog Sine/Cosine - Sensitivity = 16-34 V/T	-40°C to 125°C
MLX91204KDC-ABA-001-RE	SOIC-8 - Analog Sine/Cosine - Sensitivity = 16-34 V/T	-40°C to 125°C
MLX91204KDC-ABA-002-TU	SOIC-8 - Analog Sine/Cosine - Sensitivity = 32-68 V/T	-40°C to 125°C
MLX91204KDC-ABA-002-RE	SOIC-8 - Analog Sine/Cosine - Sensitivity = 32-68 V/T	-40°C to 125°C
MLX91204KDC-ABA-003-TU	SOIC-8 - Analog Sine/Cosine - Sensitivity = 64-136 V/T	-40°C to 125°C
MLX91204KDC-ABA-003-RE	SOIC-8 - Analog Sine/Cosine - Sensitivity = 64-136 V/T	-40°C to 125°C

**Triaxis® Programmable Hi-Speed Resolver feat. Analog Output (Gen. II)**

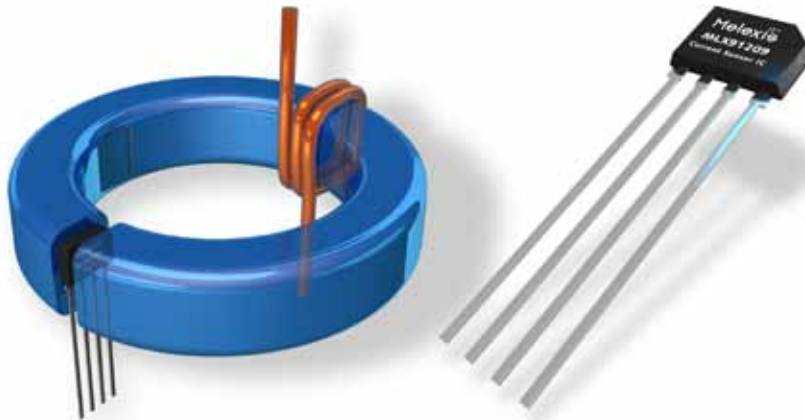
MLX Order Number	Description	Temp Range
MLX90380LDC-ABA-###-RE	SOIC-8 - Settings according to the code ###	-40°C to 150°C
MLX90380LDC-ABA-###-RE	TSSOP-16 - Dual Die - Settings according to the code ###	-40°C to 150°C
MLX90380LVS-ABA-###-BU	Dual Mold Package for "No-PCB" design Straight Leads 1.27 mm- Settings according to the code ###	-40°C to 150°C





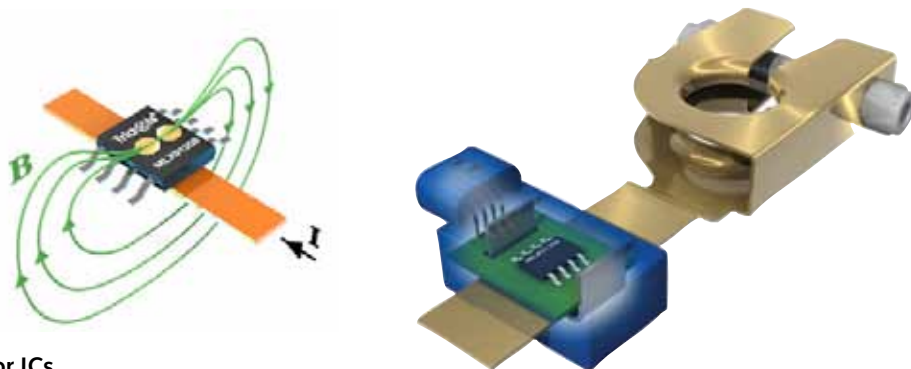
### Hall effect Geartooth Sensor ICs

MLX Order Number	Description	Temp Range
MLX90217LUA-CAA-000-BU	SIP-3 (TO-92UA) - Zero-Speed Peak Detector Geartooth Speed Sensor 1.8 mT < Hysteresis < 10 mT	-40°C to 150°C
MLX90217LUA-CCA-000-BU	SIP-3 (TO-92UA) - Zero-Speed Peak Detector Geartooth Speed Sensor 3.8 mT < Hysteresis < 12 mT	-40°C to 150°C
MLX90254LVA-BBA-000-BU	SIP-4 (1.2 mm) - AC-Coupled Differential Geartooth Sensor 20Hz < Frequency < 10kHz	-40°C to 150°C
MLX90294GVA-ABB-000-RE	SIP-4 (1.2 mm) - Camshaft Sensor feat. True Power On	-40°C to 160°C
MLX90294GVA-ABB-001-RE	SIP-4 (1.2 mm) - Crankshaft Sensor featuring Zero-speed & Direction Detection	-40°C to 160°C



### Conventional Current Sensor ICs

MLX Order Number	Description	Temp Range
MLX91207LDC-CAA-005-RE	Programmable Current Sensor IC in SOIC8 - 15-45 mV/T (25 mV/mT) - Analog Output	-40°C to 150°C
MLX91207LDC-CAA-005-TU	Programmable Current Sensor IC in SOIC8 - 15-45 mV/T (25 mV/mT) - Analog Output	-40°C to 150°C
MLX91207LDC-CAA-007-RE	Programmable Current Sensor IC in SOIC8 - 5-20 mV/T (10 mV/mT) - Analog Output	-40°C to 150°C
MLX91207LDC-CAA-007-TU	Programmable Current Sensor IC in SOIC8 - 5-20 mV/T (10 mV/mT) - Analog Output	-40°C to 150°C
MLX91207LDC-CAA-015-RE	Programmable Current Sensor IC in SOIC8 - 15-45 mV/T (25 mV/mT) - Analog Output - Ratiometry disabled	-40°C to 150°C
MLX91207LDC-CAA-015-TU	Programmable Current Sensor IC in SOIC8 - 15-45 mV/T (25 mV/mT) - Analog Output - Ratiometry disabled	-40°C to 150°C
MLX91209LVA-CAA-000-BU	High Speed Programmable Current Sensor IC in VA - 5-150mV/mT (50mV/mT) - Analog Output	-40°C to 150°C
MLX91209LVA-CAA-000-CR	High Speed Programmable Current Sensor IC in VA - 5-150mV/mT (50mV/mT) - Analog Output	-40°C to 150°C



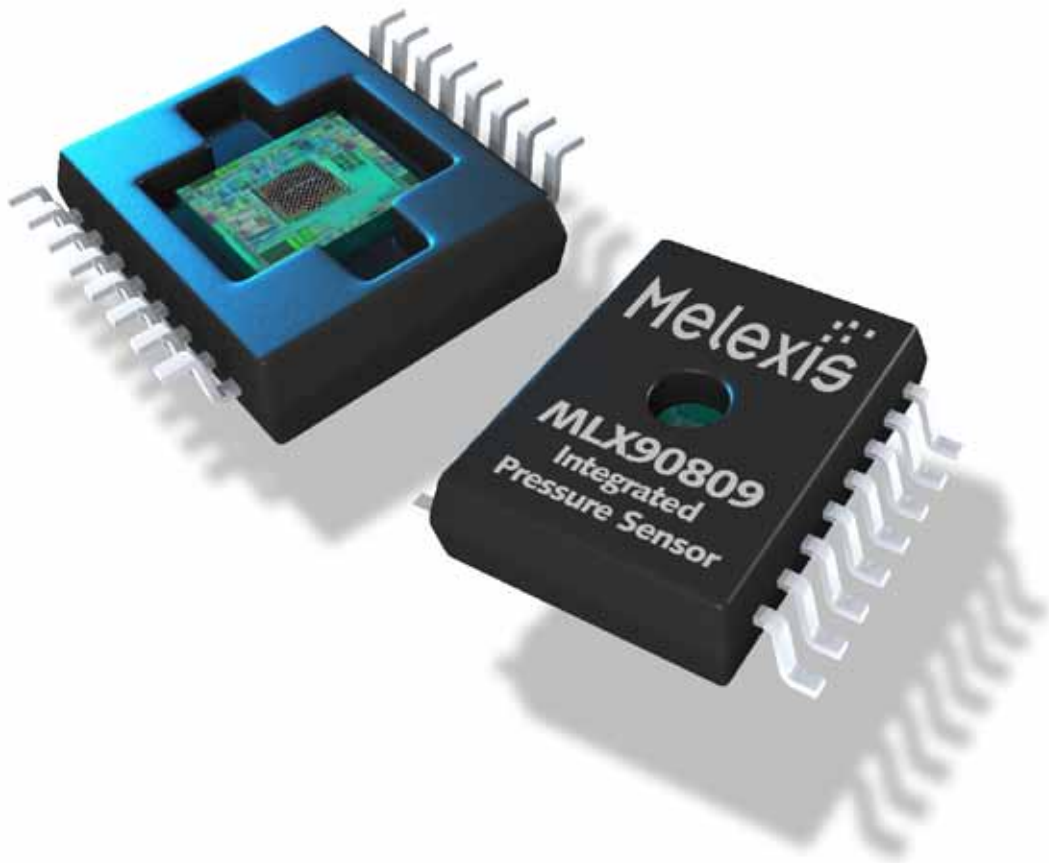
### Triaxis® Current Sensor ICs

MLX Order Number	Description	Temp Range
CSA-1VG	Triaxis® Current Sensor IC in SOIC8 - (280mV/mT) - Analog Output	-40°C to 125°C
MLX91205KDC-AAL-003-RE	Triaxis® Current Sensor IC in SOIC8 - (280mV/mT) - Analog Output	-40°C to 125°C
MLX91205KDC-AAL-003-TU	Triaxis® Current Sensor IC in SOIC8 - (280mV/mT) - Analog Output	-40°C to 125°C
MLX91205KDC-AAH-003-RE	Triaxis® Current Sensor IC in SOIC8 - (100mV/mT) - Analog Output	-40°C to 125°C
MLX91205KDC-AAH-003-TU	Triaxis® Current Sensor IC in SOIC8 - (100mV/mT) - Analog Output	-40°C to 125°C
MLX91206LDC-CAL-001-RE	Programmable Triaxis® Current Sensor IC in SOIC8 - 460-700 mV/mT (580mV/mT) - Analog Output	-40°C to 150°C
MLX91206LDC-CAL-001-TU	Programmable Triaxis® Current Sensor IC in SOIC8 - 460-700 mV/mT (580mV/mT) - Analog Output	-40°C to 150°C
MLX91206LDC-CAL-002-RE	Programmable Triaxis® Current Sensor IC in SOIC8 - 300-470 mV/mT (380mV/mT) - Analog Output	-40°C to 150°C
MLX91206LDC-CAL-002-TU	Programmable Triaxis® Current Sensor IC in SOIC8 - 300-470 mV/mT (380mV/mT) - Analog Output	-40°C to 150°C
MLX91206LDC-CAL-003-RE	Programmable Triaxis® Current Sensor IC in SOIC8 - 200-310 mV/mT (250mV/mT) - Analog Output	-40°C to 150°C
MLX91206LDC-CAL-003-TU	Programmable Triaxis® Current Sensor IC in SOIC8 - 200-310 mV/mT (250mV/mT) - Analog Output	-40°C to 150°C
MLX91206LDC-CAH-001-RE	Programmable Triaxis® Current Sensor IC in SOIC8 - 210-330 mV/mT (270mV/mT) - Analog Output	-40°C to 150°C
MLX91206LDC-CAH-001-TU	Programmable Triaxis® Current Sensor IC in SOIC8 - 210-330 mV/mT (270mV/mT) - Analog Output	-40°C to 150°C
MLX91206LDC-CAH-002-RE	Programmable Triaxis® Current Sensor IC in SOIC8 - 130-220 mV/mT (170mV/mT) - Analog Output	-40°C to 150°C
MLX91206LDC-CAH-002-TU	Programmable Triaxis® Current Sensor IC in SOIC8 - 130-220 mV/mT (170mV/mT) - Analog Output	-40°C to 150°C
MLX91206LDC-CAH-003-RE	Programmable Triaxis® Current Sensor IC in SOIC8 - 80-140 mV/mT (110mV/mT) - Analog Output	-40°C to 150°C
MLX91206LDC-CAH-003-TU	Programmable Triaxis® Current Sensor IC in SOIC8 - 80-140 mV/mT (110mV/mT) - Analog Output	-40°C to 150°C
MLX91206LDC-CAH-004-RE	Programmable Triaxis® Current Sensor IC in SOIC8 - 60-110 mV/mT (77.5mV/mT) - Analog Output	-40°C to 150°C
MLX91206LDC-CAH-004-TU	Programmable Triaxis® Current Sensor IC in SOIC8 - 60-110 mV/mT (77.5mV/mT) - Analog Output	-40°C to 150°C
MLX91206LDC-CAH-104-RE	Programmable Triaxis® Current Sensor IC in SOIC8 - 0.5-5 %DC/mT (2.2% DC/mT) - PWM Output	-40°C to 150°C
MLX91206LDC-CAH-104-TU	Programmable Triaxis® Current Sensor IC in SOIC8 - 0.5-5 %DC/mT (2.2% DC/mT) - PWM Output	-40°C to 150°C
MLX91208LDC-CAH-RE	High Speed Programmable Triaxis® Current Sensor IC in SOIC8 - 50-300mV/mT (100mV/mT) - Analog Output	-40°C to 150°C
MLX91208LDC-CAH-TU	High Speed Programmable Triaxis® Current Sensor IC in SOIC8 - 50-300mV/mT (100mV/mT) - Analog Output	-40°C to 150°C
MLX91208LDC-CAL-RE	High Speed Programmable Triaxis® Current Sensor IC in SOIC8 - 100-700mV/mT (250mV/mT) - Analog Output	-40°C to 150°C
MLX91208LDC-CAL-TU	High Speed Programmable Triaxis® Current Sensor IC in SOIC8 - 100-700mV/mT (250mV/mT) - Analog Output	-40°C to 150°C

## Pressure Sensors

### Pressure Sensors

MLX Order Number	Description	Temp Range
MLX90210CUF-AAA-000-WB	Pressure Sensor, 0-1.0 bar	0°C to +70°C
MLX90807LUF-AAA-000-WB	Relative Integrated Pressure Sensor, 80-140 mBar Full Span	-40°C to 150°C
MLX90807LUF-CAA-001-WB	Relative Integrated Pressure Sensor, 0.4-2 Bar Full Span	-40°C to 150°C
MLX90807LUF-CBA-002-WB	Relative Integrated Pressure Sensor, 2-8 Bar Full Span	-40°C to 150°C
MLX90807LUF-CCA-003-WB	Relative Integrated Pressure Sensor, 8-15 Bar Full Span	-40°C to 150°C
MLX90807LUF-CDA-004-WB	Relative Integrated Pressure Sensor, 15-45 Bar Full Span	-40°C to 150°C
MLX90808LUF-CAA-001-WB	Absolute Integrated Pressure Sensor, 0.6-3 Bar Full Span	-40°C to 150°C
MLX90808LUF-CBA-002-WB	Absolute Integrated Pressure Sensor, 3-8 Bar Full Span	-40°C to 150°C
MLX90808LUF-CCA-003-WB	Absolute Integrated Pressure Sensor, 8-15 Bar Full Span	-40°C to 150°C
MLX90808LUF-CDA-004-WB	Absolute Integrated Pressure Sensor, 15-45 Bar Full Span	-40°C to 150°C
MLX90809LXG-EAD-000-RE	Packaged factory calibrated integrated relative pressure sensor delivering a ratiometric analog or SENT digital signal	-40°C to 150°C

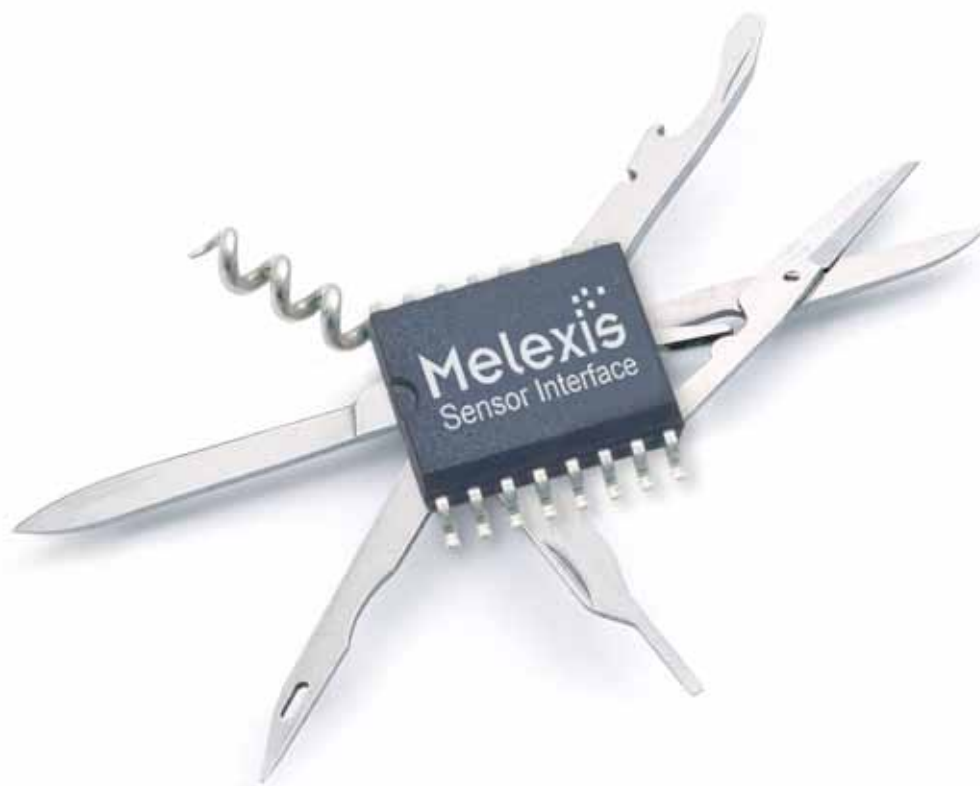




## Sensor Interface ICs

### Sensor Interface ICs

MLX Order Number	Description	Temp Range
MLX90308LDF-DAA-000-RE	Programmable Sensor Interface	-40°C to 150°C
MLX90308LDF-DAA-000-TU	Programmable Sensor Interface	-40°C to 150°C
MLX90314LDF-BAA-000-RE	High Gain Programmable Sensor Interface	-40°C to 150°C
MLX90314LDF-BAA-000-TU	High Gain Programmable Sensor Interface	-40°C to 150°C
MLX90320LFR-BBA-000-RE	Automotive small sensor interface	-40°C to 150°C
MLX90320LFR-BBA-000-TU	Automotive small sensor interface	-40°C to 150°C
MLX90320LUF-BBA-000-WB	Automotive small sensor interface	-40°C to 150°C
MLX90323KDF-AAA-000-RE	4-20 mA output Sensor Interface	-40°C to 125°C
MLX90323KDF-AAA-000-TU	4-20 mA output Sensor Interface	-40°C to 125°C
MLX90326LFR-AAA-000-RE	Industrial 0-5V analog sensor interface	-40°C to 150°C
MLX90326LFR-AAA-000-TU	Industrial 0-5V analog sensor interface	-40°C to 150°C



## Sensor Products - Hardware and Tools

### IC Programmers

MLX Order Number	Description	Contents
PTC04	Programmer for Melexis PTC devices: 90215, 90244, 90251, 90277 with additional Board: 90316, 90264, 90275 and Microcontroller Products	Main board; PTC04-DB-HALL01 in metal case, Power supply 100W switching adapter, USB and RS232 cable, CD
PTC04-DB-Calib	Supporting daughter board for calibration of PTC04 programmer	Additional board to mount into a PTC04
PTC04-DB-Hall02	Supporting daughter board to program 90275, 90264 on a PTC04 programmer	Additional board to mount into a PTC04
PTC04-DB-Hall03	Daughter board for mounting in PTC-04 programmer. Needed for devices : MLX90288; MLX34102	Additional board to mount into PTC04
PTC04-DB-90316	Daughter board for PTC-04 programmer for MLX90316 Hall sensor	Additional board to mount into PTC04
PTC04-DB-922xx	Supporting daughter board to interface with the programmable switch & latch family	Additional board to mount into PTC04
PTC04-DB-DEBUG	Universal debugging daughter board	Additional board to mount into PTC04
PTC-testbench MLX90316	Testbench for MLX90316	Additional board to mount into PTC04
PTC-testbench magnetic	Testbench for magnetic devices	Includes 2 magnets and socket for MLX90316"
PTC04-DB-FL	Supporting daughter board board for supporting LIN products on a PTC04 programmer	Additional board to mount into PTC04
PTC04-DB-Pressure01	Daughter board for mounting in PTC-04 programmer	Needed for devices MLX90807, MLX90808, MLX90320, MLX90328
PTC04 Sensor Multi Calibration Board	Allows calibration of sensors in parallel	Extension board for PTC-04



### Evaluation Boards and Development Kits

MLX Order Number	Description	Contents
DVK91205	Development kit to evaluate the current sensors MLX91205	Sensors, PCB's and 2 shields. The kit does not include a busbar.
EVB90308	Evaluation board for MLX90308 Sensor Interface	Evaluation board with SOIC socket, serial interface cable, data-sheet and programming manual, software, (5) 90308 samples. Compatible with MLX90308/MLX90314/MLX90323
EVB90314	Evaluation Board for MLX90314	Evaluation board with SOIC socket, serial interface cable, datasheet and programming manual (on diskette), software, (5) 90314 samples
EVB90316-DC	Evaluation board for MLX90316 rotary position Sensor	Evaluation board with pre-programmed MLX90316KDC-PPA with reference application diagram and magnetic knob
DMB90316	Demonstration board for MLX90316	EVB90316-DC with 9V battery holder and DVM display
EVB90316-GO	Evaluation board for MLX90316 rotary position Sensor	Evaluation board with pre-programmed MLX90316KGO-PPA with reference application diagram and magnetic knob
EVB90333-DC	Evaluation Board for MLX90333 Programmable Linear or 3D-Joystick Position Sensor	Evaluation Board with pre-programmed MLX90333KDC-PPA with reference application diagram and magnetic knob

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## Wireless

For more than ten years, the Wireless Business Unit of Melexis successfully brought short range connectivity and identification solutions to the markets with its leading edge RF and RFID ICs. The frequency coverage of our wireless products is from a few kHz up to 950MHz.

Our latest product generation brings even more innovation to our customers and provides them with highly integrated solutions. In the automotive area, our Wireless products are widely used in Remote/Passive Keyless Entry (RKE/PKE) and Tire Pressure Monitoring Systems (TPMS). Beside providing regular automotive qualified RF transmitters and receivers, RFID immobilizers, Near Field Communication (NFC) transceivers and pressure sensors,

Melexis combines these RF, RFID, sensing and high voltage technologies into unique “systems on chip”. Thus, we are providing our customers with highly differentiated products. Melexis pushes for a wider standardization of radio protocols as well as of encryption algorithms for RKE/ PKE/ TPMS.

Our objective is to reduce system cost and to increase the inter-operability of radio chips. In industrial markets, we provide our ICs in home and building automation equipment like garage door openers, security systems, access control and Automatic Meter Reading (AMR).

In the consumer market, our RFICs are used in remote controls and our RFID technology is successfully integrated in NFC platforms for mobile phones.

Our new targeted field is the medical sector for which we provide high-end medical monitoring and control solutions.

An open mindset to understand our customer challenges and provide valuable support, a strong system and application knowledge, a large capabilities spectrum to convert requirements into “systems on chip” are part of our core competencies.

Combined with the sensing expertise available within Melexis, the Wireless Business Unit builds a market leading position in the Wireless Sensing area.





## Near Field Communication (NFC)

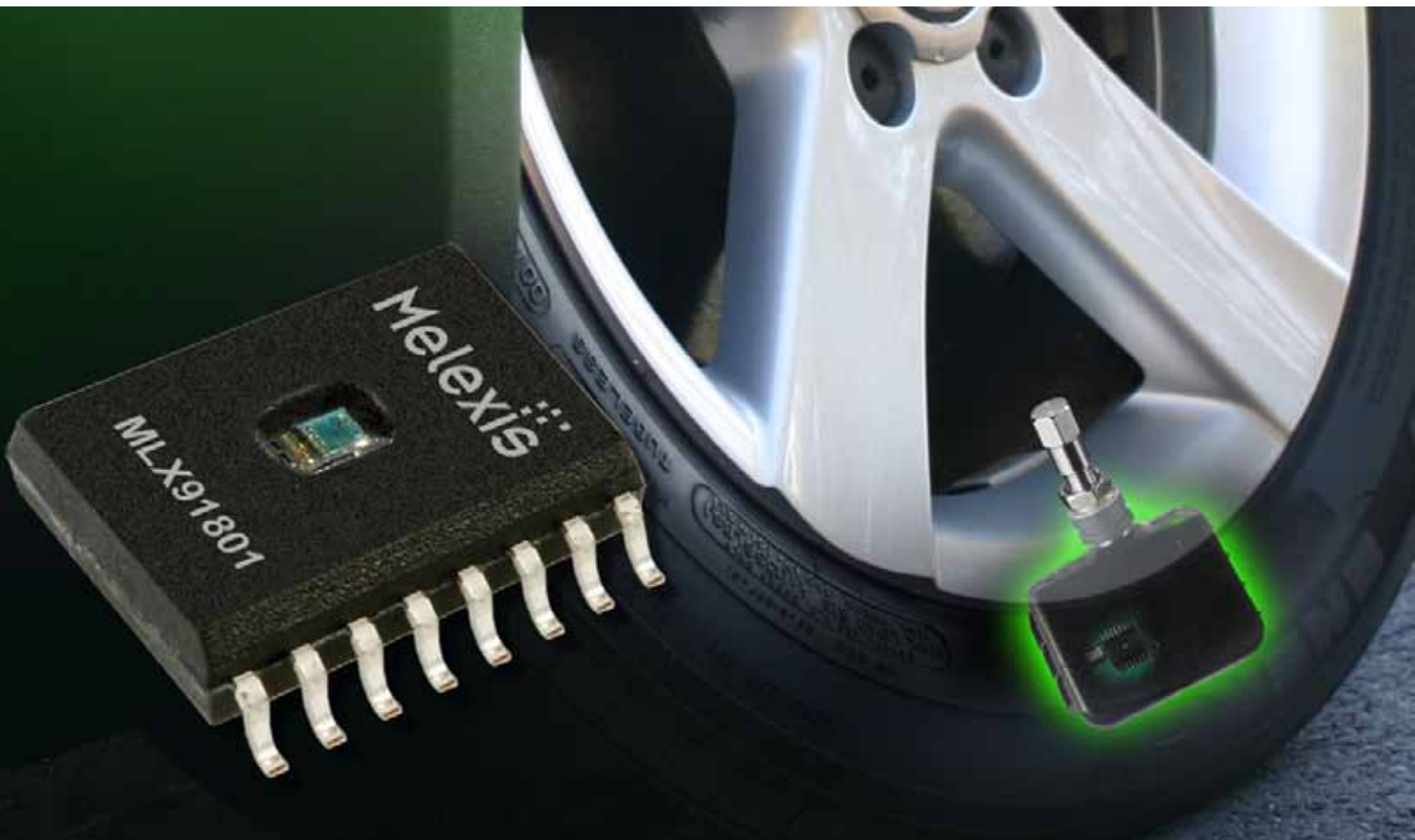
### NFC for car access and sharing

MLX Order Number	Description	Temp Range
MLX90132RLQ-ADA-000-RE	Automotive 13.56MHz NFC / RFID Transceiver	-40°C to 105°C
MLX90132RLQ-ADA-000-TU	Automotive 13.56MHz NFC / RFID Transceiver	-40°C to 105°C

## Tire Pressure Monitoring System (TPMS)

### Tire Pressure Monitoring Sensor

MLX Order Number	Description	Temp Range
MLX71122RLQ-BAA-000-TU	300 to 930MHz FSK/ASK Receiver multi channel, SPI programmable	-40°C to 105°C
MLX71122RLQ-BAA-000-RE	301 to 930MHz FSK/ASK Receiver multi channel, SPI programmable	-40°C to 105°C
MLX72013KDC-AAA-000-TU	433MHz FSK/ ASK high power Transmitter	-40°C to 125°C
MLX72013KDC-AAA-000-RE	433MHz FSK/ ASK high power Transmitter	-40°C to 125°C
TH72005KLD-BAA-000-RE	315MHz FSK/ASK Transmitter	-40°C to 125°C
TH72015KLD-BAA-000-TU	433MHz FSK/ASK Transmitter	-40°C to 125°C
TH72015KLD-BAA-000-RE	433MHz FSK/ASK Transmitter	-40°C to 125°C
MLX91801KXZ-AAA-000-RE	Low Power system-in-Package for TPMS 100...450kPa, 100...800kPa, 100...1400kPa	-40°C to 125°C
MLX91801KXZ-AAA-000-TU	Low Power system-in-Package for TPMS 100...450kPa, 100...800kPa, 100...1400kPa	-40°C to 125°C
MLX91802KXZ-DBU-000-TU	Tire Pressure Monitor Sensor EEPROM-configurable Application-Ready 100...1400 kPa	-40°C to 125°
MLX91802KXZ-DBU-000-RE	Tire Pressure Monitor Sensor EEPROM-configurable Application-Ready 100...1400 kPa	-40°C to 125°



## Wireless Automotive Entry & Go

### Immobilizers

MLX Order Number	Description	Temp Range
MLX90109CDC-AAA-000-RE	125 kHz RFID Reader IC	0°C to 70°C
MLX90109EDC-AAA-000-RE	125 kHz RFID Reader IC	-40°C to 85°C

### RKE and TPMS Solutions - Car Side

MLX Order Number	Description	Temp Range
MLX71120KLQ-AAA-000-TU	300 to 930MHz FSK/ASK Receiver Multi-band, single channel	-40°C to 125°C
MLX71120KLQ-AAA-000-RE	300 to 930MHz FSK/ASK Receiver Multi-band, single channel	-40°C to 125°C
MLX71122RLQ-BAA-000-TU	27 to 930MHz FSK/ASK Receiver multi channel, SPI programmable	-40°C to 105°C
MLX71122RLQ-BAA-000-RE	27 to 930MHz FSK/ASK Receiver multi channel, SPI programmable	-40°C to 105°C

### RKE and TPMS Solutions - Key Side

MLX Order Number	Description	Temp Range
MLX72013KDC-AAA-000-TU	433MHz FSK/ ASK high power Transmitter	-40°C to 125°C
MLX72013KDC-AAA-000-RE	433MHz FSK/ ASK high power Transmitter	-40°C to 125°C
TH72005KLD-BAA-000-TU	315MHz FSK/ASK Transmitter	-40°C to 150°C
TH72005KLD-BAA-000-RE	315MHz FSK/ASK Transmitter	-40°C to 150°C
TH72015KLD-BAA-000-TU	433MHz FSK/ASK Transmitter	-40°C to 150°C
TH72015KLD-BAA-000-RE	433MHz FSK/ASK Transmitter	-40°C to 150°C
TH72035KLD-BAA-000-TU	868/915MHz FSK/ASK Transmitter	-40°C to 150°C
TH72035KLD-BAA-000-RE	868/915MHz FSK/ASK Transmitter	-40°C to 150°C



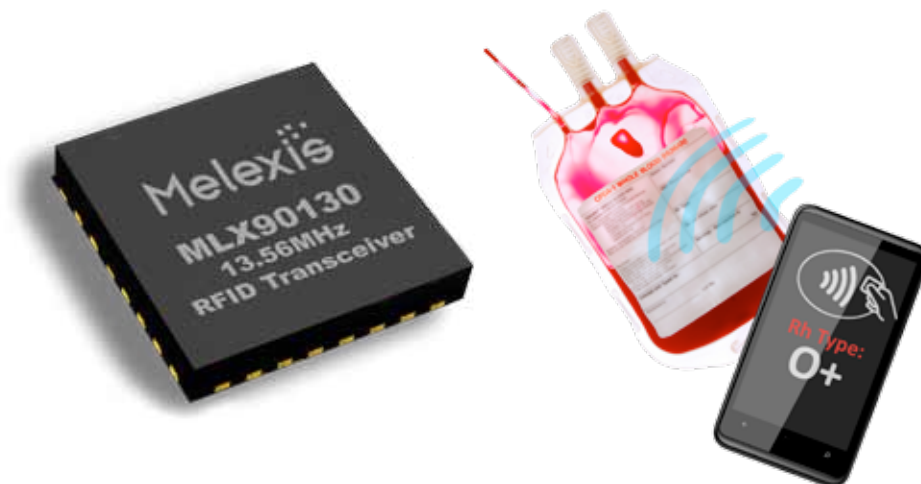
## Wireless Multi-Market & Sensing

### RFIC Receivers: 27 to 990MHz

MLX Order Number	Description	Temp Range
TH71101ENE-CAA-000-TR	315/433MHz FSK/ASK Receiver Single-Conversion Version	-40°C to 85°C
TH71101ENE-CAA-000-RE	315/433MHz FSK/ASK Receiver Single-Conversion Version	-40°C to 85°C
TH71102ENE-CAA-000-TR	315/433MHz FSK/ASK Receiver Double-Conversion Version	-40°C to 85°C
TH71102ENE-CAA-000-RE	315/433MHz FSK/ASK Receiver Double-Conversion Version	-40°C to 85°C
TH71111ENE-BAA-000-TR	868/915MHz FSK/ASK Receiver Single-Conversion Version	-40°C to 85°C
TH71111ENE-BAA-000-RE	868/915MHz FSK/ASK Receiver Single-Conversion Version	-40°C to 85°C
TH71112ENE-BAA-000-TR	868/915MHz FSK/ASK Receiver Double-Conversion Version	-40°C to 85°C
TH71112ENE-BAA-000-RE	868/915MHz FSK/ASK Receiver Double-Conversion Version	-40°C to 85°C
MLX71120KLQ-AAA-000-TU	300 to 930MHz FSK/ASK Receiver Multi-band, single channel	-40°C to 125°C
MLX71120KLQ-AAA-000-RE	301 to 930MHz FSK/ASK Receiver Multi-band, single channel	-40°C to 125°C
MLX71121CLQ-AAA-000-TU	300 to 930MHz FSK/ASK Receiver fixed frequency, antenna diversity	0°C to 70°C
MLX71121CLQ-AAA-000-RE	301 to 930MHz FSK/ASK Receiver fixed frequency, antenna diversity	0°C to 70°C
MLX71121KLQ-AAA-000-TU	300 to 930MHz FSK/ASK Receiver fixed frequency, antenna diversity	-40°C to 125°C
MLX71121KLQ-AAA-000-RE	301 to 930MHz FSK/ASK Receiver fixed frequency, antenna diversity	-40°C to 125°C
MLX71122RLQ-BAA-000-TU	300 to 930MHz FSK/ASK Receiver multi channel, SPI programmable	-40°C to 105°C
MLX71122RLQ-BAA-000-RE	301 to 930MHz FSK/ASK Receiver multi channel, SPI programmable	-40°C to 105°C

### RFIC Transceivers: 27 to 950MHz

MLX Order Number	Description	Temp Range
TH7122ENE-BAA-000-TR	27 to 930MHz FSK/ASK Transceiver	-40°C to 85°C
TH7122ENE-BAA-000-RE	27 to 930MHz FSK/ASK Transceiver	-40°C to 85°C
TH71221ELQ-BAA-000-TU	27 to 930MHz FSK/ASK Transceiver	-40°C to 85°C
TH71221ELQ-BAA-000-RE	27 to 930MHz FSK/ASK Transceiver	-40°C to 85°C





## RFIC Transmitters: 310 to 930 MHz

MLX Order Number	Description	Temp Range
TH72001KDC-BAA-000-TU	315MHz FSK Transmitter	-40°C to 125°C
TH72001KDC-BAA-000-RE	315MHz FSK Transmitter	-40°C to 125°C
TH72002KDC-BAA-000-TU	315MHz ASK Transmitter	-40°C to 125°C
TH72002KDC-BAA-000-RE	315MHz ASK Transmitter	-40°C to 125°C
TH72005KLD-BAA-000-TU	315MHz FSK/ASK Transmitter	-40°C to 125°C
TH72005KLD-BAA-000-RE	315MHz FSK/ASK Transmitter	-40°C to 125°C
TH72006KLD-CAA-000-TU	315MHz FSK/ASK Transmitter w/ clock O/P	-40°C to 125°C
TH72006KLD-CAA-000-RE	315MHz FSK/ASK Transmitter w/ clock O/P	-40°C to 125°C
TH72011KDC-BAA-000-TU	433MHz FSK Transmitter	-40°C to 125°C
TH72011KDC-BAA-000-RE	433MHz FSK Transmitter	-40°C to 125°C
TH72012KDC-BAA-000-TU	433MHz ASK Transmitter	-40°C to 125°C
TH72012KDC-BAA-000-RE	433MHz ASK Transmitter	-40°C to 125°C
MLX72013CDC-AAA-000-TU	433MHz FSK/ ASK high power Transmitter	-0°C to 70°C
MLX72013CDC-AAA-000-RE	433MHz FSK/ ASK high power Transmitter	-0°C to 70°C
TH72015KLD-BAA-000-TU	433MHz FSK/ASK Transmitter	-40°C to 125°C
TH72015KLD-BAA-000-RE	433MHz FSK/ASK Transmitter	-40°C to 125°C
TH72016KLD-CAA-000-TU	433MHz FSK/ASK Transmitter w/ clock O/P	-40°C to 125°C
TH72016KLD-CAA-000-RE	433MHz FSK/ASK Transmitter w/ clock O/P	-40°C to 125°C
TH72031KDC-BAA-000-TU	868/915MHz FSK Transmitter	-40°C to 125°C
TH72031KDC-BAA-000-RE	868/915MHz FSK Transmitter	-40°C to 125°C
TH72032KDC-BAA-000-TU	868/915MHz ASK Transmitter	-40°C to 125°C
TH72032KDC-BAA-000-RE	868/915MHz ASK Transmitter	-40°C to 125°C
TH72035KLD-BAA-000-TU	868/915MHz FSK/ASK Transmitter	-40°C to 125°C
TH72035KLD-BAA-000-RE	868/915MHz FSK/ASK Transmitter	-40°C to 125°C
TH72036KLD-CAA-000-TU	868/915MHz FSK/ASK Transmitter w/ clock O/P	-40°C to 125°C
TH72036KLD-CAA-000-RE	868/915MHz FSK/ASK Transmitter w/ clock O/P	-40°C to 125°C

## RFID Sensor Tag: 13.56MHz

MLX Order Number	Description	Temp Range
MLX90121SFR-DAA-000-RE	13.56MHz RFID Reader, ISO14443B & 15693 compliant (not for new designs except when used with 90129)	-40°C to 85°C
MLX90129RGO-CAA-000-TU	13.56MHz Sensor Tag, 15693 compliant	-40°C to 105°C
MLX90129RGO-CAA-000-RE	13.56MHz Sensor Tag, 15693 compliant	-40°C to 105°C
MLX90130RLQ-ADA-000-TU	13.56MHz Multi-Protocol RFID Reader	-40°C to 105°C
MLX90130SLQ-ADA-000-RE	13.56MHz Multi-Protocol RFID Reader	-40°C to 85°C



## Wireless Products - Hardware and Tools

### Evaluation Boards and Demo Kits

MLX Order Number	Description	Contents
EVB71120-XXX-Z	Evaluation Board for MLX71120 Receiver	PC Board w/ connector input and receiver circuit featuring MLX71120 receiver chip
EVB71121-XXX-Z	Evaluation Board for MLX71121 Receiver	PC Board w/ connector input and receiver circuit featuring MLX71121 receiver chip
EVB71122-XXX-Z	Evaluation Board for MLX71122 Receiver	PC Board w/ connector input and receiver circuit featuring MLX71122 receiver chip
EVB72005-XXX-YYY-Z	Evaluation Board for TH72005 Transmitter	PC Board w/ printed loop antenna and transmitter circuit featuring TH72005 transmitter chip and TH72001/02 functionality
EVB72006-XXX-YYY-Z	Evaluation Board for TH72006 Transmitter	PC Board w/ connector output and transmitter circuit featuring TH72006 transmitter chip
EVB72015-XXX-YYY-Z	Evaluation Board for TH72015 Transmitter	PC Board w/ printed loop antenna and transmitter circuit featuring TH72015 transmitter chip and TH72011/12 functionality
EVB72016-XXX-YYY-Z	Evaluation Board for TH72016 Transmitter	PC Board w/ connector output and transmitter circuit featuring TH72016 transmitter chip
EVB72035-XXX-YYY-Z	Evaluation Board for TH72035 Transmitter	PC Board w/ printed loop antenna and transmitter circuit featuring TH72035 transmitter chip and TH72031/32 functionality
EVB72036-XXX-YYY-Z	Evaluation Board for TH72036 Transmitter	PC Board w/ connector output and transmitter circuit featuring TH72036 transmitter chip
EVB90109	Evaluation Board for MLX90109	Evaluation board of transceiver + antenna, featuring the MLX90109
DVK90109	Development Kit for MLX90109	Includes EVB90109, 125 KHz tags and board with microcontroller
EVB90121	Evaluation Board for MLX90121	Evaluation board of transceiver + antenna, featuring the MLX90121
DVK90121	Development Kit for MLX90121	Includes EVB90121, 13.56 MHz tags and board with microcontroller
DEMO90121LR	RFID Long Range Reader Demonstrator	Demonstrator of RFID high power reader (1W) for logistic application based on MLX90121
EVB90129	Evaluation Board for MLX90129	Sensor Tag & data logger evaluation board featuring the MLX90129
DVK90132	Development Kit for the MLX90132 NFC Transceiver	PCB w/ MLX90132 chip and on-PCB printed RFID antenna. Connection to a microcontroller board based on a STM32F103 ARM CORTEX M3
DVK90130	Development Kit for the MLX90130 RFID Reader	PCB w/ MLX90130 chip and on-PCB printed RFID antenna. Connection to a microcontroller board based on a STM32F103 ARM CORTEX M3
EVB91801	MLX91801/2 evaluation/software development board	PCB with wSOIC16 socket, voltage regulator, USB->RS232 converter and Mini E-mx programmer interface
DMB91801	MLX91801/2 TPMS sensor demo board	Based on MLX91801/2 and MLX72013 (015) RF-transmitter IC, CR2032 battery holder
DK91801	MLX91801 TPMS demo kit	Includes: - DMB91801 - Melexis TPMS demo transceiver (LF transmitter 125 kHz, MLX71122-based RF receiver 433 MHz) - user interface PC software
SPI-USB Converter	PCB with SPI-USB converter	to connect EVB7122 and EVB71122 to a PC's USB port



# Part Numbering System

(1)	(2)	(3)	(4)	(5)	(6)
MLX	90620	E	SF	-BAB-000	-TU
(1)	(2)	(3)	(4)	(5)	(6)
US	91	E	VK	-AAA-000	-BU
(1)	(2)	(3)	(4)	(5)	(6)
TH	71101	E	NE	-BAA-000	-TR

## 1. Prefix

This is a 2-3 character alphabetic prefix

## 2. Product Family

The product family is a 2-5 digit numeric code, which denotes the circuit, or product family.

## 3. Temperature Code (Refer To Table 1)

The one-character temperature range denotes standard operating temperature ranges.

## 4. Package Code (Refer to Table 3A thru Table 3C)

Melexis uses a two-character alpha package code, which denotes the type of package the chip is molded (or assembled) in.

## 5. Option Code (Refer to Product Datasheet on [www.melexis.com](http://www.melexis.com))

The option code is a two part code, designed to denote any special information related to the device. The option code will be in the form of 6 alpha-numeric characters separated by a (-) hyphen. (000-000 to ZZZ-ZZZ)

This code is non-rigid, and will have no standard lookup table for reference. For full description of the option code on any particular product, please refer to the product datasheet on [www.melexis.com](http://www.melexis.com).

## 6. Packing Form Code (Refer To Table 2)

The Packing Form Code is a code which denotes how the product will be packed for shipping to the end user.

Melexis products are available in various packing forms, such as bulk, tape-on reel, tube, etc. Some products are available in more than one packing form to accommodate end user production tooling.

**Table 1 - Melexis Temperature Codes**

Temperature Range	Temp Code
0°C to +70°C	C
-20°C to +85°C	S
-20°C to +100°C	B
-40°C to +85°C	E
-40°C to +95°C	P
-40°C to +105°C	R
-40°C to +115°C	V
-40°C to +125°C	K
-55°C to +125°C	M
-40°C to +135°C	T
-40°C to +140°C	D
-40°C to +150°C	L
-40°C to +175°C	F

**Table 2 - Melexis Packing Form**

Packing Form	Packing Form Code
Bulk	BU
Radial Tape (Carton Tape on Reel)	CR
Radial Tape (Carton Tape in Ammopack)	CA
Reel (plastic pocket tape)	RE
Sample Pack	SP
Tube	TU
Tray	TR
Waferbox (sawn wafers and die on foil)	WB
Wafflepack	WP



**Table 3A - Melexis Industry Standard Packages**

MLX Code	Industry Code	Description	Min #Pins	Max #Pins
AA	PDIP	Plastic Dual In Line Package, 300 mil	8	40
DC	SOIC	Plastic Small Outline, 150 mil	8	16
DF	SOIC	Plastic Small Outline, 300 mil	16	44
EA	CLCC	Ceramic Leadless Chip Carrier	1	–
FC	QSOP	Plastic Shrink Small Outline, 150 mil	16	16
FR	SSOP	Plastic Shrink Small Outline, 209 mil	8	64
GO	TSSOP	Thin Plastic Shrink Small Outline, 173 mil	8	56
HK	PLCC	Plastic Leaded Chip Carrier	28	84
LD	QFN Double	Micro Leadframe Package Double	8	–
LQ	QFN Quad	Micro Leadframe Package Quad	8	–
MG	MQFP	Metric Quad Flat Package, Body Size 10x10	44	64
NE	LQFP	Low Profile Quad Flat Package, Body Size 7X7	32	48
NG	LQFP	Low Profile Quad Flat Package, Body Size 10X10	44	64
NK	LQFP	Low Profile Quad Flat Package, Body Size 14X14	64	100
SA	TO-92	Plastic Single In Line Transistor, Through-Hole Mount	3	3
SE	TSOT	Thin Small Outline Transistor	5	8
SO	SOT-23	Plastic Small Outline Transistor Surface Mount	3	6
TF	GBGA (glass)	Ball Grid Array, Glass with Filter	55	55
UA	TO-92 (flat)	Plastic Single In Line, Through-Hole Mount	3	3

**Table 3B - Melexis Exclusive Packages**

MLX Code	Description	Min #Pins	Max #Pins
WB	Glass GLP-5 package for opto sensors	5	5
WC	Glass SMD-8 package for opto sensors	8	8
XC	Open cavity SMD-8 package for opto sensors	8	8
XA	Open cavity SOIC-24 package for opto sensors	24	24
XD	Open cavity SOIC-8 package for opto sensors	8	8
ZF	Ceramic SO-8 "tophat" package for pressure sensors	8	8
SF	TO-39 package with aperture for infrared sensors	4	4
SG	TO-46 package with aperture for infrared sensors	4	4
VA	Plastic Single In Line, thickness 1.1-1.2mm	4	4
VK	Plastic Single In Line, thickness 1.5-1.6mm	4	4
VM	Plastic Single In Line, thickness 1.45-1.65	5	5

**Table 3C - Unpackaged Die**

MLX Code	Description
UC	Die on wafer (unsawn)
UF	Die on foil
US	Single die

# International Presence

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