



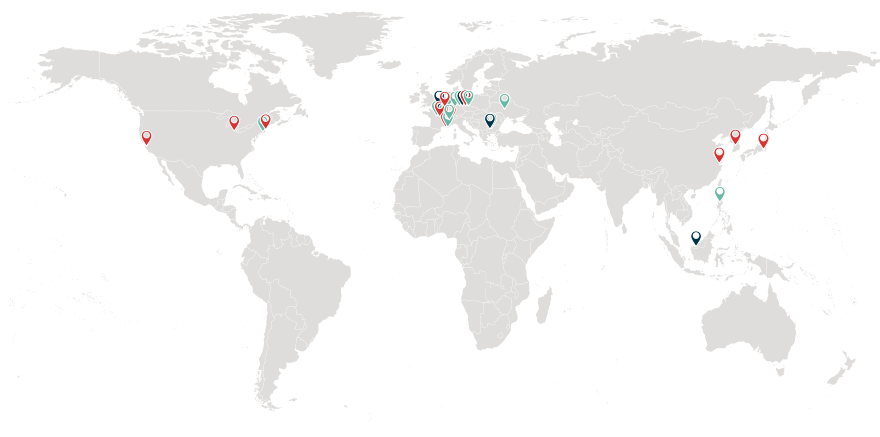
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SELECTION GUIDE

TRIAxis® POSITION SENSORS

FOR E-MOBILITY SMART APPLIANCE,
HOME, INDUSTRIAL AND MEDICAL

Thanks to its magnetic compass the fascinating honey bee has the ability to perceive the omnipresent magnetic field (MF) of the Earth. This magnetic field sensitivity matches this wonderful creature with our Triaxis® magnetic sensors.

We are a pioneer in programmable angular and linear Hall sensors for rotary, linear, and joystick motion. Our devices offer improved manufacturability of sensor assemblies and modules. Our technology and innovations support a broad range of applications in automotive markets and beyond.

2D	Triaxis® 2D Angular Sensor (2D position sensor) - For rotary or linear displacement																										
	IC part number	Status	Motion				Magnetic Range min - maxB _{xy} [mT]	Data Rate	Supply	Idd	Output						Resolution [bit]	Operating Temperature [°C]	Angular processing	Angular Mapping	Additional data output	Package				(A)SIL	ISO11452-8
			On-axis	Off-axis	Joystick	Linear		[kHz]	[V]	[mA]	Analog	PWM	SPI	I2C	SENT	Sin/Cos						SOIC-8	TSSOP-16	DMP-4	UTDFN-8		
	MLX90340	prod	✓	✓		✓	20 - 70	2.5	5	10	✓	✓				12	-40..150	on	XY / XZ/ YZ		✓	✓			(A*) 1		
	MLX90365	prod	✓	✓		✓	20 - 70	3.4	5	10	✓	✓					12	-40..150	on	XY / XZ/ YZ		✓	✓	✓		(B*) 2	
	MLX90363	prod	✓	✓		✓	20 - 70	1	3.3 / 5	12.5			✓				12	-40..150	on	XY / XZ/ YZ	Gain + XYZ	✓	✓			(B*) 2	
	MLX90371	prod	✓	✓		✓	10 - 70	2.3	5 / 12	10	✓						12	-40..160	on	XY / XZ/ YZ		✓	✓	✓		(B) 2	5mT
	MLX90372	prod	✓	✓		✓	10 - 70	1	5 / 12	10		✓			✓		12	-40..160	on	XY / XZ/ YZ	Temp.	✓	✓	✓		(C) 3	5mT

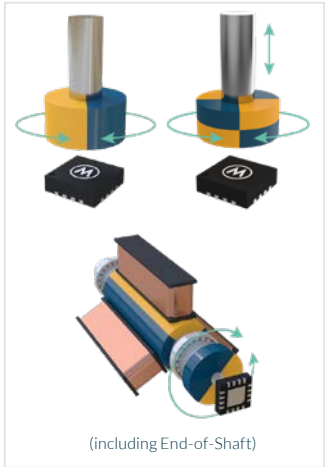
* Safety applications supported by safety analysis report and safety manual via HW evaluation under clause 13 or via proven in use under Clause 14 of ISO26262

2D	Motor position sensors - Hi-speed rotor position / Servo motor																									
	IC part number	Status	Motion				Magnetic Range min - max [mT]	Data Rate	Supply	Idd	Output						Resolution [bit]	Operating Temperature [°C]	Angular processing	Angular Mapping	Additional data output	Package				(A)SIL
			On-axis	Off-axis	Joystick	Linear		[kRPM]	[V]	[mA]	Analog	PWM	SPI	I2C	SENT	Sin/Cos						SOIC-8	TSSOP-16	TSOT-3L	TO92-3L	
	MLX90290	prod		planar		✓	18 - 100mV/mT	50	3.3 / 5	5	✓						n/a	-40..150	off	B _z			✓	✓		
	MLX90380	prod	✓	✓			20 - 70	25	3.3 / 5	7						✓	n/a	-40..150	off	XY/YZ/XZ		✓	✓		(B*) 2	

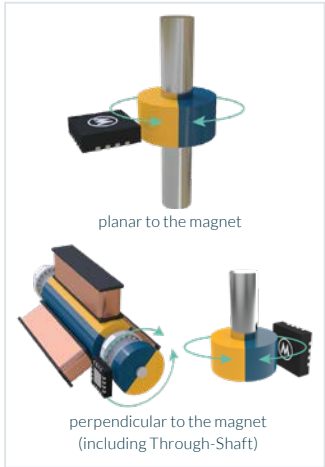
3D	Triaxis® 3D Magnetometer (3D field sensing) - micro-power and cost-effective																								
	IC part number	Status	Motion				Magnetic Range min - max [mT]	Data Rate	Supply	Idd [mA]	Output						Resolution [bit]	Operating Temperature [°C]	Angular processing	Field Mapping	Additional data output	Package			
			On-axis	Off-axis	Joystick	Linear		[kHz]	[V]	XYZ	Analog	PWM	SPI	I2C	SENT	Sin/Cos						SOIC-8	TSSOP-16	QFN-16	UTDFN-8
	MLX90392	Samples	✓	✓	✓	✓	0 - 5 / 5 - 50	1.4	1.8	1				✓			16	-40..85	off	B _x / B _y / B _z	Temp.				✓
	MLX90393	prod	✓	✓	✓	✓	5 - 50	1	2.2 to 3.6	0.4				✓	✓		16	-40..85	off	B _x / B _y / B _z	Temp.			✓	✓
	MLX90395	prod	✓	✓	✓	✓	5 - 50 / 10 - 120	2	2.6 to 3.6	0.234				✓	✓		16	-40..125	off	B _x / B _y / B _z	Temp. + Voltage	✓	✓	✓	

3D	Triaxis® 3D Angular Sensor (3D position sensor / Joystick) - 2 angular information in one sensor																									
	IC part number	Status	Motion				Magnetic Range min - maxB _{xy} [mT]	Data Rate	Supply	Idd	Output						Resolution [bit]	Operating Temperature [°C]	Angular processing	Angular Mapping	Additional data output	Package				(A)SIL
			On-axis	Off-axis	Joystick	Linear		[kHz]	[V]	[mA]	Analog	PWM	SPI	I2C	SENT	Sin/Cos						SOIC-8	TSSOP-16	DMP-4	UTDFN-8	
MLX90333	prod			✓		20 - 70 - 140	5	3.3 / 5	8.5 / 13.5	✓	✓	✓			12	-40..150	on	XZ / YZ		✓	✓					
MLX90363	prod	✓	✓	✓		20 - 70 - 126	1	3.3 / 5	12.5			✓			12	-40..150	on	XY / XZ / YZ	Bx, By, Bz	✓	✓			(B) 2		
MLX90378	prod	✓	✓	✓		10 - 70 - 100	1	5	9		✓			✓	12	-40..160	on	XY / XZ / YZ	Temp., Switch	✓	✓			(C) 3		

On-axis



Off-axis



Joystick



Linear

