

Inclination sensors (analog)																page 1/2				rev3.8 20210921			
Family	QG30				QG40				QG40N				QG40N Redundant		QG65 / QG76 analog								
Product life cycle status	released				Released				Released				Released		Released								
Measuring range	±10°	±30°	±90°		±10°	±30°	±90°		±10°	±30°	±90°	360°		±90°	360°		±10°	±30°	±90°	360°			
Number of axis	1				2				2		1		1		2		1						
Centering function	no				no				yes				yes		yes								
Functional safety	no				no				no				full redundant		no								
Output format	4-20mA 0.5-4,5V				4-20mA 0.5-4,5V				4-20mA 0.5-4,5V				4-20mA		4-20mA 0.5-4,5V (for CAN: see page 2)								
Output bandwidth	0 - 10Hz				0 - 10Hz				0 - 10Hz				0 - 10 Hz		0 - 10Hz								
Output function	sinus curve				sinus curve				lineair				lineair		lineair								
Resolution	0,03°				0,03°				0,1°				0,1°		0,01°								
Accuracy (typ. @20°C)	0,3°	0,6°	0,9° (-45° .. +45°)		0,3°	0,6°	0,9° (-45° .. +45°)		0,5°				0,5°		0,04°	0,05°	0,09° (-60 .. +60°)		0,07°				
	offset error excluded, 1° typ.				offset error excluded, 1° typ.																		
Temperature coefficient (typ.)	0,02°/K				0,02°/K				0,04°/K				0,04°/K		0,005°/K								
Housing material	Plastic				Plastic				Plastic				Plastic		QG65: Reinforced plastic with steel fiber QG76: Stainless steel								
Size	30x30x15mm				40x40x25mm				40x40x25mm				40x40x25		QG65: 60x50x27mm QG76: 70x60x33mm								
Temperature range	-25 .. +80°C				-40 .. +80°C				-40 .. +80°C				-25 .. +80°C		-40 .. +80°C								
Protection class	IP67				IP67, IP69K				IP67, IP69K				IP67		QG65: IP67, IP69K QG76: IP67, IP69K (IP68 with gland/cable)								
Certification	CE				CE, UL				CE, UL				CE		QG65: CE, Automotive EMC, UL QG76: CE, Automotive EMC, UL								
Programmable	no				no				Yes, with optional configurator				Yes, with optional configurator		Factory programmable only								
Connection standard	PVC cable 2m				M12 5-pole male				M12 5-pole male				2m PUR cable		M12 male 8p								
Options:	Different output formats (i.e. 0-10V), bandwidths, ranges, cables, connectors etc.																						

Inclination sensors (CAN) page 2/2 rev3.8 20210921												
Family	QG65N / QG76N CANopen			QG65N2 / QG76N2 CANopen			QG65N / QG76N CANopen Safety SIL CL 2/PLd			QG65D/QG76D CANopen/J1939 Dynamic Inclinometer		
Status	Discontinued			Released			Released			Released		
Measuring range	±30°	±90°	360°	±30°	±90°	360°	±30°	±90°	360°	±30°	±90°	360°
Number of axis	2		1	2		1	2		1	2		1
Centering function	yes			yes			yes			yes		
Functional safety	no			no			SIL CL 2 / PLd certified			no		
Output format	CANopen			CANopen / SAE J1939			CANopen & CANopen Safety			CANopen / SAE J1939		
Output bandwidth	0 - 20Hz			0 - 10Hz			0 - 20Hz			0 - 100Hz		
Output function	lineair			lineair			lineair			lineair		
Resolution	0,05°			0,01°			0,05°			0,01°		
Accuracy (typ. @20°C)	0,15°			0,07° (high accuracy) 0,15° (standard accuracy)			0,15°			0,07° static, 0,5° dynamic (high accuracy) 0,15° typ static, 0,8° dynamic (standard accuracy)		
Temperature coefficient (typ.)	0,01°/K			0,003°/K (high accuracy) 0,015°/K (standard accuracy)			0,01°/K			0,003°/K (high accuracy) 0,015°/K (standard accuracy)		
Housing material	QG65: Reinforced plastic with steel fiber / QG76: Stainless steel											
Size	QG65: 60x50x27mm / QG76: 70x60x33mm											
Temperature range	-40 .. +80°C											
Protection class	QG65: IP67, IP69K / QG76: IP67, IP69K (IP68 with gland/cable)											
Certification	CE, UL, Automotive EMC, E4 type approval			CE, UL, Automotive EMC, E4 type approval			QG65: CE, UL, Automotive EMC			CE, UL, Automotive EMC, E4		
Programmable	Yes, via CAN object dictionary			Yes, via DIS Configurator set CAN and CAN object dictionary			Yes, via CAN object dictionary			Yes, via DIS Configurator set CAN and CAN object dictionary		
Connection standard	M12 5p male & optional female (internal T-junction)											
Options:	Different CAN settings, cable with gland, connectors etc.											