

Inclination sensors (analog)														page 1/2				rev3.6 20200410			
Family	QG30			QG40			QG40N				QG40N Redundant		QG65 / QG76 analog								
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 Pending QG76: IP67 (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		Yes, with optional configurator								
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		rev3.5 20200410		PRELIMINARY, AVAILABLE Q3 2020	
Family	QG65N / QG76N CANopen			QG65N / QG76N CANopen Safety SIL CL 2/PLd			QG65D/QG76D CANopen/J1939 Dynamic Inclinometer				
Measuring range	±30°	±90°	360°	±30°	±90°	360°	±30°	±90°	360°		
Number of axis	2		1	2		1	2		1		
Switching output	no			no			no				
Centering function	yes (CAN object dictionary)			yes (CAN object dictionary)			yes (CAN object dictionary)				
Functional safety	no			SIL CL 2 / PLd certified			no				
Output format	CANopen			CANopen & CANopen Safety			CANopen / J1939				
Output bandwidth	0 - 20Hz			0 - 20Hz			0 - 100Hz				
Output function	linear			linear			linear				
Resolution	0,05°			0,05°			0.01°				
Accuracy (typ. @20°C)	0,15°			0,15°			target: ±0.1° static, ±0.5° dynamic				
Temperature coefficient (typ.)	0,01°/K			0,01°/K			target: 0.005°/K				
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 pending / QG76: IP67 (IP68 with gland/cable), IP69K pending										
Certification	QG65: CE, UL, Automotive EMC, E4 type approval QG76: CE, UL, Automotive EMC, E4 type approval			QG65: CE, UL, Automotive EMC QG76: CE, UL, Automotive EMC			CE, UL				
Programmable	Yes, via CAN object dictionary										
Connection standard	M12 5p male & optional female (internal T-junction)										
Options:	Different CAN settings, cable with gland, connectors etc.										