

#### Sensing range :

Sensing air gap	0...2,0 mm (dependent of target geometry)
Target tooth width	> 2,0mm recommended
Target slot width	> 2,0mm recommended
Tooth height	> 3,0mm recommended (5mm typical)
Target width	> 5,0mm recommended (12mm typical)
Sensor misposition to target	+/-1,5mm

#### Supply :

Operating voltage (Vs)	7...24 VDC
Current consumption	< 18 mA (10mA typical)

#### Output characteristics :

Output type	2x NPN
Signal type	Square wave (2 channels)
Duty cycle	50% +/-10% (dependent of target geometry)
Phase shift between outputs	90° +/-45° (dependent of target geometry)
Output current	20mA Max
Output leakage current	< 50µA
Pull-Up resistor	No (no pull-up integrated)
Pull-Down capacitor	Yes (< 470pF capacitor, between Output and GND)
Output Low level	< 0,5V (with load current 20mA Max)
Output High level	>= Vs - 0,5V
Operating frequency	0...20 KHz (dependent of target geometry and air gap)
Output rise time	< 10 µs (dependent of external pull-up resistor value)
Output fall time	< 5 µs

#### Electrical protections :

Reverse voltage protection	Yes (-26 VDC)
Over voltage protection	Yes (26 VDC)
Output protection	Yes (Short-circuit & Overload protection)
Short-circuit current	< 100 mA / Ouput

#### EMC protections :

Radiated immunity	100 V/m (ISO 11452-2 400MHz ...2,5 GHz)
Bulk current injection	140 mA (ISO 11452- 4 1MHz...400 MHz)
Electrical disturbance ESD	Test pulse : a=-200V b=+200V (ISO 7637-3) +/-8kV Contact , +/-15kV Air (IEC 61000-4-2)

#### Materials :

Housing	PBT GF30
O-ring	FKM

#### Other characteristics :

Operating temperature range	-40...+110 °C
Storage temperature range	-40...+120 °C
Protection degree	IP67 & IP69K
Thermal shock protection	10 cycles -40°C/1H - +110°C/1H, with 3minutes changing times
Salt fog protection	5% NaCl @ 35°C (96 Hours)
Thermal saline dunk protection	100°C to 25°C air to liquid, 5% saline (10x cycles) +110°C, 13,5 VDC, 1kΩ load (500 hours)
High temp. exposure / Power	50 g half sinus EIC 68-2-27 (100 cycles +/- X, Y, Z)
Mechanical shock	3 axes, 4 hours per axe 10-85 Hz: 1.5mm peak to peak 85-2000Hz: 150m/s2 RMS
Mechanical vibration	95% Humidity @55°C during 48 hours
Humidity test	General automotive under the hoods fluids
Resistance to fluids	> 40 years
MTTF	> 40 years
Connector type	SuperSeal 1.5 / mating connector 282088

#### Pin assignment :

A	GND
B	Output CHANNEL A
C	Output CHANNEL B
D	VCC (7...24 VDC)

#### Pin description :

