Hall Effect Zero Speed Sensor
F58S25

GREEN LINE
INDUSTRIAL SPEED SENSORS

Product ID

Type #	Product #	Drawing #
F58S25	385Z-05562	113.626 Rev.2

General

Function	The F58S25 series Hall effect speed sensors are suitable, in conjunction with a ferrous pole wheel, for generating square wave signals proportional to rotary speeds. They exhibit a static function, whereby pulse generation down to 0 Hz is guaranteed. The sensor function is independent of rotational mounting angle.

Technical data

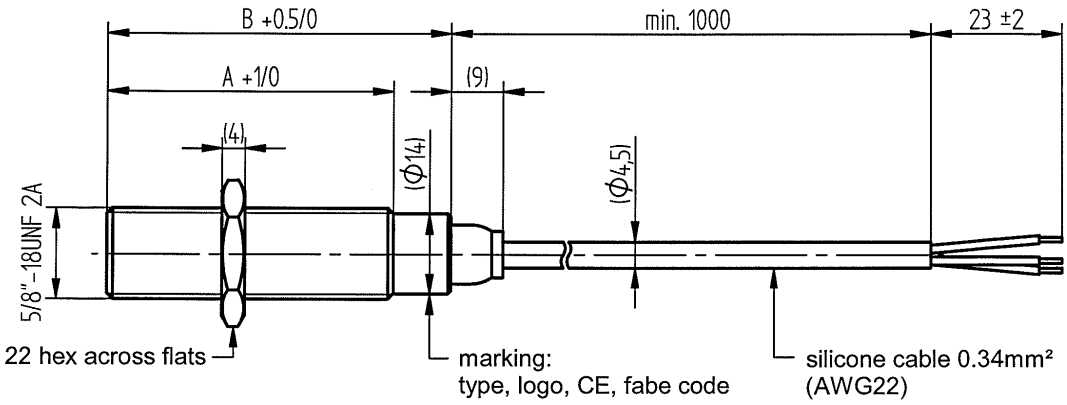
Supply voltage	8...25 VDC
Current consumption	Max. 12 mA (without load)

Signal output	Square wave signal from NPN output transistor with internal 2.7 kOhm pull-up resistor, DC-coupled to supply (negative pole = reference Voltage).
	• Sink current: max. 25 mA
	• Output voltage:
	  • U_{high} ~ supply voltage
	  • U_{low} < 0.5 V at I = 25 mA

Frequency range	0 Hz…15 kHz
Housing	5/8"-18 UNF-2A, tightening torque: max. 35 Nm
Connection	Cable with open leads: 3-wire, 3 x 0.34 mm2 (AWG22), stranded wires, elastomer isolation, green casing, fire retardant, low smoke, RoHS conform and halogen free, max. outer Ø = 4.8 mm, min. bending radius = 25 mm (static) and 50 mm (dynamic), cable length according to dimensional drawing
Protection	Sensor head: IP68 Cable outlet: IP67
Insulation	Housing and electronics galvanically isolated (Test: 500 V, 50 Hz for 1 minute)
Pole wheel	Prerequisite: Toothed wheel of a ferrous material (e.g. Steel 1.0036). Optimal performance with • Involute gear • Tooth width > 10 mm • Side offset < 0.2 mm • Eccentricity < 0.2 mm
Air gap between sensor and pole wheel	• Module 1.0 (DP 25.4): 0.3…0.5 mm • Module 2.0 (DP 12.7): 0.3…1.5 mm
Electromagnetic compatibility (EMC)	Please contact Jaquet for further details.
Vibration & shock immunity	Jaquet Greenline sensors are approved for rough environments. Please contact Jaquet for further details.
Operating temperature	-40℃…125℃

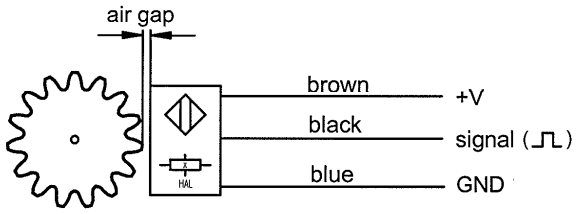
Further Information

Safety	All mechanical installations must be carried out by an expert. General safety requirements have to be met.
Installation	The sensor has to be aligned to the pole wheel according to the sensor drawing independent of its rotational orientation. Deviations in positioning may affect the performance and decrease the noise immunity of the sensor. During installation, the smallest possible pole wheel to sensor gap should be set. The gap should however be set to prevent the face of the sensor ever touching the pole wheel. Within the air gap specified the amplitude of the output signal is not influenced by the air gap. A sensor should be mounted with the middle of the face side over the middle of the pole wheel. Dependent upon the wheel width, a certain degree of axial movement is permissible. However, the middle of the sensor must be at minimum in a distance of 3 mm from the edge of the pole wheel under all operating conditions. A solid and vibration free mounting of the sensor is important. Eventual sensor vibration relative to the pole wheel can induce additional output pulses. The sensors are insensitive to oil, grease etc. and can be installed in arduous conditions.
Maintenance	Product cannot be repaired.
Transport	Product must be handled with care to prevent damage of the front face.
Storage	Product must be stored in dry conditions. The storage temperature corresponds to the operation temperature.
Disposal	Product must be disposed of properly, it must not be disposed as domestic waste.



part no.	Jaquet	A	B
385Z-05332	F58S	50	60
385Z-05562	F58S25	64	74
385Z-05563	F58S40	102	112

connecting diagram:



FOR TECHNICAL SPECIFICATIONS SEE OPERATING INSTRUCTIONS

		dimensions in mm					
part no.		material / remarks		application			
–	–	–/–	–	nominal size range			
–	–	–/–	–	allowed tolerance			
–	–	–/–	–	replacement for			
–	–	–/–	–	first angle projection	drawn	27.09.2006	ebi
2	6280	10.04.07/ebi	Kabel ausgetauscht von PUR auf Silikon				
rev.	ecn.	date/signature	change description	scale 1:1	approved	27.08.07	
JAQUET TECHNOLOGY GROUP Thannerstrasse 15 CH-4009 Basel www.jaquet.com			part name: speed sensor Greenline F58S	format A4	drawing no. 113.626		rev. 2
				file name		113.626_rev1.dft	