

$$\begin{aligned}
 PFH_G = & \\
 6 \cdot [ & (1-\beta_D) \cdot \lambda_{DD} + (1-\beta) \cdot \lambda_{DU} ] \cdot \dots \\
 \cdot (1-\beta) \cdot \lambda_{DU} \tau_{CE} + \beta \lambda_{DU} & = \text{SIL3}
 \end{aligned}$$

## SIL3 Speed Sensors

Completing fully certified safety systems

The importance of numbers:

200'000 man days experience in supplying quality speed sensors;

2'000 man hours to create the first SIL certified speed sensor;

all to achieve the number 3.



## SIL3 SPEED SENSORS

Chances are your life was influenced by JAQUET speed sensors today:



Monitoring turbines that generated the electricity to power your lights at home.

Optimizing turbo speed in supermarket delivery trucks.

Measuring the engine speed in the harvesting machine for your daily bread.

Controlling the railway traction motors and brakes on your train to work.

JAQUET's new line of SIL3 capable speed sensors now enables added functional safety in these and many other applications with an associated reduction in risk level.



Designed to conform to safety standards ANSI/ISA 84.00.01, IEC61508 & IEC61511 plus certified by TÜV, these new speed sensors from JAQUET are intended & approved for use in high demand applications up to and including SIL3. These are defined as having a probability of dangerous failure per hour (PFH) of  $\geq 10^{-8}$  to  $< 10^{-7}$



Protecting the compressor sets that produce fertilizer for your lunchtime salad.

Making street sweepers that keep your city streets clean more efficient.

Synchronizing road roller speeds to smooth your high-way journey.

In the fast patrol boats and submarines that keep our shores safe.

3 VR coil systems are initially offered for targets ranging from Module 1 to 10, Pitch (DP) 2.5 to 25 in housings fully closed at the front & potted at the back to eliminate ingress risks.



VR sensors are offered in the temperature range of -40 ... +150°C with either integral connector or integral cable. All in a package best matched to your application.

Dual coil & Ex rated VR sensors plus various Hall models will be introduced under a rolling program driven by customer demand. When used in conjunction with Safety Instrumented Systems, JAQUET SIL3 sensors provide the hitherto missing link in the fully certified speed measurement safety chain.

Challenge us with your application requirements. The safety team is ready.

## Swiss know-how and quality matched to your demands

JAUQUET manufactures speed sensors in quantities from 1 to 200,000 per project per year. These typically customer specific solutions add value through being matched to individual applications. *Since 1889, a spirit of excellence complementing tradition and innovation.*



### Automotive turbochargers

Turbocharger for trucks, passenger cars, construction equipment

- Speed of VG/VNT turbochargers
- Gearbox shaft and retarder speed



### Railway systems

- Optimum traction control
- WSP (wheel slide protection) systems
- Speed information for automatic train control



### Power generation

Gas, hydro, steam and wind turbines

- Overspeed protection
- Speed measurement and control



### Hydraulics

Agricultural machinery, construction and mining equipment, cranes, ROV – remote operated vehicles

- Motors and pumps, flowrate measurement
- Position measurement, traction synchronization



### Diesel and gas engines

Large diesel and gas engines in marine, rail, off-road applications and power production.

- Cam and crank shaft for dynamic position
- Turbocharger speed, engine diagnostics

#### Quality systems

ISO TS 16949  
ISO 9001  
AS 9100  
IRIS



### Worldwide and local to you through

JAUQUET Technology sales offices, subsidiaries and distributors.