



Advanced technology as you like it.

OEM SENSOR PROGRAMS
CUSTOMIZED SENSORS
STANDARD PRODUCTS
RETROFIT PROGRAMS

JAUQUET TECHNOLOGY GROUP leads the field in innovative speed solutions for railway applications. Our principle is simple: you should get what you want - no compromises. JAUQUET's modular sensor design program makes it easy for you to obtain innovative and robust speed sensors. We know your application needs and must-have's through serving the leading railway companies for many years. Consult us on your specific requirements and we'll assist you in creating the optimum design and functionality - no matter if you need one or a million pieces per project. We are ready for your signal.

JAUQUET MODULAR SENSOR DESIGN PROGRAM offers speed sensors for

- Brake control (ABS/WSP) - 1, 2, 3 or 4 channels per sensor, 2 or 3 wire, qualified for axle mounting
- Propulsion system, traction control & signalling - typically 2, 3 or 4 channels, offering the opportunity for dual functionality
- Door interlocks & Black-Box information - realisable with isolated channels in one sensor, e.g. 1+1, 2+1 or 2+2
- Engine cam and crankshaft - via VR and Hall technologies
- Turbochargers - from the world's #1 turbo sensor manufacturer

Specialty products

- The world's shortest railway sensor, built with JAUQUET's new ASIC chip - small in size, big in practice
- Alumi
- High resolution sensor – 1...16 times tooth frequency in real time

IRIS
Certification

Modular sensor design program

JAUQUET's modular design program makes it easy for you to obtain an innovative and robust speed sensor. Consult us on what you need and we'll assist you in creating the optimum design and functionality.

- Housing matched to the application
- Sealed, waterproof stainless steel housing - can be used in filthy environments
- Can replace resolver systems by more robust approach
- Cable mounting sleeve
- Cable entry fully sealed
- Armoured cable – no hoses to degrade
- Over moulded connector

The result is sensors to the highest quality standards and certifications, including EN 50155.

Step 1. Select your housing

The mechanical form and dimensions of speed sensors in rail applications are dominated by flanged housings for simple installation. JAUQUET's housings are machined from solid stainless steel, fully sealed at the front and manufactured to meet your specifications - for a drop-in-replacement or new programs.



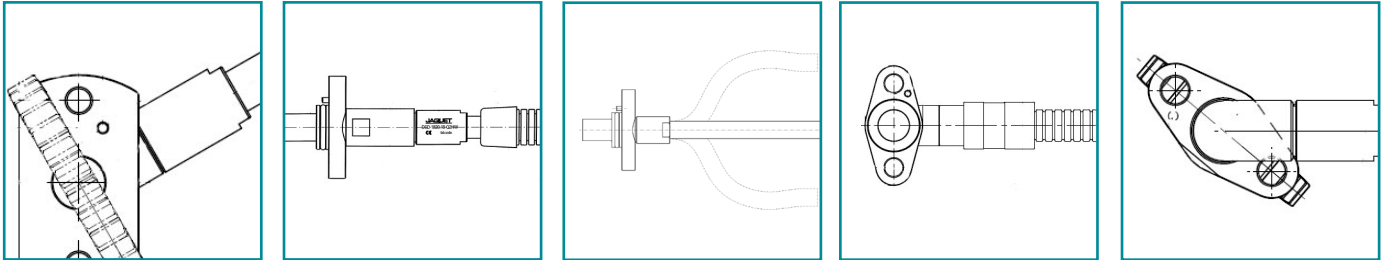
Step 2. Select your electronics

JAUQUET provides a variety of electronics for different applications. Functionality, number of outputs, redundant channels and many other features are available and can be combined with any other element of the sensor kit. Just let us know what your sensor should deliver and how it should behave and we'll assist with the selection.

Type	Number of speed signal outputs	Direction output	Package	Output stage	Diagnostic function
.17	1	-	normal	voltage, push-pull	-
.17R	2 (galvanically separated)	-	normal	voltage, push-pull	-
.19	2	-	normal	voltage, push-pull	-
.20	2 + 1 independent output	-	normal	voltage, push-pull	-
.21	3	-	normal	voltage, push-pull	-
.22	2 + 2 inverted	-	normal	voltage, push-pull	-
.25	2	yes	normal	voltage, push-pull	-
.26	1	-	normal	current	mid-voltage
.27	2 (galvanically separated)	-	normal	current	mid-voltage
.30	1	-	normal	voltage, push-pull	mid-voltage
.60	2	-	high density	voltage, push-pull	-
.61	2	-	high density	open collector	-
.62	1	yes	high density	voltage, push-pull	-
.63	1	yes	high density	open collector	-
.64	1	yes	high density	voltage, push-pull	mid-voltage
.65	1 (frequency x 2)	yes	high density	voltage, push-pull	-
.66	1	yes	high density	current	-

Step 3. Select your cable entry and orientation

JAQUET offers a wide variety of possibilities - straight or angled cable-entries, enabling fast installation with optimum orientation to the target. Or choose the small ASIC sensor housings for flexible cable-entry.



Step 4. Select your accessories and method of termination

When it comes to connectors, JAQUET will meet your expectations. Our overmoulding process enables us to integrate all connector types with a high level of sealing to the cable. Prefer Teflon cable with free ends or terminals and a PMA hose? It's readily available – as you like it.



Specialty executions

In addition to JAQUET's modular sensor design program we have developed several specialty products and new technologies for the railway industry.



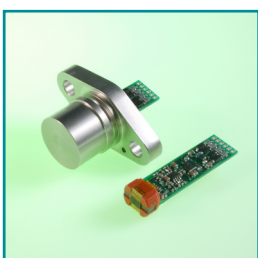
Small in size, big in practice: the world's smallest railway sensor

In railway applications such as propulsion, space is limited and valuable. That's why JAQUET builds its new railway sensors with an ASIC chip. The Hall-ASIC allows a reliable, fully integrated measurement circuit. The performance of the electric parts of the sensor, their reliability and MTBF-figures profit. Due to the reduced size (size of chip only 4 x 5 mm) smaller mechanical arrangements and thermoset housings are possible. And more than that: Thanks to its small size the sensor provides a flexible cable entry. So it can be used in various applications without having to create diverse housings. ONE SIZE FITS ALL! As a result, the sensor is user-friendly, more cost-effective and – at the same time – will set new standards for reliability.



Speed sensor for aluminum targets

The speed sensors Eddy Current DSH 2645.22 SHW are designed to detect rectangular teeth of non-magnetic metal structures and to deliver two quadrate output signals. As an example, the aluminium impeller wheel of an asynchronous motor of a railway drive system can be modified such that there are structures, either, at the radial edge or on the lateral surface.



High resolution sensor

In harsh environments where non contact speed sensing and control are required, for example to control the slip of AC induction motors, the measurement resolution is usually derived from the number of gear teeth of the target. In many cases the desired resolution is higher than the diameter of the pole wheel and the minimum size of the module / gear teeth would allow. The new DSI family of speed sensor alleviates this problem by providing speed signals with frequencies up to 16 times higher than the number of teeth of the original pole wheel. Available in various housing sizes, DSI speed sensors operate over a wide voltage range of 10...24 VDC and have been type tested for demanding applications such as railway traction control.

COMPANY PROFILE



JAQUET TECHNOLOGY GROUP offers the world's most versatile and advanced range of solutions for the detection, measurement, diagnosis and management of rotational speed.

Our industry and application specific expertise ensures that you will achieve an optimum solution. Completely matched to your individual requirements, meeting key industrial standards and certifications, our products help boost the performance of your machinery while reducing cost of ownership.

TYPICAL INDUSTRIES SERVED

- Automotive and truck
- Aerospace
- Diesel / Gas engines
- Hydraulics
- Railway
- Turbines and compressors
- Wind Turbines
- Turbochargers
- Industrial machinery

PRODUCTS – SPEED SENSORS

- Various technologies
- Standard, custom and OEM models
- For demanding applications, e.g. 300,000 rpm, temperature up to 320 °C / 600 °F, high vibration, shock to 200 g, etc.
- GreenLine speed sensors for general applications
- Ex models for hazardous areas
- Pole bands and target wheels available where needed

PRODUCTS – SYSTEMS

- Multi-channel overspeed protection systems
- 1–2 channel measurement, protection and control modules
- Engine diagnostic systems
- Redundant speed measurement and indication

SPECIAL PROJECT EXAMPLES

- An automotive linear movement sensor
- Integrated power and torque measurement for display and gearbox control
- Naval spec. turbine protection for nuclear submarines
- Speed measurement in turreted, tracked vehicles

QUALITY MANAGEMENT AND STANDARDS

- Quality management: TS 16949 & ISO 9001, ZELM ATEX 1020, KWU, EN/AS/JISQ 9100, IRIS (railway)
- Sensors: GL, KWU, TÜV, ATEX, EN 50155, NF F 16-101 102, ABS, EMC
- Systems: IEC 61508 SIL 2 and SIL 3, API 670, GL, TÜV, KWU, EX
- Environmental: RoHs - EU directive 2002/95/EC, WEEE - EU directive 2002/96/EC

JAQUET – YOUR PARTNER

- Efficient and professional service - JAQUET TECHNOLOGY GROUP is headquartered in Basel, Switzerland and has subsidiaries in Belgium, China, Germany, the Netherlands, United Kingdom and United States along with a worldwide distributor and end-user service network.
- Flexible production quantities; from 1 to millions per project
- Reduction of total costs by intelligent and cost-effective solutions
- Fast turn-around time

IN CHARGE OF SPEED

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