AXON systems

AXON J1

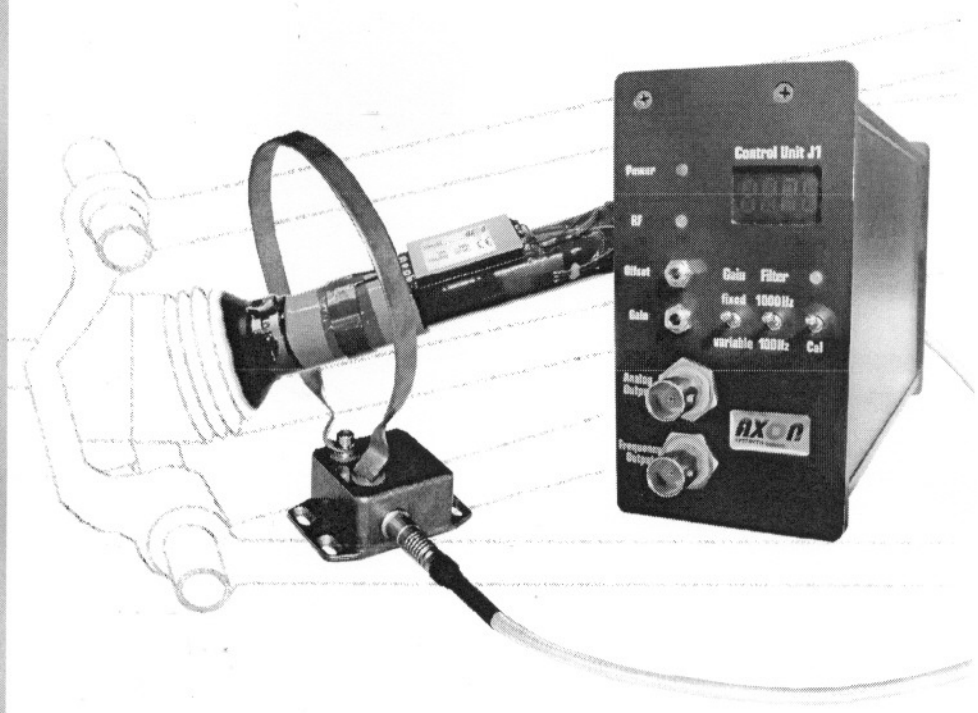
Wireless data transmission for rotating applications

Highly reliable data transmission

Support on the spot

Application & calibration service

Customer-specific solutions



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United States - FCC Notice

- Changes or modifications not expressly approved by the responsible party could void the user's authority to operate the equipment.

- This device may only be used with the approved internal antenna that is shipped with the unit and installed per installation instructions. The use of any other antennas will invalidate the unit's FCC Part 15 certification.

- To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that permitted for successful communication. Operating the device with the supplied antenna will ensure that this requirement is met.

- Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

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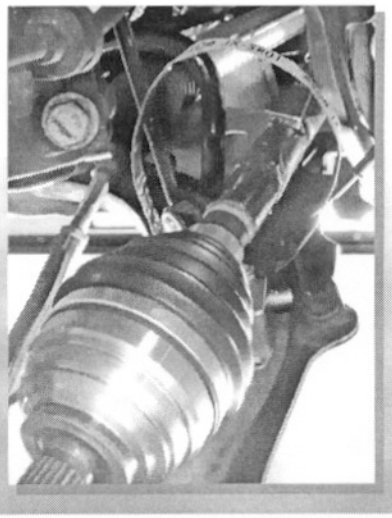
IPT - Intelligent Power Transmission

Routine Condition

Today, it's more important than ever to have reliable, detailed information about torque, temperature or other feedback signals by metering the different types of applications. The telemetry system AXON J1 helps you to capture this data even from rotating applications. A very small electronic rotor, installed directly on the shaft captures, conditions and transmits the measuring data to a Stator Unit. After this the information can be reproduced on the Control Unit.
Because it's easy to install and powered inductively, it's a real all-rounder for measurements on rotating machinery. There's no easier way to run wireless data transmission!

Intelligent Power Transmission allows a significant improvement of the transmission distance and temperature stability as well as a compensation of any influence in terms of aging.
Particularly the Ring-Stator JX-SR70 ensures in connection with Intelligent Power Transmission a permanent data stream even from shafts with a high degree of displacement.
The system components can be exchanged easily with use of Plug&Play allowing flexible use. For example the individual alignment of the Stator-Transmission-Coil AXON JX-SR70 compensates for shaft and axis deviations however large and can supply the rotor side with energy reliably.



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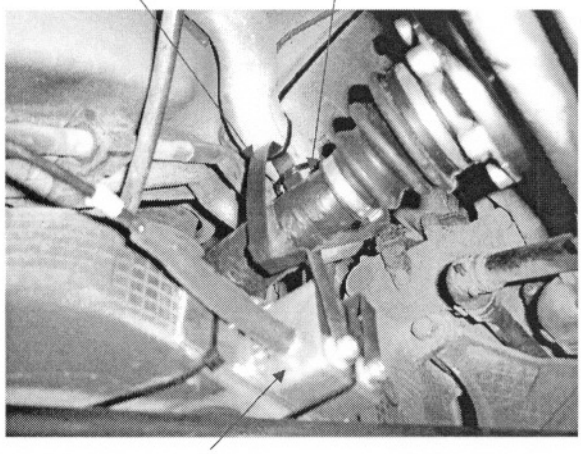
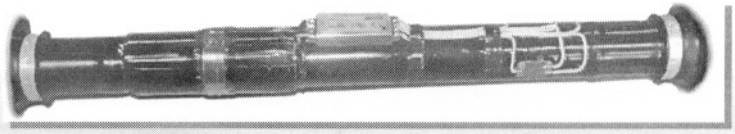
Best performance for torque measurement

The Telemetry System AXON J1 is in permanent use by many automotive companies

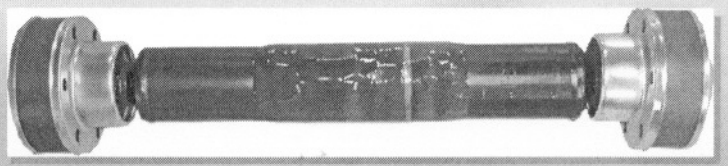
To meet the requirements of measuring torque on shafts in vehicles, it is important to provide continuous data transmission, even while measuring torque on drive shafts under a high degree of deflection. With the Ring-Stator JX-SR70, the System represents the perfect solution for measurements in vehicles on rotating machinery provided by rapid installation. The stator is equipped with a transmission coil, which provides inductive power in every operating point of the suspension. Under permanent operation if on the road or on the race track, customers can confirm the reliability of the AXON J1-System.
To manage a professional and solid mounting of the shafts, AXON Systems offers application, calibration and installation of the shafts as a complete service.



Ring-Stator AXON J1-SR70



Driveshaft with appltication



Shaft after application and calibration with waterproof and shock resistant encapsulation

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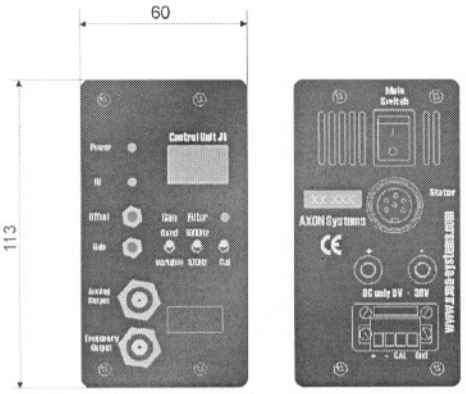
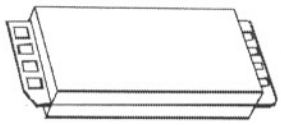
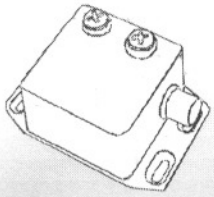
Technical Data







Control Unit

J1-CS10	
Supply voltage	9 .... 36 VDC
Display	3½-digit, 7-Segment LED-Display
Signal bandwith	switchable 1 000 Hz / 100 Hz optional 2 500 Hz / 100 Hz
Frequency output	10 kHz +/- 5 KHz
Voltage output analog	+/- 10 V
CAN-Bus interface	optional
Carrier frequency	10,7 MHz
Signal to noise ratio	65dB at signal bandwith 100 Hz: 83dB
Signal propagation delay	450 µs
Wireless shunt calibration	Pushbutton on Control Unit
Degree of protection	IP40
Weight	700 Gramm
Temperature range	-10 °C ... + 75°C
Power consumption	30 VA max.

Rotor unit

J1-RD10	
Signal conditioning	Strain gauge
Housing	Aluminium
Dimensions (incl. solder pads)	45 x 19 x 7 mm
Weight	app. 10 g
Connections	Solder pads
Temperature range	-10°C ... + 85°C

Stator Unit

Ring-Stator AXON JX-SR70(T)	
Transmission distance	0 ... 70 mm
Dimensions (incl. connector)	61 x 50,5 x 33 mm
Carrier frequency	wideband (10,7 ... 30 MHz)
Cable to Control Unit	5 m
	optional 7, 10, 30 m
Degree of protection	IP 67
Transmission coil	copper, free shapeable up to Ø 30 cm
Temperature range	-10°C ... +85°C **optional -40 ... +125°C (T)**

Application & calibration of shafts for torque measuerement

Strain gauge application
Installing of telemetry
Water– and shockproof covering
Calibration up to 10.000 Nm
Documentation

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