

FT100 Front Wheel Drive Torque Sensor

The FT100 Front Wheel Drive Torque Sensor offered by Teledyne Instruments is a testing tool used by automotive engineers to obtain an accurate real-time torque signal from the driveline.

The system was developed in response to a request by a major automotive manufacturer who wanted to conduct long-term customer-use testing. As such, the system had to be completely weatherproof and capable of outputting data in an unattended mode for 3 years. Several dozen vehicles were to be distributed around the United States, presenting our engineers with a range of weather challenges. The FT100 was the only sensor to survive an extensive testing program and consequently be selected for the program.

In addition to other fleet the sensor of choice for auto-suppliers for conducting all Teledyne Instruments offers FT100 on customer shafts able calibration certificate. with a clean, responsive ana- of slip rings, batteries or out-



tests, the FT100 has become motive manufacturers and their types of development testing. turnkey installation of the along with an N.I.S.T. trace- The system provides the user log signal without the hassles board wiring.

Technical Data	FT100 Rotating Electronic Collar	Features	Applications
Torque Capacity	Dependent on axle size, typically ± 2500 ft-lbs	All-Weather Operation	Transmission Development
Calibration Range	0 to 2500 ft-lbs (3400 Nm)	No Outboard Slip Rings or Wiring	Engine Development
Maximum Speed	5500 RPM (seals)	Non-Contact Data Transfer	Powertrain Torque Monitoring
Environmental Concerns	Completely weatherproof sealed housing/bearings	Unattended Operation	Traction Control
Collar Size	3.0" OD, 2.75" Wide	N.I.S.T. Traceable Calibration	Racing Vehicles
Operating Temperature Range	-40 to 85° C	Turnkey Installation	Fleet Testing
	FT100 Stationary Electronics		Customer Use Testing
System Frequency Response	2600 s/s, 500Hz (-3dB), 300 Ks/s possible		
Combined Accuracy	<1%		
Interface to Collar	Serial Digital		
Sampling & Averaging	Programmable (0-64 samples)		
Output Signal	0 to ± 5 VDC		
Input Power Requirements	9-18 VDC, 0.8 A (1.8 A surge)		