

FCA 7300 Measurement Steering Wheel



- On-Board Electronics
- Five Simultaneous Analog Outputs
 - 2 Torques
 - 2 Angles
 - 1 Angular Velocity
- Built-In Shunt Calibration Function
- Universal – Fits All Road Vehicles
- Rapidly Installed via Mounting Adapters
- 10X F.S. Torque Overload Protection
- Steerability Maintained at Rupture
- Unique Remote Data Acquisition

DESCRIPTION

The FCA 7300 series of measurement steering wheels are the most accurate available on the market today. This new generation of transducers incorporates numerous technological innovations, such as:

- Full on-board conditioning electronics, with built-in angle reset, torque calibration function and a facility to send a start trigger signal to the remote data acquisition system.
- Optical coder processing electronics are built-in – there is no need for external TTL electronics
- Five simultaneous analogue output signals, two torque channels, two angle channels and one angular velocity channel
- Bearing friction influence on the torque measurement has been eliminated, allowing high accuracy low torque measurements
- Low profile design retains the same driving conditions as with standard steering wheels.
- Easily mounted on any road vehicle by means of flanges - no disassembly of the steering column is required.
- Optional steering stops adjustable between $\pm 15^\circ$ to $\pm 165^\circ$ are available. These stops fold automatically for safety - there is no need for the driver to hit a panic button.

FEATURES

- 5 Analog Outputs
- Torque, Angle, Velocity Outputs
- 10 to 250 Nm Range

APPLICATIONS

- Automotive Design & Test
- Laboratory and Research
- Component Testing

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PERFORMANCE SPECIFICATIONS

CAPTEUR TYPE MODEL SENSOR	FCA7300	Ref. FCA7300-xxx_Rev B
UTILISATION DESCRIPTION	Couplemètre dynamique + Mesure d'angle et vitesse Dynamic torquemeter + Angle and speed measuring	570* 577* 670* 673* 862*

ETENDUE DE MESURE RANGE	___Nm/___Nm - ±___°/±___° - 1080°/s	
SURCHARGE ADMISSIBLE OVERANGE	Voir Tableau See Table	
TENSION D'ALIMENTATION EXCITATION	10 / 28 Vcc 10 / 28 Vdc	
SIGNAL A L'ETENDUE DE MESURE SIGNAL OUTPUT AT FULL SCALE	±10V / 10V (Pour couples et angles / pour vitesse) ±10V / 10V (For torques and angles / for velocity)	
DESEQUILIBRE OFFSET	0V ±0.5V 0V ±0.5V	
LINEARITE + HYSTERESIS LINEARITY + HYSTERESIS	< ± 0.15% de l'EM <±0.3% à partir de 100Nm < ± 0.15% de l'EM <±0.3% after 100Nm	
ISOLEMENT à 50Vcc INSULATION at 50 Vdc	> 100 MΩ > 100 MΩ	
INDICE DE PROTECTION PROTECTION	IP50	
PLAGE D'UTILISATION EN TEMPERATURE (OTR) OPERATING TEMPERATURE RANGE (OTR)	-20°C à +80°C -20°C to +80°C	
PLAGE DE COMPENSATION EN TEMPERATURE (CTR) COMPENSATED TEMPERATURE RANGE (CTR)	0°C à +60°C 0°C to +60°C	
DERIVE DE ZERO DANS LA PLAGE COMPENSEE ZERO SHIFT WITHIN CTR	< 0.5 % de l'étendue de mesure / 50°C < 0.5 % full scale / 50°C	
DERIVE DE SENSIBILITE DANS LA PLAGE COMPENSEE SENSITIVITY SHIFT WITHIN CTR	< 1 % de la valeur lue / 50°C < 1 % of reading / 50°C	
SORTIE ELECTRIQUE ELECTRICAL OUTPUT	Embases LEMO 4b et 6b 4p & 6p LEMO receptacles	
FICHE MOBILE MATING CONNECTOR	Oui Yes	
TYPE ET LONGUEUR DE CABLE CABLE OUTPUT		

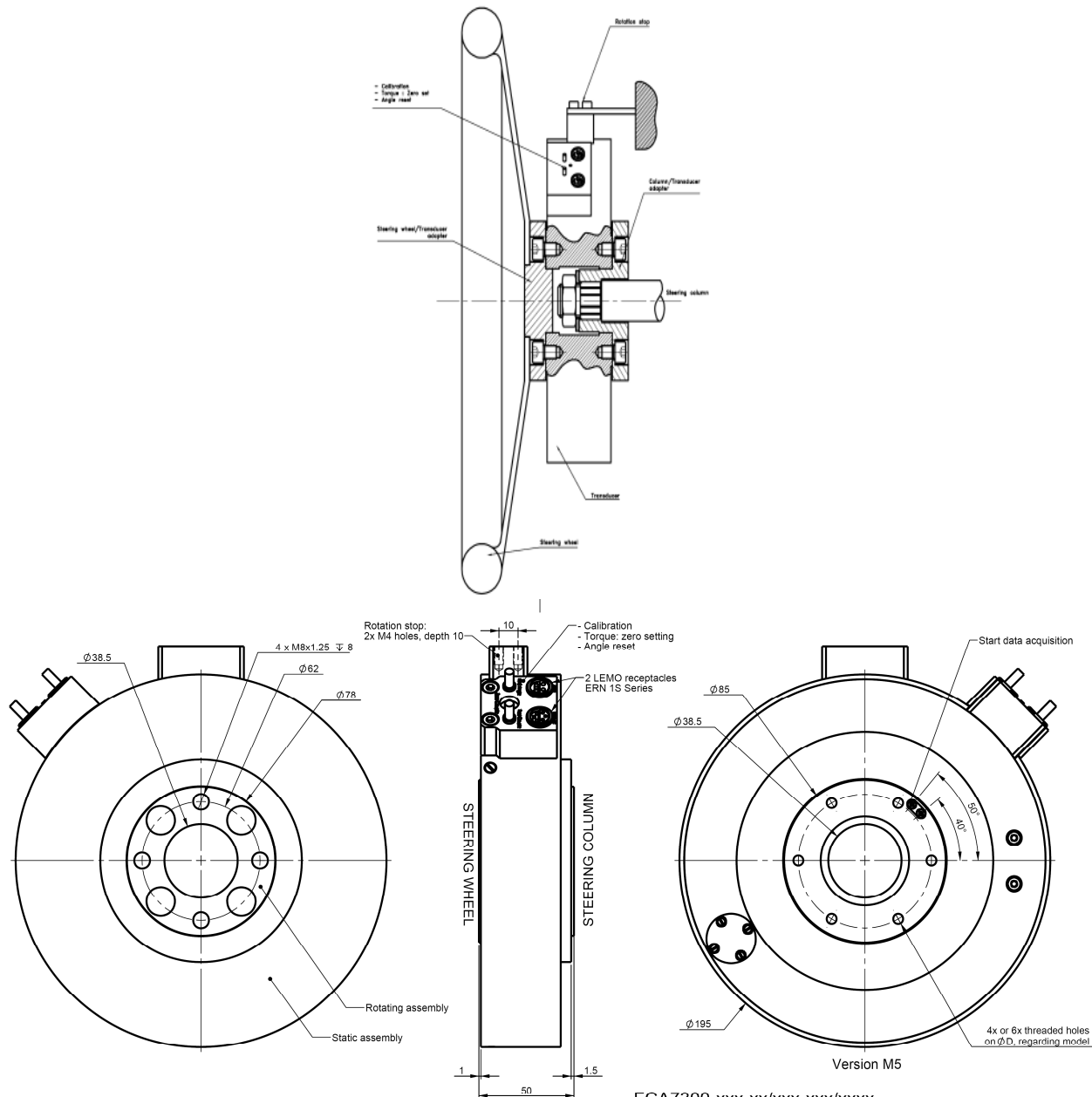
OBSERVATIONS : * Voir plan joint pour les étendues de mesures du FCA7300
NOTES : * See attached drawing for configure FCA7300 ranges

EM / Range (Nm)	10	20	30	40	50	60	80	100	150	200	250
Surch./Overrange (Nm)	100	200	300	300	300	300	120	150	225	300	300

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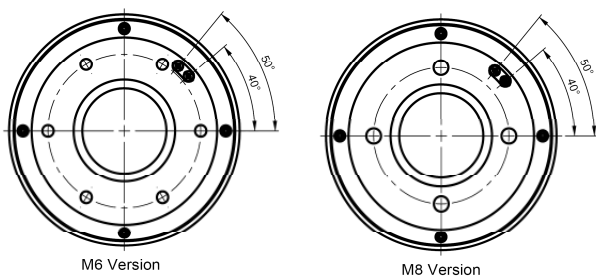
DIMENSIONS



FCA7300-xxx-xx/xxx-xxx/xxxx

- High Angle: $\pm 1080^\circ$ (standard) $\pm 1800^\circ$ max
- Low Angle: $\pm 30^\circ$ mini ($\pm 50^\circ$ mini for 1800°)
- High torque - M5: 10Nm to 150Nm
- M6: 10Nm to 200Nm
- M8: 10Nm to 250Nm
- Low torque: 10% mini of High torque

- 570: 6x M5 holes at 60° on $\phi 70$, depth 8
- 577: 6x M5 holes at 60° on $\phi 77$, depth 8
- 670: 6x M6 holes at 60° on $\phi 70$, depth 8
- 673: 6x M6 holes at 60° on $\phi 73$, depth 8
- 882: 4x M8 holes at 90° on $\phi 62$, depth 8



Dynamic torquemeter + Angle and speed measuring	measurement SPECIALIST	40297-1459-03 Rev.
FCA7300		Tol ± 0.1
EMF/Range: ___Nm/___Nm - 1 ___°/s - 1000°/s		
Matière/Material: Aluminium / Aluminum		Masse/Weight: 3326g
Traitement/Treatment:		Echelle/Scale: 2:3