



- **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**

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## DESCRIPTION

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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.

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## FEATURES

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

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## APPLICATIONS

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

# FCA 7300 Measurement Steering Wheel

## PERFORMANCE SPECIFICATIONS

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

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

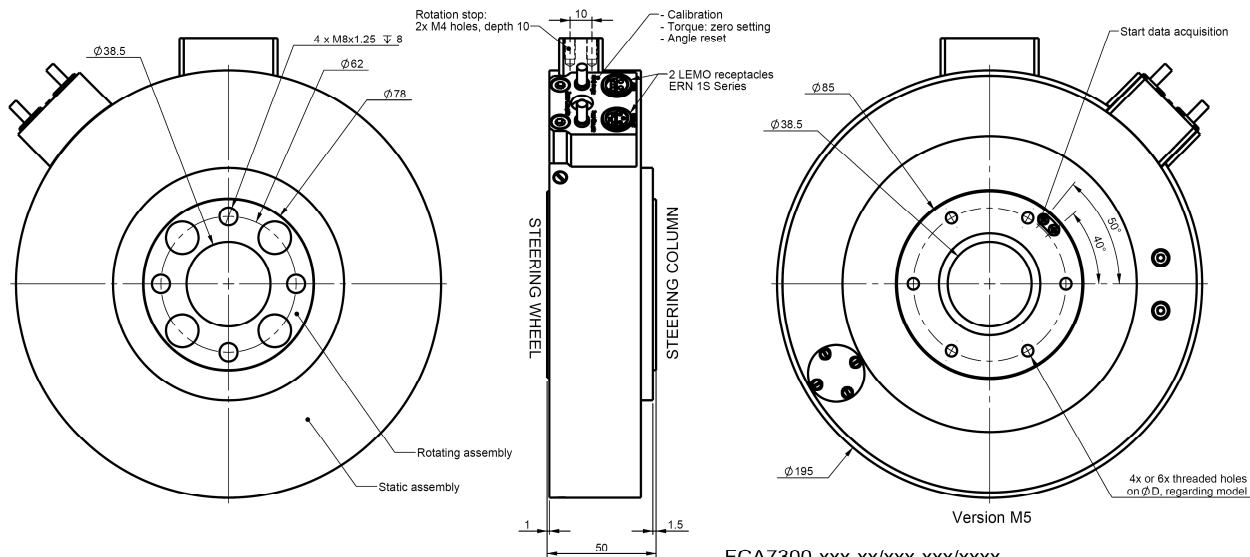
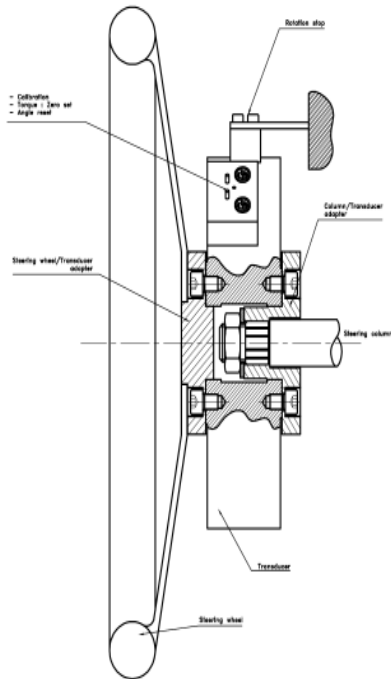
**OBSERVATIONS :** \* Voir plan joint pour les étendues de mesures du FCA7300  
**NOTES :** \* See attached drawing for configure FCA7300 ranges

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

La société se réserve le droit de modifier sans préavis les cotes et spécifications annoncées

# FCA 7300 Measurement Steering Wheel

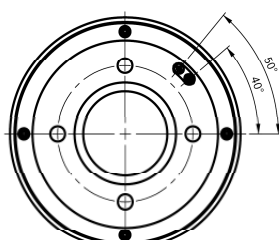
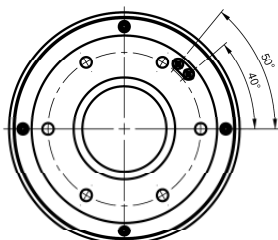
## DIMENSIONS



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



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

# FCA 7300 Measurement Steering Wheel

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## 联系方式

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**深圳市亿为测控电子有限公司**  
Shenzhen Bill-Well Measurement & Control Electronics Co., Ltd.

广东省深圳市南山区创业路怡海广场东座2407 邮编：518000

电话：+86 755 2641 9890 传真：+86 755 2641 9680

电子邮箱：sales@bill-well.com