DF-Family

Precise measurement of the torque

The Products Division of ATESTEO is one of the world's leading manufacturers of high-precision torque measurement technology for use in test benches and laboratories. The DF family represents a series of torque measuring flanges. The entire product portfolio can be found online at **https://www.atesteo.com/equipment/**

Description of the DF family

The DF ibex product is part of the DF family (series). ibex measuring flanges represent high-precision solutions for torque measurement. The systems feature a split stator ring, allowing for easy installation. The stator ring and more precise sensor technology have improved the efficiency and accuracy of the DF system to 0.02%. Ibex flanges are ideal for the increased demands of efficiency and drag torque measurements.

New drives or new drive concepts can be tested on the test bench during the prototype phase and optimized for efficiency. Ideal for testing applications where accuracy is the most important parameter.

The new DF dual flanges of the DF family allow the measurement of two torque measuring ranges, each with an accuracy class of 0.04%. The nominal torques of the two measuring ranges are in a ratio of up to 1:5.

DF ibex	DF dual	DF plus
		
Accuraccy Class 0,02%	Accuraccy Class 0,04%	Accuraccy Class 0,04%
split ring stator	split ring stator	**Stator-Head**
One Torque measuring range	**Two Torque measuring ranges**	One Torque measuring range
Rotors with DIN bolt circle	Rotors with DIN bolt circle	Rotors with DIN bolt circle
TCU5	TCU5	TCU5
15m central cable	15m central cable	15m central cable
Optional magnetic speedsensor	Optional magnetic speedsensor	Optional magnetic speedsensor
–	–	Optional Highspeed Version DF plus HS
Keyword: High precision	**Keyword: Flexible**	**Keyword: Space-saving**

Overview DF-Family

Contact our expert Tobias Kuck (-280) or Philipp Scherb (-262) now for more information on the DF series.

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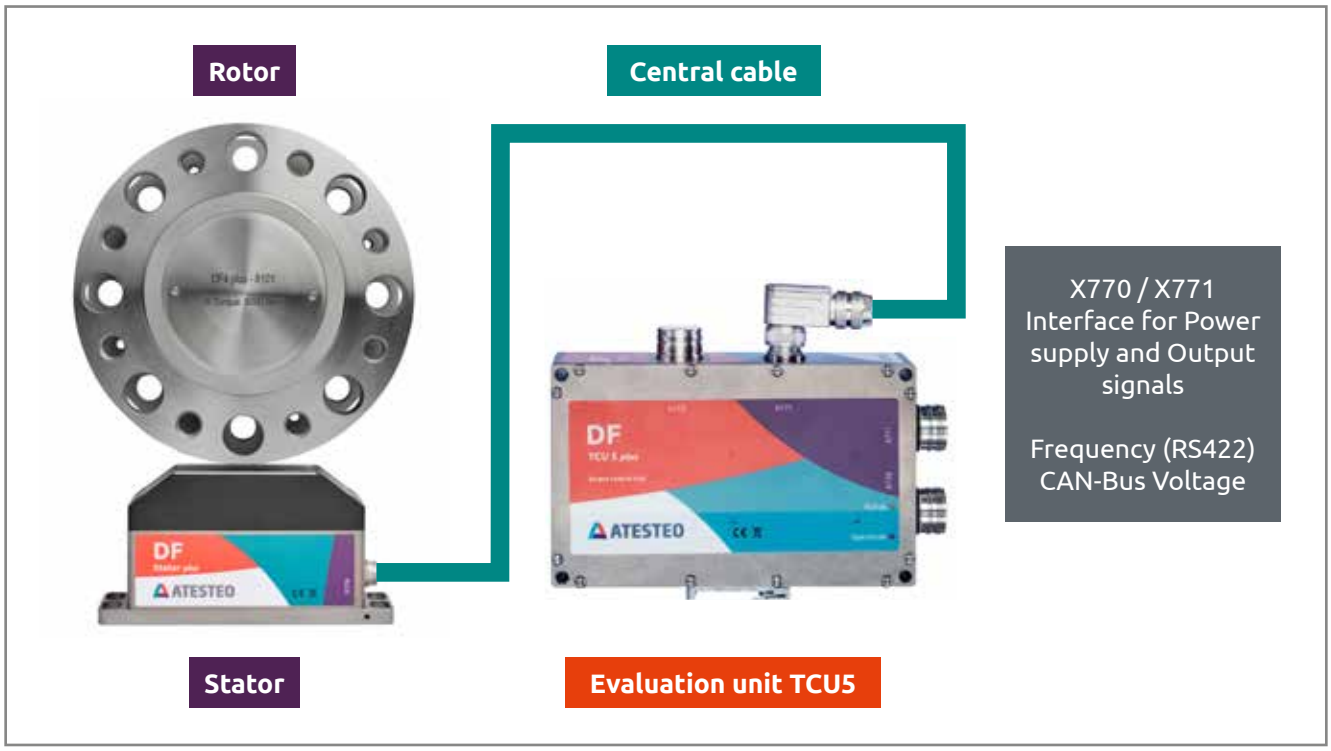
The dual flanges of the DF series allow measurement requirements with wide torque ranges to be easily covered without any modifications of the test stand. Ideal for testing applications where flexibility of setup is paramount.

The established DF plus measuring flanges were the first in the DF series. ATESTEO used rotors with DIN-standardized hole patterns for the first time. The ringless stator is particularly well-suited for applications where space is limited around the rotating shafts. The simple design also makes it the most cost-effective variant of the DF family. The DF plus HS is a system capable of reaching high speeds of up to 40,000 revolutions per minute at up to 4,000 Nm. Ideal for applications with limited space and budget.

The torque flanges of the DF family can cover nominal torques up to 10,000 Nm.The rotors are divided into five different sizes depending on their nominal torque.

For example, a size DF1 rotor is limited to 500 Nm, while the largest rotor, the DF5, can be designed for up to 10,000 Nm. All systems are calibrated by the ATESTEO calibration laboratory. Optionally, the measuring flanges can be calibrated according to DIN 51309.

A DF measurement system consists of the components rotor, stator, and evaluation unit (TCU5 for short). The rotor and stator operate contactlessly. Data exchange and power supply therefore function contactlessly and without bearings. The stator is connected to the TCU5 via the central cable (15 m, longer optionally). To achieve short signal paths, the TCU5 can therefore be placed in the control cabinet while the rotor and stator are mounted in the test bench. Optionally available customer cables (data exchange, power supply) are connected to the two slots on the TCU5.



DF-measuring system

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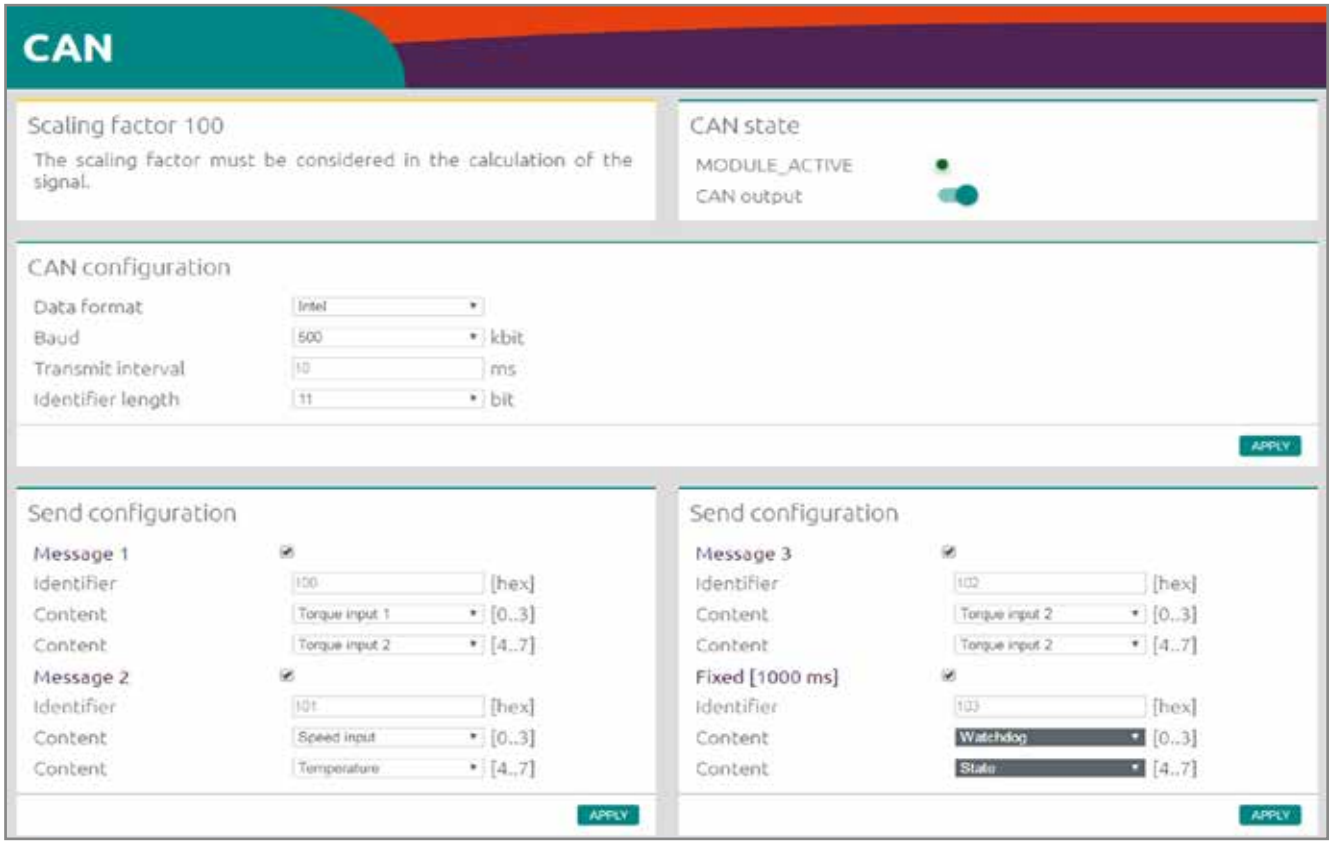
	ibex	dual	plus
Nominal torque [Nm]	from 500 to 10.000	up to 10.000	from 100 to 10.000
Number of rotor sizes	5 (DF1 - DF5)		
Accuracy class [%]	0,02	0,04	0,04
Max. Speed [1/min]	21.000 / 20.000 / 16.000 / 15.000 / 12.000		
Nominal temperature range [°C]	from 0 to 80		
Protection class	IP54	IP54	IP54
Interface for configuration	website		
Data output	Frequency (RS422), CAN, voltage		

Technical data. Further data can be found in the product data sheet.

The TCU5 has an integrated website for configuring the measurement system. The TCU5 can be connected to a terminal device via a standard network cable, and the configuration website can be accessed via a browser.
The simple and intuitive menu navigation allows for targeted use.

Furthermore, a wide range of system statuses can be received and monitored via the CAN interface. This ensures safe, unattended 24/7 operation. CAN bus commands can be used to automate processes (e.g., measuring chain calibration with a test signal).



CAN-Interface

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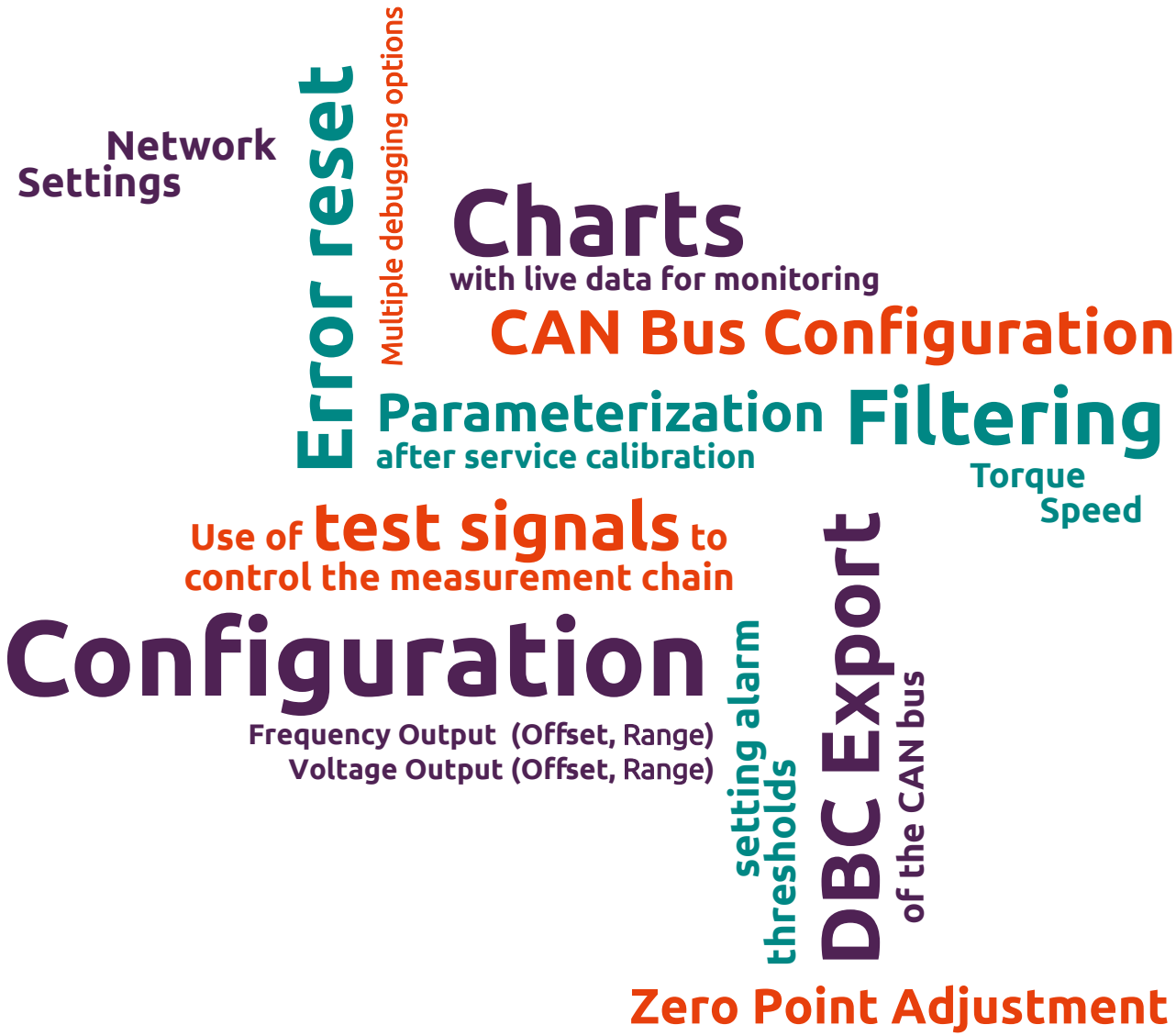
Settings:



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