

Motor Data The Software Sensor

Today, electric motors are the most numerous receivers in the commercial and industrial installations, just behind lighting systems. Their function of converting electrical energy into mechanical energy makes them particularly important economically, so no installation or machine designer, installer or operator can ignore them.

Chauvin Arnoux® has developed and integrated into its power and energy loggers an analytical and diagnostic environment for monitoring electric drives.

Based on a physical and statistical model, a software sensor capable of providing all the motor's electrical parameters was developed.

With the PEL family of loggers, in addition to power and energy measurements based on voltage and current measurements, you can obtain comprehensive instantaneous data such as the motor's rotation speed, efficiency and torque.

The software sensor developed by Chauvin Arnoux® includes a database containing the profiles of several hundred motors.

By entering the information indicated on the motor's nameplate, the technician performing electrical measurements on the motor will obtain the specifications of the motor in real time, without setting up any specific sensors.



MODEL NO.	D10036AFG
HP	3
VOLTS	230/460
AMP	7.8/3.9
ENCL. TEFC (IP55)	FRAME NO. 183TC
F/L RPM	1760
MAX. AMB.	40 °C
SERVICE FACTOR	1.15
INS.	H
TIME RATING	CONT.
BRG. D.E.	6306VV
3-PHASE	KVA CODE K
NO. O.D.E.	6206VV
Hz	60
EFFICIENCY	89.5%
DESIGN	B
Asynchronous motor 3-PHASE INDUCTION	
CONV. P1	P2
INDUCTION	THERMAL PROTECTION CONNECT TO INTERLOCK

366.3	kW
415.6	kVAR
207.8	kVA
TAN 0.25	

ANDROID application

The software sensor can be accessed with a smartphone or tablet, using the PEL family of loggers

Download for free



Nameplate

Of Motor

Measurements

Electrical Power

Calculation 1

- Mechanical Power
- Efficiency

Calculation 2

- Speed
- Mechanical Torque



The efficiency of an electric motor corresponds to the speed measured directly at the end of the shaft, after the slippage. It can be determined by calculating the ratio of the useful energy divided by the energy absorbed.

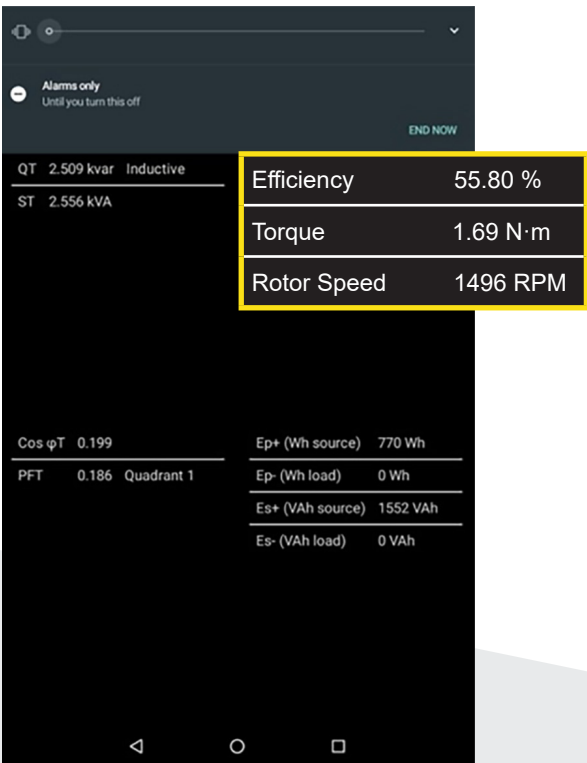
The motor torque is a rotation moment (expressed in Nm) applied to a shaft and owes its name to the way in which the action is obtained by means of two equal, opposite forces. A high torque provides high power.

The rotation speed of the motor is equal to the synchronous speed minus the slippage. The synchronous speed is equal to the frequency divided by the number of pole pairs.



Software Sensor Specifications

Power up to 750 kW
Speed up to 3600 RPM
Torque up to 10,000 N.m



Users can view the results on their ANDROID device.
The application is multilingual.

Our products are backed by over 130 years of experience in test and measurement equipment, and encompass the latest international standards for quality and safety.

Measure Up WITH AEMC INSTRUMENTS®

To learn more, contact us or visit our website: www.aemc.com

Call the AEMC Instruments Technical; Assistance Hotline for immediate consultation with an applications engineer: (800) 343-1391

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