

## ANALOG AND DIGITAL MEASURING TRANSDUCERS



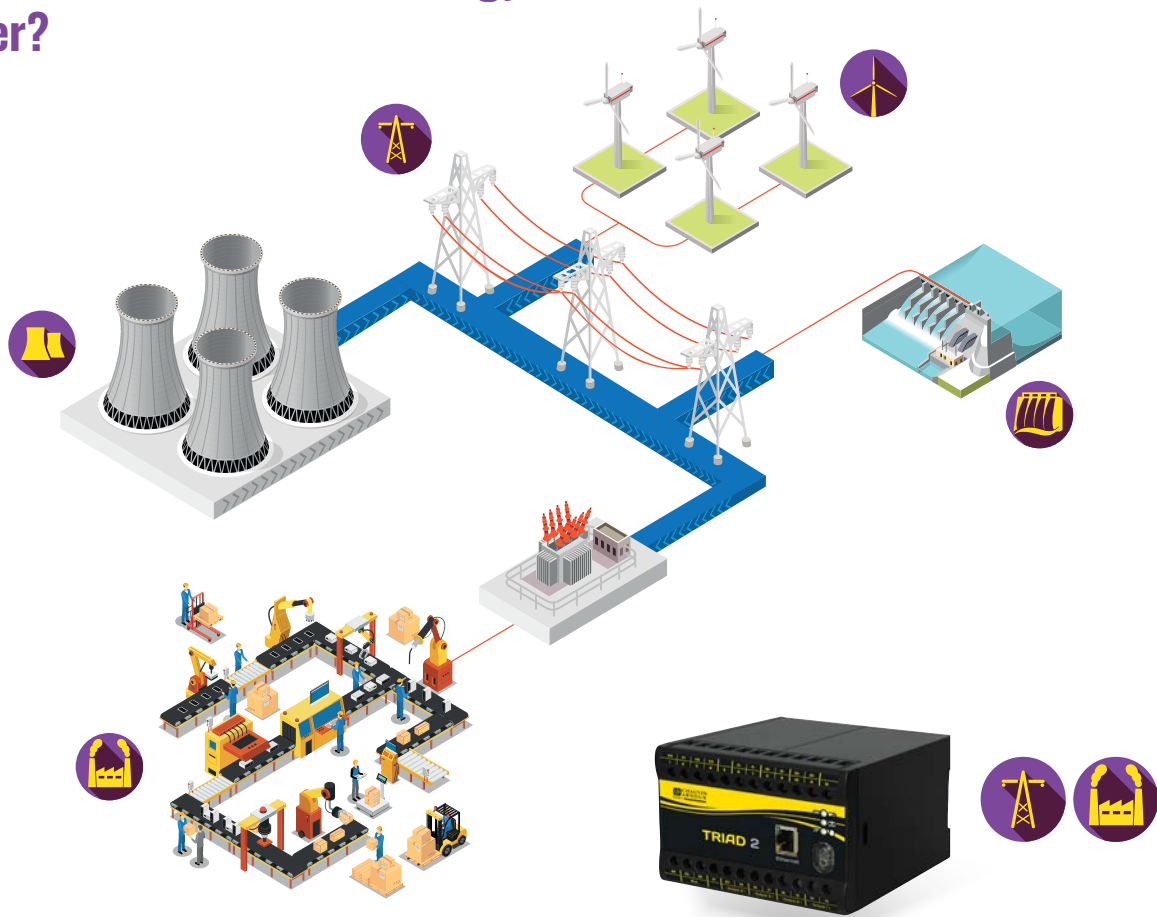
**A complete range covering all your measurement requirements**



- Backed by 40 years' experience, designed and manufactured in France
- Communication with all systems (4-20mA, Modbus, IEC 61850, etc.)
- Product range suitable for harsh environments
- All the T82N models are K3-qualified



# Why choose a Chauvin Arnoux Energy transducer?



## Electricity generation

Transducers accurately measure the electrical quantities at the output from the alternators of thermal, nuclear or hydro-electric power stations. They enable fine adjustment of the high active and reactive powers generated. Transducers also play a key role in monitoring renewable energy generation installations between the power inverters and the connection to the grid.

## Electricity transmission and distribution

Transducers are used in the transformer substations (e.g. 400 kV / 225 kV) to transmit to the dispatching center the electrical quantities (U, F, P, Q, etc.) needed to control electrical power transmission and distribution.

## Electricity-intensive industries

Transducers are used to measure the electrical quantities (V, U, I, P, etc.) for control of the production facilities and/or specific monitoring of the power consumed by advanced industrial sites.



1982

100,000

Chauvin Arnoux Energy has been building transducers since 1982 and has mastered all the phases from design through to manufacturing in its French factories

There are more than 100,000 Chauvin Arnoux Energy transducers equipping power generation sites and substations in electricity distribution grids all over the world



To help you configure your transducer, please refer to the Chauvin Arnoux Energy General Catalog, which includes a configuration and order form.

## Type of transducer

### Analog

The advantage of totally analog instruments without programmable digital components for sensitive environments such as nuclear power plants



A rugged, proven product whose configuration is fixed when ordering



### Digital

The advantage of digital instruments with the extensive flexibility for configuration and communication which they give the user.

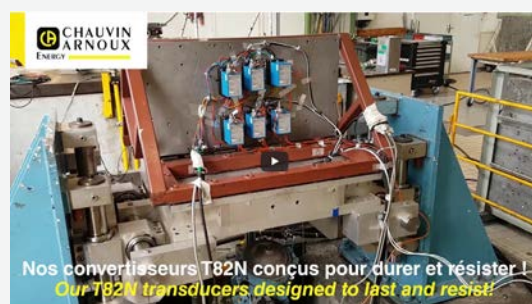


A totally configurable product which is adaptable for your measurements and is equipped with digital communication



**Seismic tests on our T82N transducers:** see for yourself their high resistance in harsh environments, an essential step for K3 qualification!

Scan to watch the video



T82N



TRIAD 2

#### Measurements

	T82N	TRIAD 2
Iac	■	■
Vac	■	■
Uac	■	■
P	■	■
Q	■	■
S		■
F	■	■
PF	■	■
Cosφ		■
Tanφ		■
φ		■
φ (U'-U'')		■

#### Processing

	T82N	TRIAD 2
Accuracy	0.5%	0.1%
Response time	120 ms to 260 ms	50 ms to 1 s
Configurable	When ordering	Yes

#### Output

	T82N	TRIAD 2
Analog	1	Up to 4
Digital	-	Modbus TCP, Modbus RTU, CEI 61850

IEC

Chauvin Arnoux Energy's transducers comply with the most demanding international reference standards, such as IEC 60688 and IEC 61000-6-5 (substation environment standard)



A comprehensive transducers offering to cover all the measurement needs of your network or your site. Chauvin Arnoux Energy transducers can be delivered preconfigured to match your requirements.

## Our offering

### TRIAD 2 for advanced electrical quantities

- Accuracy class 0.1 as per IEC 60688
- Reinforced immunity for electrical substations (IEC 61000-4-5)
- Compatible with IEC 61850 via ELINK (communication gateway) and digital output available as an option (Ethernet / RS485)
- Configured when ordering or configurable using the Triadjust 2 software



- For single-phase and balanced three-phase networks
- 1 analog output



- For all electrical networks
- 4 analog outputs



For your IEC 61850 networks, don't forget to use your TRIAD 2 with the ELINK gateway

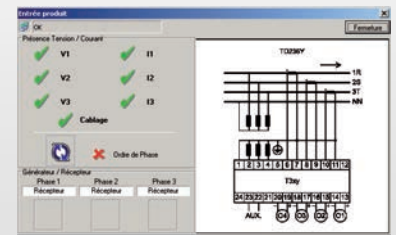
- Modernize your equipment's measurement protocol without calling into question your choice of a transducer
- Up to 20 transducers
- DNV.GL-certified



#### A tailored product configurable via your Triadjust 2 application

With the TRIADJUST 2 software, you can quickly configure all the parameters of your TRIAD 2 as many times as you want.

- Configuration via optical head or Ethernet RS485
- Access to all the TRIAD 2 parameters
- Diagnosis of the installation
- Label printing on all types of laser printer



### T82N for harsh environments

- Linear transfer curve
- Accuracy class 0.5
- Direct input or on CT
- IP 20, tropicalization option
- Operating temperature: -10... + 60 °C
- 2 mounting modes: fixed or plug-in



**IAR 1210B**  
RMS AC current



**PAR 1232B**  
Active power



**JAR 1211B**  
Phase angle



**FAR 1210B**  
Frequency



▪ Mounting on DIN rail for fixed or plug-in unit



Model	Reference
Mounting on symmetrical DIN rail	PDIN SYME
Mounting on asymmetrical DIN rail	PDIN ASYM

▪ Socket for plug-in unit



Model	Socket	
	Type	Reference
UAR 1210B	5	EMBB 4005
IAR 1210B	4	EMBB 4004
PAR 1232B	3	EMBB 4003
QAR 1232B	3	EMBB 4003

### Use of T82 transducers with NormEurope analog panel meters

A complete measurement line for viewing the electrical quantities in critical nuclear environments.



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