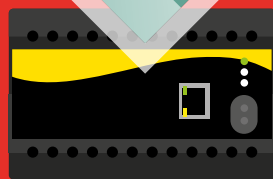
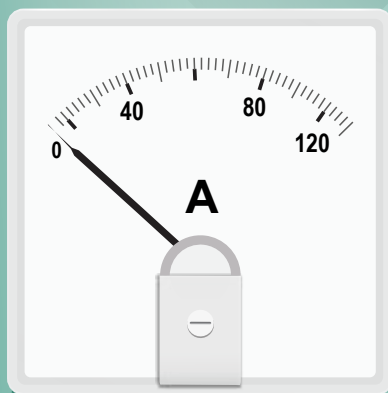
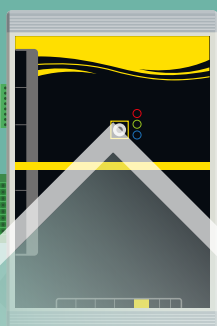


SELECTED PRODUCTS

2021



ABOUT

Chauvin Arnoux Energy

Chauvin Arnoux Energy, a company in the Chauvin Arnoux Group, is specialized in fixed equipment for measurement and supervision of electrical networks to meet the requirements of cutting-edge industries for intensive use in harsh environments.

Our key sectors



ELECTRICAL POWER GENERATION

Chauvin Arnoux Energy meets the specific needs of the nuclear sector by contributing expertise developed and acknowledged for more than thirty years.



ELECTRICAL POWER TRANSMISSION AND DISTRIBUTION

Chauvin Arnoux Energy proposes solutions for energy billing and network balancing for the players in the power transmission and distribution sectors.



RAILWAYS

A major partner of the rail market, Chauvin Arnoux Energy designs automation relays for the rolling stock and substations.



NAVAL

Chauvin Arnoux Energy develops tailored solutions for navigation and control in the context of naval applications.



A French brand with integrated production

Chauvin Arnoux Energy, a French company which is part of the Chauvin Arnoux Group, handles all the aspects of manufacturing for its products, from design through to final inspection of the equipment. Our experience, qualified teams guarantee the quality and reliability of the instruments supplied and their availability for several decades.

A long-term offering

Complete mastery of our industrial know-how in our factories in France and our ability to keep up with the changes in the markets (materials used in our instruments) enable us to guarantee constant quality and long-term availability for our products.

POWER MONITORS



For monitoring LV, MV and HV electrical networks

MEMO

- Easy-to-read, all-in-one screen
- Easy to set up and operate
- Managed inventory covering your main requirements

ENERIUM

- Accuracy suitable for the most critical MV/LV measurements
- The operating history and diagnostic tools to understand your electrical feeder
- Unique on the market, up to 8 totally-integrated inputs/outputs (on-off or analog)
- Qualimetry at the heart of a power monitor

		MEMO	ENERIUM				
		Flush-mounting 96 x 96 mm			Flush-mounting 144 x 144 mm		
		Memo P200	Enerium 50	Enerium 150	Enerium 100	Enerium 200	Enerium 300
		ELECTRICAL ENERGY			MULTI-ENERGY		QUALIMETRY
Functional specifications	Accuracy class (as per IEC 61557-12)	0.5	0.5	0.5	0.5	0.5 or 0.2	0.2
	Version without display				Enerium 110	Enerium 210	Enerium 310
Recording functions	8 load curves						
	4 trend curves						
Alarms	Number of alarms		16	16	16	16	16
	Time/date-stamped events recorded		64	64	64	64	64
Power quality	THD / PF / Tan φ						
	Max. harmonic orders		25	50	25	50	50
	Qualimetry as per EN50160						
	Capture of V, U, I & In waveforms						16
	Storage of the last 1,024 time/date-stamped events (dips, outages, overvoltages)						
Inputs / Outputs	Max. number of inputs / outputs	1	2	2	8	8	8
Inputs (option)	On-off (pulse or alarm mode)		0,1 or 2	0,1 or 2	0, 2, 4, 6 or 8	0, 2, 4, 6 or 8	0, 2, 4, 6 or 8
	Analog						
Outputs (option)	On-off (pulse or alarm mode)	1 (pulse)	0,1 or 2	0,1 or 2	0, 2, 4, 6 or 8	0, 2, 4, 6 or 8	0, 2, 4, 6 or 8
	Analog		0 or 2	0 or 2	0, 2 or 4	0, 2 or 4	0, 2 or 4
Graphics	Fresnel						
	Gauges						
	Harmonic-order histograms						
Communication interface	Optical USB		Front	Front	Front or rear	Front or rear	Front or rear
	Ethernet or RS485	RS485 only					
	Metrological LED						
Programming	Front panel						
	Software						

Mounting on DIN rail possible with mounting kit

RELATED SOFTWARE

- Configuration, diagnostic, installation and display software dedicated to the ENERIUM range of power monitors.



For your IEC 61850 networks, don't forget to use ENERIUM with the ELINK communication gateway:

- It modernizes the protocol of your measuring equipment without calling into question your choice of power monitors
- Up to 10 power monitors
- DNV.GL-certified



ULYS MCM

MULTI-CHANNEL METER



Industry



Energy - Generation, Transmission & Distribution



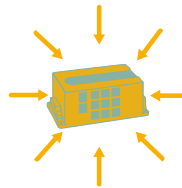
Energy efficiency



DESCRIPTION

Ulys MCM is the innovative solution for centralizing the measurement of multiple electrical feeders.

- Compact: 18 meters in one!
- Quick implementation
- Wide range of sensors for all types of conductors and current values
- Comprehensive measurement of all the electrical parameters
- Flexible communication



■ 18 meters in one



■ Compact size



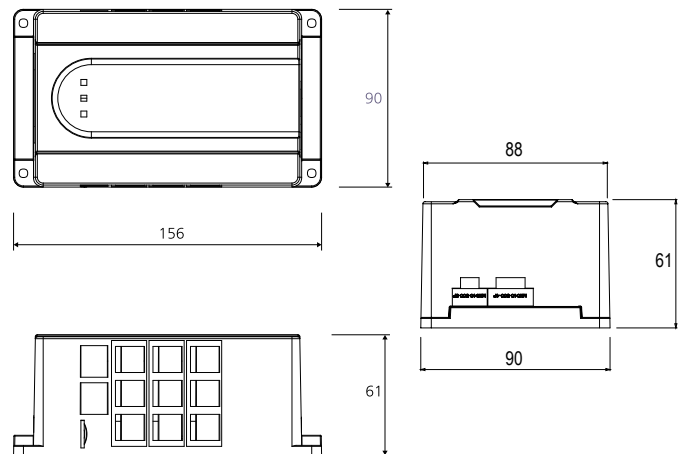
■ Compatible with a large number of sensors

OVERVOLTAGE CATEGORY

TECHNICAL SPECIFICATIONS

Feature	Specification	
Electrical system	1P2F, 3P3F, 3P4F	
Nominal specifications of inputs	Voltage (Umin – Umax)	43-690 V~ between phases
	Voltage (Vmin – Vmax)	25-400 V~ between phases and neutral
	Measurement category	600 V Cat III
	Frequency	45-65 Hz
	Current	0-333 mV (max. 0.5 V p-p) Impedance : 20 kΩ
	On-off (DI)	1 point, 80-250 V~, external power supply
	Temperature CTN	25°C, 10 kΩ, (β(25/85)=3 970°k)
Auxiliary power supply	Voltage	100-240 V~
	Frequency	50-60 Hz
	Max. voltage (L-N)	Short term: 1,440 V~ Long term: 490 V~
	Consumption	0.05-0.08 A
Communication	Overvoltage category	300 V Cat II
		Modbus RS485
		Modbus TCP
On-off output contact (DO)		RS232
		1 NO (normally open) SPST (single-pole single-throw)

INSTALLATION CONDITIONS



The Ulys MCM is available in **9 or 18-channel** versions or three-phase measurement.

TO ORDER ▼

Model	Reference
ULYS-MCM9	P01 331 062
ULYS-MCM18	P01 331 064

ULYS MCM ACCESSORIES



Industry



Energy - Generation, Transmission & Distribution



Energy efficiency

Sensors



Model	Rogowski coil		Current transformer				
Type of sensor	Openable, flexible		Openable, rigid				
Models	MF300	MF3000	TCC V 105	TCC V 161	TCC V 242	TCC V 364	TCC V 366
Rated current	600 A	3000 A	5A	100A	250A	400A	600A
Clamping diameter	70 mm	200 mm	10 mm	16 mm	24 mm	36 mm	36mm
Weight of pack of 3	195g	210g	190g	320g	625g	1150g	1260g
Dimensions of sensor alone (h x w x d)	130 x 80 x 12 mm	270 x 220 x 12 mm	41,4 x 24 x 26,5 mm	51,7 x 30 x 31,5 mm	71 x 44 x 39,2 mm	84 x 57 x 41 mm	84 x 57 x 41 mm

Our sensors are delivered in packs of 3 directly connected to the connection adapter (P01379643)

WHAT SENSORS DO YOU WANT?

	Ratio	Diameter	
Rigid sensors			
PACK 3 TCC V 105	5A / 333mV	10 mm	P01 379 616
PACK 3 TCC V 161	100A / 333mV	16 mm	P01 379 618
PACK 3 TCC V 242	250A / 333mV	24 mm	P01 379 620
PACK 3 TCC V 364	400A / 333mV	36 mm	P01 379 622
PACK 3 TCC V 366	600A / 333mV	36 mm	P01 379 624
Flexible sensors			
PACK 3 MF300	600A / (39.1µV/A)	70 mm	P01 379 631
PACK 3 MF3000	3000A / (39.1µV/A)	200 mm	P01 379 633

WHAT IS THE DISTANCE BETWEEN YOUR ULYS MCM AND YOUR SENSORS

RJ12M-RJ12M M	3 meters	P01 379 641
RJ12M-RJ12M L	9 meters	P01 379 642

Screen



The remote screen allows you to view the data measured by your Ulys MCM.

DO YOU WANT TO EQUIP YOUR ULYS MCM WITH A SCREEN?

Model		Reference
ULYS MCM D	Screen	P01 331 065
RJ45M-RJ45M M	Connection cable*	P01 379 640

*Cable essential for screen connection

MEASUREMENT TRANSDUCERS



Energy - Generation, Transmission & Distribution



Nuclear

A complete range covering all your measurement requirements

- Analog and digital
- Communication with all systems (4-20 mA, Modbus, IEC 61850)
- 40 years of experience
- Designed and manufactured in France



Analog transducers

T82N

For harsh environments



Digital transducers

TRIAD 2

For evolving electrical quantities

Measurements			
Iac			
Vac			
Uac			
P			
Q			
S			
F			
PF			
Cos Φ			
Tan Φ			
φ			
$\varphi (U' - U'')$			
Options			
Number of analog outputs	1		4
RS485			
Ethernet			
Relay output			
Programmable			
Plug-in version			
Self-powered	Depending on model		(1)

(1) By looping the input voltage

MEASUREMENT TRANSDUCERS



Energy - Generation, Transmission & Distribution



Nuclear

For advanced electrical quantities



- ▶ For single-phase or balanced three-phase networks
- 1 analog output



- For all electrical networks
- 4 analog outputs

TRIAD 2

- Accuracy class 0.1 as per IEC 60688
- Reinforced range for IEC 61000-4-5 substations
- 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 your IEC 61850 networks, don't forget to use TRIAD 2 with the ELINK communication gateway

- Modernizes the protocol of your measuring equipment without calling into question your choice of a transducer
- Up to 20 transducers
- DNV.GL-certified



For harsh environments



UAR 1210B
RMS AC voltage



IAR 1210B
RMS AC current



PAR 1232B
Active power



QAR 1232B
Reactive power

- 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

- 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

POWER QUALITY ANALYZERS



Industry



c



For 27/7 analysis of all the electrical characteristics of LV, MV and HV networks

MAP RANGE

- Compliant with the IEC 61000-4-30 Class A standard
- Data processing according to the EN 50160 standard
- Detection of the direction (upstream/downstream) of events
- Analysis of brief transients



Permanent analyzers



Non-intrusive analyzers

MAP COMPACT MAP 610 MAP 620 MAP 640 MAP 620-NI MAP 607

Strengths		Predefined report as per the EN50160 standard. Compliance with the template calculated in the product. Immediate indication of compliance with the template by LED on front panel. Possibility of managing the whole MAP600 range with the same set of software.				Recovery of the measurements via USB 2.0 port. Plug & play system.	
Installation	Network	Three-phase 400 V / 230 V		Three-phase 690 V / 400 V			Single-phase 230 V
	Number of voltage channels	3	3	3	3	3	1
	Number of current channels	3		4	4	4	
	Number of 0 - 20 mA inputs			4	4		
Sampling	Sampling frequency	12,8 kHz	12,8 kHz	12,8 kHz	12,8 kHz	12,8 kHz	12,8 kHz
	Frequency for fast transients				2 MHz		
Communication	Mini-USB						
	Built-in Ethernet port (Modbus TCP/IP available)	option	option	option	option	option	
	Port RS232						
Data storage	Capacity	64 MB	128 MB	128 MB	128 MB	128 MB	64 MB
Power supply and connection	Internal operating reserve	1 s	10 s	10 s	10 s	10 s	1 s
	Power supply voltage	175 Vac to 255 Vac	85 - 264 Vac / 110 - 375 Vdc or 36 - 72 Vdc				230 Vac
	Voltage connections	screw-on	screw-on	screw-on	screw-on	4 mm banana	Standardized connector
	Current connections	screw-on		screw-on	screw-on	¼ turn	
Calculated parameters	Voltage, frequency, unbalance, THD						
	Harmonics (up to 50th order)						
	Flicker pst (10 min), Plt (2 h) and Lft (inst.)						
	Remote control signals						
	Power harmonics						
	P, Q and S power values						
Voltage events	Power factors, tangents						
	Dips						
	Interruption / outage						
	Transients						
	Fast variations						
	Events log						
Capture and recording of events	HF transients						
	Signature						
	Waveforms						
Connection	Customizable qualimetry template						
Software	Quick / non-intrusive connection						
	Qual SRT	Qual SRT					Qual SRTc
	E.Qual-Premium						
	E.Qual-Premium-Server						(import)



E.Qual-Premium Server is the single, user-friendly solution for managing a fleet of power quality analyzers comprising 10 to several hundred products.

- All the data retrievals are performed automatically by a high-performance remote data-retrieval engine
- A history since commissioning of the equipment fleet for benchmarking of all the power quality analyzers
- Tools for summarizing all the measurements and sharing the information concisely with decision-makers and operators.

MANAGEMENT AND ANALYSIS SOFTWARE



Industry



Energy - Generation, Transmission & Distribution



Analysis and report generation modules for network analyzers in the MAP range

E. QUAL-PREMIUM

E.Qual-Premium can be used to generate various views corresponding to the different parameters present in the measurement campaign recovered, including:

- views of the events
- views of the transients
- views of the trend curves
- views of the measurement campaign summaries
- reports generated directly in MS Word® format

The most extensive and critical electrical networks require special supervision of energy quality at the points of connection.

E.QUAL-PREMIUM SERVER

E.Qual-Premium Server is a unique, user-friendly solution for managing from ten to several hundred network analyzers.

E.Qual-Premium Server also includes E.Qual-Premium:

- graphical multi-equipment views
- multi-equipment event logs
- statistical views

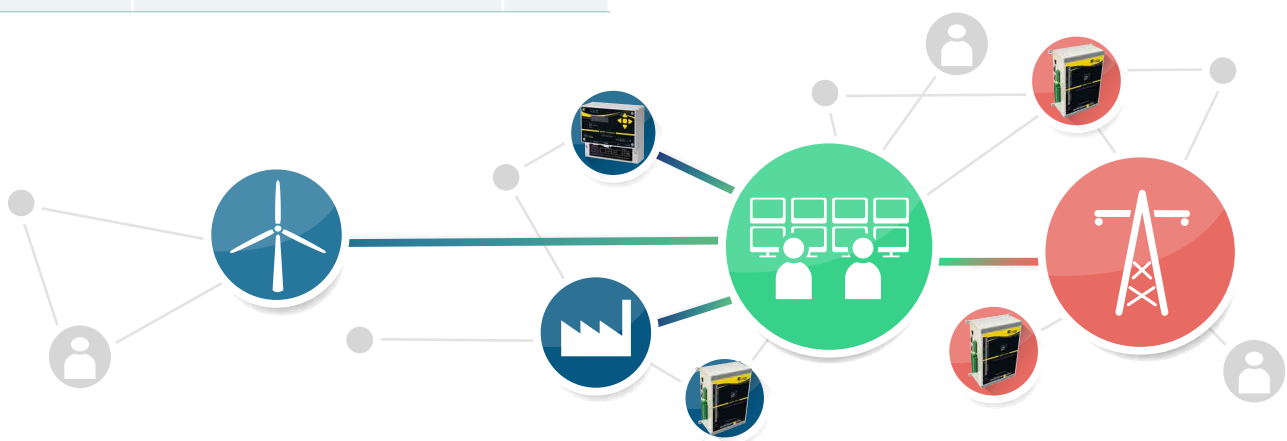
Peace of mind: all the data retrievals are performed automatically by a high-performance remote data-retrieval engine

Complete: a history from the moment the equipment fleet was commissioned, allowing benchmarking of all the analyzers

Analysis: special tools for summarizing the measurements on the fleet of analyzers and sharing the information in concise form with the decision-makers and operators

Model	Description	Number of licenses
E.Qual-Premium	Configuration, display and analysis software	1
E.Qual-Premium Server	Configuration, remote data retrieval, display, administration and analysis software	5
E.Qual-Premium Server	Configuration, remote data retrieval, display, administration and analysis software	20

	E.Qual-Premium	E.Qual-Premium Server
Architecture		
Point to point	■	■
Multi-equipment by successive targeting	■	■
Management of measurements in database		■
Multi-site / multi-equipment		■
Client / server architecture		■
Data transfer		
Manual	■	■
Selective transfer	■	■
Automatic transfer		■
Communication log		■
Measurement display		
Real-time waveform and vectorial	■	■
Recorded curves	■	■
Curves with multi-equipment parameters		■
Global measurement campaign		■
Event display		
List of events	■	■
Waveform and fast RMS	■	■
Sorted views		■
Statistical views of events		■
Report generation		
Standard report covering one week	■	■
Report covering customizable period		■



ANALOG PANEL METERS



Industry



Energy - Generation, Transmission & Distribution



Nuclear

With round barrel for severe operating constraints

NORMEUROPE

RANGE

- EDF-certified range, usable onboard sea-going vessels, ideal for power generators and distributors
- Large choice of functions, formats, measurement ratings and options

Front panel (round barrel)	Format	48 x 48	72 x 72	96 x 96	COHO 48 x 48
Standard functions					
AC ammeter		90°		250°	
AC voltmeter		90°		250°	
Pointer dial frequency meter			90°	250°	
Vibrating reed frequency meter		1 to 9 reeds			
Maximum demand ammeter		90°			
Wattmeter / varmeter					
Phasemeter			90°	250°	
DC ammeter		90°		250°	
DC voltmeter		90°		250°	
Hour meter					
Synchronization equipment					
Double vibrating reed frequency meter		2 x 9 reeds			
Differential voltmeter			90°	250°	
Command functions meter					
AC current / AC voltage				90°	
DC current / DC voltage				90°	
Temperature				90°	
Advantages	NORMEUROPE, the industry reference for the generation, transmission and distribution of electrical energy for severe operating constraints.				

SPECIAL FUNCTIONS

Maximum demand ammeters

The maximum demand ammeter or thermal ammeter indicates the RMS current for a given period. It is designed to control slow overloads on transformers, cables, etc.

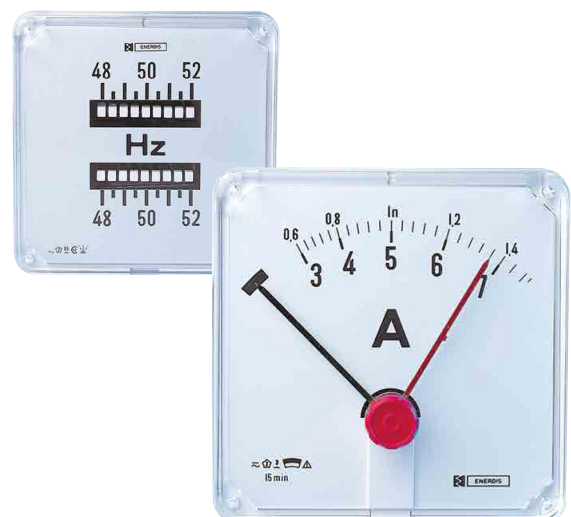
Synchronization equipment

Necessary for paralleling generators or for network-network or network-alternator coupling.

The user can thus ensure that the voltage to be synchronized and the reference voltage are of the same frequency and amplitude and are in phase before carrying out the coupling.

The vibrating-reed dual frequency meter enables you to synchronize the frequency of a source with a reference source.

The differential voltmeter is powered by the voltages of two different sources and indicates the percentage difference between the source to be synchronized and the rated voltage.



DIGITAL PANEL METERS



Industry



Energy - Generation, Transmission & Distribution



Nuclear

For the industrial sector

- Instant mounting without tools
- Quick, simple programming
- Compact design
- Digital processing of the data makes it possible to connect the panel meters to external measuring or supervision systems
- Totally programmable



	μDIGI1	μDIGI2	CA 2150	
	Economical programmable range for industrial use		Programmable range for universal use	
Front panel format (mm)	24 x 48	48 x 96	48 x 96	
Display range (in counts)	-1999/+9999	-1999/+9999	-19999/+19999	
Measurement functions	AC ammeter	μDIGI1 E	CA 2150-E	
	AC voltmeter	μDIGI1 E	CA 2150-E	
	DC ammeter	μDIGI1 E	CA 2150-E	
	DC voltmeter	μDIGI1 E	CA 2150-E	
	Process signals	μDIGI P/LP	μDIGI2 P	CA 2150-M
	Thermocouple thermometer		μDIGI2 P	CA 2150-M
	Pt 100 thermometer		μDIGI2 P	CA 2150-M
	Potentiometer		μDIGI2 P	CA 2150-M
	Load cell			CA 2150-M
	Frequency meter			CA 2150-D
	Tachometer			CA 2150-D
	Counter			CA 2150-D
Chronometer			CA 2150-D	
Special functions	MIN/MAX		CA 2150-E/D/M	
Output(s)	Analog output		Option	
	RS232 output		Option	
	RS485 output		Option	
	Threshold output(s)	Option	Option	
User-programmable				

TO ORDER ▼

μDIGI1

Model	Power supply	Reference
μDIGI1-LP	Self-powered (active loop)	P01 330 000
μDIGI1-P	85 - 265 Vac & 100 - 300 Vdc	P01 330 031
	22 - 53 Vac & 10,5 - 70 Vdc	P01 330 032
μDIGI1-E	85 - 265 Vac & 100 - 300 Vdc	P01 330 011
	22 - 53 Vac & 10,5 - 70 Vdc	P01 330 012

μDIGI2

Model	Power supply	Reference
μDIGI2-E	85 - 265 Vac & 11 - 265 Vdc	P01 330 081
μDIGI2-P	85 - 265 Vac & 11 - 265 Vdc	P01 330 080

CA 2150

Model	Power supply	Reference
CA 2150-E	85 - 265 Vac & 100 - 300 Vdc	P01 308 005
	22 - 53 Vac & 10,5 - 70 Vdc	P01 308 006
CA 2150-M	85 - 265 Vac & 100 - 300 Vdc	P01 308 001
	22 - 53 Vac & 10,5 - 70 Vdc	P01 308 002
CA 2150-D	85 - 265 Vac & 100 - 300 Vdc	P01 308 003
	22 - 53 Vac & 10,5 - 70 Vdc	P01 308 004

Option boards	μDIGI1	μDIGI2	CA 2150
2-relay alarm		P01 319 301	P01 319 301
4-relay alarm			P01 319 303
Com RS 485			P01 319 307
Com RS 232			P01 319 306
4-20 mA output			P01 319 311
0-10 Vdc output			P01 319 310

CURRENT TRANSFORMERS



Industry



Energy - Transmission & distribution

For tariff metering



JVR 86



JVO 40-100



JVO 40-100 S



J3R 80B



JVO 90-160 S

		Core - Single-phase				
Type of connection	Wound primary	Ø M8/M10 > 75 A				
	Cable primary (mm)		Ø 42	Ø 40	Ø 66	Ø 90
Accuracy	Accuracy class	0.5	0.5	0.2s	0.5	0.2s
	Accuracy power (VA)	20	7.5 (bi-rating) / 15	7.5	15 (5 for 300 A 10 for 400 A)	7.5
Rating	Single-rating					
	Bi-rating		200 - 500 A	200 - 500 A		
	Tri-rating					500 - 1,000 - 2,000 A
Primary	5 / 5 A	■				
	20 / 5 A	■				
	40 / 5 A	■				
	50 / 5 A					
	60 / 5 A	■				
	75 / 5 A					
	100 / 5 A	■				
	150 / 5 A					
	200 / 5 A					
	250 / 5 A					
	300 / 5 A				■	
	400 / 5 A				■	
	500 / 5 A				■	
	600 / 5 A				■	
	750 / 5 A				■	
	1,000 / 5 A				■	
1,200 / 5 A						
1,250 / 5 A						
1,500 / 5 A						
2,000 / 5 A						

■ Also available with 1A secondary. Please contact us.

Tailored version of the the JVR86, JR 80B, JVP 1025 and JVP 1045 can be supplied on request.



JVP 1025



JVP 1045



JVP 1045B



JVP 1145 S



TRI 500



TRI 700



TRI 700 S

		Core - Single-phase				Core - Three-phase		
Type of connection	Cable primary (mm)	100 x 20	100 x 40	100 x 40	100 x 12			
	Cable clamp (cross-section in mm ²)					50 à 240	50 à 240	50 à 240
Accuracy	Accuracy class	0.5	0.5	0.5	0.2s	0.5	0.5	0.2s
	Accuracy power (VA)	15 (30 pour 1,250 A)	15 (30 pour 1,000 A)	7.5 (bi-rating) / 15	7.5	15	3.75	7.5
Rating	Single-rating							
	Bi-rating			500 - 1,000 A 1,000 - 2,000 A				50 - 100 A 100 - 200 A 200 - 500 A
	Tri-rating				500-1,000-2,000 A		100 - 200 - 500 A	
Primary	50 / 5 A							
	75 / 5 A							
	100 / 5 A							
	150 / 5 A							
	200 / 5 A							
	300 / 5 A							
	400 / 5 A							
	500 / 5 A							
	600 / 5 A							
	1,000 / 5 A							
1,250 / 5 A								
2,000 / 5 A								

CURRENT TRANSFORMERS



- Primary from 5 to 5,000 A
- Large choice of feedthroughs: cable, busbar

TCR



TCR / JVS



		TCR 10	TCR 15	TCR 21	TCR 31	TCR 41 JVS 25B	TCR 51 JVS 26B	TCR 61 JVS 30B	TCR 71 JVS 38B	TCR 75 JVS 39B	TCR 80 JVS 40	TCR 90 JVS 50	TCR 100 JVS 60
		Wound primary			Cable/busbar primary						Busbar primary		
Type of connection		0.5	0.5	0.5	0.5	0.5 0.2s	0.5 0.2s	0.5 0.2s	0.5 0.2s	0.5 0.2s	0.5 0.2s	0.5 0.2s	0.5 0.2s
Wound primary (connection)		Plages 25 x 25	Fil 16 mm ²										
Cable primary(mm)				Ø 20	Ø 22	Ø 26	Ø 28	Ø 44	Ø 63				
Busbar primary (mm)				15 x 10 20 x 10 25 x 5	20 x 12 25 x 11 30 x 10	20 x 20 25 x 12 30 x 10	20 x 25 30 x 15 40 x 10	50 x 30 60 x 12	50 x 50 60 x 37 80 x 30	3 x 100 x 10	100 x 20	100 x 30	125 x 60
Primary	Primary												
	5 A	<input type="checkbox"/>	<input type="checkbox"/>										
	10 A	<input type="checkbox"/>	<input type="checkbox"/>										
	15 A	<input type="checkbox"/>	<input type="checkbox"/>										
	20 A	<input type="checkbox"/>	<input type="checkbox"/>										
	25 A	<input type="checkbox"/>	<input type="checkbox"/>										
	30 A	<input type="checkbox"/>	<input type="checkbox"/>										
	40 A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>									
	50 A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>									
	60 A	<input type="checkbox"/>		<input type="checkbox"/>									
	75 A	<input type="checkbox"/>		<input type="checkbox"/>									
	100 A	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> / <input type="checkbox"/>	<input type="checkbox"/>						
	125 A	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						
	150 A	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> / <input type="checkbox"/>	<input type="checkbox"/> / <input type="checkbox"/>						
	200 A			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> / <input type="checkbox"/>	<input type="checkbox"/> / <input type="checkbox"/>						
	250 A			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> / <input type="checkbox"/>	<input type="checkbox"/> / <input type="checkbox"/>						
	300 A				<input type="checkbox"/>	<input type="checkbox"/> / <input type="checkbox"/>	<input type="checkbox"/> / <input type="checkbox"/>						
	400 A				<input type="checkbox"/>	<input type="checkbox"/> / <input type="checkbox"/>	<input type="checkbox"/> / <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
	500 A				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> / <input type="checkbox"/>	<input type="checkbox"/> / <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
	600 A				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> / <input type="checkbox"/>	<input type="checkbox"/> / <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
750 A						<input type="checkbox"/> / <input type="checkbox"/>	<input type="checkbox"/> / <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
800 A						<input type="checkbox"/> / <input type="checkbox"/>	<input type="checkbox"/> / <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
1,000 A							<input type="checkbox"/> / <input type="checkbox"/>	<input type="checkbox"/> / <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> / <input type="checkbox"/>		<input type="checkbox"/> / <input type="checkbox"/>	
1,200 A							<input type="checkbox"/> / <input type="checkbox"/>	<input type="checkbox"/> / <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> / <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1,500 A							<input type="checkbox"/> / <input type="checkbox"/>	<input type="checkbox"/> / <input type="checkbox"/>	<input type="checkbox"/> / <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> / <input type="checkbox"/>	<input type="checkbox"/> / <input type="checkbox"/>	
2,000 A								<input type="checkbox"/> / <input type="checkbox"/>	<input type="checkbox"/> / <input type="checkbox"/>	<input type="checkbox"/> / <input type="checkbox"/>	<input type="checkbox"/> / <input type="checkbox"/>	<input type="checkbox"/> / <input type="checkbox"/>	
2,500 A								<input type="checkbox"/> / <input type="checkbox"/>	<input type="checkbox"/> / <input type="checkbox"/>	<input type="checkbox"/> / <input type="checkbox"/>	<input type="checkbox"/> / <input type="checkbox"/>	<input type="checkbox"/> / <input type="checkbox"/>	
3,000 A								<input type="checkbox"/> / <input type="checkbox"/>	<input type="checkbox"/> / <input type="checkbox"/>	<input type="checkbox"/> / <input type="checkbox"/>	<input type="checkbox"/> / <input type="checkbox"/>	<input type="checkbox"/> / <input type="checkbox"/>	
4,000 A									<input type="checkbox"/> / <input type="checkbox"/>	<input type="checkbox"/> / <input type="checkbox"/>	<input type="checkbox"/> / <input type="checkbox"/>	<input type="checkbox"/> / <input type="checkbox"/>	
5,000 A										<input type="checkbox"/> / <input type="checkbox"/>	<input type="checkbox"/> / <input type="checkbox"/>	<input checked="" type="checkbox"/> / <input type="checkbox"/>	

TCRO and TC CLIP ranges for insertion on electrical installations without opening the conductor

TCRO



TC CLIP



		TCRO 2030	TCRO 5080	TCRO 8080	TCRO 80120	TCRO 80160	TCC 176	TCC 241	TCC 242	TCC 3644	TCC 366
		Tore ouvrant					Tore ouvrant				
Accuracy class		0.5-1-3	0.5-1-3	0.5-1-3	0.5-1-3	0.5-1-3	1	1	1	1	1
Cable primary (mm)							Ø 17	Ø 24	Ø 24	Ø 36	Ø 36
Busbar primary (mm)		20 x 30	50 x 80	80 x 80	80 x 120	80 x 160					
Primary	60 A						<input checked="" type="checkbox"/>				
	75 A							<input checked="" type="checkbox"/>			
	100 A	<input checked="" type="checkbox"/>							<input checked="" type="checkbox"/>		
	125 A										
	150 A	<input checked="" type="checkbox"/>									
	200 A	<input checked="" type="checkbox"/>									
	250 A	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>		
	300 A	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						
	400 A	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>	
	500 A		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					
	600 A		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>
	750 A			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					
	800 A		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					
	1,000 A		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
	1,200 A			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
	1,500 A				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
2,000 A					<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					
2,500 A						<input checked="" type="checkbox"/>					
3,000 A						<input checked="" type="checkbox"/>					
4,000 A						<input checked="" type="checkbox"/>					
5,000 A						<input checked="" type="checkbox"/>					

1 A and 5 A secondary as standard

1 A secondary on request

5 A secondary only

JVS 5 A secondary

1 A secondary only

AUXILIARY RELAYS



Energy - Generation, Transmission & Distribution



Nuclear



Rail



Heavy industry

Depending on product

Depending on product



Monostable



Monostable with forcibly guided contacts



Bistable



Fast monostable or bistable



Time delay

Model	Instantaneous monostable	Bistable (latching)	Forcibly guided contacts	Fast-acting(*)	Time-delay	Self-check	High break capacity(**)	PCB (option)	Contacts	In	Notes	Rolling stock equipment (***)	Nuclear
RCM	■							■	2 CO	10 A	Compact		
RDM	■							■	4 CO	10 A	Compact		
RGM	■						■		4 CO	12 A			
RMMX	■								8 CO	10 A	Multiple contacts, compact		
RMM	■						■		8-12-20 CO	12 A	Multiple contacts, compact		
POK-POKS	■							■	2 CO	5-10 A	Compact		
BIPOK-BIPOKS	■							■	4 CO	5-10 A	Compact		
TRIPOK-TRIPOKS	■								6 CO	5-10 A	Compact		
QUADRIPOK	■								8 CO	10 A	Compact		
ESAPOK	■								12 CO	10 A	Compact		
OK	■						■		4-8-12 CO	10 A			
OKB184	■						■		4 CO	10 A	K3-qualified		
RE3000	■								4 CO	10 A	K3-qualified		
FOKB	■						■		4 CO	13 A	NF F62-002		
RCG	■		■						2 CO	10 A	Forcibly guided contacts, type A, EN61810-3		
RDG	■		■						4 CO	10 A	Forcibly guided contacts, type A, EN61810-3		
RGG Former names RGMZX	■		■				■		4 CO	10 A	Forcibly guided contacts, type A, EN61810-3		
RMGX	■		■				■		8 CO	10 A	Forcibly guided contacts, type A, EN61810-3		
RGB		■					■		3-4 CO	12 A			
RMBX		■							7-8 CO	10 A	Multiple contacts		
RMB		■					■		7-11-19 CO	10 A	Multiple contacts, common negative		
OKBA		■					■		4-8 CO	10 A			
RGR	■			■					2 CO	2 A	Operating time < 3 ms		

* Unless stated otherwise, operating times indicated in the catalog are understood as being inclusive of bounces

** Relays with contact specifications guaranteeing efficient break of strongly inductive DC loads, even with 220Vdc voltages

*** These relays comply with regulations applicable to rolling stock; also suitable for use in other applications.

AUXILIARY RELAYS



Energy - Generation, Transmission & Distribution



Nuclear



Rail



Heavy industry

Depending on product

Depending on product

Model	Instantaneous monostable	Bistable (latching)	Forcibly guided contacts	Fast-acting(*)	Time-delay	Self-check	High break capacity(**)	PCB (option)	Contacts	In	Notes	Rolling stock equipment (***)	Nuclear
RGMV	■			■					4 (CO or NC)	10 A	Operating time < 8 ms		
RMMV	■			■					8 (CO or NC)	10 A	Operating time < 6 ms		
RMMZ11/13	■			■			■		8 CO	10 A	Operating time < 13 ms		
RGBZ10/11		■		■			■		3-4 RT	12 A	Operating time < 12 ms		
RMBZ30		■		■			■		7 CO	10 A	Operating time < 18 ms		
RV LV16	■			■					6 CO	5 A	Operating time < 6 ms		
RDT					■				4 CO	10 A	Time delay on pick-up or drop-out		
RDL - RGL					■				2 CO	10 A	Flasher relay		
RDTE15/16					■				4 CO	10 A	Delay on drop-out, adaptable duration, no Vaux		
RGTO					■				1 CO	5 A	Delay on drop-out, adaptable duration, no Vaux		
TMM					■				4 CO	10 A	Multifunction relay, 10 functions		
TM - TMS Former names OK-TMF/S					■				4 CO	5-10 A	Time delay on pick-up or drop-out		
TOK					■		■		4 CO	10 A	Time delay on pick-up or drop-out		
OKTF					■		■		4 CO	10 A	Delay on drop-out, fixed duration		
OKR					■				4 CO	5 A	Time delay on pick-up or drop-out		
OKT					■				4 CO	5 A	Time delay on pick-up or drop-out		
UTM					■		■		-	-	Solid-state timer unit		
TOK-L					■		■		4 CO	10 A	Flasher relay		
TOK-FP					■		■		4 CO	10 A	Flasher relay		
OKRE-L					■				4 CO	5 A	Flasher relay		
OKRE-FP					■				4 CO	5 A	Flasher relay		
CLE					■				4 CO	5 A	Flasher relay		
RGK			■		■				4 CO	12 A	Forcibly guided contacts, type A, EN61810-3		
MOK-V2	■								2 CO	3 A	Measurement relay, voltage		



Fast-acting monostable or bistable



Logic function



Time-delay with forcibly guided contacts



Measurement

* Unless stated otherwise, operating times indicated in the catalog are understood as being inclusive of bounces

** Relays with contact specifications guaranteeing efficient break of strongly inductive DC loads, even with 220Vdc voltages

*** These relays comply with regulations applicable to rolling stock; also suitable for use in other applications.

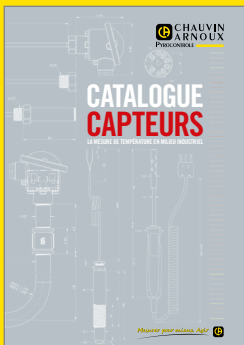
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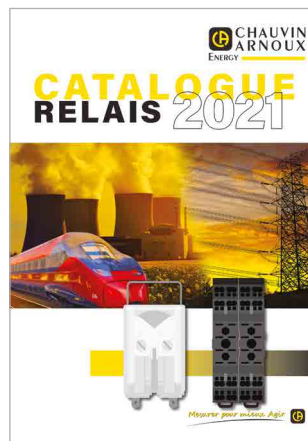
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