PYRO CONTROLE ®
CHAUVIN ARNOUX GROUP

PYRO tracer
C.A 6500 RANGE

Menu | Realtime | Page1 | 13:44:06

1085.0 | 1217.6 | 283.2

526.3 | 1206.3 | 1002.4

PYRO tracer
C.A 6520

Menu | Realtime | Page1 | 08:24:35

569.8 | 675.9
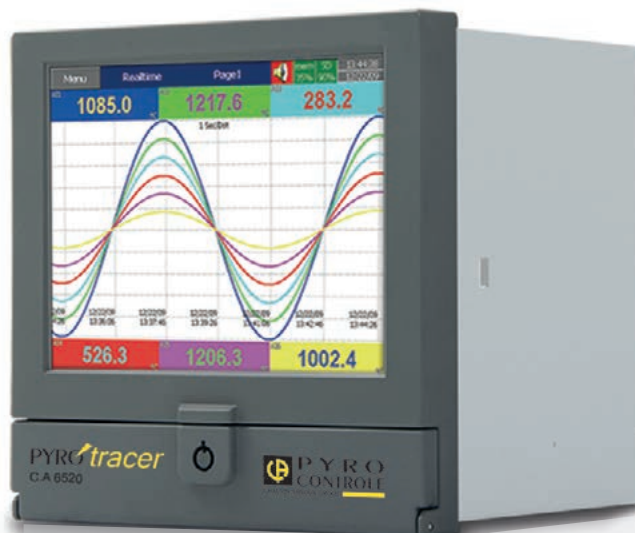109.9 | 318.8
920.5 | 577.5

PYRO tracer
C.A 6510
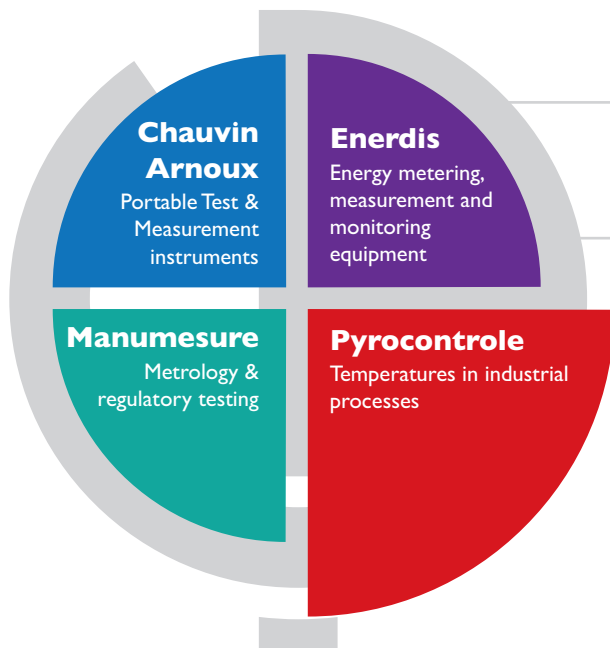PYRO CONTROLE

Measure up

PYROCONTROLE, a CHAUVIN ARNOUX GROUP company

Founded in Pars, France, in 1893, **Chauvin Arnoux** has succeeded over the centuries in developing its expertise in the design, manufacture and commercialization of measuring instruments for professionals.

From portable instrumentation to fixed electrical equipment and energy performance solutions, and from mastery of the whole thermal process chain to industrial metrology, the **Chauvin Arnoux** Group's offering covers every customer requirement, whatever the sector involved (electrical contractors, industry, government authorities, etc.).

A few figures

- 10 subsidiaries spread across the world
- 900 staff
- 7 production sites
- 6 R&D departments worldwide
- 11% of revenues invested in R&D

Chauvin Arnoux
Portable Test & Measurement instruments

Enerdis
Energy metering, measurement and monitoring equipment

Manumesure
Metrology & regulatory testing

Pyrocontrole
Temperatures in industrial processes

4 FRENCH COMPANIES
promoting the product and service offering

PYROCONTROLE

For all thermal process industries, **PYROCONTROLE** designs **high-accuracy sensors** for severe environments and solutions adapted to meet their temperature measurement and control requirements.

A **wide range of sensors** and industrial process expertise built up over many years make **PYROCONTROLE** the ideal partner for the industries such as the nuclear sector, petrochemicals, glass-making, metallurgy, etc.

Thermal equipment offering

Sensors
- Tailored temperature sensors for process industries from -268°C to + 1,800 °C
- 1,500 standard sensor references

Instrumentation
- Temperature and power controllers
- Signal processing

Heating elements
- Standard and tailored

Supervision
- Human-Machine Interfaces
- Recorders

Metrology
- COFRAC-accredited calibration laboratory
- Design of reference-standard sensors

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PYRO*tracer*

The C.A 6500 range
records, displays and monitors all your data for on-site or remote supervision

Main advantages

EASY-TO-READ, INTUITIVE INTERFACE

> Customizable LED touch screen for quick commands and easier reading

MULTIPLE POSSIBILITIES

> 3 to 72 recording channels, with the possibility of 48 external channels

SECURE & FAST

> Secure data
> 100 ms acquisition interval

OPEN & COMMUNICATING

> Ethernet as standard
> Modbus master, web server

ADVANCED FUNCTIONS

> Pulse-counting input
> Math & Logic
> Batch management
> FDA 21 CFR part11
> Customizable screens
> Multilingual: 19 languages

COMPACT, RUGGED DESIGN

> IP65
> Reduced depth of casing

▶ A complete, secure range of recorders

The **PYRO***tracer* **C.A 6500** range is a series of new-generation paperless data recorders benefiting from the latest technological developments and an extra-rugged design.

Fast sampling, accuracy, data security, simple configuration, easy data processing and networking capabilities: a set of features which will allow you to make optimum use of your **PYRO***tracer*.

With its 2 recorders, the **C.A 6500** range meets every requirement. It offers extensive recording capacity on 3 to 72 channels (including 48 external channels) with an acquisition interval of 100 ms per channel for the most demanding applications.

▶ Reduced operating costs

The **C.A 6500** range allows you to choose the recorder which is the best match for your requirements, the standard **C.A 6510** model or the more powerful **C.A 6520**, while staying within your budget.

Their 144x144 format and reduced depth will help you make savings during integration.

▶ Modulatable solution

The **C.A 6500** Series also offers considerable flexibility thanks to the external channel I/O modules.

These add-ons enable you to increase the **C.A 6510**'s control capacity with an extra 24 channels and boost the **C.A 6520**'s capacity by 48 channels.

▶ Customizable interface

With the Panel STUDIO software, users can recreate their process. The customized screens enable you to view all or part of your installation on the screen of your **C.A 6500**.

C.A 6500 range:
a solution for each requirement!

The powerful, high-performance C.A 6500 family offers the possibility of comprehensive data acquisition, an exceptional display and high-security data storage.

The Range

The **PYRO**tracer **C.A 6500** range comprises 2 recorder models, from the simplest to the most sophisticated, to suit every application

C.A 6520

C.A 6510

		Its power
Advantage	Price/ performance ratio	
Channels	3 or 6 Upgradable to 24	24 Upgradable to 48
Format	144x144	144x144
Screen	4.3"	5.6"

Portable version

A portable version of the **PYRO**tracer is also available which is easy to transport in your workshops or on outdoor sites.

Main application sectors

▶ Heat treatment

▶ Pharmacy

▶ Agri-food

▶ Health

▶ Laboratory

▶ Water treatment

▶ Chemicals

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Data management & display

■ **Configuration and processing of the data history**
with OBSERVER

▶ Offline or online configuration of the **C.A 6500** recorders.

▶ Reading of encrypted data, display and analysis on PC via the recorder using the RJ45 connector or via the Ethernet network.

The data can be exported in CSV format.

■ **Real-time display and monitoring**
with PYRO*daq**

▶ Real-time display for clear, precise data analysis.

▶ Display in history mode for more detailed study.

Possibility of displaying the data from several recorders on a single PC.
*available as an option

■ **Constantly keep an eye on your process**
with the Web servor

▶ With the built-in web server, it is possible to view the curves and data from the **C.A 6500** recorders anywhere in the world.
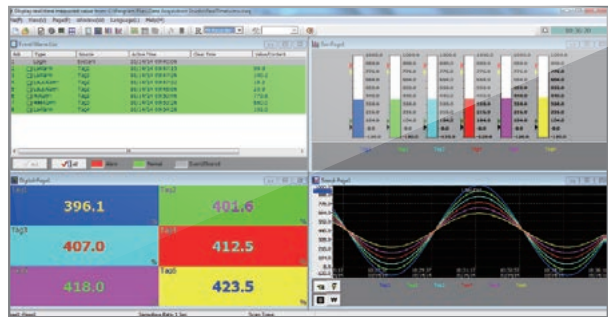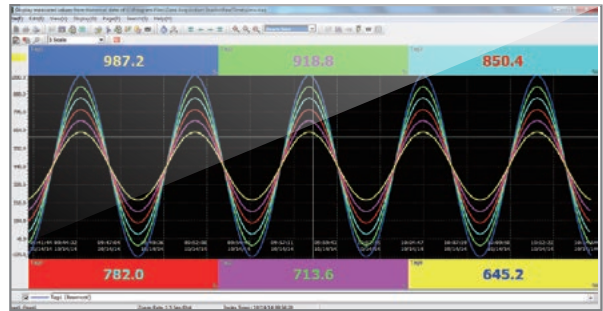
Data security

■ **Compliant with 21 CFR Part 11**

The **C.A 6500 range** follows the FDA (US Food & Drug Administration) recommendations concerning the 21 CFR Part 11 standard for electronic recording and signatures (FA1 version).
Password expiry is managed by this FA1 version.

■ **Reliability - Security key**

To prevent any unauthorized access to the memory card, the **C.A 6500** models are equipped with a mechanical security key on their front panel.

■ **Batch management and traceability**

The batch management option can be used to record the data from the Batch processes. Each batch number is unique and is completed by 3 free comment fields for the user.

All the information can be entered directly on screen, by means of a keyboard or a barcode reader.

Practical, intuitive user interface

■ Customizable screen

Simplify the "operator" interface!
The Panel Studio software can be used to represent your production processes on the screens of your recorders. (option)

▶ Creation of block diagrams of your installations

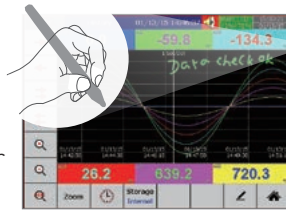▶ Access to a library of ready-to-use objects and images

■ Writing directly on screen

A great way to avoid losing your notes!
Use a stylus to write directly on the recorder's screen. Your notes will be archived in the internal memory next to the points you wish to highlight.

■ Touch screen

The **PYRO**tracer is equipped with a practical touch screen for quick commands.

■ HMI functionality

Depending on the application, the **C.A 6500** may be used as a low-cost Human-Machine Interface.

Example of interface scenario: When connected to I/O modules, the PYROtracer provides direct on-screen access to the remote I/S modules.
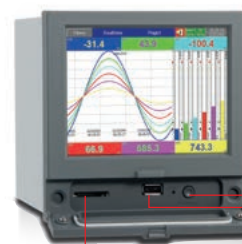
Communicating recorder

■ Multiple external connections

With its USB ports, the **C.A 6500** range has several inputs for connecting peripheral devices.

▶ keyboard,
▶ USB keys
▶ mouse
▶ barcode reader
▶ printer

On/Off button

USB

SD card

■ Ethernet communication

The **PYRO**tracer offers Ethernet communication as a standard feature. It can handle the FTP, TCP/IP and http protocols, so it is easy to integrate into your local area networks.
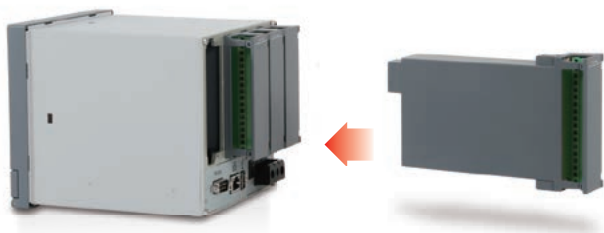
Communication RS485 SubD

USB port

Power supply

Ethernet RJ45

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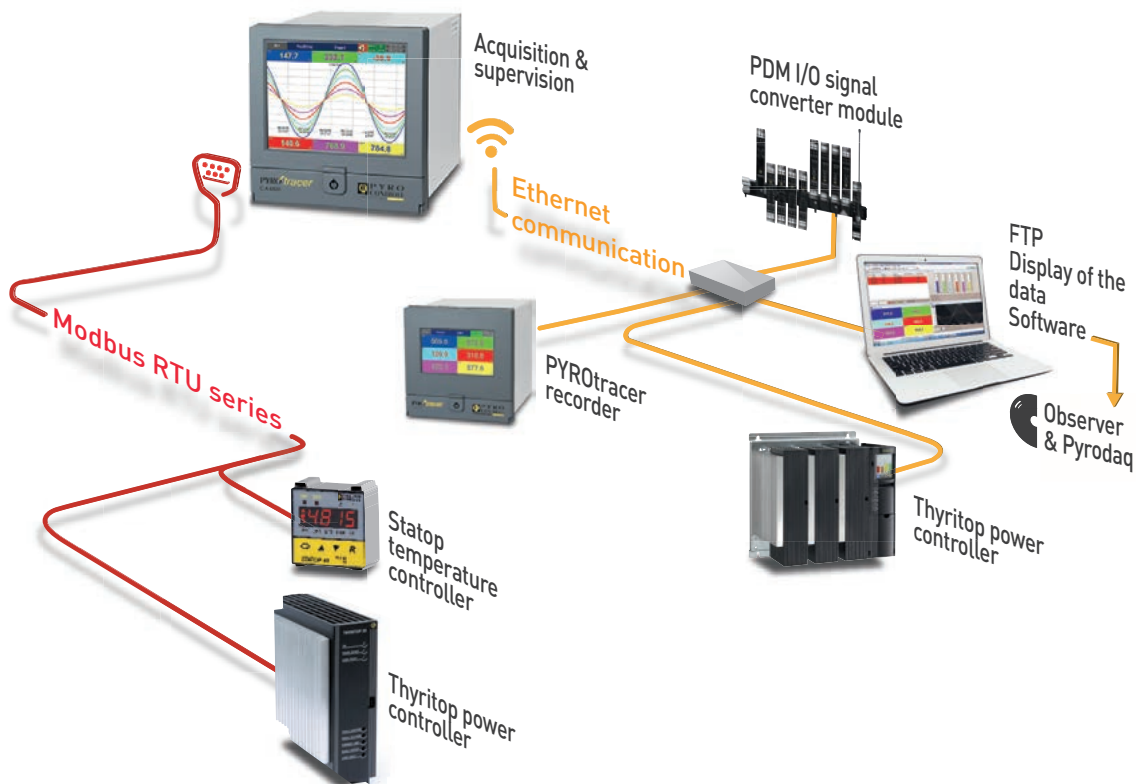
Upgradable recorder

■ **Extension** by "PLUG & PLAY"

Adding inputs/outputs has never been so simple! The input/output modules are "Plug and Play" add-ons recognized automatically by the recorder.
The content of the slots can be viewed directly on the set-up screen.

Application: global supervision of an installation

PYRO*tracer* **Modbus RTU series**

Acquisition & supervision

PDM I/O signal converter module

Ethernet communication

Modbus RTU series

PYROtracer recorder

FTP Display of the data Software

Observer & Pyrodaq

Thyritop power controller

Statop temperature controller

Thyritop power controller

■ **Network architecture**

With the Modbus master option **the C.A 6500 range** is open to the outside world.
Slave peripheral devices can be connected and their data can be recorded on the C.A 6500, thus taking advantage of the recorder's features (secure data storage, remote viewing, etc.)
These peripherals behave like external inputs. Up to 48 external inputs can be managed, depending on the recorder used.

It is also possible to control these peripherals via the touch screens of your C.A 6500 recorders.

Examples of use: *changing the setpoint of a controller, acknowledging alarms remotely.*
On the ETHERNET network and with a serial link, the C.A 6500 range can act as master or slave according to your requirements.

In this example: the C.A 6500 is the MODBUS RTU link master and the ETHERNET network master.

C.A 6510

Inputs/Outputs

Number of universal inputs	3-6
Number of external inputs	24
Types of inputs	> Thermocouples: J, K, T, E, B, R, S, N, L, U, P, W5, W3, LR, A1, A2, A3, M > RTDs: Pt50, Pt100, Pt200, Pt500, JPt50, JPt100, JPt200, JPt500, Pt1000 (α=0.00385), Pt50, Pt100(α=0.00391) > Cu10 (α=0.00427), Cu50, Cu100 (α=0.00427, α=0.00428), Ni100, Ni200, Ni500, Ni1000 (α=0.00428) > Universal: mA, V, mV
Digital inputs	Up to 6
Pulse inputs	Up to 6
Relay outputs	Up to 6
Acquisition interval	Down to 100 ms per channel

Advanced functions

Math channels	15
Customizable screens + Panel Studio software	option
Batch management	option
FDA 21CFR Part11	option

Display

Number of traces per page	6
Number of pages	8

Screen

Screen (extra-bright)	4.3" colour TFT touch screen
Resolution	480x272
Backlighting MTBF at 25°C (Max. brightness)	30,000 hours
Backlighting	LEDs with adjustable brightness
Screen saver	1 to 60 minutes

Memory

Processor	ARM Cortex-A8, 1 GHz
Internal Flash memory	256 MB
RAM	256 MB
SD Card slot	yes
USB connectors	x2, one on front panel, one on rear panel

Communication interfaces

Sending of email	yes
Ethernet	Modbus TCP/IP
RS232 and RS422/485	option
Master communication	option
WEB server	yes

Software: configuration & display

OBSERVER PC Historical Viewer + Configuration	yes
PYRODAQ real-time display	option

Mechanical specifications

Dimensions (lxHxD)	144x144x189 mm
Mounting depth	171 mm
Panel cutout (lxH)	137x137 mm
Portable version	option

Power supply & environment

Power supply	11-36 VDC or 90-250 VAC
Ingress protection	IP65 front panel, IP20 rear panel
Operating temperature	0°C to 50°C
Storage temperature	-30°C to 70°C
Certifications	CE, cULus, RoHS

Other parameters

Operating system	Windows CE version WINCE 6.0
Languages	19 integrated languages
On/Off button	yes
Calibration	On-site calibration possible

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C.A 6520

Inputs/Outputs

Number of universal inputs	3-6-12-18-24
Number of external inputs	48
Types of inputs	> Thermocouples: J, K, T, E, B, R, S, N, L, U, P, W5, W3, LR, A1, A2, A3, M > RTDs: Pt50, Pt100, Pt200, Pt500, JPt50, JPt100, JPt200, JPt500, Pt1000 (α=0,00385), Pt50, Pt100(α=0.00391) > Cu10 (α=0.00427), Cu50, Cu100 (α=0.00427, α=0.00428), Ni100, Ni200, Ni500, Ni1000 (α=0.00428) > Universal: mA, V, mV
Digital inputs	Up to 12
Pulse inputs	Up to 12
Relay outputs	Up to 12
Acquisition interval	Down to 100 ms per channel

Advanced functions

Math channels	40
Customizable screens + Panel Studio software	option
Batch management	option
FDA 21CFR Part11	option

Display

Number of traces per page	6
Number of pages	20

Screen

Screen (extra-bright)	5.6" colour TFT touch screen
Resolution	640x480
Backlighting MTBF at 25°C (Max. brightness)	30,000 hours
Backlighting	LEDs with adjustable brightness
Screen saver	1 to 60 minutes

Memory

Processor	ARM Cortex-A8, 1 GHz
Internal Flash memory	256 MB
RAM	256 MB
SD Card slot	yes
USB connectors	x2, one on front panel, one on rear panel

Communication interfaces

Sending of email	yes
Ethernet	Modbus TCP/IP
RS232 and RS422/485	option
Master communication	option
WEB server	yes

Software: configuration & display

OBSERVER PC Historical Viewer + Configuration	yes
PYRODAQ real-time display	option

Mechanical specifications

Dimensions (lxHxD)	144x144x189 mm
Mounting depth	171 mm
Panel cutout (lxH)	137x137 mm
Portable version	option

Power supply & environment

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Other parameters

Operating system	Windows CE version WINCE 6.0
Languages	19 integrated languages
On/Off button	yes
Calibration	On-site calibration possible

■ Codification

Products	No. of channels	Inputs / Outputs

C.A 6510

3	0 | Not supplied
	6 | 3 relays + 3 DI

6	0 | Not supplied
	1 | 6 relays
	3 | 6 DI
	6 | 3 relays + 3 DI
	7 | 6 relays + 6 DI

C.A 6520

3	0 | Not supplied
	6 | 3 relays + 3 DI
	C | 3 relays + 3 DI + 6 AO

6	0 | Not supplied
	1 | 6 relays
	3 | 6 DI
	5 | 6 AO
	6 | 3 relays + 3 DI
	7 | 6 relays + 6 DI
	A | 6 relays + 6 AO
	B | 6 DI + 6 AO
	C | 3 relays + 3 DI + 6 AO

12	0 | Not supplied
	1 | 6 relays
	2 | 12 Relays
	3 | 6 DI
	4 | 12 DI
	5 | 6 AO
	6 | 3 relays + 3 DI
	7 | 6 relays + 6 DI
	8 | 9 Relays + 3 DI
	9 | 3 Relays + 9 DI
	A | 6 Relays + 6 AO
	B | 6 DI + 6 AO
	C | 3 relays + 3 DI + 6 AO

18	0 | Not supplied
	1 | 6 relays
	3 | 6 DI
	5 | 6 AO
	6 | 3 relays + 3 DI

24	0 | Not supplied

Power supply
A	90-250V 50/60Hz
B	11-36 Vdc

Communication
0	Standard Ethernet
1	Ethernet + RS232
2	Ethernet + RS422/485

Advanced functions
0	Standard
1	FA1 Math functions - Modbus Master - Batch - 21 CFR Part 11
2	FA2 Customized screen - Panel Studio software
3	FAI3 = FA1 + FA2

Display software
0	Historical Viewer & Configuration software - Observer
1	Data Acquisition Studio software (Real time Viewer-Pyrodaq)

Mounting
0	Flush-mounted without On/Off switch
1	Flush-mounted with On/Off switch
2	Portable + UL & CSA cable
3	Portable + VDE cable

Archiving
0	None
1	16 GB SD Card
2	32 GB SD Card
3	16 GB USB key
4	32 GB USB key

Calibration certificate
0	None
1	Calibration certificate
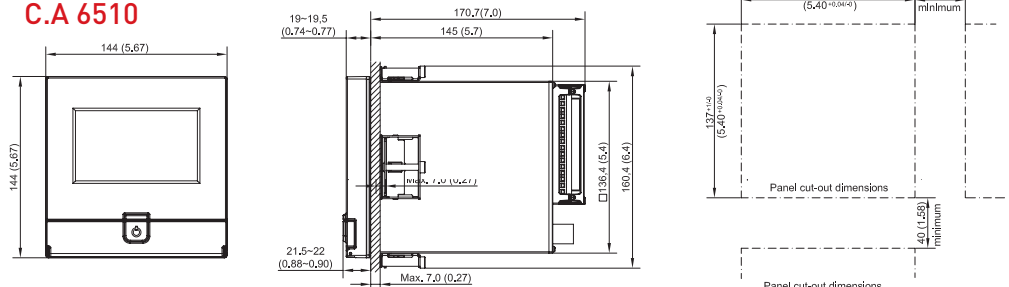
Example of order:

C.A 6520, 12 channels, 12 relays, 11 to 36 VDC power supply, communication: Ethernet+RS422/485, advanced functions 1, Pyrodaq software, mounting: flush-mounted with switch, 32 GB USB key, with a calibration certificate.
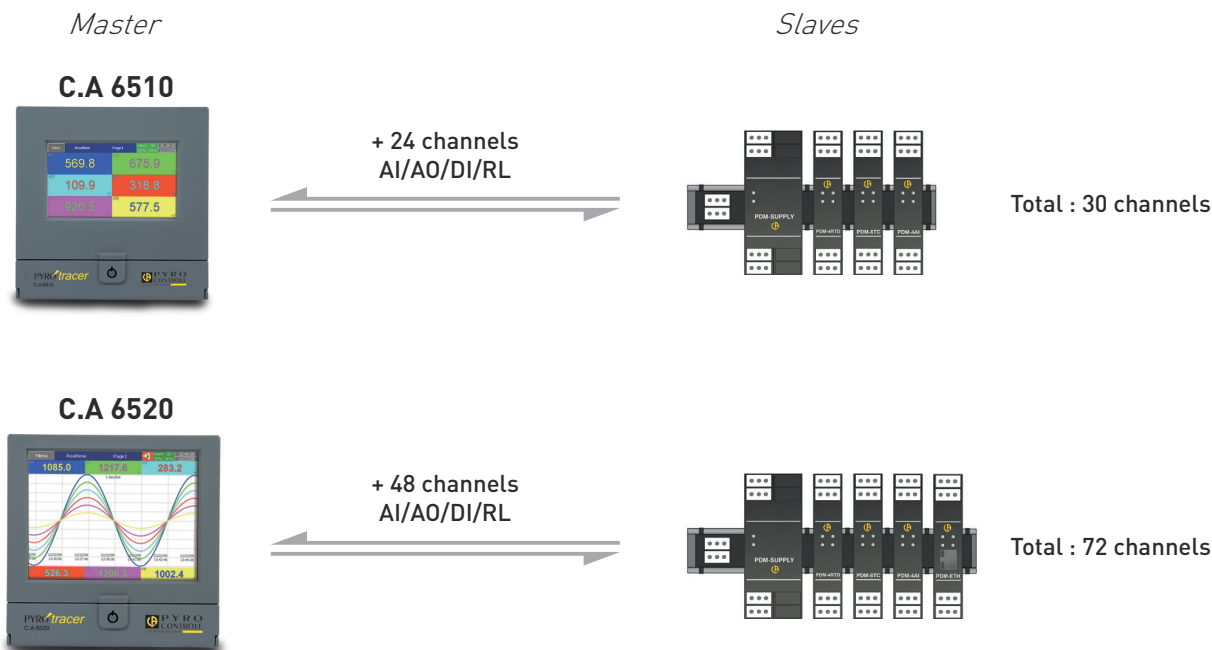*► order:*
C.A 6520 -12-2-B-2-1-1-1-4-1

■ Dimensions

C.A 6510

C.A 6520

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Channel extensions

Taking advantage of the Master/Slave principle, increase the number of channels on your **C.A 6500** very simply with the PDM range of remote I/O modules from Pyrocontrole.

■ ADVANTAGES of the combination

► Excellent price/performance ratio
► Modular
► A single solution for the whole site
► Compact design

Master

Slaves

C.A 6510

+ 24 channels
AI/AO/DI/RL

Total : 30 channels

C.A 6520

+ 48 channels
AI/AO/DI/RL

Total : 72 channels

Connection: RS485 MODBUS

PDM I/O modules

Choose your PDM
I/O models

Applications	Modules	Inputs / Outputs
Temperature	PDM- 4RTD	4 RTD inputs
	PDM- 4TC	4 thermocouple inputs
	PDM- 8TC	8 thermocouple inputs
Analogue	PDM- 4AI	4 configurable analogue inputs
	PDM- 8AI	8 configurable analogue inputs
	PDM- 3AO	3 configurable outputs
Digital	PDM- 5RO	5 relays
	PDM- 10DI	10 logic inputs
	PDM- 10DO	10 logic outputs
	PDM- DIO	6 logic inputs / relays

Documentation

Find all the technical specifications and references of the Pyrocontrole PDM I/O Modules in the specific "PDM" catalogue.

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