CHAUVIN ARNOUX
PYROCONTROLE

THYRITOP 700 SERIES

Power controllers
4 PID loops from 16A to 40A

Thyritop 704

Thyritop 714

- 3-in-1 solution
- Simple and intuitive
- Ratings from 16A to 40A
- 4 single-phase zones or 1 three-phase zone
- Fieldbus communication

CANopen EtherCAT EtherNet/IP DeviceNet
Modbus PROFIBUS PROFINET

CE c UL us LISTED

Measure up

Fault detection

- If the sensor breaks or if it is connected incorrectly
- Total or partial breaking of the load
- Variable outside range and abnormal variable
- Overheating on power unit

- Up to 40A
- Fieldbus communication

Main application sectors

- Industrial furnaces for metallurgical and heat treatments
- Industrial dryers
- Thermoforming machine
- Extrusion line
- Heating system with infrared lamps (long medium and short wave)
- Machine for clothes-making

THYRITOP 704 | IDEAL SOLUTION FOR RESISTIVE LOADS

Compact solution

Combination of a 4-loop controller and 4 solid-state contactors

Simple configuration

Thanks to the PYRO*tools* processing software

Quick, accurate adjustment

Sampling interval customizable to 120 or 60ms

Built-in fuse

Ultra-fast fuse

Optimization of the settings

Advanced tuning algorithms

THYRITOP 714 | IDEAL SOLUTION FOR COMPLEX LOADS

Compact, all-in-one solution

Combination of a 4-loop controller and 4 power controllers

Adapts to all types of load

Super Kantal – short infrared - Resistive – Silicon carbide - Inductive

Control of electrical quantities

Control of U, I, P

Current limitation

Parameters adjustable with the PYRO*tools* processing software

Conduction mode

BURST firing – Phase angle - Half single-cycle

		THYRITOP 704	THYRITOP 714
Input			
Main input IN1 to IN4	CT input	Thermocouple: J,K,R,S,T; Linearization: ITS90	
	RTD input	Cold junction compensation error 0.1°C	
	Voltage	Pt100 linearization: DIN 43760, maximum line resistance: 20Ω	
	Current	Linear: 0...60mV, Ri>1Mohm 0...1V, Ri>1Mohm	
	Accuracy	It is possible to insert 32-segment custom linearization	
	Sampling interval	Linear: 0/4...20mA, Ri =50ohm	
DI1,...,DI2 digital inputs	Type	It is possible to insert 32-segment custom linearization	
	Insulation	0.2% of full scale	
Output			
OUT1 to OUT4 heat control outputs, directly linked to the solid-state relays	Function	Configurable (heat control by default) The status of the command is indicated by diodes (O1,...,O2)	
OUT9, OUT10 alarms	Type of relay	Contact NO 5A, 250V/30Vdc cosϕ =1	
Communication ports			
PORT 1	Protocol	Modbus RTU	
	Baud rate	Programmable 1.2...57.6Kbit/s, (by default: 19.2Kbit/s)	
	Node address	Programmable using the rotary selector	
PORT 2	Protocol	MModBus RTU. type RS485. baud rate 1.2...57.6Kbit/s | baud rate 1.2...57.6Kbit/s CANOpen 10K...1Mbit/s DeviceNet 125K...0.5Mbit/s Profibus DP 9.6K...12 Mbit/s Ethernet Modbus TCP, Ethernet IP 10/100Mbps EtherCAT, ProfiNET 100Mbps	
Power (4 units)			
Power supply	Rated voltage	480Vac	
	Operating voltage range	24...530Vac	90...530Vac
	Switching voltage for zero	<20V	-
	Rated frequency	50/60Hz with automatic determination	
	Non-repetitive overvoltage (t=20m-sec)	400A 600A 1150A	
	I2t for melting (t=1...10msec)	645A²s 1010A²s 6600A²s	
	Rated insulation voltage	4000V	
General information			
Powersupply	Operating voltage	24Vdc ±25%, max 8VA Class II	
Display	Indication	Eight diodes: ▪ RN : CPU operating status ▪ ER: error indication ▪ DI1, DI2: status of digital inputs, O1,...,O4 status of outputs	
Degré de protection	-	IP20	
Conditions ambiantes	Use	Indoor	
	Altitude	2000m	
	Operating temperature	0...50°C	
	Storage temperature	-20...70°C	
	Installation	DIN EN50022 bar or panel with screw mounting	
CE standards	EMC conformity	EMC Conformity: Compliance with directive 2014/30/EU in reference to the EN 61326-1 standards Industrial Emissions Class A	
	UL	Compliant with C/UL/US dossier no. E522688	

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A clever, simple tool for:

- Configuration of the parameters
- Display of the data and analysis of the parameters: measured values, set points, alarms, etc.
- Recording of the data
- Archiving

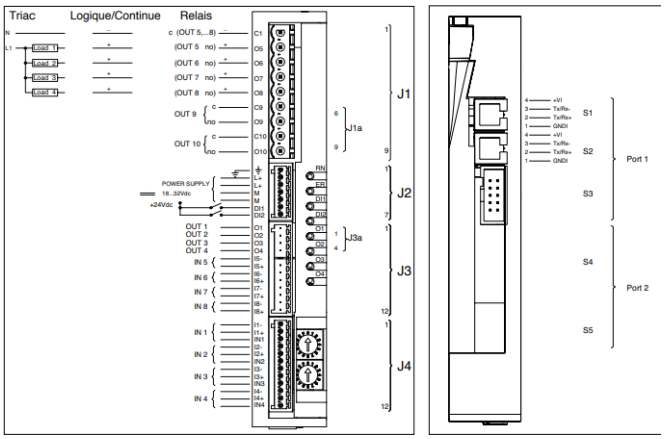
Available for download from

www.pyrocontrole.com

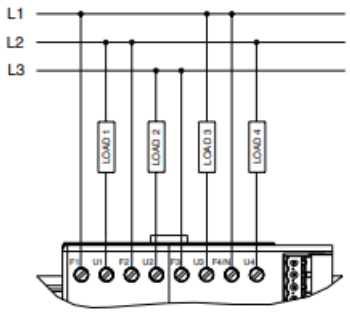
RS485 configuration cable	*P01660101*

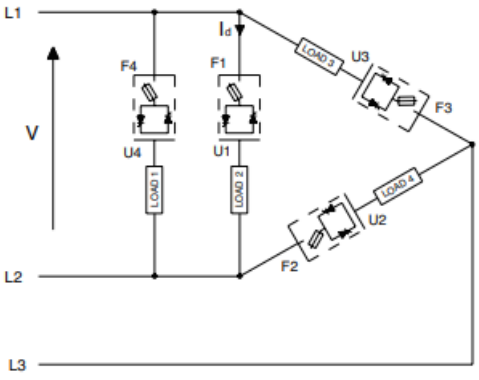
The cable connecting the PC and the Thyritop 700/714 (for configuration) is sold separately. Don't forget to order it.

ELECTRICAL CONNECTIONS



EXAMPLE OF CONNECTION WITH 4 SINGLE-PHASE LOADS THREE-PHASE LINE WITHOUT NEUTRAL





$$Id = \frac{P}{V\cos\phi}$$

V = line voltage
Id = current in the load
P = total power

If resistive load, $\cos\phi = 21$

Configuration of the switches				
Dip 1	Dip 2	Dip 3	Dip 4	Dip 5
OFF	ON	OFF	ON	OFF

THYRITOP 704

Assembly	Current rating (A)	Tension 480V				Dissipated power (W)	Dimensions			Weight (kg)
		Rated power (kW)	Reference HB	Reference Fuse	Reference Communication		L (mm)	H (mm)	P (mm)	
Four-phase resistive load control	16*	30	P01666720	P01666732	Contacter CA Pyrocontrole	83,2	110	147	195	1,2
	32*	60	P01666721	P01666733		166,4				
	40*	80	P01666722	-		208	110	147	147	

THYRITOP 714

Assembly	Current rating (A)	480V voltage				Dissipated power (W)	Dimensions			Weight (kg)
		Rated power (kW)	Reference HB + UIP	Reference Fuse	Reference Communication		L (mm)	H (mm)	P (mm)	
Four-phase resistive load control	16*	30	P01667000	P01667013	Contacter CA Pyrocontrole	83,2	110	147	195	1,6
	32*	60	P01667001	P01667014		166,4				
	40*	80	P01667002	-		208	110	147	147	

* Short infrared load, current to be divided by 2 and inductive load, value to be divided by 1.5
Contact CA Pyrocontrole for more information

HB	Detection of partial or total load break
UIP	Uxl, U^2, I^2, U, I power control

Accessories

A wide range of accessories is available:
fuses, configuration cables, software, etc.

Contact us:

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