

7200A

MODEL

Ideal for :

- Glass lehrs
- Metal furnaces
- Ceramic furnaces
- Semi-conductor manufacture
- Ovens
- Thermo-forming
- SWIR heaters

Features :

- Current range: from 16 to 200 amps at 45°C
- Voltage up to 500V
- Inputs
current:
0-20mA or 4-20mA
voltage:
0-5V or 0-10V
- Firing modes:
Burst firing
Single cycle
- Alarm options include:
Thyristor short circuit
Load open circuit
Partial load failure
Thyristor over temperature
(≥125 amps)



Two Leg Three Phase Thyristor Units for use with Short Wave Infrared or Resistive Loads

Specification Sheet

Ratings

The current ratings of the 7200A cover the range from 16 amps up to 200 amps, with units rated at 125 amps and above being fan cooled. The voltage rating extends to a maximum of 500 volts. These units consist of two thyristor controlled channels each rated at the specified current and voltage.

Inputs

The 7200A can accept analogue voltage: (0-5V or 0-10V) or current: (0-20mA or 4-20mA) inputs.

Firing Modes

The 7200A is available with a selection of firing modes to suit most three phase applications with resistive elements in 3-wire configuration. It is suitable for controlling resistive loads with low temperature coefficient and short wave infrared (SWIR).

Alarm

Optional alarms can warn of thyristor short circuit or load open circuit. It includes the partial load failure with automatic set up which can detect the loss of at least one for up to four parallel loads (DLF alarm).

Over temperature shutdown is provided with fan cooled units (above 125 amps) with optional alarm.

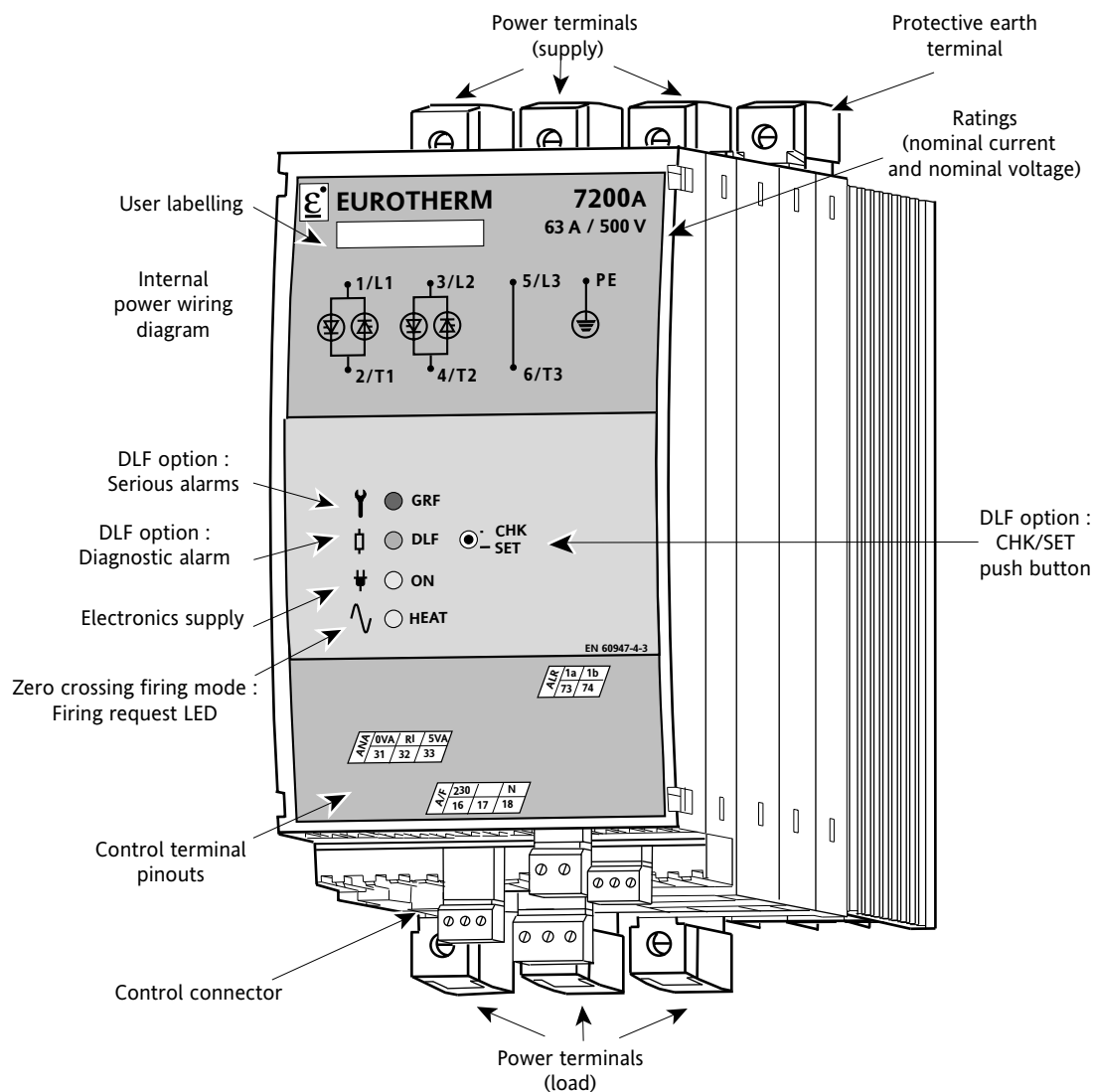
Fusing

High speed fuses are recommended for most applications except SWIR. The fuses are external for units up to and including 100 amps and internal above 100amps. Fuses are available either with or without microswitch indication.

International approvals

CE (EN60947-4-3)

7200A



Example of 7200A layout

Signal connections

Terminal Block	No.	Label	Terminal Purpose	Option
ANA	31	0VA	0V analogue signal	Basic or Options
	32	RI	+analogue signal	
	33	5VA	5V user supply	
A/F	16	230	Auxiliary 230V or	
	17	115	115V supply	
	18	0V	Neutral or 2 nd phase	
ALR	71	1a	Alarm relay contact (NC code)	Alarms
	72	1b	Alarm relay contact (NO code)	
	73	1a	Alarm relay contact (NO code)	
	74	1b	Alarm relay contact (NO code)	
MSF	75	3a	Fuse with micro switch contact	≥125A
	76	3b	Fuse with micro switch contact	
EXT	21	L2	Neutral or 2nd phase in case of alarm option	Alarm
	22	N/A		

Safety specification

PRODUCT STANDARD

The 7200A products comply with the terms of product standard EN 60947-4-3. Contactors and motor-starters- AC semiconductor controllers and contactors for non-motor loads.

CE LABELLING

Complies with essential requirements of the European Low Voltage Directive 73/23 EEC dated 19 February 1973, modified by 93/68/EEC dated 22 July 1993 and the Electromagnetic Compatibility Directive 89/336/EEC dated 3 May 1989 modified by 92/31/EEC dated 28 April 1992 and 93/68/EEC dated 22/07/93.

TECHNICAL SPECIFICATION

Additional information and documentation available on www.eurotherm.co.uk

POWER

Nominal Current	16 A to 200 A at 45°C ambient (see order code)
Nominal Voltage	200 VAC to 500 VAC (see order code)
Frequency	47 to 63 Hz
Auxiliary supply	Self-powered from supply network, or external (115Vac or 230Vac +10%; -15%). Consumption: 10VA.
Dissipated power	1.3 W (approx): per amp per phase. Allow 2 W per amp per phase to include fuse dissipation
Cooling	Rating ≤100A: Natural convection. Rating ≥125A: Fan-cooled.

LOAD

Use category	Three-phase industrial load: · AC-51 Resistive load with low temperature coefficient · AC-55b Short wave infrared elements units ≤100A only
Load configuration	· Star without neutral (3S) · Closed delta (3D)

CONTROL

Control type	Analogue · Remote analogue setpoint: 0-5Vdc or 0-10Vdc (100 kΩ =input impedance), 0-20mA or 4-20mA (250Ω input impedance)
Control parameter	· Standard: Load voltage squared (V²)
Linearity and stability	Better than ±2% of full scale (balanced supply and load)

FIRING MODE

Firing at zero crossings	· 'Burst mode' base time: 16 or 64 cycles · 'Single cycle': base time 1 cycle
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LOAD MONITORING (OPTIONS)

Diagnostic alarm (DLF)	Serious Alarms: Unit overtemperature, short circuit and load open circuit, signalled by LED and relay contact. Partial load failure detection: Detects the failure of at least : 1 element out of 4 in 3S configuration and 1 element out of 3 in 3D configuration, signalled by orange 'DLF' LED and alarm relay contact.
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ALARM RELAY

Available with alarm option. The relay contact (0.25 A 230 Vac; 32 Vdc) is either open or closed on alarm depending on the code.

ENVIRONMENT

Temperature	Use 0°C to 45°C at max. altitude of 2000m. Storage -10°C to 70°C
Pollution	Degree 2 acceptable (defined by IEC 664)
Humidity	RH 5% to 95% Non condensing

INSTALLATION

Mounting.	Rating from 16 to 63A: Two symetric DIN rail EN50022 or bulkhead mounting (4 x M4 screws) Rating from 80 to 100A: Bulkhead mounting (4 x M4 screws) Rating from 125 to 200A: Bulkhead mounting (4 x M6 screws) Allow a minimum of 10mm between units. Units must be mounted with fins running vertically
Max. cable size.	16 and 25 amp: 6mm ² . 40 and 63 amp: 16mm ² . 80 and 100 amp: 35mm ² . 125 to 200 amp: 120mm ²

PROTECTION

Thyristor protection	Varistor and RC snubber High speed fuses: rating ≤100A: external (optional), rating ≥125A: internal. No fuse for short wave infrared elements if firing at zero crossings or in phase angle firing mode without current limit.
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Electrical protection IP20 without adding additional protection. Overvoltage category II

WARRANTY

2 years.

PHYSICAL DATA

Rating (A)	H(mm)	W(mm)	D(mm)	
			Basic	DLF
16-63	220	96	214	214
80-100	305	144	372	372
125-200	498	144	372	372

ORDERING CODE

7200A	1	2	3	4	5	6	7	8	9	10
11	12	13	14	NONE	15	16	NONE			

1	Current	2	Nominal Line to line Voltage	3	Power supply for Electronics	5	Load Configuration	7	Firing Mode	9	Manual Language
16A	16 amps	200V	127 volts	SELF	Self-powered	3S	Star without neutral	C16	Burst 16 cycles	ENG	English
25A	25 amps	230V	230 volts	115V	115 volt supply	3D	Closed delta	C64	Burst 64 cycles	FRA	French
40A	40 amps	277V	277 volts	230V	230 volt supply			FC1	Single-cycle	GER	German
63A	63 amps	400V	500 volts								
80A	80 amps	460V	460 volts								
100A	100 amps	480V	480 volts								
125A	125 amps	500V	500 volts								
160A	160 amps										
200A	200 amps										
4	Fan Power Supply	6	Fuse	8	Input	10	Selected Options				
16A-100A		FUSE	Fuse without microswitch	0mA20	current from 0mA to 20mA	NONE	Without options: V ⁺ control and End of code				
XXXX No fan		MSFU	Fuse with microswitch	4mA20	current from 4mA to 20mA	YES	With options: Selection of options				
125A-200A		NONE	No fuse	0V5	Voltage from V to 5V						
115V 115V fan and SELF electronics				0V10	Voltage from 0V to 10V						
230V 230V fan and SELF electronics											

Options (if Options 'YES')

11	Load Monitoring	12	Load Type	13	Alarm Relay Contact	14		15	Certification	16	
DLF	Partial load failure and serious alarms	For DLF option: SWIR	Short infrared (with FC1 only)	NC	With alarm option: closed on alarm	NONE		NONE	Without certificate	NONE	
NONE	No alarms	LTCL	Low temperature coefficient loads	NO	Without alarm option			CFMC	With certificate		
		XXXX	Without DLF option	XX							

SPARE FUSE AND HOLDER (2 per unit)

Current rating amps	Fuse and holder assembly	Fuse and Holder with Microswitch
16	FU1038/16A/00	MSFU1451/16A
25	FU1038/25A/00	MSFU1451/25A
40	FU1451/40A/00	MSFU1451/40A
63	FU2258/63A/00	MSFU2258/63A
80	FU2258/80A/00	MSFU2258/80A
100	FU2760/100A/00	MSFU2760/100A

SPARE FUSE (2 per unit)

Current rating amps	Fuse number	Fuse Trip with Indicator
16	CH260024	CS176513U020
25	CH260034	CS176513U032
40	CH330054	CS176513U050
63	CS173087U080	CS176461U080
80	CS173087U100	CS176461U100
100	CS173087U125	CS176461U125

INTERNAL FUSES (2 per unit)

Current rating amps	Fuse Trip with Indicator
125	CS17672U160
160	CS17672U250
200	CS17672U315

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