TECHNICAL SUMMARY
7100s
Intelligent Solid State Contactor
(Basic version)
Specifications   Installation   Coding

EUROTHERM

TECHNICAL SPECIFICATIONS

Power

Nominal current	16 A to 630 A at 45 °C (see product code)
Nominal voltage	100 V to 690 V (+10%, -15%) depending on code.
Frequency	47 to 63 Hz
Dissipated power	approx. 1.3 W per amp
Cooling	Natural convection for ≤ 100 A or fan for ≥ 125 A (consumption 10 VA).
Load	Single-phase industrial load. Resistive loads with low temperature coefficient or Short-Wave Infrared heaters

Command

Thyristor firing mode	At zero crossing
Control	Open loop
Power supply	Internal electronic supply

On/Off firing

• DC signal (LDC input)	Conducting from 4.5 Vdc to 32 Vdc maximum; current ≥ 9 mA. Off < 2 V or < 0.5 mA.
• AC signal (HAC input)	Conducting from 85 Vac to 253 Vac maximum. Off < 10 Vac. Impedance 7 kΩ at 50 Hz.

Burst firing:

• Analogue signal (ATP input)	4 - 20 mA. Voltage 10 Vdc maximum. Power modulation as a function of the signal. At 50% of input signal, the modulation period is 0.6 s with 0.3 s firing. Linearity better than ±2% of full scale.
• DC signal (LDC input) from a REMIO TPO output	Depending on the REMIO operating mode (interface with digital communication): • 8-cycle burst mode or • intelligent half-cycle

Environment

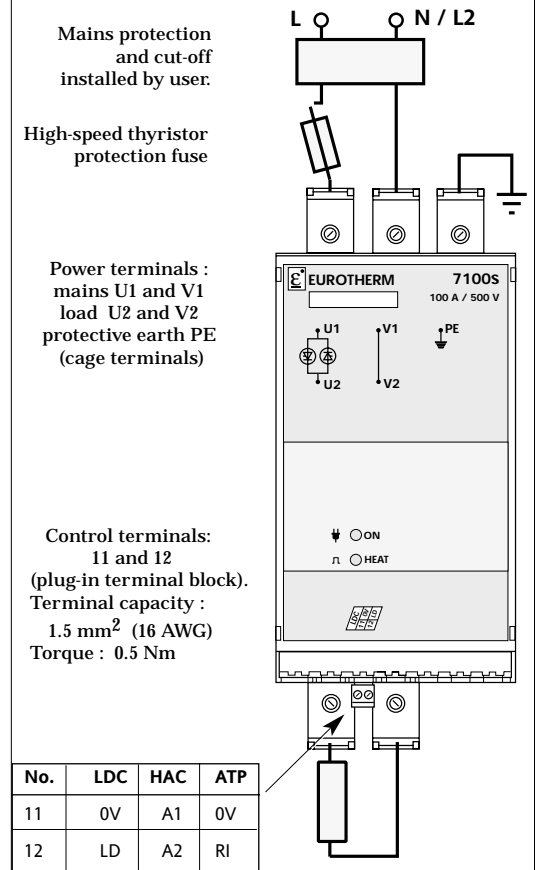|	
Usage	0 to 45°C at a maximum altitude of 2000 m .
Storage	-10°C to 70°C.
Pollution	Degree 2 allowable (defined by IEC 664).
Humidity	RH 5% to 95% non-condensing, non-streaming.
Protection	IP20 without adding additional protection. Overvoltage category 3.
Thyristor protection	High-speed external fuse (rating ≤ 100 A) or internal (rating ≥ 125 A).
Indication	Mains supply: green "ON" LED. Thyristor firing: green "HEAT" LED.
Alarms	**Optional** (Available later)

Eurotherm's policy of continuous product improvement and development means that these specifications may be modified without prior notice.

CONNECTION DIAGRAM

Mains protection and cut-off installed by user.

High-speed thyristor protection fuse

Power terminals : mains U1 and V1 load U2 and V2 protective earth PE (cage terminals)

Control terminals: 11 and 12 (plug-in terminal block). Terminal capacity : 1.5 mm^2 (16 AWG) Torque : 0.5 Nm

No.	LDC	HAC	ATP
11	0V	A1	0V
12	LD	A2	RI

WIRING

Rating A	Terminal capacity mm^2 (AWG)	Torque Nm
16 to 25	2.5 (13) to 6 (9)	1.2
40 to 63	6 (9) to 16 (5)	1.8
80 to 100	16 (5) to 35 (2)	3.8

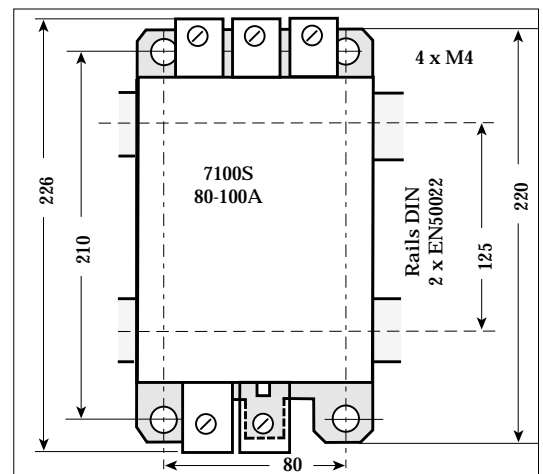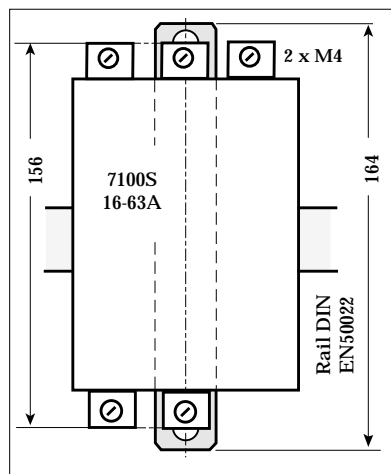Wire cross-sections should comply with the IEC 943 standard.

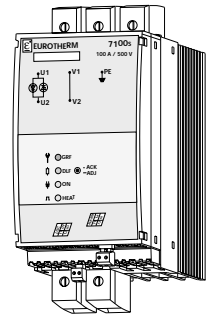## MOUNTING with attachment plate

DIN rail or panel mounting (panel mounting only for rating ≥ 125 A) Minimum horizontal spacing between two units: 10 mm

DIMENSIONS

Unit dimensions (H x W x D) mm

16 A:	156 x 35 x 110
25 A:	156 x 35 x 140
40 A:	156 x 52.5 x 140
63 A:	156 x 70 x 160
80-100 A:	226 x 96 x 164

TAKE YOUR PICK:
SELECT YOUR 7100s INTELLIGENT SOLID STATE CONTACTOR

									Alarms option			Communication option		Option
7100s /	Current /	Voltage /	Filter /	Fan /	Fuse /	Input /	Manual /	Options selected	Alarm type /	Load type /	Contact /	Protocol /	Baud rate /	Certification

1. Nominal current

	Code
16 amps	**16A**
25 amps	**25A**
40 amps	**40A**
63 amps	**63A**
80 amps	**80A**
100 amps	**100A**
125 amps	**125A***
160 amps	**160A***
200 amps	**200A***
250 amps	**250A***
315 amps	**315A***
400 amps	**400A***
500 amps	**500A***
630 amps	**630A***

2. Nominal voltage

	Code
127 volts	**127V**
230 volts	**230V**
277 volts	**277V**
500 volts	**500V**
690 volts	**690V***

3. Internal EMC filter

	Code
16A to 40A only with filter	**FILT**
63A to 100A:	
with filter	**FILT**
without filter	**NONE**
≥125A only without filter	**NONE**

4. Fan

	Code
16A to 100A:	
no fan	**XXXX**
≥125A: fan	
115 V supply	**115V**
230 V supply	**230V**

5. High speed fuse

	Code
Thyristor protection fuse	
≤100A: external	
≥125A: internal	
without microcontact	**FUSE**
with microcontact	**MSFU**
No fuse or **SWIR** load	**NONE**

6. Input

	Code
On/Off firing	
DC logic signal 4.5 - 32 Vdc	**LDC**
AC logic signal 85-253 Vac	**HAC**
Burst firing	
Analogue signal 4 - 20 mA	**ATP**

7. Manual language

	Code
French	**FRA**
English	**ENG**
German	**GER***

8. Options selected

	Code
No options	
End of code	**NONE**
Choice of options	**YES***

9. Alarm type* *(If options YES)*

	Code
Serious alarms: thyristor short circuit, total load failure, thermal cut out for ≥125A	**GRF**
Partial load failure and serious alarms	**DLF**
No alarms	**NONE**

10. Type of load*

	Code
For DLF option:	
Low temperature coefficient resistive load	**LTCL**
Short wave infrared elements	**SWIR**
Without DLF option	**XXXX**

11. Alarm relay contacts*

	Code
For GRF or DLF option:	
Alarm relay contact:	
Closed for alarm	**NC**
Open for alarm	**NO**
Without alarm option	**XX**

12. Communication option*

	Code
Communication protocol:	
Modbus	**MOP**
No communication	**NONE**

13. Baud rate*

	Code
Baud rate:	
96 kbaud	**9K6**
192 kbaud	**19K2**
No communication	**XXXX**

14. Certification option

	Code
No Certificate supplied	**NONE**
Supply Certificate of Conformity with order	**CFMC**

* **Available later**

FUSES   For **FUSE** code only

Unit rating	High-speed fuse (thyristor protection)		Fuse and fuse holder assembly
	Fuse rating	Eurotherm reference	
16 A	20 A	CH260024	FU1038/16A/00
25 A	32 A	CH260034	FU1038/25A/00
40 A	50 A	CH330054	FU1451/40A/00
63 A	80 A	CS173087U080	FU2258/63A/00
80 A	100 A	CS173087U100	FU2258/80A/00
100 A	125 A	CS173246U125	FU2760/100A/00

Important!
For all types of load (other than short wave infrared elements), using any thyristor protection fuse **other** than the recommended type **voids the unit's guarantee**.

USER SAFETY

• Eurotherm Limited shall not be held responsible for any damage or injury caused by inappropriate use of the product or failure to comply with these instructions.
• The protective earth must be connected before any other connections and disconnected last.
• The high-speed fuse only protects the thyristors. It is essential to provide line protection and a circuit breaker in compliance with applicable standards.
• The heatsink temperature may exceed 100°C. Avoid touching the heatsink when the unit is operating and for 15 minutes after it is switched off.
• The user must not attempt to access internal parts. Disconnect the unit before disassembling.

CE MARKING

7100s units installed and used according to these instructions comply with
the European Low Voltage Directive 73/23 EEC (93/68 EEC).
Installations in which the units are used may therefore be declared compliant with the EMC Directive as regards the 7100s units.

HA176432ENG