



DC RECTIFIER DIODE STACK

DCR

X10242

INTRODUCTION

United Automation Ltd. manufacture a range of single and three phase rectifier stack assemblies. All the Diodes used are operated well within their performance envelope. All Stacks that are rated over 100 Amps are fan cooled and have thermal trips as an added safety feature. Photograph shows model DCR480-3-250A fitted with optional fuses

APPLICATIONS

Many controlled or uncontrolled DC loads, such as Electroplating, Cathode Protection, Electro Phoretic Painting, Battery Charging and DC Motor Controls.

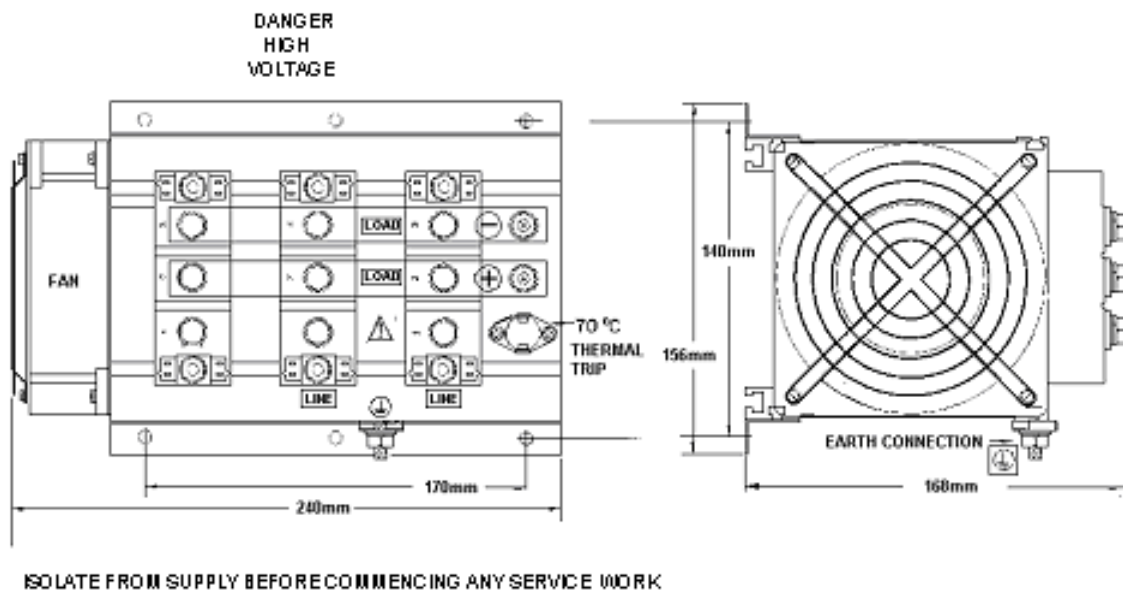
FEATURES

- 15-300A Single and Three Phase
- Isolated modules used on standard range
- Fan Cooled over 100A
- Other current ratings available

DCR480-3-250A



INSTALLATION



DCR480-3-250A shown without optional fuses

STACK SPECIFICATION

The Stacks detailed in this leaflet are typical UAL assemblies but other stacks with different specifications can easily be ordered using the required code.

Stack codes- DCR denotes the DC Rectifier stack family
 1st number gives the AC rms Input Voltage.
 2nd number gives the Phase (1 or 3).
 3rd number gives the maximum Current Output.

E.g. DCR-240-1-280 is a single-phase 240 volts DC rectifier, supplying a maximum 280-amp output.

All diode used in the assemblies are very generously rated, giving a 50 to 100% safety margin.

All current rating @ 45°C ambient temperature.

Overall Stack Dimensions			
All dimensions in mm. (approx) shown without fuses			
ORDER CODE	Length	Width	Height
DCR-240-1-50	240mm	150mm	100mm
DCR-240-1-100	240mm	150mm	100mm
DCR-240-1-150	240mm	150mm	100mm
DCR-240-1-280	240mm	150mm	100mm
DCR-240-1-400	240mm	150mm	100mm
DCR-240-3-75	340mm	230mm	120mm
DCR-240-3-150	240mm	173mm	180mm
DCR-240-3-225	240mm	173mm	180mm
DCR480-3-250A	240mm	173mm	180mm

Note: 480v stacks have the same dimensions as equivalent 240v stack

RECTIFIER CIRCUIT DATA		
Circuit Data	POWER CIRCUIT 1	POWER CIRCUIT 3
[NO LOAD AC INPUT VOLTAGE] [NO LOAD DC OUTPUT VOLTAGE]	1.11	0.74
[RIPPLE FACTOR] [GIP PERCENTAGE]	2	6
[AVERAGE ARM CURRENT] [DC OUTPUT CURRENT]	0.5	0.333
[RMS ARM CURRENT] [DC OUTPUT CURRENT]	0.707	0.577
[MAX. REVERSE VOLTAGE] [NO LOAD DC OUTPUT VOLTAGE]	1.57	1.05
[MAX. REVERSE VOLTAGE] [RMS VOLTAGE FROM TRANSR]	1.41	2.45
Transformer Data		
[RMS LINE INPUT CURRENT] [DC OUTPUT CURRENT]	1.00	0.816
[PRIMARY RATED CURRENT] [IDEAL OUTPUT POWER]	1.11	1.05
[SECONDARY OUTPUT POWER] [IDEAL OUTPUT POWER]	1.11	1.05
Power Factor	0.90	0.955
Impedance Factor	200	200
Conduction Angle	180	180

FUSING

It is recommended to use semiconductor (fast acting) type fuses or circuit breakers (Semiconductor - MCB) for unit protection and an appropriate safety fuse for unit supply (F1A). On initial 'switch on' some loads may need an increased factor of safety (F of S) for unit and/or device protection. (See SRA Datasheet for further information).

CE MARKING

This product family carries a "CE marking". These phase angle controllers need a suitable remote filter. For information see recommendation section and contact our sales desk. (See Declaration of Conformity).

RECOMMENDATIONS

Other documents available on request, which may be appropriate for your application:-

CODE	IDENTITY	DESCRIPTION
X10229	RFI	Filtering recommendations - addressing EMC Directive
X10213	ITA	Interaction, uses for phase angle and for burst fire control.
X10255	SRA	Safety requirements - addressing the Low Voltage Directive (LVD) including:- Thermal data/cooling ; "Live" parts warning & Earth requirements; Fusing recommendations.
AP02/4	COS	UAL Conditions of sale.

NOTE It is recommended that installation and maintenance of this equipment should be done with reference to the current edition of the I.E.E. wiring regulations (BS7671) by suitably qualified/trained personnel. The regulations contain important requirements regarding safety of electrical equipment (For International Standards refer to I.E.C. directive IEC 950).

ORDER CODE

State part number:

DCR + voltage + current
 Optional Fuses available



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