

General

Hubbell offers the Type 4320 diode rectifier, specifically designed and rated for the demanding requirements where short circuits on the DC output bus are common or probably. The unit is ideally suited for applications such as scrap lifting magnets or cranes.

Addressing the common problem of blown semi-conductor fuses resulting from cut magnet cables, shorted magnets, or crane rail faults. The 4320 offers a rectifier system that eliminates all fusing in the rectifier. Traditional rectifier design incorporates the use of silver and, fast acting, current limiting, semi-conductor fuses to protect rectifier diodes in the event of a DC fault. The 4320 rectifier design eliminates the need for these fuses.

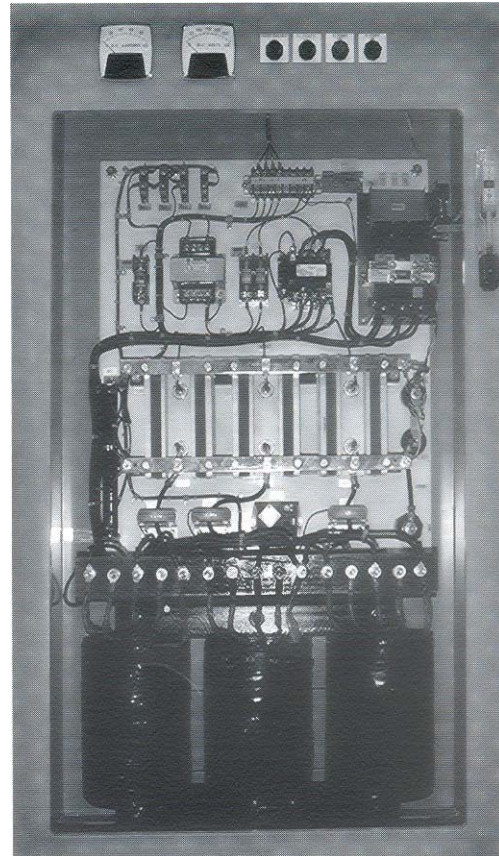
The 4320 rectifier design will trip the unit's AC input breaker in the event of a DC output bus fault. After the fault is cleared, the user simply resets the unit's AC breaker and the unit is operational.

Cost Savings:

- ◆ No blown fuses to replace
- ◆ No spare fuses to inventory
- ◆ Downtime associated with changing power semi-conductor fuses is eliminated

Standard Features of the Type 4320 Rectifier:

- ◆ AC input voltage: 460V, 3Ph, 60Hz.
- ◆ Nominal DC output: 240VDC
- ◆ AC molded case circuit breaker
- ◆ Dry Type isolation transformer: Transformer has one 5% tap above and below nominal input voltage
- ◆ DC bleed resistor
- ◆ Full wave, six pulse, diode rectifier assembly; mounted on oversize extruded aluminum head sinks
- ◆ Diode peak inverse voltage to be six times the bridge AC RMS voltage



- ◆ Heavy Duty surge suppression specifically rated for highly inductive load kick application. i.e. Magnets
- ◆ Power on indication light
- ◆ Industrial duty floor mounted NEMA 2 indoor, or NEMA 3R outdoor, convection cooled, vented enclosure with hinged door access
- ◆ Single side access to all components
- ◆ Enclosure grounding lug

Options:

- ◆ DC ammeter and/or voltmeter
- ◆ Remote on/off pushbutton
- ◆ Flange mounted on/off pushbutton

Operating Parameters:	Typical Schematic Diagram
<p>* Service Factor:</p> <ul style="list-style-type: none"> -115% load continuously at 40 C ambient -100% load continuously at 50 C ambient -125% load for two hours at 40 C ambient after 8 hours of 100% load operation -200% load for one minute at 40 C ambient after 8 hours of 100% load operation -DC ripple 4.63 RMS at 100% resistive load -DC voltage regulation 8% on 10% to 100% load variation and 0% AC line variation <p>* Power factor 95% at 100% load</p> <p>* Efficiency 95% or better at 100% load</p>	<p>TRANSFORMER PRIMARY CONNECTIONS PROVIDE ±5% INPUT VOLTAGE TAPS FOR CORRECTION USE: X2 CONNECTOR FOR NOMINAL VOLTAGE X1 CONNECTOR FOR 5% HIGH INPUT X3 CONNECTOR FOR 5% LOW INPUT</p> <p>Δ OPTIONAL</p>

* Approximate Dimensions for NEMA 2/3R Free Standing Enclosures

KW	VOLTS	DIMENSIONS	KW	VOLTS	DIMENSIONS
3	240 DC	22W 14D 25H	25	240 DC	28W 18D 44H
5	240 DC	22W 14D 25H	30	240 DC	28W 18D 44H
7.5	240 DC	22W 14D 25H	40	240 DC	28W 18D 44H
10	240 DC	22W 14D 25H	50	240 DC	28W 18D 44H
12.5	240 DC	28W 18D 29H	60	240 DC	36W 24D 54H
15	240 DC	28W 18D 29H	75	240 DC	36W 24D 54H
20	240 DC	28W 18D 44H	100	240 DC	36W 24D 54H

* Dimensions Not For Construction Purposes



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