

DATASHEET

IR025H3R240ATEZ Integritas™ Rectifier

Advanced Technology to Simplify Your Power Needs



The OmniOn IR025H3R240ATEZ true three-phase rectifier efficiently transforms energy from any standard three-phase source into 240 volt DC power needed for industrial applications. The rectifier operates using three-phase input voltages from 320 to 530 VAC without the need of a neutral conductor. This means that one single rectifier can be used globally to meet all your 240V powering needs.

Efficiency is market leading for diode protected, true hot pluggable, 240 volt rectifiers.

The IR025H3R240ATEZ rectifier offers a powerful combination of efficiency, network simplicity, and reliability.

A True System Solution

- Integritas™ rectifiers are part of the proven global platform line of rectifier products designed to meet the demanding needs of industrial customers.
- Monitoring/Control – the built in microprocessor controls and monitors all critical rectifier functions and communicates with the system controller using the built in Galaxy Protocol serial interface.
- Designed and tested to work with battery modules to support a safe, reliable, and low cost way to deliver “5 nines” level of reliability.

Features & Advantages

- Compact – 1 RU form factor provides high power density at 27 Watts/cubic inch.
- Efficient – flat efficiency curve >95% efficiency over a wide range of loads.
- Flexible Output – provides up to 25 amps of power over a broad voltage output band for fast charging of discharged batteries.
- Programmable - output is programmable between 180 - 300 VDC to support nominal 220V and 240V battery strings.
- Wide Range Input – operates at three-phase AC voltage from 320 to 530 VAC.
- Temperature Hardened - operates from -25°C to 75°C
- Fail-Safe Performance – hot insertion capabilities allow for rectifier replacement without system shutdown; soft start and inrush current protection prevents nuisance tripping of upstream breakers.
- Extended Service Life – parallel operation with automatic load sharing ensures that load is distributed across all units when used with a matching controller.
- Plug and Play – when installed into a shelf connected to a system, the controller will automatically initialize all the set up parameters of the rectifier.

Specifications

Inputs

Voltage (VAC), 3Φ	320-530
Current Draw (A)	15 max @ 380 V
Power Factor	0.98 - 0.99 @ loads over 50%
THD	< 5% @ loads over 70% typical
Holdover	8ms down to 193 VDC
Frequency (Hz)	47 to 63

Outputs

Voltage (VDC)	180-300 ¹ range, default = 240 Vdc
Current (A)	25
Power (W)	6000
Regulation	± 0.5% (with controller operation)
Ripple (mV _{rms})	<450
Efficiency	96% Peak
Soft Start	Starts up into fully discharged batteries.

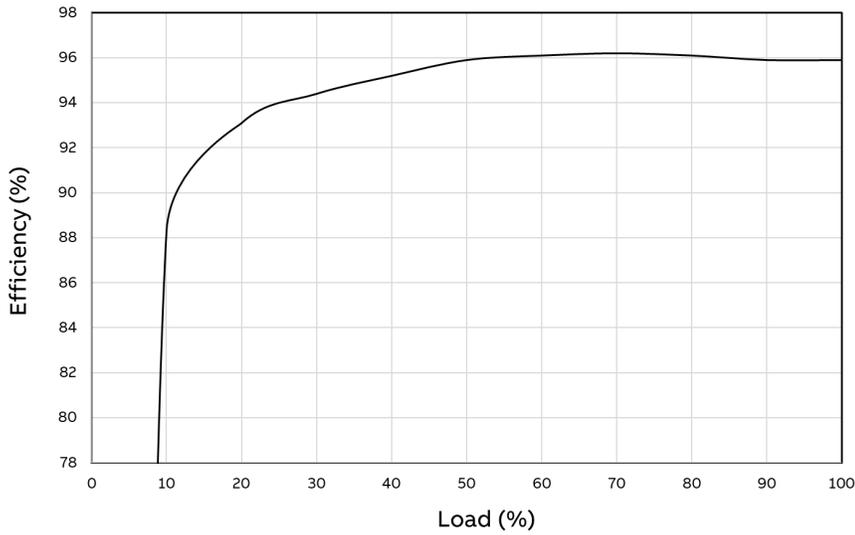
¹ For 300 Vdc continuous output, minimum AC voltage input is limited to 400 Vac

Environmental, Compliance & Physical

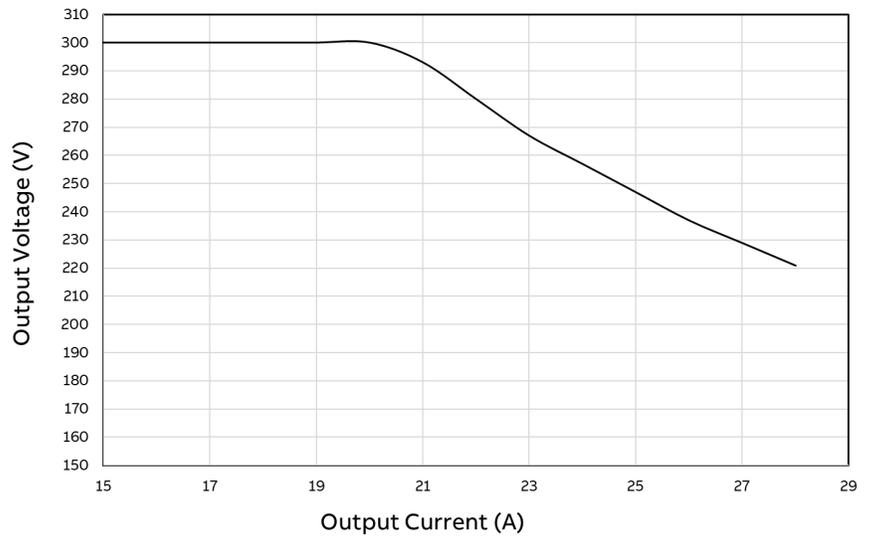
Operating Temperature Range (°C)	-25 to +75 (Output de-rates at 2%/°C at T>55°C)
Cooling Method	Front to back airflow with onboard temperature controlled fans
Operating Relative Humidity	0 - 93% (non-condensing), For use in a controlled environment
Electromagnetic Compatibility	FCC Part 15 EN 55032 (CISPR32) EN 55035 (CISPR 35)
Lightning Surge	EN/IEC 61000-4-5 Level 4 ANSI C62.41
Agency Certifications	UL1012, CSA C22.2 EN62368-1
Heat Release (BTU/hr)	853 @ max power
Mean Time Between Failure (MTBF); Life	1019k Hours @ 25°C per Telcordia SR-332, Method 1, Case 3; 10 Years
Dimensions, H x W x D (in.) [mm]	1.6 x 7.98 x 17.9 [41 x 202 x 445]
Weight (lbs) [kg]	10 [4.5]

Specifications

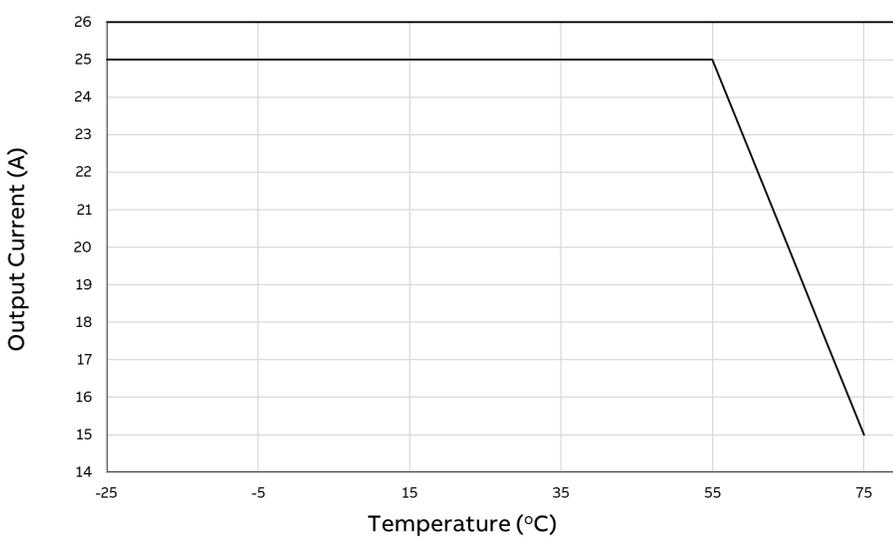
Load @ 480 Vac input, 25 °C



Input 480 Vac, 25 °C



Input 480 Vac

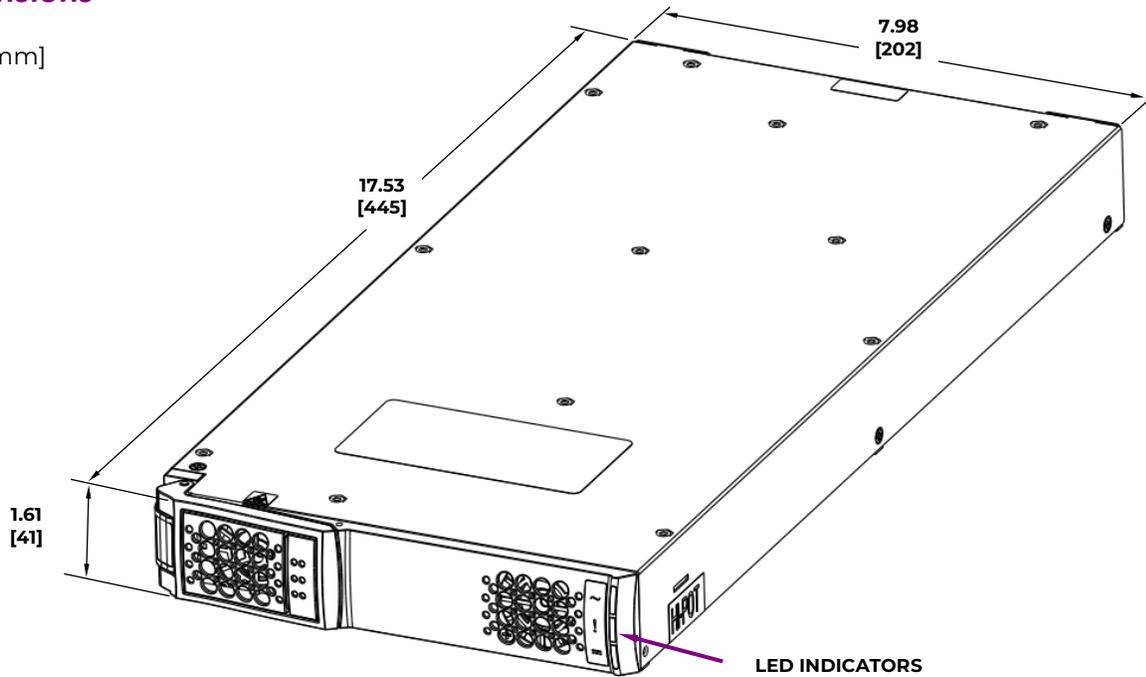


Ordering Information

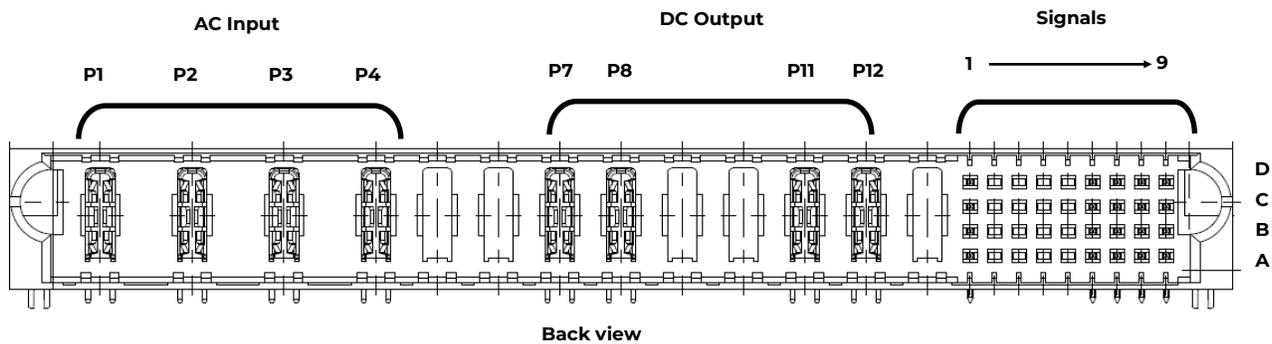
Item	Description	Ordering Number
IR025H3R240ATEZ	240 VDC industrial power rectifier	150052766

Dimensions

Inch [mm]



Signal Interface



POWER												
AC INPUT				DC OUTPUT								
P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13
L1	L2	L3	EGND	EMPTY	EMPTY	VOUT+	VOUT+	EMPTY	EMPTY	VOUT-	VOUT-	EMPTY

SIGNALS									
1	2	3	4	5	6	7	8	9	
NON_ISO_BIAS	EMPTY	EMPTY	EMPTY	EMPTY	SHELF_ID1	NC	RS485-	RS485+	D
SEC_RTN	EMPTY	EMPTY	EMPTY	EMPTY	SHELF_ID10	MOD_PRES	NC	LGND	C
UNIT_ID	EMPTY	EMPTY	EMPTY	EMPTY	STBY_MRGN	NC	NC	5VA	B
INTERLOCK	EMPTY	EMPTY	EMPTY	EMPTY	REM_ONOFF	NC	NC	NC	A

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