


IMARK

PRODUCT DESCRIPTION

	IMARK HR HYBRID REGULATORS
	Full Feature RAPS Hybrid Regulators Imark Stock # 80487x
	Features: <ul style="list-style-type: none"> ▪ PWM with shunt regulation ▪ Low loss MOSFET's ($\approx 98\%$ efficiency) ▪ Rugged mechanical design ▪ Inbuilt Input Wind & PV Surge Protection ▪ Battery Over Voltage Protection ▪ Regulator Over Temperature Protection ▪ High Power Operation (16kW-240Vdc, 12kW-120Vdc, or 6kW-48Vdc) ▪ Fully rated for 100 Amps on all terminals ▪ 160 Amp Blocking Diode for PV Input ▪ 200 Amp 3 Phase Bridge Rectifier for Wind ▪ Efficient chamber cooling system ▪ Illuminated Panel Meters for Battery Voltage & Temperature, & Wind, PV, and Charge Current ▪ Float, Charge, Boost, & Surge LED Indicators ▪ Compact 6RU Rack or Wall Mounting ▪ Link Selection for Flooded or Gel batteries ▪ Input Surge Protection & RFI Suppression ▪ 100 Amp Shunt for external monitoring ▪ 100 Amp Load Dump Terminals & Contactors ▪ Battery Temp Compensation & Sensor included

PRODUCT DESCRIPTION:
<p>The IMARK HR range of Hybrid regulators utilise high power low $R_{DS(on)}$ MOSFET's for switching. The HR Range are shunt regulators that only regulate when the battery is fully charged, thus providing maximum efficiency while minimising heat generation. A 160A Blocking diode is provided for the PV input, while a 200A 3 phase bridge rectifier is included for the Wind input. The IMARK HR range solar regulators are housed in a metal 6RU size cabinet and can be either wall or rack mounted. The mechanical construction provides fan forced air to the heatsink cooling chamber with the fans activating at 60°C. 10way & 12way interface connectors on the rear panel enables easy interfacing to external devices or popular inverters. A signal terminal is provided for customers wishing to use an external PLC (or similar) to activate external load dumps such as heaters, water pumps, etc. Large capacity Metal Oxide Varistors are fitted internally for surge protection on both Wind and PV inputs. 100 Amp binding posts for battery, PV, Wind, Load Dump, & Earth connections are fitted on the rear panel. Internal Contactors switch the load dump circuit as/when required. LED's are used to indicate the battery charging mode, & the Surge Protection condition. Illuminated panel meters show Battery Voltage, Battery Charge Current, Wind Current, PV Current & Battery Temperature. Easy to read meters provide non-technical people with easily understood information that can be very helpful for remote diagnosis of system performance.</p> <p>Wind Input only (WR models) are available for wind only applications.</p>

SPECIFICATIONS			
MODEL	HR48V6K WR18V6K	HR120V12K WR120V12K	HR240V16K WR240V16K
IMARK Stock #	804872 804882	804873 804883	804874 804884
Input Voltage (nominal)	48 Vdc	120 Vdc	240 Vdc
Input Voltage (Maximum)	150 Vdc	250 Vdc	400 Vdc
Input Power (maximum)	6K Watts	12K Watts	16K Watts
Regulation Method	Shunt, Pulse Width Modulation		
Efficiency	Greater than 98% when battery charging		
Charge Setpoints	Float, Charge, & Boost		
Charge Setpoint Adjustment	Set by Rotary Switch on PCB, calibrated in cell voltage		
Battery Conditioning	Batteries held at Charge voltage for 2 hours each day, followed by Float Charging		

IMARK

PRODUCT DESCRIPTION

Voltage Setpoint Range	2.225V to 2.600V per cell
Temperature Compensation	None, or Optional External Sensor, set by link, 6mV/°C/cell
Over Temperature Protection	Over Temperature sensor trips circuit breaker on high (90°C) heatsink temperature
Over Voltage Protection	Independent Battery Over Voltage circuit trips circuit breaker after 2 minute delay
Inbuilt Load Dump Contactor Rating	100 Amps continuous
Unit Size & Weight	260(L) x 483(W) x 264(H) mm 21.8 Kilograms
Shipping Size & Weight	575(L) x 540(W) x 305(H) mm 23.5 Kilograms
Design & Construction	Australian designed and manufactured
OPTIONS	
Load Dump	Various power models are available to suit customer requirements