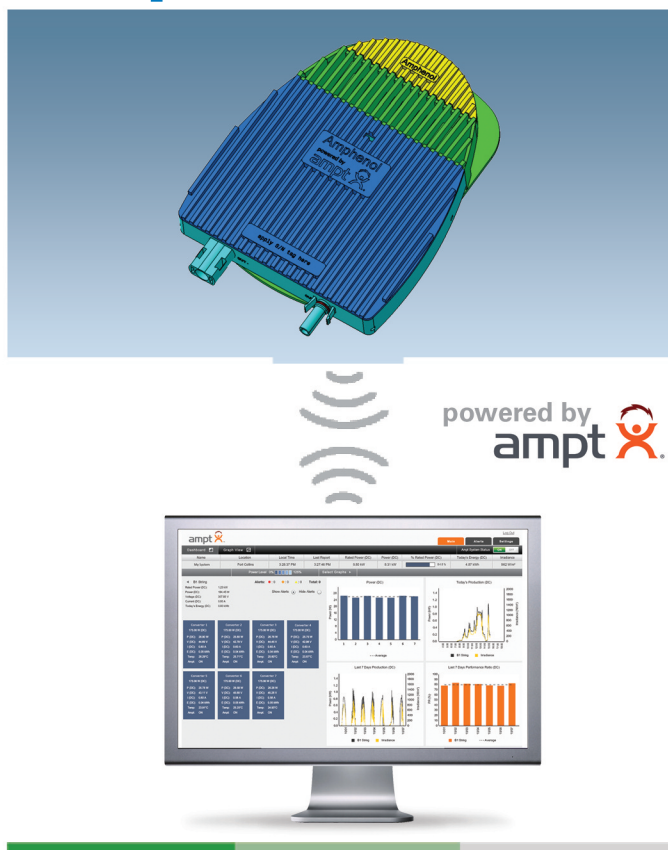


# Amphenol®



## Payloader Junction Box

The Payloader Junction Box integrated with Ampt DC/DC converters position maximum power point tracking (MPPT) and optional wireless communication capabilities on each PV module - reducing the cost of energy and providing a higher return on investment.

PV modules with the Payloader Junction Box deliver:

- Lower BOS costs
- Improved safety
- More energy
- Increased uptime
- Flexible design
- Informed decisions

Amphenol has been known and trusted for its rugged designs since 1932 and is the interconnect technology provider of choice to industry leading companies throughout the world. We provide connectivity products to panel manufacturers, installers, and OEM's that need efficient (low loss) power transfer, high reliability, and cost effective solutions. Amphenol industrial can help you power the planet with the sun.

## Features:

- High efficiency power conversion
- Fast and accurate MPPT per PV module
- Instrument-grade precision measurement
- Optional two-way wireless communication
- Independent power optimization without reliance on communication
- Remotely enabled/disabled output power
- Programmable output voltage and current limits
- Inverter and PV module compatible
- Utility-strength operation and stability
- Sealed design with high heat dissipation
- Compact design with high reliability
- Quick assembly
- 25 year warranty

# Payloader Junction Box



Modular PV Junction Box with Interchangeable Cover for Active Components

Technical Data	V40	V50	V100
Maximum module power rated at STC*	300 W	320 W	400 W
Maximum module DC OC voltage	46 V	58V	102 V
Module MPP DC voltage range	10 - 38 V	17 - 48 V	25 - 80 V
Maximum module DC current rated at STC*	8.5 A	9.2 A	6.1 A**
Maximum DC output voltage	46 V	58 V	102 V
Maximum DC output current	9.2 A	9.2 A	6.7 A**
Maximum operating efficiency	99.0%	99.2%	99.2%
Multi-mode MPPT	Yes	Yes	Yes
Programmable voltage and current limits	Yes	Yes	Yes
Terminal/diode quantity	4/3		
Bypass diodes	Low V <sub>f</sub> surface mount Schottky, thermally coupled		
Connection cross-section	12 AG/4.0mm <sup>2</sup> or 10 AWG/6.0mm <sup>2</sup>		
Temperature range	-40° to +70° C		
Protection degree	IP65		
Dimensions	6 x 7.5 x 1.25 in. (152 x 190 x 31 mm)		
Weight	1 lb 14 oz. (850g)		
Flame class	UL94 V-0; 5VA		
Ribbon Connection	Spot welding		
Breather	Gore® semi-permeable vent		
Connector type	Amphenol H4		
DC reverse polarity protection	Yes		
Certification	UL, TUV pending		
Mounting adhesive	RTV silicone or/and PSA foam tape		
Cable length	75cm, 90cm, 100cm, or custom		
Warranty	25 years		

\* Standard test condition (STC) irradiation level of 1000 W/m<sup>2</sup> at 25°C.

\*\* 6.1 A input and 6.7 A output at 60°C. 5.45 A input and 5.55 A output at 70°C.

## Benefits:

- Correct mismatch between PV modules and strings
- Deliver more power in shaded conditions
- Prevent failed PV modules from dropping a full string
- Simplify module binning and inventory management
- Increase modules per string to lower wiring costs and wire losses
- Isolate faults to decrease downtime and mitigate fire hazard
- Design systems with variable string lengths or in partial shade to optimize system footprint
- High current self-locking connectors with lower power losses

## Results:

- Increase the lifetime performance and uptime of PV systems
- Reduce the cost of PV system components and installation
- Gain deeper knowledge, predictability, and control to operate system more efficiently
- Reduce PV project risk
- Realize a lower cost of energy and increase return on investment

## How to order

1		2		3		4		5	
HB		P		A		A		D	
Product line		Product type		Terminals and Diodes		Terminal style		DC/DC converter	
HB	Helios JB	P	Payloader Junction Box	A	4 contacts / 3 diodes	A	Spot welding contacts	A	V40 - w/o wireless communication option
								B	V50 - w/o wireless communication option
								C	V100 - w/o wireless communication option
								D	V40C - with wireless communication option
								E	V50C - with wireless communication option
								F	V100C - with wireless communication option

6		7		8		9		10		11	
A		B		N		B		B			
Sealing type		Cable size		PSA foam adhesive		Cable length (Ln)*		Cable length (Lp)*		Variations	
A	Potting	A	6.0mm <sup>2</sup> /10AWG	Y	Yes	A	1000mm	A	1000mm		
B	O-ring	B	4.0mm <sup>2</sup> /12AWG	N	No	B	900mm	B	900mm		

\*Ln: cable length on negative end; Lp: cable length on positive end

---Please contact us for your additional variations!

Notice: Specifications are subject to change without notice. Contact your nearest Amphenol Corporation Sales Office for the latest specifications. All statements, information and data given herein are believed to be accurate and reliable but are presented without guarantee, warranty, or responsibility of any kind, expressed or implied. Statements of suggestions concerning possible use of our products are made without representation or warranty that any such use is free of patent infringement and are not recommendations to infringe any patent. The user should assume that all safety measures are indicated or that other measures may not be required. Specifications are typical and may not apply to all connectors.

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