



Powell Ag Solutions: J1939/ISO 11783 Diagnostics Connectors

Powell Agricultural Solutions

Powell Electronics • JRH Electronics • East Coast Microwave



For more information on how Powell Electronics is meeting the needs of the agricultural community, please contact:

Powell Electronics
200 Commodore Drive
Swedesboro, NJ 08085
United States
aginfo@powell.com

Powell Ireland Limited
Clane Business Park
Clane
Kildare, Ireland
W91 XN65
PAS@powell.com

Agricultural Technology and Farming 4.0











The future of agriculture is Smart Farming, also known as Farming 4.0: an emerging concept that refers to modern farms using technology to reduce costs, gain higher yields and minimize environmental impact. As the implementation of Farming 4.0 spreads more widely, the utilization of IoT (Internet of Things) in agriculture will become the norm as sensors are automatically used to monitor critical parameters such as soil nutrition, temperature, moisture, and more. Key IoT systems involved include telematics, sensing technology, position monitoring, data analytics, communications, and various hardware and software aspects. And one of the keys to bringing these systems together to achieve smart, sustainable farming lies in rugged, reliable interconnect solutions

The modern precision agricultural equipment is strongly driven by technical innovation through electrification and cross brand digitalization. Critical advancements in agricultural equipment have made it possible for farms to track crop production with great precision. Integrated equipment is used to optimize crop potential by ensuring that the correct amount of water, seed, pesticide, and fertilizer are applied to the crops electronically via GPS. This new way of farming is accomplished with the help of monitors, sensors, and cross brand computerized systems.

PAS Circular Diagnostic Connectors

Powell Ag Solutions ISO 11783-2 and J1939 Circular Diagnostic Connectors are available in all common versions. Most popular forms are the flange mount versions that are extremely cost effective drop in replacements for current market applications. Also popular is the hex nut version that provides a dramatically simplified installation using no additional tooling.

These 9 pin connectors are designed to perform in the demanding environments found on construction, agricultural equipment and heavy duty vehicles. These circular connectors feature robust thermoplastic construction with a positive contact retention system and sealed via redundant grommet wire seals. Powell Ag Solutions common contacts are used in these connectors creating a readily available, proven system to use at major global OEM's and accommodating the solid machined and stamped and formed contacts.

Item	Reference Photo	Powell Ag Solutions #	Type	No. of Pin	PAS Terminal	PAS Housing	Gender	Plating	Packing	AWG	Cross Reference	
											TE Deutsch PN	Amphenol PN
1		PA512P-1000-19P	Housing	6	PA512M-2000-50H	NA	M	NA	PE GP	NA	HD16-6-12S-B010	AHD16-6-12S-B010
2		PA513C-1000-19P	Housing	6	PA513C-2200-59P	NA	F	NA	PE GP	NA	HD10-6-12P	AHD10-6-12P-L
3		PA514C-1000-10E	Housing	9	PA512M-2000-50H	NA	M	NA	PE GP	NA	HD16-9-1939S	AHD16-9-1939S
4		PA512M-1000-10E	Housing	9	PA512M-2000-50H	NA	M	NA	PE GP	NA	HD16-9-1939S-P080	AHD16-9-1939S-P080 AHD16-9-1939S80
5		PA513B-1000-10E	Housing	9	PA512M-3AYF-0A	NA	F	NA	PE GP	NA	HD10-9-1939P-P080	AHD10-9-1939P80
6		PA513B-1100-19P	Housing	9	PA512M-3AYF-0A	NA	F	NA	PE GP	NA	HD10-9-1939P-BP03	No
7		PA512M-2000-50H	Terminal	9	NA	PA512P-1000-19P PA514C-1000-10E PA512M-1000-10E	NA	Tin	Special Packaging GP	20-28	No	No
8		PA512M-3AYF-0A	Terminal	9	NA	PA513B-1000-10E PA513B-1100-19P	NA	Tin	Special Packaging GP	20-28	No	No
9		PA512P-2000-50H	Terminal	6	NA	PA512P-1000-19P	NA	Tin	Special Packaging GP	24-28	No	No
10		PA 513C-2200-59P	Terminal	6	NA	7E513C-1000-19P	F	Tin	Special Packaging GP	20-28	No	No