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HARTING Han[®] S 120







Safe and error-free connections
in energy storage systems

HARTING Han® S 120

Solution overview and compliance to standards

In line with the market trends for energy storage systems, Han® S was developed as a front mounting solution for high power transmissions with flexibility and safety. This single pole connector family can work with rated currents up to 120 A at a voltage of 1500 V, while assuring safe installations with finger safe contacts with different termination types (bolt or busbar) and visible control of the locking status. Moreover, the product is vibration proof and available in different colours, complete with a me- chanical coding system that makes misconnections impossible.

Han® S complies with all relevant standards for energy storage systems







-  **IEC 60664-1 (VDE 0110-0)**
Principles, requirements and tests
-  **IEC 61984 (VDE 0627)**
Connectors, safety requirements and tests
-  **UL 1977 (in release processing)**
Standard for component connectors for use in data, signal, control and power applications
-  **UL 4128**
Outline of investigation for intercell and intertier connectors for use in electrochemical battery system applications
-  **UL 1973**
Standard for batteries in use in stationary, vehicle auxiliary power and light electrical rail
-  **UL 9540**
Standard for energy storage and equipment



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Key features and advantages

Besides the fact of holding the brand-new approval UL 4128, Han® S provides important additional features currently not existing in the segment. As a matter of fact, Han® S assures safe and error-free connections with high flexibility.

-  High power transmission in a compact design: rated currents up to 120 A at a voltage of 1500 V due to an effective contact resistance of less than 0.3 mΩ
-  Safe installations due to visible control of the locking status, finger protected contacts, mechanical & colour coding system and shock & vibration resistance
-  Easy (dis) assembly due to (un) screwing the contact of the screw mounted housing from the front. Easy mating through a self-opening single lever
-  High flexibility due to different mounting possibilities and contact terminations as well as 360° positioning for cable entry
-  Complies with all relevant energy storage standards, including the brand-new UL 4128
-  Free of lead and halogens

For more information refer to our homepage:
www.HARTING.com/hans

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Technical characteristics

Inserts/electrical data acc. to DIN EN 60664-1 and DIN EN 61984

Number of contacts	1
Rated current - Han® S 120	120 A
Rated voltage	1500 V
Rated impulse voltage	8 kV
Pollution degree	2
Insulation resistance	≥ 108 Ω
Contact resistance	≤ 0.3 mΩ
Limiting temperatures	-40 °C ... +125 °C
Number of mating cycles	≥ 500
Degree of protection acc. to IEC/EN 60529 - mated condition - unmated condition	Touch safe male and female contacts IP40 IP20 (1500 VDC, 1000 VAC)
Coding system	Mechanical & colour
Locking system	Single lever (with visible status)
Vibration and shock resistance acc. to IEC 16373	Category 1, class B
Cable entry	Angled, available rotation through 360°

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Technical characteristics



Inserts/electrical data acc. to DIN EN 60664-1 and DIN EN 61984

Cable outer diameter - Han® S 120	5.5 -12.5 mm
Cable gland tightening torque - Han® S 120	1.5 Nm
Contact termination (hood) - cable stripping length - suitable tools/crimp-dies	Crimp (conductor cross-section 10 ... 25 mm²) 22 mm refer to the Han® S Assembly Instructions
Contact termination (housing) - recommended tightening torque •Han® S 120	Bolt/busbar 4 Nm*
Fixing screws (housing) - recommended tightening torque	M3, 6 mm long, flat head (acc. to ISO 7380-2) 0.5 - 0.8 Nm
Colour (hood/housing) - black - red - blue	RAL 9005 (jet black) RAL 3001 (signal red) RAL 5015 (sky blue)
Material (hood/housing)	Polyamide (PA)
Material (contacts)	Copper alloy
Material flammability class acc. to UL 94	V-0

* for bulkhead mounted housings, the use of a counter wrench is mandatory if applying more than recommended tightening torque.


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Components and part numbers

Han® S 120			
Identification/part no.	Figure	Drawings	
Rubber sleeve		Cable outer diameter 5.5 – 7.0 mm 09 93 000 8220	
		Cable outer diameter 6.8 – 8.8 mm 09 93 000 8221	
		Cable outer diameter 8.6 – 10.6 mm 09 93 000 8222	
		Cable outer diameter 10.5 – 12.5 mm 09 93 000 8223	
Contact		120 A female crimp contact, silver plated	
		10 mm² conductor cross-section 09 93 000 8260	
		16 mm² conductor cross-section 09 93 000 8261	
		25 mm² conductor cross-section 09 93 000 8262	

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Components and part numbers

Han® S 120			
Identification/part no.	Figure	Drawings	
Hood		Angled hood, 10 ... 25 mm² conductor cross-section contact, incl. cable gland	
		Black 09 93 001 1501 Red 09 93 001 1502	
SMH/Bolt		Screw mounted housing, incl. male contact with M6 bolt termination	
		Black 09 93 001 1101 Red 09 93 001 1102	

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Components and part numbers



Han® S 120			
	Identification/part no.	Figure	Drawings
BMH/Bolt	Bulkhead mounted housing, incl. male contact with M6 bolt termination		
	Black 09 93 001 1301 Red 09 93 001 1302		
BMH/Busbar	Bulkhead mounted housing, incl. male contact with busbar termination		
	Black 09 93 001 1303 Red 09 93 001 1304		

Han® S 120 parts also available in blue colour, having an exclusive mechanical coding
 Han® S 120 housings also available with Unlocking Protected lever (unlocking only possible using a tool)
 Han® S 120 accessories available, such as protect cover for transport purposes and assembly tools

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 country website

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