



Pushing Performance



People | Power | Partnership

HARTING Han[®] S

Safe and error-free connections
in energy storage systems

HARTING Han[®] S

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 can work with rated currents up to 200 A at a voltage of 1500 V, while assuring safe installations with finger safe contacts with different termination types (M8 bolt or busbar) and visible control of the locking status. Moreover, the product is vibration proof and available in two different colours, red (+) and black (-), complete with a mechanical 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 a fact, Han® S assures safe and error-free connections with high flexibility.



High power transmission in a compact design: rated currents up to 200 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	200 A
Rated voltage	1500 V
Rated impulse voltage	8 kV
Pollution degree	2
Insulation resistance	$\geq 10^8 \Omega$
Contact resistance	$\leq 0.3 \text{ m}\Omega$
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	IEC 61373, category 1, class B
Cable entry	Angled, available rotation through 360°
Cable gland - maximum cable diameter - recommended tightening torque	Wrench size 23 (A/F 23) 16 mm 2.5 Nm

For more information refer to data sheet:
www.HARTING.com/datasheet-han-s

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Technical characteristics


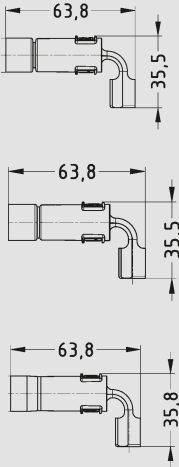

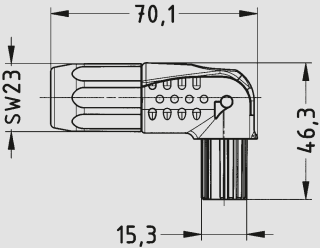
Inserts/electrical data acc. to DIN EN 60664-1 and DIN EN 61984

Contact termination (hood) - cable stripping length - suitable tools/crimp-dies	Crimp (conductor cross-section 25 ... 50 mm ²) 22 mm refer to the Industrial Connectors Han [®] catalogue, chapter 90.11
Contact termination (housing) - recommended tightening torque	M8 bolt/busbar 11 Nm (for bulkhead mounted housings, the use of a counter wrench is mandatory if applying more than 11 Nm)
Fixing screws (housing) - recommended tightening torque	M3, 6 mm long, flat headed (ISO 7380-2) 0.5 - 0.8 Nm
Material (hood/housing)	Polyamide (PA)
Colour (hood/housing)	RAL 9005 (jet black), RAL 3001 (signal red)
Material (contacts)	Copper alloy
Material (accessories)	Thermoplastic elastomers (TPE)
Material flammability class acc. to UL 94	V-0

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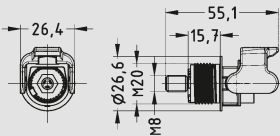

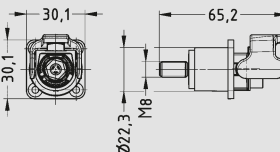

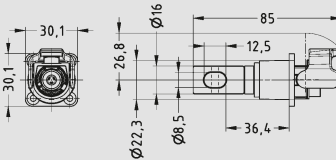
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Components and part numbers

	Identification/part no.	Figure	Drawings
Contact	<p>200 A female crimp contact, silver plated, incl. rubber sleeve</p> <p>25 mm² conductor cross-section 09 93 000 6262</p> <p>35 mm² conductor cross-section 09 93 000 6263</p> <p>50 mm² conductor cross-section 09 93 000 6264</p>		
Hood	<p>Angled hood (16 mm), 25 ... 50 mm² conductor cross-section, incl. cable gland</p> <p>Black 09 93 001 0501</p> <p>Red 09 93 001 0502</p>		

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Components and part numbers

	Identification /part no.	Figure	Drawings
SMH/M8 bolt	Screw mounted housing, incl. male contact with M8 bolt termination Black 09 93 001 0101		
	Screw mounted housing, incl. male contact with M8 bolt termination Red 09 93 001 0102		
BMH/M8 bolt	Bulkhead mounted housing, incl. male contact with M8 bolt termination Black 09 93 001 0301		
	Bulkhead mounted housing, incl. male contact with M8 bolt termination Red 09 93 001 0302		
BMH/busbar	Bulkhead mounted housing, incl. male contact with busbar termination Black 09 93 001 0303		
	Bulkhead mounted housing, incl. male contact with busbar termination Red 09 93 001 0304		



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