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# HARTING Selection Guide

## Han<sup>®</sup> 1A Connectors


















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	2+PE Screw	3+PE Screw	3+PE Shielded	
Power	Contacts / wires	2+PE	3+PE	3+PE + shielding
	Electrical data	10 A / 230/400 V	10 A / 230/400 V	10 A / 400 V
	Termination	Screw	Screw	Crimp
	Conductor cross-section	0.75 ... 1.5 mm <sup>2</sup>	0.75 ... 1.5 mm <sup>2</sup>	0.14 ... 2.5 mm <sup>2</sup>
	Male with snap-in latch	09 10 002 2601	09 10 003 2601	09 10 003 3001
	Female with snap-in latch	09 10 002 2701	09 10 003 2701	09 10 003 3101
	Male for locking lever	09 10 002 2606	09 10 003 2606	09 10 003 3006
	Female for locking lever	09 10 002 2706	09 10 003 2706	09 10 003 3106
	Single wire seal*	09 10 004 9900	09 10 004 9900	
	Note	Insert incl. contacts	Insert incl. contacts	Han® D contacts to be ordered separately

	3+PE Crimp	5+PE Crimp	12 Crimp	
Power and Signal	Contacts / wires	3+PE	5+PE	12
	Electrical data	16 A / 400 V	10 A / 400 V	6.5 A / 50 V
	Termination	Crimp	Crimp	Crimp
	Conductor cross-section	0.14 ... 4 mm <sup>2</sup>	0.14 ... 2.5 mm <sup>2</sup>	0.09 ... 0.52 mm <sup>2</sup>
	Male with snap-in latch	09 10 003 3201	09 10 005 3001	09 10 012 3001
	Female with snap-in latch	09 10 003 3301	09 10 005 3101	09 10 012 3101
	Male for locking lever	09 10 003 3206	09 10 005 3006	09 10 012 3006
	Female for locking lever	09 10 003 3306	09 10 005 3106	09 10 012 3106
	Single wire seal*	09 10 004 9901	09 10 006 9900	09 10 012 9900
	Note	Han E® contacts to be ordered separately	Han D® contacts to be ordered separately	Han® D-Sub contacts to be ordered separately. For insertion/removal use tool part no. 09 99 000 0809.

	Cat. 5	Cat. 6 <sub>A</sub>	Cat. 5	Cat. 6 <sub>A</sub>	
Data	With snap-in latch	With snap-in latch	For locking lever	For locking lever	
	Contacts / wires	4	8	4	8
	Electrical data	4 A / 48 VAC/60 VDC	0.5 A / 48 V	4 A / 48 VAC/60 VDC	0.5 A / 48 V
	Data transmission rate	100 Mbit/s	10 Gbit/s	100 Mbit/s	10 Gbit/s
	Termination	Crimp	Crimp	Crimp	Crimp
	Conductor cross-section	0.13 ... 0.82 mm <sup>2</sup>	0.08 ... 0.25 mm <sup>2</sup>	0.13 ... 0.82 mm <sup>2</sup>	0.08 ... 0.25 mm <sup>2</sup>
	Male insert	09 10 004 3001	09 10 008 3001	09 10 004 3006	09 10 008 3006
	Female insert	09 10 004 3101	09 10 008 3101	09 10 004 3106	09 10 008 3106
	Advice	D-Sub contacts to be ordered separately	har-speed M12 contacts to be ordered separately	D-Sub contacts to be ordered separately	har-speed M12 contacts to be ordered separately

\* Single wire seal for IP 65 protection is not required if a cable adapter (09 10 000 0400) or a bulkhead mounted housing (09 10 000 0300 / 09 10 000 0800) is used

Housing components		Bulkhead mounted housing, straight	Bulkhead mounted housing, angled	Cable adapter	Strain relief
					
	Cable diameter			5.7 - 10 mm	
	IP protection class	IP65	IP65	IP65	IP20
Part number	09 10 000 0300	09 10 000 0800	09 10 000 0400	09 10 000 5300	
Accessories		Protection cover	Protection cover	Protection cover	
					
		for male insert	for male insert	for male insert	
	IP protection class	IP65	IP65	IP65	
	Part number	09 10 000 5400	09 10 000 5401	09 10 000 5402	
	Suitable for	09 10 012 300X	09 10 003 300X 09 10 003 320X 09 10 005 300X	09 10 002 260X 09 10 003 260X 09 10 004 300X 09 10 008 300X	
Accessories		Protection cover	Protection cover	Protection cover	Fixing cord
					
		for female insert	for female insert	for female insert	for protection cover (male/female)
	IP protection class	IP65	IP65	IP65	
	Part number	09 10 000 5500	09 10 000 5501	09 10 000 5502	09 10 000 9959
	Suitable for	09 10 012 310X	09 10 003 310X 09 10 003 330X 09 10 005 310X	09 10 002 270X 09 10 003 270X 09 10 004 310X 09 10 008 310X	
<b>X = 1 Insert with snap-in latch, X = 6 Insert for locking lever</b>					
Accessories		Dummy plugs	Locking lever	Colour coding elements	
					
			Stainless steel		
	Part number	09 10 000 9909	09 10 000 5200	09 10 000 9901 (red) 09 10 000 9902 (blue) 09 10 000 9903 (green) 09 10 000 9904 (yellow) 09 10 000 9905 (violet)	
Accessories		Mounting frame	DIN rail adapter	DIN rail adapter	
					
		with strain relief	without strain relief		
Part number	09 10 000 9908	09 10 000 9911	09 10 000 9912		

# Crimp Contacts and Crimping Tools



6.5 A – D-Sub/0.5A/1A-M12	Cross-section / wire gauge		Har-speed M12 male (gold plated)	Har-speed M12 female (gold plated)	D-Sub male (gold plated)	D-Sub female (gold plated)
	(mm <sup>2</sup> )	(AWG)				
	0.13 - 0.25	26 - 23	21 01 100 9019	21 01 100 9021		
	0.09 - 0.25	28 - 24	21 01 100 9014	21 01 100 9023	09 67 000 7576	09 67 000 7476
	0.13 - 0.33	26 - 22			09 67 000 5576	09 67 000 5476
	0.25 - 0.52	24 - 20			09 67 000 8576	09 67 000 8476
	0.33 - 0.82	22 - 18			09 67 000 3576	09 67 000 3476

10 A – Han D®	Cross-section / wire gauge		male (silver plated)	female (silver plated)	male (gold plated)	female (gold plated)
	(mm <sup>2</sup> )	(AWG)				
	0.14 - 0.37	26 - 22	09 15 000 6104	09 15 000 6204	09 15 000 6124	09 15 000 6224
	0.5	20	09 15 000 6103	09 15 000 6203	09 15 000 6123	09 15 000 6223
	0.75	18	09 15 000 6105	09 15 000 6205	09 15 000 6125	09 15 000 6225
	1	18	09 15 000 6102	09 15 000 6202	09 15 000 6122	09 15 000 6222
	1.5	16	09 15 000 6101	09 15 000 6201	09 15 000 6121	09 15 000 6221
	2.5	14	09 15 000 6106	09 15 000 6206	09 15 000 6126	09 15 000 6226

16 A – Han E®	Cross-section / wire gauge		male (silver plated)	female (silver plated)	male (gold plated)	female (gold plated)
	(mm <sup>2</sup> )	(AWG)				
	0.14 - 0.37	26 - 22	09 33 000 6127	09 33 000 6227	09 33 000 6117	09 33 000 6217
	0.5	20	09 33 000 6121	09 33 000 6220	09 33 000 6122	09 33 000 6222
	0.75	18	09 33 000 6114	09 33 000 6214	09 33 000 6115	09 33 000 6215
	1	18	09 33 000 6105	09 33 000 6205	09 33 000 6118	09 33 000 6218
	1.5	16	09 33 000 6104	09 33 000 6204	09 33 000 6116	09 33 000 6216
	2.5	14	09 33 000 6102	09 33 000 6202	09 33 000 6123	09 33 000 6223
	3	12	09 33 000 6106	09 33 000 6206		
	4	12	09 33 000 6107	09 33 000 6207	09 33 000 6119	09 33 000 6221

Crimping tools	Crimping tools acc. to IEC 60352-2	09 99 000 0501	09 99 000 0525	09 99 000 0635	09 99 000 0531		
	Contacts / cross-section [mm <sup>2</sup> ]	D-Sub / 0.09 ... 0.52	Positioner for M12 male	Positioner for M12 female	Positioner for D-Sub male and female		

Crimping tools	Crimping tools acc. to IEC 60352-2	09 99 000 0021	09 99 000 0110	09 99 000 0888	09 99 000 0012	09 99 000 0847	09 99 000 0809
	Contacts / cross-section [mm <sup>2</sup> ]	Han D® / 0.14 ... 1.5 Han E® / 0.5 ... 2.5	Han D® / 0.14 ... 1.5 Han E® / 0.5 ... 4.0 Han® C / 1.5 ... 4.0	Han D® / 0.14 ... 2.5 Han E® / 0.14 ... 4.0 Han® C / 1.5 ... 4.0	Han D® Removal Tool	Han E® / Han D® Assembly Tool	Han® 1A D-Sub Insertion / Removal Tool

## Description and Overview

HARTING Han® 1A System Cabling - pre-assembled, overmoulded and universally usable

### Feature & Benefits:

- Time savings - quick and easy installation due to a Plug & Play solution
- Reliability - highest level of quality due to a 100% outgoing goods inspection
- High robustness - IP65, IP66/67 in mated and locked position
- Customised system cablings on request - including different lengths, cable types and variants
- Compact solutions for power and signal transmission



Part numbers		Side 1			Side 2	Cable		IP-Protection			
		Gender	Insert	Locking		Jacket	Type (mm <sup>2</sup> )				
Power	33500100201XXX	Female	3+PE	Single locking lever <sup>1</sup>	-	PVC	4G2.5	IP 65			
	33500200201XXX	Male		Snap-In Latch	-						
	33500300201XXX	Female		3+PE+Shld	Single locking lever <sup>1</sup>				-		
	33500400201XXX	Male			Snap-In Latch				-		
	33500500202XXX	Female	5+PE	Single locking lever <sup>1</sup>	-	PVC	6G1.5				
	33500600202XXX	Male		Snap-In Latch	-						
	33500700202XXX	Female		3+PE	Single locking lever <sup>1</sup>				-	PVC	4G2.5
	33500800202XXX	Male			Snap-In Latch				-		
	33500900203XXX	Female	5+PE		Single locking lever <sup>1</sup>	-	PVC		6G1.5		
	33501000203XXX	Male			Snap-In Latch	-					
	33501100203XXX	Female		12 pole	Single locking lever <sup>1</sup>	-				PVC	12 x 0.34
	33501200203XXX	Male			Snap-In Latch	-					
	33400100202XXX	Female	12 pole		Single locking lever <sup>1</sup>	-	PVC		12 x 0,5		
	33400200202XXX	Male			Snap-In Latch	-					
	33400300202XXX	Female		12 pole	Single locking lever <sup>1</sup>	-				PVC	12 x 0,5
	33400400202XXX	Male			Snap-In Latch	-					
33400500201XXX	Female	12 pole	Single locking lever <sup>1</sup>		-	PVC	12 x 0,5				
33400600201XXX	Male		Snap-In Latch		-						
33400700201XXX	Female		12 pole	Single locking lever <sup>1</sup>	-			PVC	12 x 0,5		
33400800201XXX	Male			Snap-In Latch	-						
33501300304XXX	Female	12 pole		Single locking lever <sup>1</sup>	-	PVC	12 x 0.34				
33501400304XXX	Male			Snap-In Latch	-						
33501500304XXX	Female		12 pole	Single locking lever <sup>1</sup>	-			PVC	12 x 0,5		
33501600304XXX	Male			Snap-In Latch	-						
33400900703XXX	Female	12 pole		Single locking lever <sup>1</sup>	-	PVC	12 x 0,5				
33401000703XXX	Male			Snap-In Latch	-						
33401100703XXX	Female		12 pole	Single locking lever <sup>1</sup>	-			PVC	12 x 0,5		
33401200703XXX	Male			Snap-In Latch	-						

<sup>1</sup>metal lever needs to be ordered separately (part no. 09 10 000 5200)

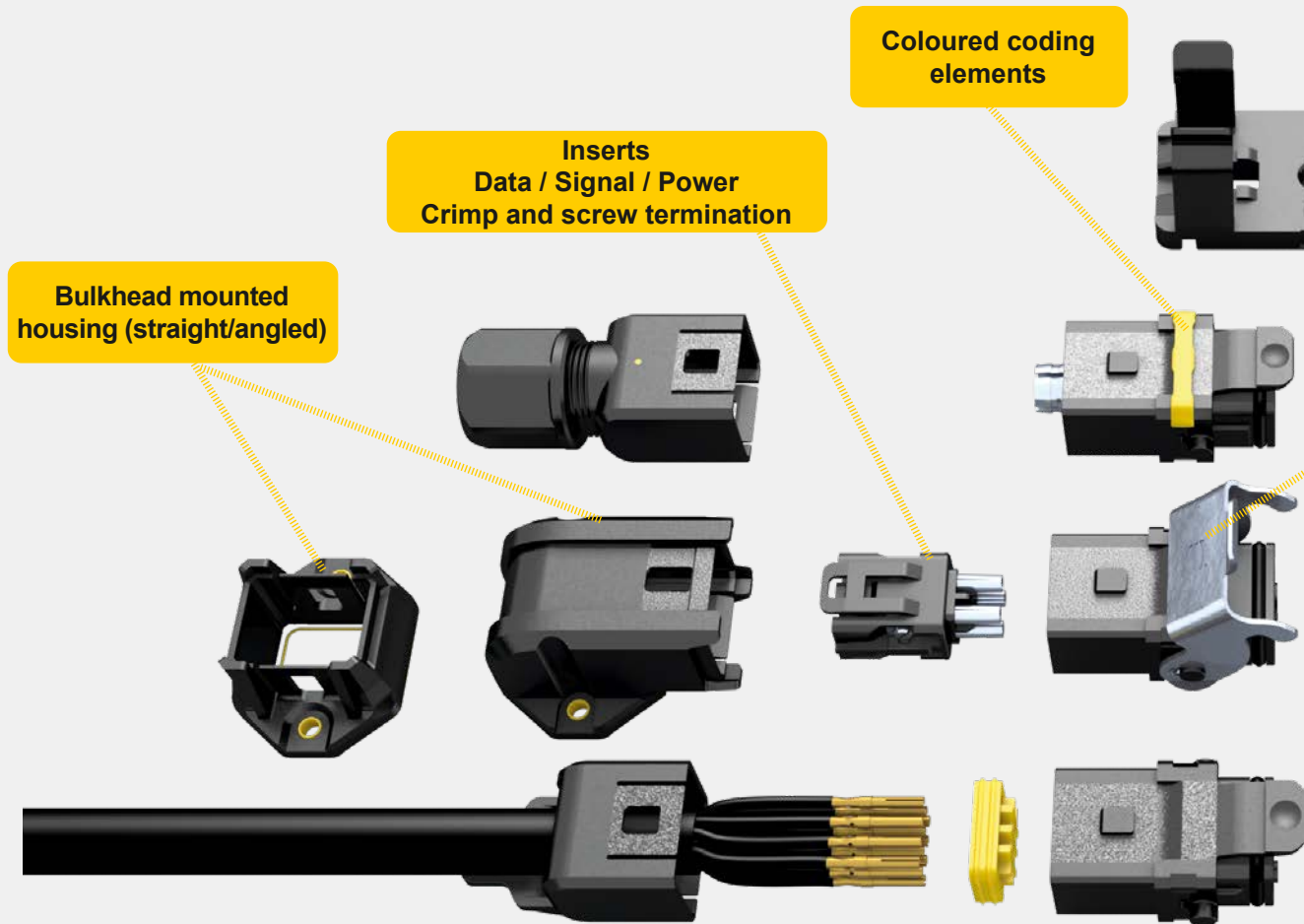
<sup>2</sup>cable to cable position

you can find more information in our eShop  
<https://b2b.harting.com/475329>

Standard length			
010 = 1.0 m	030 = 3.0 m	050 = 5.0 m	100 = 10 m

## Your configuration:

The right connectivity solution for every application!



### Light weight

Thanks to the used material the Han® 1A has a weight advantage in comparison to connectors that are e.g. made of metal.



### Shock and vibration resistant

The Han® 1A product series provides a high reliable connection even under shock and vibration conditions.



### Versatile concept

Build your own connectivity solution by using the modularity advantage of the Han® 1A with inserts covering power, signal and data transmission. Together with all accessory parts the Han® 1A is a very flexible system usable for a broad range of applications.



### Time saving

Due to the easy mate and click design of all single components the assembly of the connector is done within seconds – and there are no tools needed.



### Space saving

The Han® 1A components are designed to fulfil the trend of miniaturisation – while being still a robust Han® connector also for harsh environments.

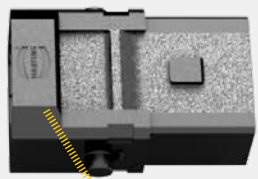
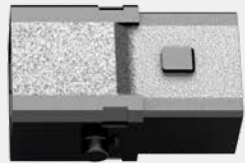
Mounting frame



Single locking lever



Cable adapter



Snap-in latch

Single wire seal

Strain relief



#### Chemical resistance

Although the Han® 1A is made of plastic, the connector is resistant to chemicals and other aggressive influences.



#### Cost saving

Limited storage costs due to a versatile system – almost unlimited combinations possible.



#### Data transmission up to Cat. 6A

The modularity of the new connector offers a complete system which also includes the possibility of highspeed data transmission.



#### IP protected where needed

By usage of hood and housing elements or single wire seals IP65 protection degree can be realised in an easy way.

## Technical characteristics

### Material characteristics

Material (insert, hood, housing)	Polyamide, TPE
Material seal	NBR
Material single wire seal	Silicone
	Halogen free
	High chemical resistance
	V-0
Flammability UL94	
Fire protection on railway vehicles (EN 45545-2)	R22: HL1, HL2, HL3 R23: HL1, HL2, HL3 R24: HL1, HL2, HL3
Limiting temperatures	-30 ... +90 °C

### Mechanical characteristics

Mating cycles	
With snap-in latch	≥ 100
With metal locking lever	≥ 100
Shock and vibration (EN 61373)	Cat. 1 <sub>B</sub>
IP protection	IP20 - IP65

### Inserts

Signal	Up to 12 pole
Power	Up to 16 A
Data	Cat. 5; Cat. 6 <sub>A</sub>

### Approvals

UL/CSA	UL 1977 ECBT2.E235076 CSA-C22.2 No. 182.3 ECBT8.E235076
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Please contact your local HARTING Subsidiary for further information.



Locking mechanism with snap-in latch or robust metal locking lever.

Locking lever needs to be ordered separately.



IP65 protection by single wire seal.

Single wire seal for IP 65 protection is not required if a cable adapter (09 10 000 0400) or a bulkhead mounted housing (09 10 000 0300 / 09 10 000 0800) is used.

### General information:

It is the customer's responsibility to check whether the components illustrated in this catalogue also comply with different regulations from those stated in special fields of applications. We reserve the right to modify designs or substance of content in order to improve quality, keep pace with technological advancement or meet particular requirements in production. No part of this catalogue may be reproduced in any form (print, photocopy, microfilm or any other process) or processed, duplicated or distributed by means of electronic systems without the prior written consent of HARTING Stiftung GmbH & Co. KG, Espelkamp. We are bound by the German version only.  
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- Door systems and ramps
- Illumination
- Headlights
- Speakers
- Indicating lights
- Warning lights
- Screens
- Door opener
- Push buttons
- Buzzers
- Windscreen wiper systems



- Battery storage systems
- Solar inverters
- Power plant control systems and cabinets
- Power generator sets
- Sensors



- Tower lighting
- Emergency stops
- Sensors
- Indicating sounds
- Ventilators



- Heater
- Fans
- Control terminals
- Industrial lighting
- Small drives
- Vibratory conveyors
- Connections inside cabinets





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