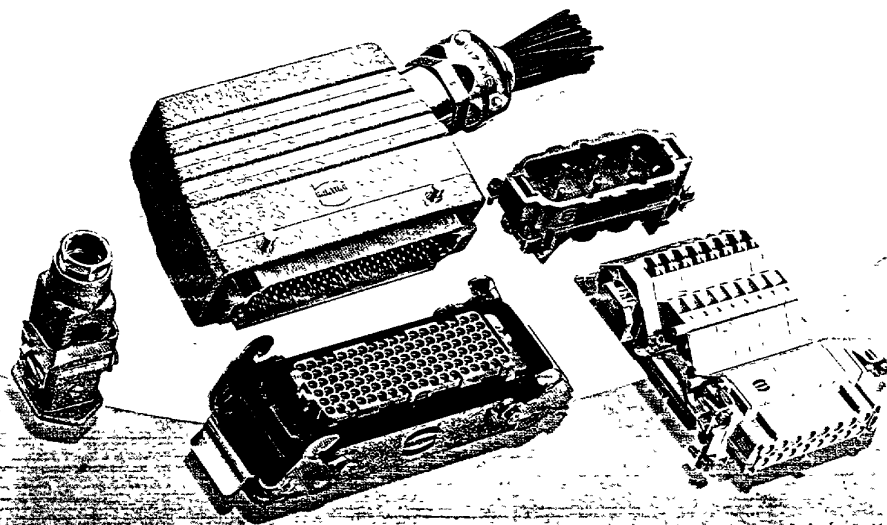
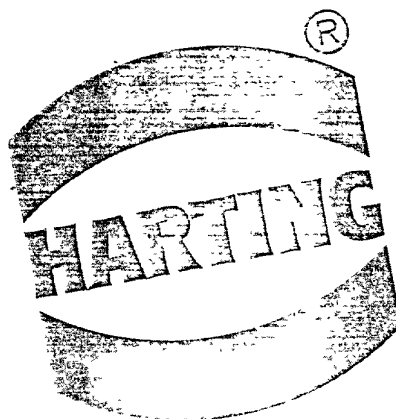


5 462 408 to 809

Heavy Duty Han[®] Connectors





Inserts

Catalog No. Guide

09 +Series No. + Contacts + Insert Suffix

0	9	+		+		+		+	
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Series		Han E®	Han® HsB	Han® DD	Han D®	Han A®					
Current Rating (A)		16	35	10	10	10					
Voltage Rating (V) CSA/UL VDE0110		600 440~/C	600 440~/C	300 250~/C	600 250~/C	600 380~/B					
Wire Gauge (AWG)		12-26	max. 10	14-26	14-26	12-20					
Series No.	No. of Contacts	Male (M)/Female (F)	Contacts and Inserts Suffix	Contact arrangement	Termination*	Hoods/Housings Series	All inserts are with an integrated ground Ⓞ clip				
33	6	M	006 2601	1-6	S	Han 6 E	All inserts are with an integrated ground Ⓞ clip	Screw terminal with wire protection			
		F	2701								
		M	006 2602								
	10	M	006 2616	1-10	C	Han 10 E					
		F	2701								
		M	010 2602								
	16	M	010 2616	1-16	K	Han 16 E					
		F	2716								
		M	016 2601								
	24	M	016 2616	1-24	S	Han 24 E					
		F	2701								
		M	016 2602								
	32	M	016 2616	1-32	C	Han 32 E					
		F	2716								
		M	024 2601								
	48	M	024 2602	1-48	K	Han 48 E					
		F	2702								
		M	024 2616								
	31	6	M	024 2616	1-6	S			Han 16 E	Crimp terminal with wire protection	
			F	2701							
			M	006 2601							
	12	M	006 2611	1-12	S	Han 32 E					
		F	2711								
		M	006 2701								
	16	24	M	024 3001	1-24	C			All inserts are with an integrated ground Ⓞ clip	Crimp terminal with wire protection	
			F	3101							
			M	042 3001							
		42	M	042 3001	1-42	C					Han 42 E
			F	3101							
			M	072 3001							
		72	M	072 3001	1-72	C					Han 72 E
			F	3101							
			M	108 3001							
108		M	108 3001	1-108	C	Han 108 E					
		F	3101								
		M	072 3001								
144		M	072 3011	73-144	C	Han 144 E					
		F	3111								
		M	072 3101								
216		M	072 3111	73-216	C	Han 216 E					
		F	3111								
		M	108 3001								
216		M	108 3011	109-216	C	Han 216 E					
		F	3111								
		M	108 3101								
21		7	M	007 3031 ¹⁾	1-7	C	Crimp terminal with wire protection				
			F	3131 ¹⁾							
			M	015 3001							
		15	M	015 3001	1-15	C		Han 15 E			
			F	3101							
			M	025 3001							
		25	M	025 3001	1-25	C		Han 25 E			
			F	3101							
			M	040 3001							
		40	M	040 3001	1-40	C		Han 40 E			
			F	3101							
			M/F	2 x Han 25 D							
	50	M/F	2 x Han 25 D	1-50	C	Han 50 E					
		M	064 3001								
		F	3101								
	64	M	064 3001	1-64	C	Han 64 E					
		F	3101								
		M/F	2 x Han 40 D								
	80	M/F	2 x Han 40 D	1-80	C	Han 80 E					
		M	064 3001								
		F	3101								
	128	M/F	2 x Han 64 D	1-128	C	Han 128 E					
		M	064 3001								
		F	3101								
	20	3	M	003 2611	1-3	S		Cage-clamp spring terminal			
			F	2711							
			M	010 2612							
		10	M	010 2612	1-10	C			Han 10 A		
			F	2812							
			M	010 3001							
		16	M	016 2612	1-16	C			Han 16 A		
			F	2812							
			M	016 3001							
32		M	016 3001	1-32	C	Han 32 A					
		F	3101								
		M	016 2612								
32		M	016 2612	1-32	S	Han 32 A					
		F	2613								
		M	016 2812								
32		M	016 2812	1-32	C	Han 32 A					
		F	2813								
		M	016 3001								
32		M	016 3001	1-32	C	Han 32 A					
		F	3011								
		M	016 3101								
32		M	016 3101	17-32	C	Han 32 A					
		F	3111								
		M	016 3111								

*Termination S - Screw clamp
 C - Crimp contact
 K - Cage-clamp spring

Note: Crimp contacts for wire gauges AWG 12 to 22-26 must be ordered separately

Hoods/Housings



Catalog No. Guide

09 + Series No. + Size + Type Suffix
 0 9 + [] + [] [] [] [] [] [] []

Series No	Hoods										Housings														
	Side-entry					Top-entry					Panel Mount					Surface Mount (two-side entry except Han 3 A)									
	Single lever					Double lever					Spring Cover					Spring Cover									
	a	b	h	Size + Type Suffix 1 Lever 2 Levers		a	b	h	Size + Type Suffix 1 Lever 2 Levers		a	b	c	e	h	Size + Type Suffix 1 Lever 2 Levers		a	b	c	e	h	Size + Type Suffix 1 Lever 2 Levers		
20	Han 3 A	26 5	26 5	50	003 1640 ¹⁾ 003 0620 ²⁾	26 8	28 0	45	003 1440 ¹⁾ 003 0420 ²⁾		—	28	30	40	23	003 0301 ¹⁾ 003 0320 ²⁾		30	40	—	40,5 44 5	26 5	003 1250 ¹⁾ 003 0220 ²⁾		
		Han 10 A	29 5	54 5	10	010 1541 010 0540 010 0541	63	29 5	47	010 1440 010 0440 010 0441		70	81	17 5	29	26	010 0301		48	63,5	40	50	52	010 0291	
	Han 16 A		29 5	54 5	10	016 1541 016 0540 016 0541	79 5	29 5	47	016 1441 016 0440 016 0441		86	96	17 5	29	26	016 0301		84	80	40	50	57	016 1291 016 0291	
		Han 32 A	56	61	75	032 1520 032 1521 032 0520 032 0521	82	56	75	032 0420 032 0421		92	102	42	56	28 5	032 0301		94	106	46	57	82	032 0270 032 0271	
30	Han 6 E	60	43	43	006 1540 006 1541 006 0542 006 0543	60	43	40	006 1440 006 1441 006 0442 006 0443		70	80	32	43	28 5	006 0301 006 0302 ³⁾		70	82	40	52	51 5	006 1291 006 1296 ²⁾ 006 0292 006 0297 ³⁾ 006 0293 006 0298 ³⁾		
		Han 10 E	52	70	70	010 1541 010 0542 010 0543	73	43	45	010 1441 010 0442 010 0443	010 1421 010 0422 010 0423	83	93	32	43	28 5	010 0305 010 0303 ³⁾	010 0301	82	94	40	52	54	010 1291 010 1296 ²⁾ 010 0292 010 0297 ³⁾ 010 0293 010 0298 ³⁾	010 1271 010 0272 010 0273
	Han 16 E		60	76	76	016 1540 016 0540 016 0541	93 5	43	45	016 1440 016 0440 016 0441	016 1420 016 0420 016 0421	103	113	32	43	28 5	016 0307 016 0306 ³⁾	016 0301	105	117	45	57	56 77 77	016 1290 016 1295 ³⁾ 016 0291 016 0296 ³⁾	016 1270 016 0271
		Han 24 E	60	76	76	024 1540 024 0540 024 0541	120	43	55	024 1441 024 0440 024 0441	024 1421 024 0420 024 0421	130	140	32	43	28 5	024 0307 024 0304 ³⁾	024 0301	132	144	45	57	56 80 80	024 1290 024 1295 ³⁾ 024 0291 024 0296 ³⁾	024 1270 024 0271
	Han 32 E		82 5	94	94	032 0521 032 0522 032 0523	94	82 5	94	032 0421 032 0422 032 0423		110	124	65	90	33	032 0301		112	125	67	87	90	032 0271 032 0272 032 0273	
	Han 48 E	132	90	98	048 0540 048 0541 048 0542		132	90	98	048 0440 048 0441 048 0442		148	165	70	90	40	048 0301 ³⁾		111	141	106	120	99	048 0290 048 0295 ³⁾ 048 0291 048 0296 ³⁾	

¹⁾ Metal ²⁾ Thermoplastic ³⁾ With thermoplastic spring cover

Inserts



Catalog No. Guide 09 + Series No. + Contacts + Insert Suffix

Series	Han E®	Han® HsB	Han® DD	Han D®	Han A®	
Current Rating (A)	16	35	10	10	10	
Voltage Rating (V) CSA/UL VDE 0110	600 440~/C	600 440~/C	300 250~/C	600 250~/C	600 380~/B	
Wire Gauge (AWG)	12-26	max 10	14-26	14-26	12-20	

Series No.	No. of Contacts	Male (M)/Female (F)	Contacts and Inserts Suffix	Contact arrangement	Termination*	Hoods/Housings Series	All inserts are with an integrated ground ⊕ clip	Series No.	No. of Contacts	Male (M)/Female (F)	Contacts and Inserts Suffix	Contact arrangement	Termination*	Hoods/Housings Series	All inserts are with an integrated ground ⊕ clip								
33	6	M	006 2601	1-6	S	Han 6 E	Screw terminal with wire protection	Han DD	24	M	024 3001	1-24	C	Han 6 E	Crimp terminal Order contacts separately								
		F	2701		F					3101													
		M	006 2602		F					042 3001													
		F	2702	M	072 3001																		
		M	006 2616	F	2716					F	3101												
		F	2716	M	108 3001																		
	10	M	010 2601	1-10	S	Han 10 E			M	108 3001	1-108	C	Han 24 E										
		F	2701		F				3101														
		M	010 2602		F				072 3001														
		F	2702	M	072 3001				1-72	73-144													
		M	010 2616	F	3101																		
		F	2716	M	072 3101																		
	16	M	016 2601	1-16	S	Han 16 E		M	108 3001	1-108	C	Han 32 E											
		F	2701		F			3011															
		M	016 2602		F			3111															
		F	2702	M	108 3001			1-108	109-216														
		M	016 2616	F	3111																		
		F	2716	M	108 3101																		
	24	6	M	024 2601	1-24	S		Han 24 E	Crimp terminal Order contacts separately	Han D	21	7	M	007 3031 ¹⁾		1-7	C	Han 3 A ¹⁾					
			F	2701		F							3131 ¹⁾										
			M	024 2602		F							015 3001										
			F	2702	M	015 3001						1-15	Han 10 A										
			M	024 2616	F	025 3001																	
			F	2716	M	025 3001																	
32		16	M	024 2601	1-16	S	Han 32 E	Crimp terminal Order contacts separately			40	M	040 3001	1-40	C	Han 16 A							
			F	2701		F											3101						
			M	024 2602		F											3101						
		F	2702	M	040 3001	1-40						Han 16 E											
		M	024 2616	F	3101																		
		F	2716	M	040 3001																		
48	24	M	016 2601	1-16	S	Han 48 E	Crimp terminal Order contacts separately		50	M/F	2x Han 25 D	1-25	C	Han 32 A									
		F	2611		F										17-32								
		M	016 2701		F										17-32								
	F	2711	M	064 3001	1-64					Han 24 E													
	M	016 2602	F	3101																			
	F	2612	M	064 3001																			
32	16	M	016 2602	1-16	S	Han 32 E		Crimp terminal Order contacts separately	80	M/F	2x Han 40 D	1-40	C	Han 24 E									
		F	2612		F										17-32								
		M	016 2702		F										17-32								
	F	2712	M	2x Han 64 D	1-64					Han 48 E													
	M	016 2616	F	17-32																			
	F	2626	M	2x Han 64 D																			
20	3	M	003 2611	1-3	S	Han 3 A	Screw terminal		10	M	010 2612	1-10	C	Han 10 A									
		F	2711		F										2812								
		M	010 2612		F										2812								
		10	5	M	010 2612					1-10	S	Han 16 A			Crimp terminal Order contacts separately	16	M	016 2612	1-16	C	Han 16 A		
				F	2711						F											2812	
				M	010 3001						F											3101	
	16		8	M	016 2612	1-16		S	Han 32 A	Crimp terminal Order contacts separately	32		M	016 2612			1-16	C	Han 32 A				
				F	2711			F														2812	
				M	016 2602			F														2813	
		48	24	M	024 2602	1-24		S				Han 48 E	Crimp terminal Order contacts separately	32		M	016 2612			17-32	C	Han 32 A	
				F	2612			F															2813
				M	024 2702			F															2813
32	16		M	024 2702	1-16	S	Han 32 A	Crimp terminal Order contacts separately	32		M					016 3001	1-16	C	Han 32 A				
			F	2712		F														3011			
			M	024 2616		F														3111			
	32	16	M	024 2616	1-16	S					Han 32 A	Crimp terminal Order contacts separately		32	M	016 3001	17-32			C	Han 32 A		
			F	2626		F																3011	
			M	024 2716		F																3111	
31		6	M	006 2601	1-6	S	Han 16 E		Screw terminal	32					M	016 3001	1-16	C	Han 32 E				
			F	2701		F																3111	
			M	006 2601		F																3111	
	12	6	M	006 2601	1-6	S					Han 32 E		Screw terminal	32	M	006 2601	7-12			C	Han 32 E		
			F	2611		F																2711	
			M	006 2701		F																2711	

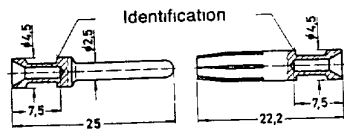
*Termination: S - Screw clamp
C - Crimp contact
K - Cage-clamp spring

Note Crimp contacts for wire gauges AWG 12 to 22-26 must be ordered separately



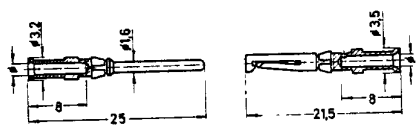
Crimp Contacts — Silver Plated Dimensions in mm

For Inserts Han E, Han A



Male Contacts	Female Contacts	Identification	Wire Gauge
09 33 000 6121	09 33 000 6220	no groove	0.5 mm AWG 20
09 33 000 6105	09 33 000 6205	1 groove	0.75 mm AWG 18
09 33 000 6104	09 33 000 6204	2 grooves	1 mm AWG 16
09 33 000 6102	09 33 000 6202	3 grooves	1.5 mm AWG 14
09 33 000 6107	09 33 000 6207	no groove	2.5 mm AWG 12

For Inserts Han DD, Han D



Male Contacts	Female Contacts	Ø	Wire Gauge
09 15 000 6104	09 15 000 6204	0.90	0.14-0.37 mm AWG 26-22
09 15 000 6103	09 15 000 6203	1.10	0.5 mm AWG 20
09 15 000 6102	09 15 000 6202	1.45	0.75 mm AWG 18
09 15 000 6101	09 15 000 6201	1.75	1 mm AWG 16
09 15 000 6106	09 15 000 6206	2.25	1.5 mm AWG 14

Crimping Tools



HARTING-crimping tool
Locator for contacts Han E, Han A
Locator for contacts Han DD, Han D



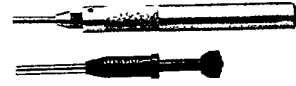
Locator order separately

Buchanan-crimping tool
Locator for contacts Han E, Han A
Locator for contacts Han DD, Han D



Locator order separately

Removal tool for contacts Han DD, Han D



Available on demand:
- Semi-automatic crimping machine
- Automatic crimping machine
- Wire stripping tool

09 99 000 0110
09 99 000 0112
09 99 000 0111

09 99 000 0001
09 99 000 0013
09 99 000 0028

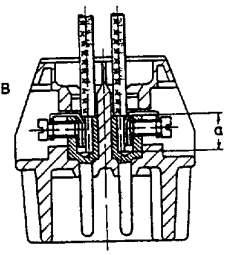
09 99 000 0012

09 99 000 0052

Termination details for inserts

Screw Terminal

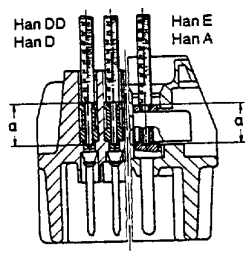
Han E
Han A
Han HsB



Inserts	max. wire gauge (mm²)	Stripping length a (mm)
Han 3 A	2.5	4.5
Han A	2.5	7
Han E	2.5	7
Han HsB	6.0	11.5

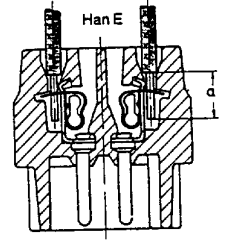
Crimp Terminal

Han DD
Han D
Han E
Han A



Wire gauge (mm²)		AWG	Internal diameter Ø (mm)	Stripping length a (mm)	
Han DD	Han D		Han DD	Han E	Han A
0.14	0.37	26-22	0.9	8	-
0.5		20	1.1	8	7.5
0.75	1	18	1.45	8	7.5
1.5		16	1.75	8	7.5
2.5		14	2.25	6	7.5
4		12	2.85	-	7.5

Cage-Clamp Spring Terminal



Wire gauge (mm²)
0.14...2.5
AWG 26...AWG 14

Stripping length a (mm)
9...11

Cable Entry Protection — Metal

— Thermoplastic

Pg



09 00 000 5101	09 00 000 5020	09 00 000 5027	09 00 000 5113	09 00 000 5013	09 00 000 5164
09 00 000 5102	09 00 000 5021	09 00 000 5028	09 00 000 5114	09 00 000 5014	
09 00 000 5103	09 00 000 5022	09 00 000 5029	09 00 000 5115	09 00 000 5015	
09 00 000 5104	09 00 000 5023	09 00 000 5030	09 00 000 5116	09 00 000 5016	
09 00 000 5106	09 00 000 5024	09 00 000 5031	09 00 000 5117	09 00 000 5017	
09 00 000 5107	09 00 000 5025	09 00 000 5032	09 00 000 5146	09 00 000 5018	
09 00 000 5108	09 00 000 5026	09 00 000 5033	09 00 000 5119	09 00 000 5019	

We reserve the right to modify designs in order to improve quality, keep in step with technological advancement or meet particular requirements in production.

HARTING Products Application Orientated Technology



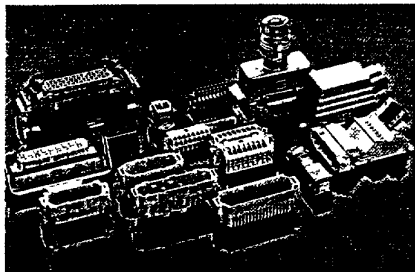
Founded in 1945 HARTING ELEKTRONIK has become one of the World's leading manufacturers and suppliers of Industrial Power Connectors designed to meet demanding industrial applications and environments.

Reliable Quality and Service from HARTING.

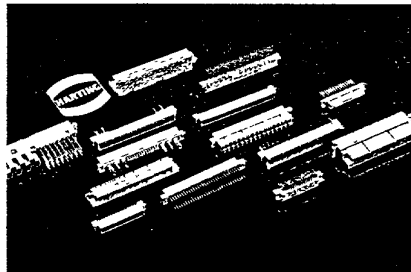
With manufacturing facilities in Germany, Great Britain, Switzerland, France and Hong Kong, and subsidiary companies throughout the world, HARTING'S dedicated staff of connection technology experts forms the foundation of a company prepared to meet the challenge of today's ever changing and demanding market-customer requirements.

Internationally recognized as a major supplier of advanced technology and reliable quality connectors, HARTING ELEKTRONIK's market leader dedication in the research and development of connection technology and inter-connection systems assures that only top-quality products complying with international standards are offered.

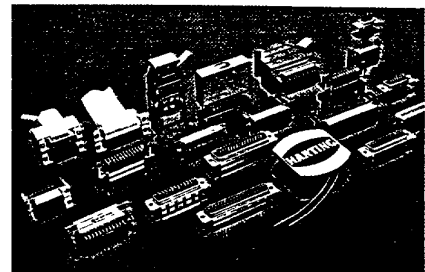
The following product lines are currently available from HARTING ELEKTRONIK.



Heavy Duty Han® Connectors



DIN Connectors



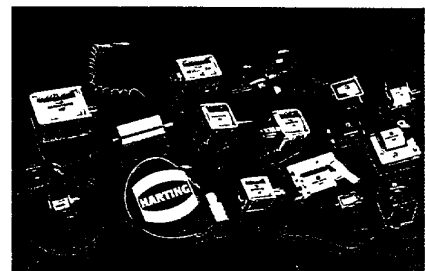
D-Subminiature Connectors



IDC Flat Cable Connectors



LWL Fiber Optic Systems



Miniature Solenoids



Mother Company
HARTING ELEKTRONIK GmbH
 Postfach 1140
 D-4992 Espelkamp
 ☎ (05772) 47-0
 ☎ 972310-14 he d
 Telefax (05772) 3302

HARTING ELEKTRONIK LTD.
 Unit 5 Airport Estate
 Biggin Hill
 Kent TN 16 3 BW
 ☎ (0959) 71411
 ☎ 95168
 Telefax (0959) 76310

HARTING Subsidiaries

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Belgium: B-1730 Asse (Zellik)
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France:
 ZAC Paris Nord II
 ☎ (1) 48632389
Great Britain: GB-Biggin Hill
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 ☎ 02-92100847
Japan: Yokohama 226/Japan
 ☎ 045-931.5718

Netherlands:
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 ☎ 01 608-35400
Norway: N-Oslo 6
 ☎ 02-647590
Sweden: S-16353 Spånga
 ☎ (08) 7617980
Switzerland:
 CH-8603 Schwerzenbach
 ☎ 01-8255151
USA: Illinois 60195
 ☎ (312) 519-7700

Production Plants

Germany
Great Britain
Switzerland
France
Hong Kong

For further information please contact HARTING ELEKTRONIK LTD. or -



HARTING distributor



HARTING Heavy Duty Han® Connectors are applicable in a wide variety of electronic and electrical applications including for example:

- Power Utilities
- Chemical Plants
- Machine Tool Controls
- Industrial Instrumentation
- Conveyor Equipment

and many more.

All hoods and housings are in accordance with International Standard IEC 529 (DIN 40 050) degree of protection IP 65 which specifies that enclosures are protected against windblown dust and rain, splashing water and hose directed water.

This degree of protection complies in full with NEMA Type 4 (Publication No. 250-1979) requirements.

The following HARTING Han® series connectors Han E®, Han® HsB, Han D®, Han A®, Han® Hv E, Han® Hv ES are:

- Recognized under file # E 80178 and
- Approved under certified file # 18753.

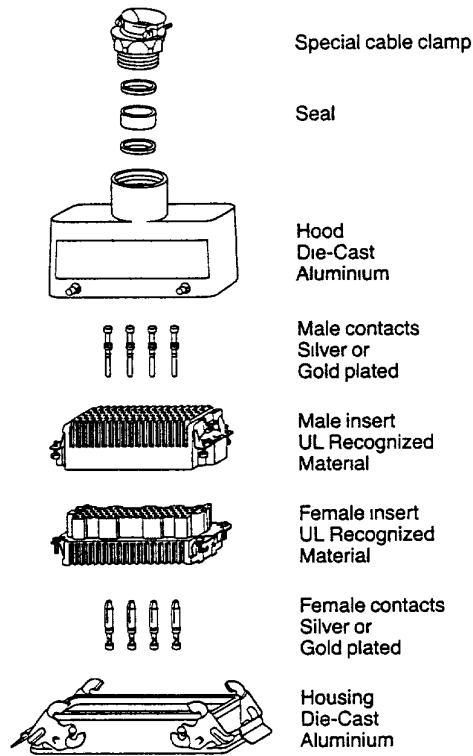
A complete connector consists of the following components:

- Accessories (Consult Factory)
- cable clamps and glands with seals
 - coding keys
 - fixing screws

- Hoods with
- top or side entry
 - low or high profile
 - single or double locking lever

- Male/Female inserts with
- screw clamp or
 - crimp contact or
 - cage-clamp spring termination

- Housings (panel or surface mount)
- one or two side entry
 - low or high profile
 - single or double locking lever
 - with or without plastic spring cover
 - protective covers available
 - labels according to CSA-approval



Additional Heavy Duty Han® Connector series available from HARTING.

Series	Han® K				Han® EAV	Han® Hv E	Han® Hv ES
Current	16 A	10 A	80 A	16 A	16 A	16 A	16 A
Voltage CSA/UL	600 V	300 V	600 V	600 V	600 V	600 V	600 V
VDE 0110	380 V AC 450 V DC	250 V AC 300 V DC	380 V AC 450 V DC	380 V AC / 450 V DC	500 V AC / 600 V DC	750 V AC / 900 V DC	
No. of Contacts	8	24	4	8	6, 10, 16, 24	3, 6, 10, 12, 16, 20, 26, 32	3, 6, 10, 12, 20

Heavy Duty Han® Hoods and Housings for applications where aggressive atmospheres are encountered use standard series Han® M and for hazardous intrinsically safe applications use series Han® U.

R 15

462-608 to

462-524

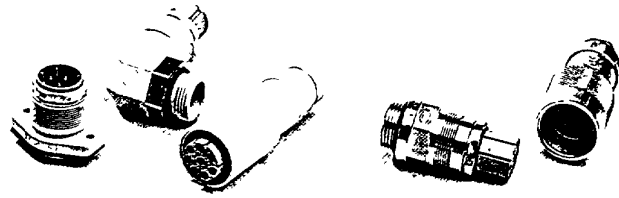
(470-524)

250 V~
300 V- max. 10 A



151-583

151-584



Number of contacts

7+

Inserts

Identification

Series

Part No
Male insert (M)

Female insert

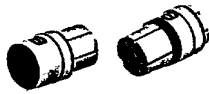
Drawing

Dimensions in mm

Crimp terminal

Inserts for plastic hoods/housings

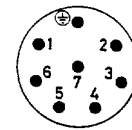
Order contacts separately



09 15 007 3001

09 15 007 3101

Male insert

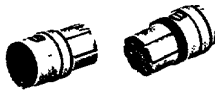


Contact arrangement View from termination side

Crimp terminal

Inserts for metal hoods/housings

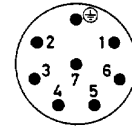
Order contacts separately



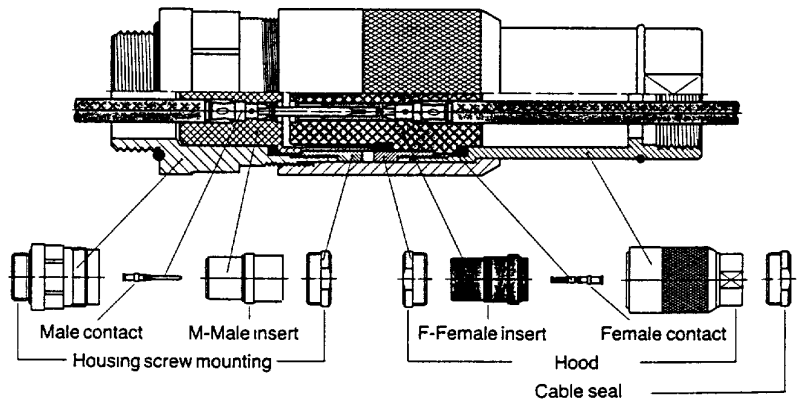
09 15 007 3021

09 15 007 3121

Female insert



Mounting example



R 15

Identification

Wire gauge (mm²)

Part No.
Male contacts

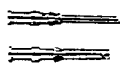
Female contacts

Drawing

Dimensions in mm

Crimp contacts

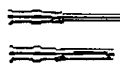
Crimping tools page 152



0,14-0,37
0,5
0,75-1
1,5
2,5

silver plated
09 15 000 6104
09 15 000 6103
09 15 000 6102
09 15 000 6101
09 15 000 6106

silver plated
09 15 000 6204
09 15 000 6203
09 15 000 6202
09 15 000 6201
09 15 000 6206



0,14-0,37
0,5
0,75-1
1,5
2,5

gold plated
09 15 000 6124
09 15 000 6123
09 15 000 6122
09 15 000 6121
09 15 000 6126

gold plated
09 15 000 6224
09 15 000 6223
09 15 000 6222
09 15 000 6221
09 15 000 6226

Wire gauge		∅	Stripping length
0,14-0,37 mm²	AWG 26-22	0,90 mm	8 mm
0,5 mm²	AWG 20	1,10 mm	8 mm
0,75-1 mm²	AWG 18	1,45 mm	8 mm
1,5 mm²	AWG 16	1,75 mm	8 mm
2,5 mm²	AWG 14	2,25 mm	6 mm

150

Termination details page 16

Housings R 15



Identification	Part No.		Pg	Drawing	Dimensions in mm
	Thermoplastic	Metal			
Hoods					
		09 15 000 0401			
		09 15 000 0421			
Housings bulkhead mounting		09 15 000 0301			
Housings screw mounting		09 15 000 0101			
		09 15 000 0121			
Housings angled		09 15 000 0102			
		09 15 000 0122			
Cover		09 15 000 5401			
Coupled connector					

R 15