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## Description of the Han-Eco® system



Han-Eco<sup>®</sup> – a new hood and housing series made of thermoplastic material.

Han-Eco<sup>®</sup> is the ideal solution for applications that do not require the full range of product features offered by the Han<sup>®</sup> B series of hoods and housings, and users want to take advantage of the weight and cost advantages.

Like the Han<sup>®</sup> B standard series, the Han-Eco<sup>®</sup> series is available in the following sizes: 6 B, 10 B, 16 B and 24 B. Depending on size, versions of the hoods with straight or angled entries and housings, bulkhead mounting, can be supplied. The cable exits are available with metric threading, a cable gland is implemented. For housing sizes 6 B and 10 B size of the cable gland is M32, for 16 B and 24 B cable gland M40 is used.

Han-Eco<sup>®</sup> hoods and housings are made of high-performance plastic that is highly resistant to environmental stress and – in combination with the design - provides very good mechanical stability. When the connector is closed and locked, it provides degree of protection IP 65 as defined in DIN EN 60 529. With seals made of high UV- and ozone-resistant material FPM (Fluororubber) the Han-Eco<sup>®</sup> hoods and housings are fit for outdoor use. The material also meets demanding flammability requirements of UL 94 Class V 0.

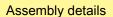
Fast, simple assembly is another outstanding product feature. Click-andmate design totally eliminates the need for tools during assembly of the Han-Eco<sup>®</sup> hoods and housings.

The Han-Eco<sup>®</sup> hoods and housings is compatible with the range of modules from the Han-Modular<sup>®</sup> series. One extra module fits into the Han-Eco<sup>®</sup> hoods and housing compared to the equivalent product in the Han<sup>®</sup> B Standard series. This special feature applies to all four sizes.

A optional PE module has been developed specifically for the Han-Eco<sup>®</sup> hoods and housings to hold the protective ground conductor.

#### Advantages:

- Weight reduction combined with mechanical strength
- Fast assembly process without tools
- Highly resistant to environmental stress, suitable for use in outdoor applications
- Complete range of modules from Han-Modular<sup>®</sup> series usable (with exception of modules with imperative guiding pins [male and female])











## Features

- Available in sizes 6 B, 10 B, 16 B and 24 B including integrated cable glands
- Capable for applications according protection class II
- Same panel cut out as Han<sup>®</sup> B housings, bulkhead mounting
- Optional PE contact module for hold the protective ground conductor
- Not mating compatible with series Han<sup>®</sup> B
- New hoods/housings series made of thermoplastic material with excellent mechanical properties and high resistance against environmental influence
- Weight and cost optimised
- Quick assembly without screws and tools ("click and mate")
- One extra module fits into the Han-Eco<sup>®</sup> hoods/housings compared to equivalent size of Han<sup>®</sup> B series

# **Technical characteristics**

$\sim$			
Sn	ACITI	cations	
$\mathbf{v}\mathbf{p}$	COIII	Jacons	
ΥP	00	outionio	

DIN EN 61 984

Polyamide,

Polyamide,

NBR / FPM

V 0

F2 / I3

fibre-glass reinforced

fibre-glass reinforced

-40 °C ... +125 °C

#### Hoods/Housings

Material	
- Hoods/Housings	

- Locking element

#### - Hoods/Housings seal Limiting temperatures Flammability - acc. to UL 94 - acc. to NFF 16 101 / 16 102 Degree of protection acc. to

DIN EN 60 529 for coupled connector IP 65

#### Number of modules

6 B	3 Modules
10 B	4 Modules
16 B	5 Modules
24 B	7 Modules

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# ARTING

Identification	Part number	Cable entry	Drawing Dimensions in mm
Hood with integrated cable gland side entry	19 41 106 0522	M32	
Hood with integrated cable gland top entry	19 41 106 0422	M32	
Protection covers for hoods	19 41 006 5406		
with cord	19 41 006 5407		



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Identification	Part number	Cable entry	Drawing	Dimensions in mm
Housings, bulkhead mounting	19 41 006 0301			
Housings, surface mounting, with integrated cable gland side entry	19 41 106 0232	М32		
Housings, surface mounting, with integrated cable gland side entries	19 41 106 0272	2x M32	12,2- 12,2- 12,2- 11- 11- 12,4,4	
Hoods, cable to cable, with integrated cable gland top entry	19 41 106 0722	M32	9'913-21 9'913-21 0 0 0 0 0 13-21 0 0 0 0 13-21 0 0 0 0 13-21	- 58, 25
				Stock items in bold type



	Identification	Part number	Cable entry	Drawing	Dimensions in mm
	Protection covers for housings	19 41 006 5405			
	with cord	19 41 006 5404			
lan- co					
2 <u>9</u> 06					Stock items in bold type



### Plastic hoods/housings for outdoor applications / 2 lever locking system

Identification	Part number	Cable entry	Drawing	Dimensions in mm
Housings, bulkhead mounting	19 41 206 0301			8,2-
Housings, surface mounting, with integrated cable gland side entry	19 41 306 0232	М32		99 +
Housings, surface mounting, with integrated cable gland side entries	19 41 306 0272	2x M32	12,2- 12,2- 12,2- 04,4 04,4 71- 84- 37,4	egge 251
Hoods, cable to cable, with integrated cable gland top entry	19 41 306 0722	M32	9'811'. Xau 	- SW36 -
				Stock items in bold type

Han-Eco

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Size 10 B



Identification	Part number	Cable entry	Drawing	Dimensions in mm
Hood with integrated cable gland side entry	19 41 110 0522	M32		
Hood with integrated cable gland top entry	19 41 110 0422	M32	¢13-21-	
Protection covers for hoods	19 41 010 5406		79 700 700 74 24	
with cord	19 41 010 5407		C 95	
				Stock items in bold type



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Identification	Part number	Cable entry	Drawing	Dimensions in mm
Housings, bulkhead mounting	19 41 010 0301			58,2-
Housings, surface mounting, with integrated cable gland side entry	19 41 110 0232	M32		12-E10 
Housings, surface mounting, with integrated cable gland side entries	19 41 110 0272	2x M32	87	12-c10 → 1980 12-c10 → 1980 54,4 53,4 68 68 68 68 68 68 68 68 68 68
Hoods, cable to cable, with integrated cable gland top entry	19 41 110 0722	M32	9'13-21- 9'13-21- 9'13-21- 0'13- 0'10- 0'10- 0'13- 0'10- 0'10- 0'10- 0'10- 0'10- 0'10- 0'10- 0'1	
				Stock items in bold type

Size 10 B



Identification	Part number	Cable entry	Drawing	Dimensions in mm
Protection covers for housings	19 41 010 5405			
with cord	19 41 010 5404			



Identification	Part number	Cable entry	Drawing	Dimensions in mm
Housings, bulkhead mounting	19 41 210 0301			58,2
Housings, surface mounting, with integrated cable gland side entry	19 41 310 0232	M32	87	17-CL 98.MS 
Housings, surface mounting, with integrated cable gland side entries	19 41 310 0272	2x M32	87	
Hoods, cable to cable, with integrated cable gland top entry	19 41 310 0722	M32		
				Stock items in bold type



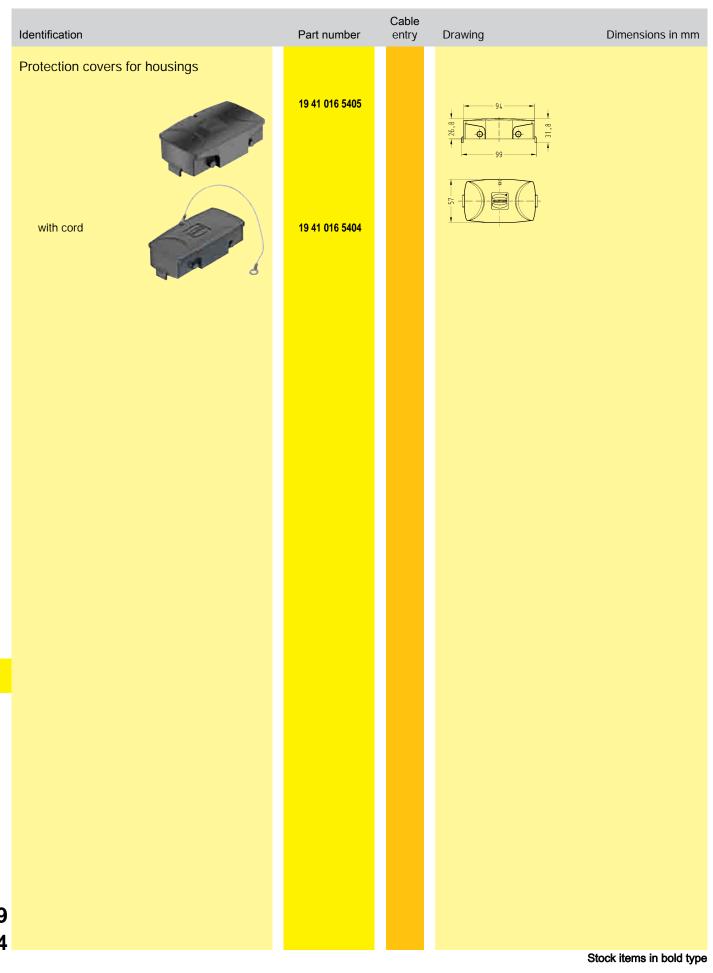
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	Identification	Part number	Cable entry	Drawing Dimensions in mm
	Hood with integrated cable gland side entry	19 41 116 0523	M40	
	Hood with integrated cable gland top entry	19 41 116 0423	M40	
	Protection covers for hoods	19 41 016 5406		
Han- Eco	with cord	19 41 016 5407		
29 12				Stock items in bold type



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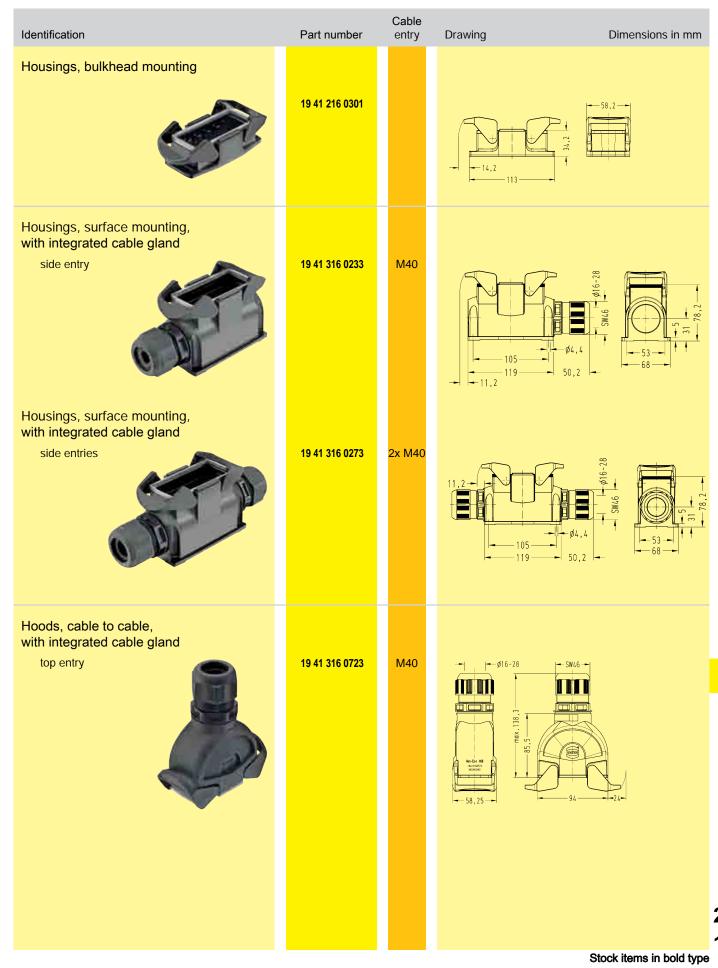
Identification	Part number	Cable entry	Drawing	Dimensions in mm
Housings, bulkhead mounting	19 41 016 0301			
Housings, surface mounting, with integrated cable gland side entry	19 41 116 0233	M40	105 11,2	87-910 97MS - 4 - 4 - 2
Housings, surface mounting, with integrated cable gland side entries	19 41 116 0273	2x M40		$872 - 910^{-1}$
Hoods, cable to cable, with integrated cable gland top entry	19 41 116 0723	M40	→ Ø16-28 SW → Ø16-28 SW → S	
				Stock items in bold type







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## Plastic hoods/housings for industrial applications / 2 lever locking system

Identification	Part number	Cable entry	Drawing Dimensions in mm
Hood with integrated cable gland side entry	19 41 124 0523	M40	
Hood with integrated cable gland top entry	19 41 124 0423	M40	
Protection covers for hoods	19 41 024 5406		
with cord	19 41 024 5407		



Identification	Part number	Cable entry	Drawing	Dimensions in mm
Housings, bulkhead mounting	19 41 024 0301			
Housings, surface mounting, with integrated cable gland side entry	19 41 124 0233	M40		87-910 97-910 -7-84
Housings, surface mounting, with integrated cable gland side entries	19 41 124 0273	2x M40		87-91 91 91 91 91 91 91 91 91 91 91 91 91 9
Hoods, cable to cable, with integrated cable gland top entry	19 41 124 0723	M40	→ → Ø16-28	- SW26 -
				Stock items in bold type

# Han-Eco<sup>®</sup> Hoods/Housings

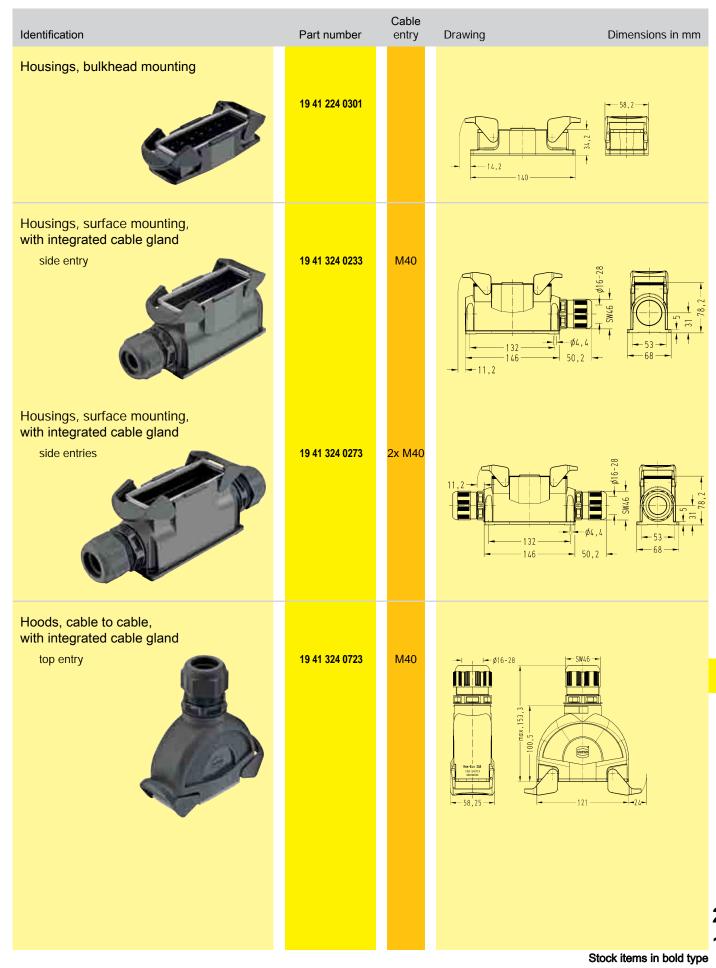




	Identification	Part number	Cable entry	Drawing	Dimensions in mm
	Protection covers for housings	19 41 024 5405			
	with cord	19 41 024 5404			
Han- Eco					
29 18				5	Stock items in bold type



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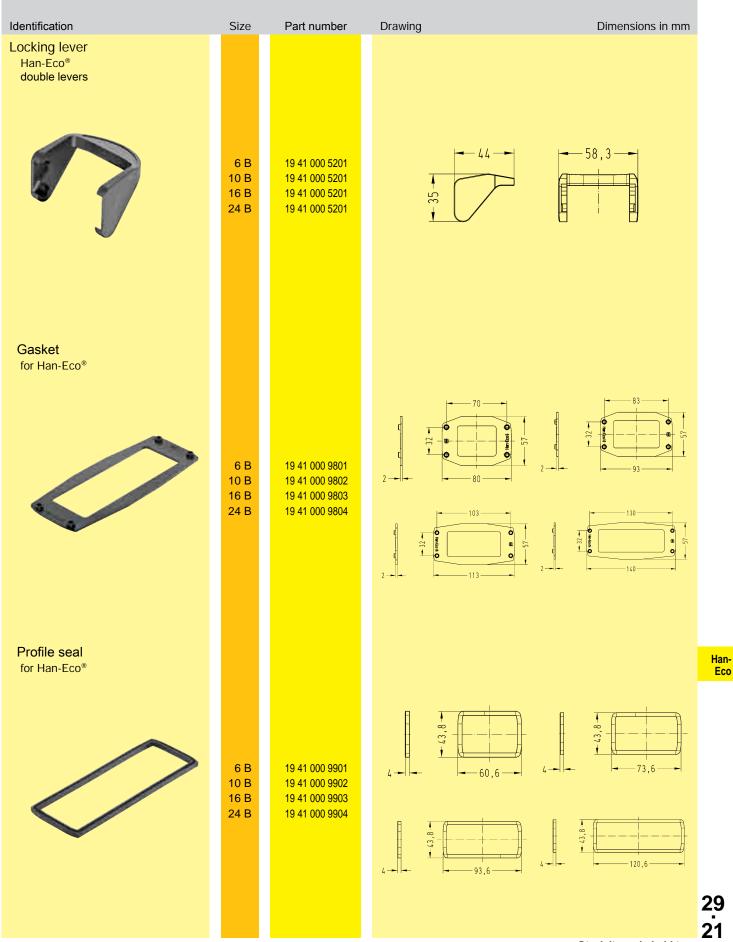
# Han-Eco<sup>®</sup> Accessories



	Identification	Part number	Drawing	Dimensions in mm
	Han-Eco <sup>®</sup> PE contact module with Screw terminal Termination wire gauge 1,5 mm <sup>2</sup> 16 mm <sup>2</sup> (with HARTING Crimping tool 09 99 000 0830 also cable up to 25 mm <sup>2</sup> with ferrule adaptable) Male insert Female insert	19 41 001 2600 19 41 001 2700	4-1 34,2 	,6 -14,6
	Han-Eco <sup>®</sup> Reduction sealing insert			
	Size M32	19 41 000 5132	Ó	
	Size M40	19 41 000 5142		012-20
	Cable glands			
Han- Eco	M32	19 41 000 5131		
	M40	19 41 000 5141		
29 20				Stock items in bold type

# Han-Eco<sup>®</sup> Accessories





Stock items in bold type

Eco

# Han-Eco<sup>®</sup> Tools



	Identification	Part number	Drawing	Dimensions in mm
	Removal tool for modules			
	Thermoplastic	09 99 000 0331		
	Metal	09 99 000 0828		
Han- Eco				
Eco				
29				
29 22				
				Stock items in bold type

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HARTI	NG

Series	Han <sup>®</sup> 100 A Axial module	Han <sup>®</sup> 100 A Crimp module	Han <sup>®</sup> 70 A Axial module	Han <sup>®</sup> 40 A Axial module
Number of contacts	2	2	2	2
Modules	Axial screw terminal	Crimp terminal	Axial screw terminal	Axial screw terminal
Rated current Rated voltage Wire gauge	100 A 1000 V 10 38 mm²	100 A 1000 V 10 35 mm²	70 A 1000 V 6 22 mm²	40 A 1000 V 2,5 10 mm²
Series	Han <sup>®</sup> 40 A Crimp module	Han <sup>®</sup> C Axial module	Han <sup>®</sup> C module	Han <sup>®</sup> CC Protected module
Number of contacts	2	3	3	4
Modules	Crimp terminal	Axial screw terminal	Crimp terminal	Crimp terminal
Rated current Rated voltage Wire gauge	40 A 1000 V 1,5 10 mm²	40 A 690 V 2,5 10 mm²	40 A 400 / 690 V 1,5 10 mm²	40 A 830 V 1,5 6 mm²
Series	Han <sup>®</sup> CD module	Han E <sup>®</sup> module	Han <sup>®</sup> EE module	Han <sup>®</sup> EE Quick Lock module
Number of contacts	3	6	8 /	8
Modules Rated current	Crimp terminal	Crimp terminal	Crimp terminal	Quick Lock termination
Rated voltage Wire gauge	830 V 1,5 6 mm <sup>2</sup>	500 V 0,14 4 mm <sup>2</sup>	400 V 0,14 4 mm²	400 V 0,5 2,5 mm <sup>2</sup>
Series	Han E <sup>®</sup> Protected module	Han <sup>®</sup> EEE module	Han <sup>®</sup> ES module	Han <sup>®</sup> HV module
Number of contacts	6	20	5	2
Modules	Crimp terminal	Crimp terminal	Cage-clamp terminal	Crimp terminal
Rated current Rated voltage Wire gauge	16 A 830 V 0,14 4 mm²	16 A 500 V 0,14 4 mm²	16 A 400 V 0,14 2,5 mm²	16 A 2900 / 5000 V 0,5 4 mm²

# Module overview for applications with Han-Eco®

HARTING	

Number of contacts 2 12 12 12 17   Modules Crimp terminal Crimp terminal Quick Lock termination Crimp terminal   Rated current 40 A 200 / 500 V 250 V 250 V 250 V 250 V 250 V 250 V 0,14 2,5 mm² 10 A   Rated current 40 A 200 / 500 V 10 A 250 V 0,25 1,5 mm² 10 A   Series Han* High Density module Han* D-Sub module Image: Crimp terminal 10 A 10 A   Number of contacts 25 9 Image: Crimp terminal Image:	Series	Han <sup>®</sup> HV module	Han	DD <sup>®</sup> module	Han DD <sup>®</sup> Quick L	ock module	Han <sup>®</sup> DDD module
Rated current Rated voltage   40 Å 2800 / 5000 V 1,5 10 mm²   10 Å 260 V 0,14 2,5 mm²   10 Å 260 V 0,25 1,5 mm²   10 Å 260 V 260 V   10 Å 260 V 260 V   10 Å 260 V 260 V   10 Å 260 V   10 Å 260 V 260 V   10 Å 260 V 260 V   10 Å 260 V   10	Number of contacts	2		12	12		17
Rated voltage Wire gauge2900 / 5000 V 1.5 10 mm²250 V 0.14 2,5 mm²250 V 0.25 1.5 mm²160 V 0,14 2,5 mm²SeriesHan* High Density moduleHan* D-Sub moduleImage: Complexity moduleHan* D-Sub moduleImage: Complexity module<	Modules	Crimp terminal	Cri	mp terminal	Quick Lock te	rmination	Crimp terminal
Rated voltage Wire gauge2900 / 5000 V 1.5 10 mm²250 V 0.14 2,5 mm²250 V 0.25 1.5 mm²160 V 0,14 2,5 mm²SeriesHan* High Density moduleHan* D-Sub moduleIII<		<b>N</b>	2				
Number of contacts 25 9   Modules Crimp terminal Crimp terminal   Rated current Rated voltage 4 A 50 V 0,08 0,52 mm <sup>2</sup> 5 A 50 V 0,08 0,52 mm <sup>2</sup> Series Han* USB module Han* FireWire module Han* RJ45 module Han* GigaBit module   Number of contacts 4 6 8 8   Modules USB 2.0 IEEE 1394 Ethernet Cat. 6   Series Han-Quintax* module Fine Wire module Han E* Coax contact 50 Ω   Series Han-Quintax* 2   Modules Lift Density Contacts High Density Cuintax contact 75 Ω 1 + shielding Han E* Coax contact 50 Ω 1 + shielding	Rated voltage	2900 / 5000 V	0,14	250 V	250 \	/	160 V
Number of contacts 25 9   Modules Crimp terminal Crimp terminal   AA 5 A   Rated voltage 4 A   Bated outlage 4 A   0,08 0,52 mm² 0,08 0,52 mm²   Series Han° USB module   Number of contacts 4   6 8   Modules USB 2.0   IEEE 1394 Ethernet Cat. 6   IEEE 1394 Ethernet Cat. 6   IEEE 1394 Ethernet Cat. 6   IEEE 1394 IEEE 1394   Series Han-Quintax* module   Number of contacts 2   Modules Image: Contact of the terminal formation of terminal ter	Series	Han <sup>®</sup> High Density mod	ule Han®	D-Sub module			
Rated current Rated voltage4 A 50 V 0.08 0.52 mm²5 A 50 V 0.08 0.52 mm²Han° RJ45 moduleHan° GigaBit moduleSeriesHan° USB moduleHan° FireWire moduleHan° RJ45 moduleHan° GigaBit moduleNumber of contacts4688ModulesUSB 2.0IEEE 1394Ethernet Cat. 6Ethernet Cat. 6SeriesUSB 2.0IEEE 1394Ethernet Cat. 6If the fireWire moduleNumber of contacts2If the fireWire moduleIf the fireWire moduleNumber of contacts2If the fireWire moduleIf the fireWire moduleNumber of contacts1If the fireWire moduleIf the fireWire moduleNumber of contacts2If the fireWire moduleIf the fireWire moduleNumber of contactsIf the fireWire moduleIf the fireWire moduleIf the fireWire moduleNumber of contactsIf the fireWire moduleIf the fireWire moduleIf the fireWire moduleNumber of contactsIf the fireWire moduleIf the fireWire moduleIf the fireWire moduleNumber of contactsIf the fireWire moduleIf the fireWire moduleIf the fireWire moduleNumber of contactsIf the fireWire moduleIf the fireWire moduleIf the fireWire moduleNumber of contactsIf the fireWire moduleIf the fireWire moduleIf the fireWire moduleNumber of contactsIf the fir							
Rated current Rated voltage4 A 50 V 0.08 0.52 mm²5 A 50 V 0.08 0.00 0.0			Cri				
Series   Han* USB module   Han* FireWire module   Han* RJ45 module   Han* GigaBit module     Number of contacts   4   6   8   8     Modules   USB 2.0   IEEE 1394   Ethernet Cat. 6   Ethernet Cat. 6     Series   Han-Quintax*   module   Modules   IEEE 1394   Ethernet Cat. 6     Number of contacts   Ethernet Cat. 6   IEEE 1394   IEEE 1394   IEEE 1394   IEEE 1394     Series   Han-Quintax* module   IEEE 1394   IEEE 1394   IEEE 1394   IEEE 1394     Number of contacts   2   IEEE 1394   IEEE 1394<							
Number of contacts4688ModulesUSB 2.0IEEE 1394Ethernet Cat. 6Ethernet Cat. 6Image: SeriesImage: SeriesImage: SeriesImage: SeriesImage: SeriesNumber of contacts2Image: SeriesImage: SeriesImage: SeriesContactsImage: SeriesImage: SeriesImage: SeriesImage: SeriesNodulesImage: SeriesImage: SeriesImage: SeriesImage: SeriesContactsImage: SeriesImage: SeriesImage: SeriesImage: SeriesModulesImage: SeriesImage: SeriesImage: SeriesImage: SeriesContact SeriesImage: SeriesImage: SeriesImage: SeriesImage: SeriesContact SeriesImage: SeriesImage: SeriesImage: SeriesImage: SeriesSeriesImage: SeriesImage: SeriesImage: SeriesImage: SeriesImage: SeriesContact SeriesImage: SeriesImage: SeriesImage: SeriesImage: SeriesImage: SeriesContact SeriesImage: SeriesImage: SeriesImage: SeriesImage: SeriesImage: SeriesContact SeriesImage: SeriesImage: SeriesImage: SeriesImage: SeriesImage: SeriesSeriesImage: Ser	Wire gauge	0,08 0,52 mm²	0,08	0,52 mm²			
ModulesUSB 2.0IEEE 1394Ethernet Cat. 6Ethernet Cat. 6SeriesHan-Quintax® moduleNumber of contacts2ModulesImage: Series contact for the series of the	Series	Han <sup>®</sup> USB module	Han <sup>®</sup> F	ireWire module	Han <sup>®</sup> RJ45	module	Han <sup>®</sup> GigaBit module
SeriesHan-Quintax® moduleNumber of contacts2ModulesHan-Quintax® High Density Outnatax contact 8 + shieldingHan Quintax® (A + shielding)High Density A + shieldingHan Quintax® (A + shielding)High Density (A + shielding)Han D® Coax (A + shielding)Han D® Coax	Number of contacts	4		6	8		8
Number of contacts2ModulesHan-Quintax* contactHigh Density Quintax contact 8 + shieldingHan D* Coax contact 75 Ω 1 + shieldingHan E* Coax contact 50 Ω 1 + shielding	Modules	USB 2.0		EEE 1394	Ethernet (	Cat. 6	Ethernet Cat. 6
Number of contacts2ModulesHan-Quintax* contactHigh Density Quintax contact 8 + shieldingHan D* Coax contact 75 Ω 1 + shieldingHan E* Coax contact 50 Ω 1 + shielding					Adi		
Modules   Han-Quintax® contact   High Density Quintax contact   Han D® Coax contact 75 Ω   Han E® Coax contact 50 Ω     4 + shielding   + shielding   + shielding   + shielding   + shielding   + shielding	Series		Han-Quintax	® module			
ContactsHan-Quintax® contact 4 + shieldingHigh Density Quintax contact 8 + shieldingHan D® Coax contact 75 Ω 1 + shieldingHan E® Coax contact 50 Ω 1 + shielding	Number of contacts		2				
Contacts   contact 4 + shielding   Quintax contact 8 + shielding   contact 75 Ω 1 + shielding   contact 50 Ω 1 + shielding	Modules			63			
75 Ω 50 Ω	Contacts	contact Quint	ax contact	contact 75 Ω	contact 50 Ω		
75 Ω 50 Ω		Chart Ma			9 - 3 - 9		
				75.0	50.0		
				75 12	50 12		
				75 Ω	30 12		
				/5 0	30 12		

# Module overview for applications with Han-Eco®



Series	Han <sup>®</sup> SC module	Han-Elisa®	Han <sup>®</sup> Dummy module	
Number of contacts	4			
Modules	19 L.C.	Comp.	<i>&gt;</i>	
Contacts	SC contact for GI 50; 62,5 / 125 μm	Temperature I/O modules ID module		
	For the use with Han-Eco <sup>®</sup> please order female module 09 14 004 4713. Only for multimode fiber.			



Photo Courtesy: Robolights

#### Installation of multiple services through a single lightweight connector assembly

When the Grand Opera House, York in the United Kingdom wanted to upgrade its 12 motorised hoists, drive system and control, a UK custom panel builder put together a design that would allow individual speed and direction control of each of the flying bars from a central console. They manufactured the control console, connection point and interconnecting cables along with a custom wheeled frame to allow easy movement of the console around the stage. This project made use of HARTING's recently introduced modular Han-Eco<sup>®</sup> system connectors which allow the integration of multiple services, contact types and ratings into a single connector assembly.