

**Pushing Performance** 

# HARTING Han-Yellock®



# Transforming customer wishes into concrete solutions



The HARTING Technology Group is skilled in the fields of electrical, electronic and optical connection, transmission and networking, as well as in manufacturing, mechatronics and software creation. The Group uses these skills to develop customized solutions and products such as connectors for energy and data transmission applications including, for example, mechanical engineering, rail technology, wind energy plants, factory automation and the telecommunications sector. In addition, HARTING also produces electro-magnetic components for the automobile industry and offers solutions in the field of Enclosures and Shop Systems. The HARTING Group currently comprises 32 subsidiary companies and worldwide distributors employing a total of approximately 3,000 staff.



HARTING Representatives



#### We aspire to top performance.

Connectors ensure functionality. As core elements of electrical and optical wiring, connection and infrastructure technologies, they are essential in enabling the modular construction of devices, machines and systems across a very wide range of industrial applications. Their reliability is a crucial factor guaranteeing smooth functioning in the manufacturing area, in telecommunications, applications in medical technology – in fact, connectors are at work in virtually every conceivable application area. Thanks to the consistent further development of our technologies, customers enjoy investment security and benefit from durable, long term functionality.

#### Always at hand, wherever our customers may be.

Increasing industrialization is creating growing markets characterized by widely diverging demands and requirements. The search for perfection, increasingly efficient processes and reliable technologies is a common factor in all sectors across the globe.

HARTING is providing these technologies – in Europe, America and Asia. The HARTING professionals at our international subsidiaries engage in close, partnership based interaction with our customers, right from the very early product development phases, in order to realize customer demands and requirements in the best possible manner. Our people on location form the interface to the centrally coordinated development and production departments. In this way, our customers can rely on consistently high, superior product quality – worldwide.

#### Our claim: pushing performance.

HARTING provides more than optimally attuned components. In order to serve our customers with the best possible solutions, HARTING is able to contribute a great deal more and play a closely integrative role in the value creation process.

From ready assembled cables through to control racks or ready-to-go control desks: Our aim is to generate the maximum benefits for our customers – without compromise!

#### Quality creates reliability - and warrants trust.

The **HARTING** brand stands for superior quality and reliability – worldwide. The standards we set are the result of consistent, stringent quality management that is subject to regular certifications and audits.

EN ISO 9001, the EU Eco-Audit and ISO 14001:2004 are key elements here. We take a proactive stance to new requirements, which is why **HARTING** ranks among the first companies worldwide to have obtained the new IRIS quality certificate for rail vehicles.



HARTING technology creates added value for customers. Technologies by HARTING are at work worldwide. HARTING's presence stands for smoothly functioning systems, powered by intelligent connectors, smart infrastructure solutions and mature network systems. In the course of many years of close, trust-based cooperation with its customers, the HARTING Technology Group has advanced to one of the worldwide leading specialists for connector technology. Extending beyond the basic functionalities demanded, we offer individual customers specific and innovative solutions. These tailored solutions deliver sustained effects, provide investment security and enable customers to achieve strong added value.

### Opting for HARTING opens up an innovative, complex world of concepts and ideas.

In order to develop connectivity and network solutions serving an exceptionally wide range of connector applications and task scopes in a professional and cost optimized manner, **HARTING** not only commands the full array of conventional tools and basic technologies. Over and beyond these capabilities, **HARTING** is constantly harnessing and refining its broad base of knowledge and experience to create new solutions that ensure continuity at the same time. In securing this know-how lead, **HARTING** draws on a wealth of sources from both inhouse research and the world of applications alike.

Salient examples of these sources of innovative knowledge include microstructure technologies, 3D design and construction technology, as well as high temperature or ultrahigh frequency applications that are finding use in telecommunications or automation networks, in the automotive industry, or in industrial sensor and actuator applications, RFID and wireless technologies, in addition to packaging and housing made of plastics, aluminum or stainless steel.

HARTING solutions extend across technology boundaries.

Drawing on the comprehensive resources of the group's technology pool, HARTING devises practical solutions for its customers. Whether this involves industrial networks for manufacturing automation, or hybrid interface solutions for wireless telecommunication infrastructures, 3D circuit carriers with microstructures, or cable assemblies for high-temperature applications in the automotive industry – HARTING technologies offer far more than components, and represent mature, comprehensive solutions attuned to individual customer requirements and wishes. The range covers ready-to-use cable configurations, completely assembled backplanes and board system carriers, as well as fully wired and tested control panels.

In order to ensure the future proof design of RF- and EMC-compatible interface solutions, the central **HARTING** laboratory (certified to EN 45001) provides simulation tools, as well as experimental, testing and diagnostics facilities all the way through to scanning electron microscopes. In the selection of materials and processes, lifecycle and environmental aspects play a key role, in addition to product and process capability considerations.



### HARTING knowledge is practical know-how generating synergy effects.

HARTING commands decades of experience with regard to the applications conditions of connectors in telecommunications, computer and network technologies and medical technologies, as well as industrial automation technologies, such as the mechanical engineering and plant engineering areas, in addition to the power generation industry or the transportation sector. HARTING is highly conversant with the specific application areas in all of these technology fields. The key focus is on applications in every solution approach. In this context, uncompromising, superior quality is our hallmark. Every new solution found will invariably flow back into the **HARTING** technology pool, thereby enriching our resources. And every new solution we go on to create will draw on this wealth of resources in order to optimize each and every individual solution. In this way, **HARTING** is synergy in action.



#### **Field of application**

HARTING Industrial Connectors are applicable in a wide variety of electronic and electrical applications. The degree of protection of all hoods and housings is in accordance with International Standard IEC 60 529, EN 60 529.

- Power Utilities
- Industrial Instrumentation
- Robotics
- Conveyor EquipmentCabinet builders
- Chemical Plants
- Machine Tool Controls and many more.
- Injection Moulding



Certified according to EN ISO 9001 in design/development, production, installation and servicing

#### General information:

It is the user's responsibility to check whether the components illustrated in this catalogue comply with different regulations from those stated in special fields of application which we are unable to foresee.

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

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#### **Specifications:**

DIN EN 60 664-1 Table concerning clearance and creepage distances

DIN EN 61 984 Connectors and plug devices

#### Note:

Connectors should not be coupled and decoupled under electrical load. Connectors of the same or different series being mounted side by side may be protected against incorrect mating by the use of coding options.

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### Description of the Han-Yellock® system

#### The Han-Yellock<sup>®</sup> – a special Han<sup>®</sup> connector

Han-Yellock<sup>®</sup> is a new product series which retains the core functionality but differs significantly from current size and shape formats. The approach of this series makes many new functions possible, for example:

- □ An internal, latched locking mechanism on the hood
- Multiplies the potentials in the connector with Han-Yellock<sup>®</sup> modules
- □ Usage of Han-Modular<sup>®</sup> modules with adapter frames
- Insulators can snap into the front or back walls of the housing
- <u>Protected Earth contact (PE) in crimp or Quick Lock termination</u>

These new technical features encourage sustained and effective improvements:

When purchasing products -

- Less article numbers and less inventory,
- When planning for the electrical and mechanical layout -
  - Less wiring work within a machine,
- During the work flow -
- □ Less steps in the work flow and quicker assembly, And during the after-sales stage
  - Reduced down times because of the latched locking mechanism and maintenance-friendly design

Thus, the Han-Yellock<sup>®</sup> offers improved functionality in the form of increased variability, multiplied potential, simplified handling, reduced incidence of errors and maximized safety.



Assembly details

#### **Design overview**

The Han-Yellock<sup>®</sup> interface consists of a housing, bulkhead mounting, on the housing side and a carrier hood with cover on the cable side.

Han-Yellock® offers the following features when assembling components:

- □ Han-Yellock<sup>®</sup> modules require only male crimp contacts.
- □ The PE is contacted on the housing; it can be connected with crimp and/or Quick Lock contacts.
- □ The Han-Yellock<sup>®</sup> hoods/housing are not plug-compatible with all other Han<sup>®</sup> hood/housing series.

The Han-Yellock<sup>®</sup> system can be used with a variety of insulators and contact inserts in order to establish an interface.



#### The Locking

The locking ability is a key function of the Han-Yellock<sup>®</sup>. The function makes connections and disconnections safe, simple and quick – even under harsh industrial conditions.

Main advantages include:

- Easy handling
- Resistance to vibrations and shock
- Protected against accidental opening
- Compact, space-saving design

Han-Yellock<sup>®</sup> features a patented internal locking mechanism. The locking takes place as the cable and device sides are simply joined together. A red ring around the perimeter of the push button will be visible if the housing halves do not snap together properly. This ring disappears as soon as the internally protected stainless steel springs snap into place.



This press-button locking also features an integrated blocking function. The locking mechanism can be locked by rotating the button 90°. It is then no longer possible to open the connector.



The press button can be set back to its visually open position only after the button is turned back 90°. It is then possible to release the two housing halves by pressing the snap-in button.

This feature provides an elegant mechanism for preventing an accidental opening of the connector – and no additional components are needed for it.

#### Han-Yellock® modules

This new product series enables an improved approach and strategy for electrical planning and procurement.

For assembling the Han-Yellock<sup>®</sup> connector only male crimp contacts are needed. The conduct between the two male contacts is made by multipliers.



This concept allows a 1:1 wire to wire arrangement and in additon the use of bridges. Two to five contacts can be arranged.

It does not matter if the bridge attachment is inserted on the cable side or the housing side of the connector.

In the past, terminals blocks have been responsible for the function of multiplying potentials. But now this function has been integrated into the connector for a quick, compact and easy-to-service solution.



#### Inserting the module into the hoods/housing

□ The Han-*Yellock*<sup>®</sup> module should only be inserted into the "A" plug-in position in the metal clamp.



□ The illustration shows the orientation of the module (see arrangement of contacts 1 ... 5).





Carrier hood, mating side





Housing, bulkhead mounting, Housing, bulkhead mounting, mating side connection side

A distinct click can be heard when the module snaps into position. It is then pushed along the rail to its final position.

The plug-in slots must always be completely filled.



#### Disassembling the Han-Yellock® module

- The removal tool (part no. 11 99 000 0001) is required to take out the module.
- The following illustration shows how to insert the removal tool into the metal clamp. The tool should then be pressed down until it reaches the end stop.
- The tool is then pulled back and the module comes out of the housing.
- The removal can be made from the connection side as well as from the mating side.



The removal tool can be stored on the carrier hood:



carrier hood



#### Han-Yellock® adapter frame

Han-Modular<sup>®</sup> series interfaces can be established using the Han-Yellock<sup>®</sup> adapter frame. The connection is based on a male/female contact arrangement.

Inserting the adapter frame in the housing:

- The adapter frame can be snapped into the housing, bulkhead mounting, on the termination side and the mating side (refer to the illustration).
- □ The lateral plastic tabs ("B") are pressed into the metal clamps on the housing.
- The adapter frame then snaps in with a distinctly audible click.





#### Removal the adapter frame:

the housing.

- □ The removal tool part no. 11 99 000 0001 is required for disassembly.
- The removal tool is inserted into the metal clamp and pressed down as shown in the following illustration.
   A screwdriver need also be placed into the notch in
- □ The removal tool should then be pulled outwards to remove the adapter frame from the housing.
- The removal can be made from the termination side as well as from the mating side.
- The process is identical for both housings, bulkhead mounting, and carrier hoods.







#### Han-Yellock® Protection covers

Protection cover function

To protect the insert against dust and water it is possible to use a Han-Yellock<sup>®</sup> protection cover.

The protection cover comes with a metal bearing pedestal and can be installed during initial or retrofit installation.

The Han-Yellock<sup>®</sup> design offer the possibility to snap in the pedestal either on the left or on the right side of the housing.

The direction of the cover movement can flip without turning the housing and inserts.



bearing pedestal

#### Han-Yellock® Ground terminal

Ground terminal assembly

On the housing side ground terminals can be used.

After placing the frame deeply inside the housing slots the housing will be fixed to the panel leading to solid mounting of the complete set.









### Features

- Two-part hoods for easy wiring and testing
- High robustness via an internal locking mechanism
- Earthed contacts PE in crimped or Quick Lock termination technique
- Protection cover retrofit on housing side

### **Technical Characteristics**

#### Shell

Material	aluminium
Surface	powder-coated
Locking element	stainless steel
Limiting temperatures	-40 °C +125 °C
Degree of protection acc. to	
DIN EN 60 529 when locking	IP 67
Tightening torque	
M4 fixing screw	1.2 Nm

#### Carrier hoods and Housings, bulkhead mounting

Number of Han-Yellock® modules	6
Han-Yellock <sup>®</sup> 30	3
Han-Yellock <sup>®</sup> 60	6
Material	Zinc die-cast
Surface	Zinc passivation
Locking element	PA / stainless steel
Hoods/Housings sealing	NBR
Limiting temperatures	-40 °C +125 °C
Un-/Locking temperature	-10 °C +85 °C
Degree of protection acc. to	
DIN EN 60 529 when locking	IP 67
Mechanical working life	
- mating cycles	500
PE wire	
termination gauge	≤ 4 mm²
Tightening torque	
M4 fixing screw	≥ 1 Nm
panel fastener	2.3 Nm





Protection covers	
Material	PA
Hoods/Housings sealing	NBR
Degree of protection acc. to	
DIN EN 60 529 when locking	IP 67
Flammability acc. to UL 94	V0



① Shell with top entry

2 cable entry M25

③ Carrier hood with push button release

④ Housing, bulkhead mounting



#### Han-Yellock® Hoods

Identification	Part number	Cable entry metric	Drawing	Dimensions in mm
Shell side entry Han-Yellock <sup>®</sup> 30	11 12 300 1500 11 12 300 1501 11 12 300 1502	M20 M25 M32	· · · · · · · · · · · · · · · · · · ·	
Han-Yellock <sup>®</sup> 60	11 12 600 1501 11 12 600 1502 11 12 600 1503	M25 M32 M40	9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9	
Shell top entry Han-Yellock <sup>®</sup> 30	11 12 300 1400 11 12 300 1401 11 12 300 1402	M20 M25 M32	M - 09 72,7	56
Han-Yellock® 60	11 12 600 1401 11 12 600 1402 11 12 600 1403	M25 M32 M40	M 6 L9 100,9	56



#### Han-Yellock® Hoods

Identification	Part number	Cable entry metric	Drawing	Dimensions in mm
Carrier hood plain push button Han-Yellock® 30	11 12 300 0100		87,6	
Han-Yellock® 60	11 12 600 0100		116,6	
Carrier hood push button, slot Han-Yellock® 30	11 12 300 0110		87,6	
Han-Yellock® 60	11 12 600 0110		116,6	
Protection cover for carrier hoods with cord				
Han- <i>Yellock</i> <sup>®</sup> 30	11 12 300 5451			
Han- <i>Yellock</i> <sup>®</sup> 60	11 12 600 5451		103,6	-114)-=

Stock items in bold type



#### Han-Yellock® Housings





### Han-Yellock® Housings

Identification	Part number	Cable entry metric	Drawing	Dimensions in mm
Protection cover for housings, bulkhead mounting Han-Yellock <sup>®</sup> 30 Set consists of protection cover and bearing pedestal	11 12 300 5401		95 95 74,5	-24
Han-Yellock <sup>®</sup> 60 Set consists of protection cover and bearing pedestal	11 12 600 5401			







#### Features

- Snap-in assembly from mating side and from termination side
- · Wiring with male contacts only
- Bus bar within bridge attachements
- Finger safe design
- Fast and tool-less assembly

#### Placement for Han-Yellock® 30 with 3 Han-Yellock® modules



#### Placement for Han-Yellock<sup>®</sup> 60 with 6 Han-Yellock<sup>®</sup> modules



#### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature. Measuring and testing techniques according to DIN EN 60 512-5



#### Ambient temperature

- ① Wire gauge: 1.5 mm<sup>2</sup>
- ② Wire gauge: 2.5 mm<sup>2</sup>
- ③ Wire gauge: 4.0 mm<sup>2</sup>

for connector with 3 Han-Yellock® modules, fully loaded (multiplier 1:1)

**Technical Characteristics** 

#### Specifications

DIN EN 60 664-1 DIN EN 61 984

#### Modules

Electrical data acc. to DIN EN 61 984 Rated current Rated voltage Rated impulse voltage Pollution degree Pollution degree 2 also

Insulation resistance Material Limiting temperatures Flammability acc. to UL 94 Mechanical working life - mating cycles 20 A 500 V 6 kV 3 20 A 500 V 6 kV 3 20 A 690 V 8 kV 2

≥ 10<sup>10</sup> Ω Polycarbonate -40 °C ... +125 °C V0

≥ 500

#### Contacts

Material Surface - hart-silver plated Contact resistance Crimp terminal

- wire gauge 1)
- AWG
- Stripping length

copper alloy

3 µm Ag ≤ 2 mΩ

0.14 ... 4 mm<sup>2</sup> 26 ... 12 6.5 mm

<sup>1)</sup> ... other wire gauges on request

20

### Han-Yellock® Modules

Number of contacts

5







### Features

- Visible bridge position from mating side and from termination side
- Multiplier can be placed on the housing side or on the cable side
- Bus bar functionality for 1 up to 5 contacts
- Fast and easy exchange

### **Technical Characteristics**

Specifications

DIN EN 60 664-1 DIN EN 61 984

#### Multiplier

Number of contacts Material Flammability acc. to UL 94 Mechanical working life - mating cycles 5 Polycarbonate V0

≥ 500

	Bus bar contacts	Single contacts	Circuit diagram
multiplier 1:1	0	5	
multiplier 2:3	2	3	
multiplier 3:2	3	2	
multiplier 4:1	4	1	
multiplier 5:0	5	0	

### Han-Yellock® Modules

Number of contacts





Identification	Part number	Drawing	Dimensions in mm
Han-Yellock <sup>®</sup> multiplier			
multiplier 1:1	11 05 105 2801		
multiplier 2:3	11 05 105 2802		
multiplier 3:2	11 05 105 2803		
multiplier 4:1	11 05 105 2804		
multiplier 5:0	11 05 105 2805		





### Features

- Suitable for Han-Modular<sup>®</sup> modules up to 4 mm<sup>2</sup>
- Snap-in functionality from mating side and from termination side

### **Technical Characteristics**

Specifications

DIN EN 60 664-1 DIN EN 61 984

#### Adapter frames

Number of modules Material Flammability acc. to UL 94 max. 2 Polycarbonate V0

### Mounting

- The adapter frame can be snapped into the housing, bulkhead mounting, on the connection side and the plug-in side (refer to the illustration).
- The lateral plastic tabs ("B") are pressed into the metal clamps on the housing.
- The adapter frame then snaps in with a distinctly audible click.



### Removal

- The removal tool part no. 11 99 000 0001 is required for removal.
- The removal tool is inserted into the metal clamp and pressed down as shown in the following illustration. A screw-driver can also be placed into the notch in the housing.
- The removal tool should then be pulled outwards to remove the adapter frame from the housing.
- The removal can be made from the connection side as well as from the plug-in side.
- The process is identical for both housings, bulkhead mounting, and carrier hoods.



### Han-Yellock® Adapter frames





Identification	Part number	Drawing	Dimensions in mm
Han-Yellock <sup>®</sup> 30 Adapter frame for carrier hoods	11 00 300 0101	50° 22°	
for housings, bulkhead mounting	11 00 300 0301		34,85
			Stock items in bold type

### Summary Han-Modular®

Modules	Han® CC Protected module	Han <sup>®</sup> CD module	Han E <sup>®</sup> module	Han <sup>®</sup> EE module
Number of contacts	4	3/4	6	8
Termination	Crimp terminal	Crimp terminal	Crimp terminal	Crimp terminal
	and stall	666 0 000 T		
Rated current	40 A	40 A / 10 A	16 A	16 A
Rated voltage Wire gauge	830 V 1.5 - 6 mm²	830 V / 830 V 1.5 - 6 mm² / 0.14 - 2.5 mm²	500 V 0.5 - 4 mm²	400 V 0.5 - 4 mm²
Modules	Han <sup>®</sup> EE module	Han E <sup>®</sup> Protected module	Han <sup>®</sup> EEE module	Han <sup>®</sup> ES module
Number of contacts	8	6	20	5
Termination	Quick Lock terminal	Crimp terminal	Crimp terminal	Cage-clamp terminal
		HE SAL		
Rated current	16 A	16 A	16 A	16 A
Rated voltage Wire gauge	400 V 0.5 - 2.5 mm²	830 V 0.5 - 4 mm²	500 V 0.5 - 4 mm²	400 V 0.14 - 2.5 mm²
Modules	Han DD <sup>®</sup> module	Han <sup>®</sup> DDD module	Han <sup>®</sup> High Density module	Han <sup>®</sup> D-Sub module
Modules Number of contacts	Han DD <sup>®</sup> module 12	Han <sup>®</sup> DDD module 17	Han <sup>®</sup> High Density module 25	Han <sup>®</sup> D-Sub module 9
Number of contacts	12	17	25	9
Number of contacts Termination Rated current	12 Crimp terminal	17 Crimp terminal	25 Crimp terminal	9 Crimp terminal
Number of contacts Termination Rated current Rated voltage	12 Crimp terminal	17 Crimp terminal	25 Crimp terminal Crimp terminal A A 50 V	9 Crimp terminal Crimp terminal
Number of contacts Termination Rated current	12 Crimp terminal	17 Crimp terminal	25 Crimp terminal	9 Crimp terminal
Number of contacts Termination Rated current Rated voltage	12 Crimp terminal	17 Crimp terminal	25 Crimp terminal Crimp terminal A A 50 V	9 Crimp terminal
Number of contacts Termination Rated current Rated voltage Wire gauge	12 Crimp terminal Crimp terminal Official Constant Consta	17 Crimp terminal	25 Crimp terminal Official 4 A 50 V 0.08 - 0.52 mm <sup>2</sup>	9 Crimp terminal Orientia S A 5 A 50 V 0.08 - 0.52 mm²
Number of contacts Termination Rated current Rated voltage Wire gauge Modules	12 Crimp terminal Crimp terminal Contemporation Con	17 Crimp terminal Of A 10 A 160 V 0.14 - 2.5 mm <sup>2</sup> Han <sup>®</sup> FireWire module	25 Crimp terminal The formation of the formation A A 50 V 0.08 - 0.52 mm <sup>2</sup> Han <sup>®</sup> RJ45 module	9 Crimp terminal
Number of contacts         Termination         Rated current         Rated voltage         Wire gauge         Modules         Number of contacts	12 Crimp terminal i $i$ $i$ $i$ $i$ $i$ $i$ $i$ $i$ $i$	17 Crimp terminal Crimp terminal In A 160 V 0.14 - 2.5 mm <sup>2</sup> Han® FireWire module	25 Crimp terminal The formation of the formation of the formation of the formation of the formation of the f	9 Crimp terminal 5 A 50 V 0.08 - 0.52 mm <sup>2</sup> Han <sup>®</sup> GigaBit module 8

### Summary Han-Modular®



Modules		Han-Quinta	Han <sup>®</sup> Multi Co	ontact module		
Number of contacts	2				4	L .
Contacts	Quintax contact 4 + shielding	High Density Quintax contact 8 + shielding	Han D <sup>®</sup> Coax contact 1 + shielding	Han E <sup>®</sup> Coax contact 1 + shielding	F.O. contact	Coaxial contact
	~~~		75 Ω	50 Ω	Multimode F.O. HCS®*/PCF F.O. 1 mm POF	50 Ω RG 174 75 Ω RG 179 50 Ω RG 58
Modules	Han <sup>®</sup> Pneun	natic module	Han <sup>®</sup> SC	C module		
Number of contacts	2	3		4		
	66	666	15 De			
Contacts	Pneumatio	c contacts	SC c	ontact		
	<b>acosta (11)</b> <b>acosta (11)</b> Ø 6.0 mm	Ø 1.6 mm Ø 3.0 mm Ø 4.0 mm				

### Han-Yellock® - Accessoires





### ARTING

### Han-Yellock® - Accessoires



Stock items in bold type



Identification	Part number	Drawing Dimensions in mm
BUCHANAN crimping tool Locator Han-Yellock® Multiple crimping tool depth adjustment gauge	09 99 000 0001 09 99 000 0342 09 99 000 0379	Wire gauge       0.14 4 mm <sup>2</sup> Wire gauge       0.14 0.37 mm <sup>2</sup> $\emptyset$ 1.00         0.5 1.0       mm <sup>2</sup> $\emptyset$ 1.55         1.5 2.5       mm <sup>2</sup> $\emptyset$ 1.80         3.0 4.0       mm <sup>2</sup> $\emptyset$ 2.00
HARTING crimping tool Han D <sup>®</sup> , Han E <sup>®</sup> , Han <sup>®</sup> C locator included Locator Han-Yellock <sup>®</sup>	09 99 000 0110 09 99 000 0341	Wire gauge 0.5 4 mm <sup>2</sup>
HARTING Service crimping tool Han D <sup>®</sup> , Han E <sup>®</sup> locator included Locator Han-Yellock <sup>®</sup>	09 99 000 0021 09 99 000 0343	Wire gauge 0.14 1.5 mm <sup>2</sup>
Removal tool for Han- <i>Yellock</i> <sup>®</sup> modules and frames	11 99 000 0001	
Removal tool for crimp contacts	09 99 000 0319	This removal tool is necessary if contacts are to be replaced in the insert. The tool is inserted from the wiring side until a stop is noticeable. The wire with the crimp contact can then be pulled out from the same side of the insert.
Panel Punch panel cut out tool panel thickness steel: ≤ 2.5 mm stainless steel: ≤ 2.0 mm for hydraulic pump punch force: ≥ 60 kN thread: 3/4" UNF for Han-Yellock® 30	11 99 300 0001	$\overbrace{\begin{array}{c} \hline \\ \hline $



### List of part numbers



Dort number	Daga	Dortoumbor	Dege	
Part number	Page	Part number	Page	
09 99 000 0001	30	11 12 300 0100	16	
09 99 000 0021	30	11 12 300 0110	16	
09 99 000 0110	30	11 12 300 0301	17	
09 99 000 0319	21	11 12 300 0302	17	
09 99 000 0319	30	11 12 300 1400	15	
09 99 000 0341	30	11 12 300 1401	15	
09 99 000 0342	30	11 12 300 1402	15	
09 99 000 0343	30	11 12 300 1500	15	
09 99 000 0379	30	11 12 300 1501	15	
		11 12 300 1502	15	
		11 12 300 5401	18	
11 00 000 9501	29	11 12 300 5451	16	
11 00 000 9506	29			
11 00 000 9507	29	11 12 600 0100	16	
11 00 000 9601	29	11 12 600 0110	16	
		11 12 600 0301	17	
11 00 300 0101	25	11 12 600 0302	17	
11 00 300 0301	25	11 12 600 1401	15	
11 00 300 9501	28	11 12 600 1402	15	
11 00 300 9502	28	11 12 600 1403	15	
11 00 300 9503	28	11 12 600 1501	15	
11 00 300 9601	29	11 12 600 1502	15	
		11 12 600 1503	15	
11 00 600 9501	28	11 12 600 5401	18	
11 00 600 9502	28	11 12 600 5451	16	
11 00 600 9503	28			
		11 99 000 0001	30	
		11 99 300 0001	30	
11 05 000 6101	21			
11 05 000 6102	21			
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