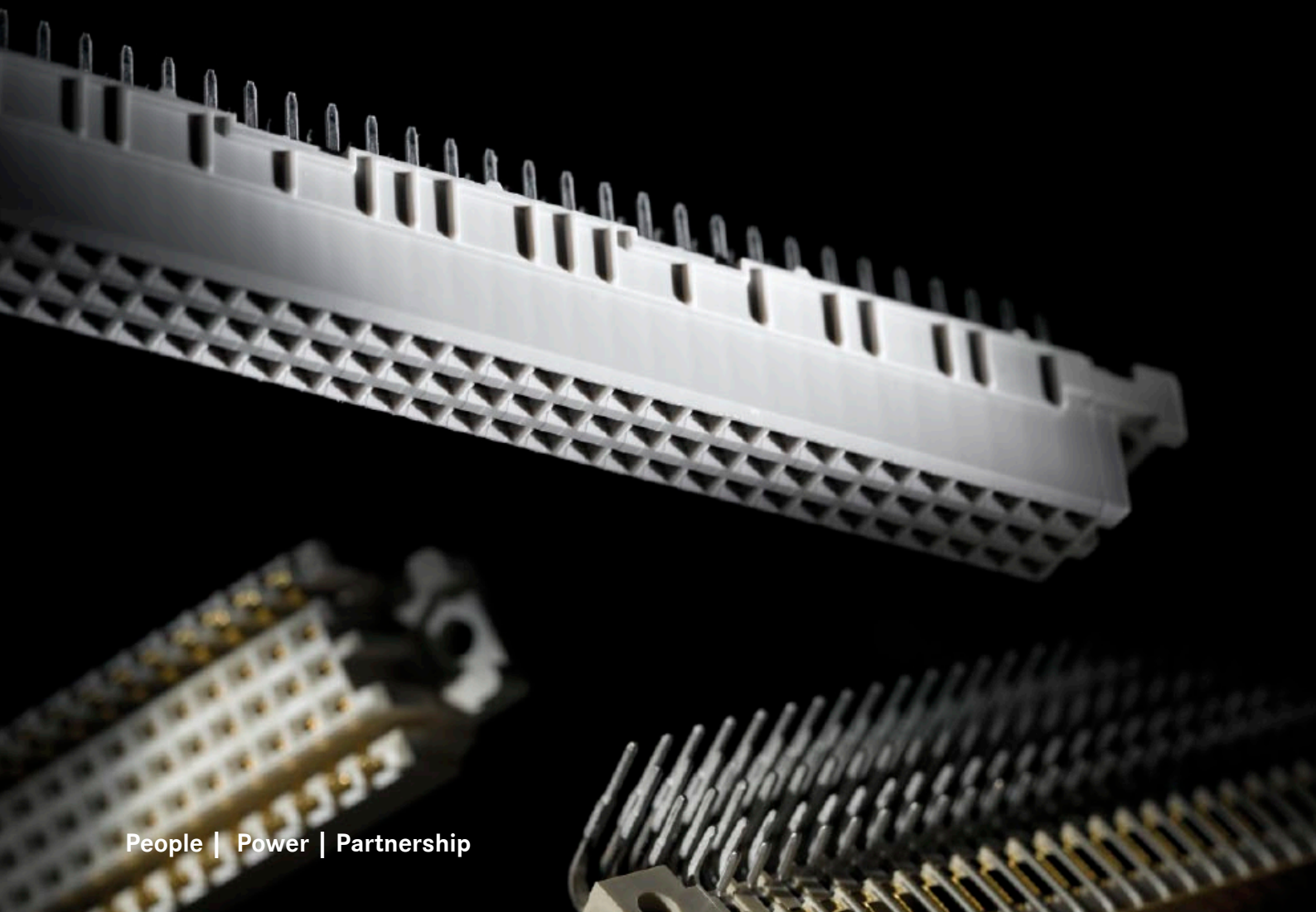




Pushing Performance

HARTING Connectors DIN 41 612



Type	Termination								
	Solder termination	Reflow soldering (SMC)	Solder lug connection	Press-in connection	Crimp connection	Wire wrap connection	IDC connection	Faston connection	Cage clamp connection
B	Page 01.11	Page 01.11							
	Pages 01.12 f	Pages 01.12 f	Pages 01.12 f	Pages 01.12 f	Page 01.15	Pages 01.12 f	Page 01.14		
2B	Page 01.16	Page 01.16							
	Page 01.17	Page 01.17		Page 01.17		Page 01.17			
3B	Page 01.18	Page 01.18							
	Page 01.19	Page 01.19		Page 01.19					
C	Pages 01.20 f	Pages 01.20 f							
	Pages 01.22 f	Pages 01.22 f	Page 01.25	Page 01.24	Page 01.27	Page 01.25	Page 01.26		
2C	Pages 01.28 f	Pages 01.28 f							
	Pages 01.30 f	Pages 01.30 f	Pages 01.30 f	Pages 01.30 f	Page 01.27	Pages 01.30 f			
3C	Pages 01.32 f	Pages 01.32 f							
	Pages 01.34 f	Pages 01.34 f		Pages 01.34 f					
M	Page 01.41								
	Page 01.42			Page 01.42					
M-flat	Page 01.43			Page 01.43					
M invers	Pages 01.44 f			Pages 01.44 f		Pages 01.44 f			
R	Pages 01.46 f	Pages 01.46 f		Pages 01.46 f		Pages 01.46 f			
	Page 01.49	Page 01.49							
R (HE 11)	Page 01.50					Page 01.50			
	Page 01.51								
RM				Page 01.48					
Q	Page 01.52			Page 01.52		Page 01.52			
	Page 01.56								
2Q	Page 01.53			Page 01.53		Page 01.53			
	Page 01.56								
2R	Pages 01.54 f	Pages 01.54 f		Pages 01.54 f		Pages 01.54 f			
	Page 01.56								
<i>harbus</i> 64	Page 02.11	Page 02.11							
	Page 02.14			Pages 02.12 f	Page 02.15				
D	Page 03.11								
	Pages 03.12 f		Page 03.12		Pages 03.14, 03.23	Page 03.12			
E	Page 03.15								
	Page 03.18		Page 03.18	Page 03.18	Pages 03.17, 03.23	Page 03.18			
I	Page 03.16								
F	Page 03.27	Page 03.27							
	Pages 03.32, 03.34 f		Page 03.33	Page 03.34	Page 03.31	Page 03.33			
U						Page 03.30			
I	Page 03.28				Page 03.29	Page 03.28			
					Page 03.37				
F9					Page 03.37				
					Page 03.38				
FM	Page 03.38				Page 03.38				
	Page 03.39				Page 03.39	Page 03.39			
2F					Page 03.42				
U						Page 03.41			
I					Page 03.40				
	Page 04.11							Page 04.11	
H	Page 04.13							Page 04.12	Page 04.14
	Page 04.15								
H 3	Page 04.15								
	Page 04.22							Page 04.22	
MH 24 + 7	Page 04.23				Page 04.23	Page 04.23			
	Page 04.24								
MH 21 + 5	Page 04.25								

■ male

□ female

■ Interface connector



HARKIS® is the abbreviation for **HARTING-Katalog-Informationen-System** (HARTING catalogue information system).

HARKIS® is an electronic catalogue with part configuration and 3D components library. Here you can choose a connector according to your demands. Afterwards you are able to send your inquiry created with the listed parts. The drawings to every single part are available in PDF-format. The parts are downloadable in 2D-format (DXF) and 3D-format (IGES, STEP). The 3D-models can be viewed with a VRML-viewer.

You can find **HARKIS®** at www.HARKIS.HARTING.com. It is also available on CD-ROM and DVD.



Piece part consulting



CAD library

Product samples: Fast-track delivery to your desk, free of charge

With immediate effect, the new express sample dispatching service in the HARTING catalogue information system (**HARKIS®**) allows customers to order samples immediately, easily and free of charge on express delivery. A broad selection from the device connectivity product portfolio is now available. In the case of unavailable items the system offers alternative products with similar features that can be requested at a mouse click.

The samples are shipped within 48 hours after your order, free of charge. This service enables tremendous flexibility, especially in the design phase of projects.

Identification

Part number

HARKIS® CD-ROM
Basic product catalogue

98 40 000 0401

HARKIS® DVD
Basic product catalogue
2D and 3D CAD files inclusive

98 40 000 0405



General information

It is the customer'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.

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 written permission of HARTING Electronics GmbH & Co. KG, Espelkamp. We are bound by the English version only.

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 electromagnetic components for the automobile industry and offers solutions in the field of Enclosures and Shop Systems.

The HARTING Group currently comprises 28 subsidiary companies and worldwide distributors employing a total of more than 3,000 staff.



HARTING Subsidiary company



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.

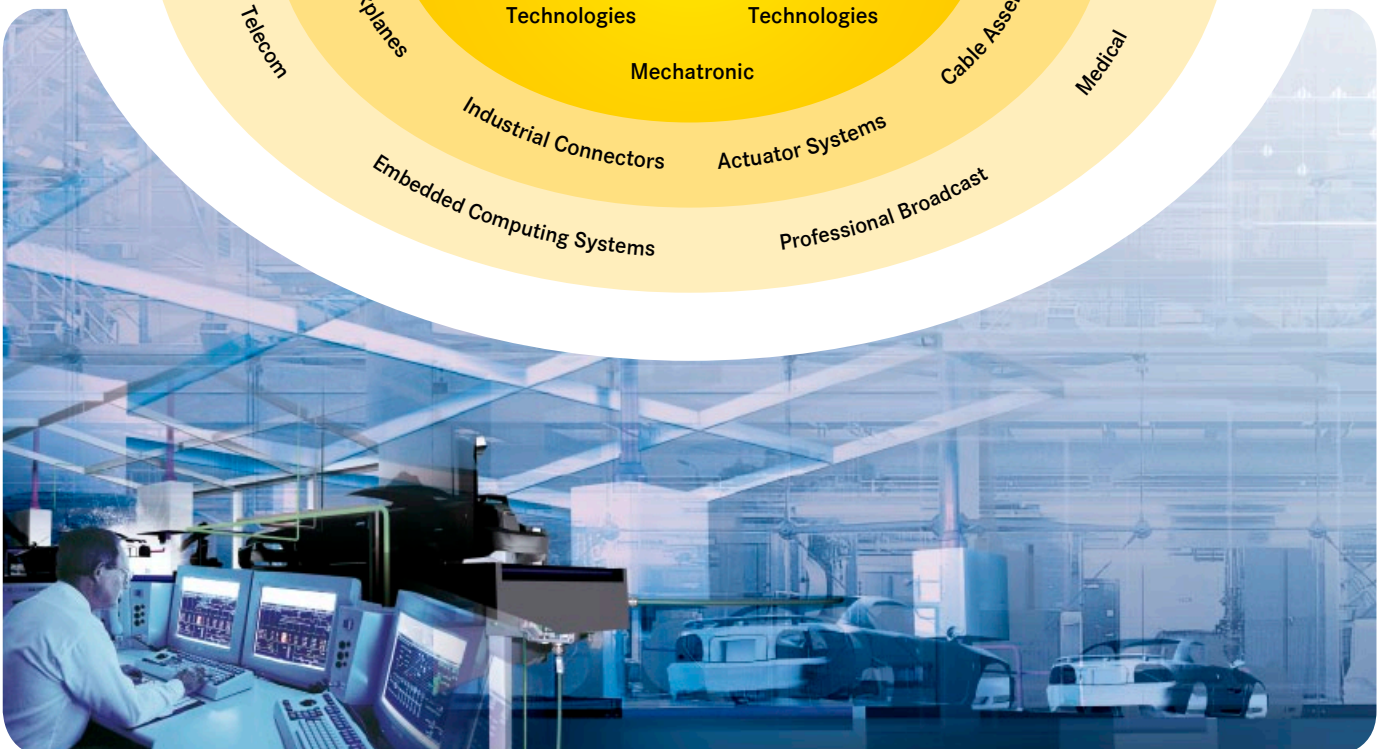
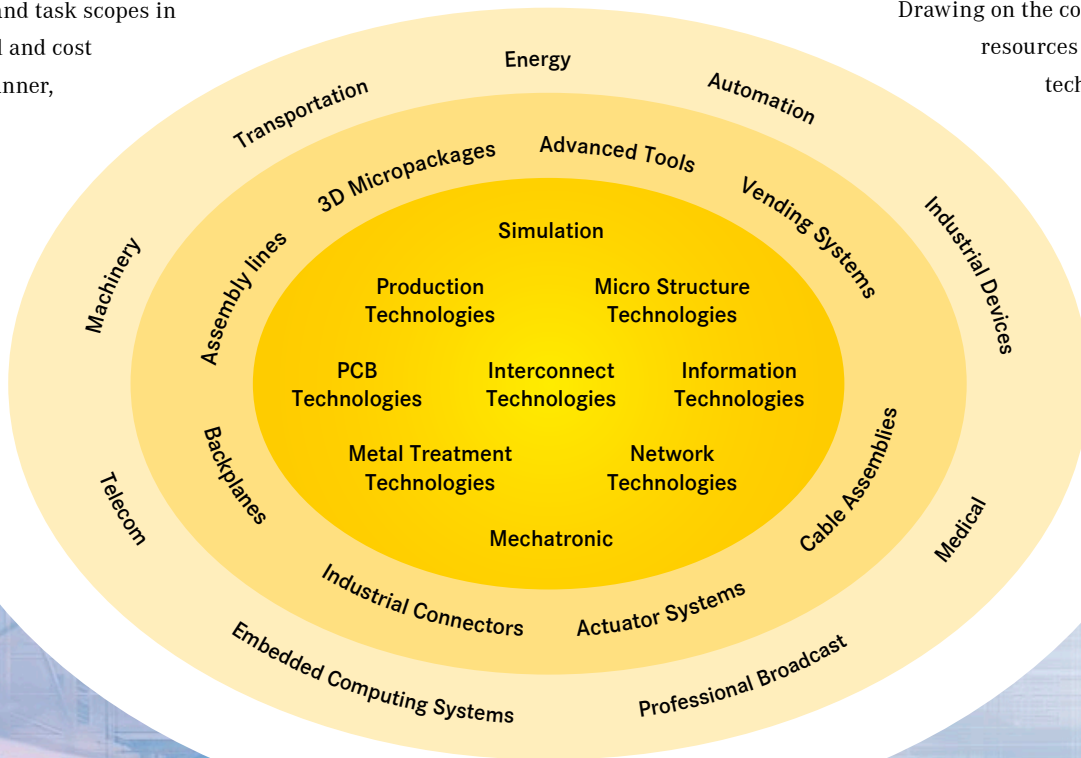
In order to develop connectivity and network solutions serving an exceptionally wide range of connector applications and task scopes in a professional and cost optimized manner, HARTING not only

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 in-house 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.



Railway specific products with NFF classification: F1 and I2

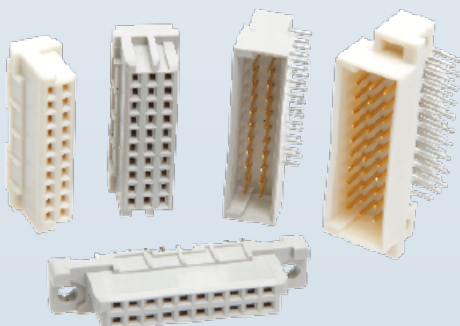
The HARTING DIN Power and DIN Signal portfolio looks back on a highly successful track record in the railway engineering industry. Now, HARTING offers DIN 41 612 connectors in compliance with the highest classification according to NFF 16-101 with smoke index F1 and flammability class I2. For details see page 00.17.



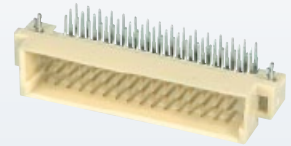
DIN 41 612 types 3B / 3C – even smaller, and just as rugged

The density of the electronics on PCBs is constantly increasing, while the PCBs and components are getting smaller and smaller. This trend also results in a need for smaller and smaller connectors.

The male and female connectors are available both with and without flange, enabling further space reductions. The connectors come in solder, SMC (Surface Mount Compatible) or press-in technology.



New SMC (Surface Mount Compatible) series of the DIN 41 612 product range



The voltage transfer capability of the new SMC (Surface Mount Compatible) series of HARTING's DIN 41 612 product range has now been tripled. These impressive performance gains were achieved due to the use of special plastics featuring higher CTI values. These new plastics comply with the Group II ($400 < \text{CTI-value} < 600$), while the standard plastics are classified as Group IIIa or IIIb ($100 < \text{CTI-value} < 400$).

Given a creepage distance of 1.2 mm, the voltage between two adjacent contacts can for example amount to 160 V, which is considerably higher than the usual 50 V. Thanks to these new capabilities the HARTING's DIN 41 612 delivers even higher performance.

The new connectors are available in types C, 2C, 3C, B, 2B, 3B, R, 2R and F. Additional types are available on request.

DIN 41 612 type 2C Crimp



Nowadays, many PCBs are smaller than the standard size 3HE. HARTING offers a new crimp connector with housing in order to assemble cables that require less space. Reliable BC crimp contacts are used for this product.