Product change notification (PCN)

Title / short description	Change of M12 A-coded to Advanced Shielding Technology
Affected article category	Cables and lines
Change category	Form and appearance
Change number	CBF240009-00
Reason for PCN/PDN Revision	

Purpose/objective of the change

Change of M12 A-coded to Advanced Shielding Technology

Detailed description of the change

The previously used crimp sleeves will be replaced by Advanced Shielding Technology. As a result, the overmold will be somewhat thinner and the product technically improved. Furthermore, the M12 SPEEDCON technology will be replaced by the M12 standard technology.

Identifying characteristics

See attachment

Start of Production (SOP)	-	**Last Time Delivery (LTD)**	-
Effective date (EOP)	2024-08-15	**End of Service (EOSR)**	-
End of Sales (EOS)	-		

Short-term change (< 6 months) or discontinuation (< 12 months), due to:

- ☐ Software / Firmware Bugfix
- ☐ Short-term delivery stop by supplier
- ☐ Short-term recall by supplier
- ☐ Force majeure
- ☒ Product improvement with customer benefits
- ☐ Others

Attachments

- PCN_CBF240009_EN.pdf
- Description_change_M12_A-coded.xlsx
- Material_list.csv
- PCN-CBF240009-00_DE
- PCN-CBF240009-00_EN

2024-2-26 VDMA24903_1.0

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Material list

Item		Hardware / Firmware		Substitute item	
Item no.	Type	old	new	Item no.	Type
1407404	NBC-MS/ 1,0-94B SCO	03	04		
1407405	NBC-MS/ 2,0-94B SCO	03	04		
1407406	NBC-MS/ 5,0-94B SCO	03	04		
1407407	NBC-MS/10,0-94B SCO	03	04		
1407414	NBC-MS/ 1,0-94B/R4AC SCO	04	05		
1407415	NBC-MS/ 2,0-94B/R4AC SCO	04	05		
1407416	NBC-MS/ 5,0-94B/R4AC SCO	04	05		
1407417	NBC-MS/10,0-94B/R4AC SCO	04	05		
1407434	NBC-MS/ 1,0-94B/MS SCO	04	05		
1407435	NBC-MS/ 2,0-94B/MS SCO	04	05		
1407436	NBC-MS/ 5,0-94B/MS SCO	04	05		
1407438	NBC-MS/10,0-94B/MS SCO	04	05		
1407439	NBC- 1,0-94B/FS SCO	04	05		
1407440	NBC- 2,0-94B/FS SCO	04	05		
1407441	NBC- 5,0-94B/FS SCO	04	05		
1407442	NBC-10,0-94B/FS SCO	04	05		
1407443	NBC-FS/ 1,0-94B/R4AC SCO	05	06		
1407444	NBC-FS/ 2,0-94B/R4AC SCO	05	06		
1407445	NBC-FS/ 5,0-94B/R4AC SCO	05	06		
1407446	NBC-FS/10,0-94B/R4AC SCO	05	06		
1407463	NBC-MS/ 1,0-94B/FS SCO	04	05		
1407464	NBC-MS/ 2,0-94B/FS SCO	04	05		
1407465	NBC-MS/ 5,0-94B/FS SCO	04	05		
1407466	NBC-MS/10,0-94B/FS SCO	04	05		
1408659	NBC-MS-FS SCO-IE/.../...	04	05		
1408664	NBC-FS-R4AC SCO-IE/.../...	05	06		
1408665	NBC-FS SCO-IE/.../...	02	03		
1408676	NBC-MS-MS SCO-IE/.../...	03	04		
1408681	NBC-MS-R4AC SCO-IE/.../...	02	03		
1408682	NBC-MS SCO-IE/.../...	01	02		

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A.Nr.: Old	A.Na. Old	Hardware old	A.Nr.: new	A.Na. New	Hardware new
1407404	NBC-MS/ 1,0-94B SCO	03	1407404	NBC-M12MS/ 1,0-94B	04
1407405	NBC-MS/ 2,0-94B SCO	03	1407405	NBC-M12MS/ 2,0-94B	04
1407406	NBC-MS/ 5,0-94B SCO	03	1407406	NBC-M12MS/ 5,0-94B	04
1407407	NBC-MS/10,0-94B SCO	03	1407407	NBC-M12MS/10,0-94B	04
1407414	NBC-MS/ 1,0-94B/R4AC SCO	04	1407414	NBC-M12MS/ 1,0-94B/R4AC	05
1407415	NBC-MS/ 2,0-94B/R4AC SCO	04	1407415	NBC-M12MS/ 2,0-94B/R4AC	05
1407416	NBC-MS/ 5,0-94B/R4AC SCO	04	1407416	NBC-M12MS/ 5,0-94B/R4AC	05
1407417	NBC-MS/10,0-94B/R4AC SCO	04	1407417	NBC-M12MS/10,0-94B/R4AC	05
1407434	NBC-MS/ 1,0-94B/MS SCO	04	1407434	NBC-M12MS/ 1,0-94B/M12MS	05
1407435	NBC-MS/ 2,0-94B/MS SCO	04	1407435	NBC-M12MS/ 2,0-94B/M12MS	05
1407436	NBC-MS/ 5,0-94B/MS SCO	04	1407436	NBC-M12MS/ 5,0-94B/M12MS	05
1407438	NBC-MS/10,0-94B/MS SCO	04	1407438	NBC-M12MS/10,0-94B/M12MS	05
1407439	NBC- 1,0-94B/FS SCO	04	1407439	NBC- 1,0-94B/M12FS	05
1407440	NBC- 2,0-94B/FS SCO	04	1407440	NBC- 2,0-94B/M12FS	05
1407441	NBC- 5,0-94B/FS SCO	04	1407441	NBC- 5,0-94B/M12FS	05
1407442	NBC-10,0-94B/FS SCO	04	1407442	NBC-10,0-94B/M12FS	05
1407443	NBC-FS/ 1,0-94B/R4AC SCO	05	1407443	NBC-M12FS/ 1,0-94B/R4AC	06
1407444	NBC-FS/ 2,0-94B/R4AC SCO	05	1407444	NBC-M12FS/ 2,0-94B/R4AC	06
1407445	NBC-FS/ 5,0-94B/R4AC SCO	05	1407445	NBC-M12FS/ 5,0-94B/R4AC	06
1407446	NBC-FS/10,0-94B/R4AC SCO	05	1407446	NBC-M12FS/10,0-94B/R4AC	06
1407463	NBC-MS/ 1,0-94B/FS SCO	04	1407463	NBC-M12MS/ 1,0-94B/M12FS	05
1407464	NBC-MS/ 2,0-94B/FS SCO	04	1407464	NBC-M12MS/ 2,0-94B/M12FS	05
1407465	NBC-MS/ 5,0-94B/FS SCO	04	1407465	NBC-M12MS/ 5,0-94B/M12FS	05
1407466	NBC-MS/10,0-94B/FS SCO	04	1407466	NBC-M12MS/10,0-94B/M12FS	05
1408659	NBC-MS-FS SCO-IE/.../...	04	1408659	NBC-M12MS-M12FS -IE/.../...	05
1408664	NBC-FS-R4AC SCO-IE/94B/...	05	1408664	NBC-M12FS-R4AC -IE/94B/...	06
1408665	NBC-FS SCO-IE/.../...	02	1408665	NBC-M12FS -IE/.../...	03
1408676	NBC-MS-MS SCO-IE/.../...	03	1408676	NBC-M12MS-M12MS -IE/.../...	04
1408681	NBC-MS-R4AC SCO-IE/94B/...	02	1408681	NBC-M12MS-R4AC -IE/94B/...	03
1408682	NBC-MS SCO-IE/.../...	01	1408682	NBC-M12MS -IE/.../...	02

Advanced Shielding Technology

Designed by PHOENIX CONTACT

The new dimension of shielding for assembled M8 and M12 circular connectors

PHOENIX CONTACT
INSPIRING INNOVATIONS

CBF240009

Change of A-coded cable assemblies to Advanced shielding technology

Advanced Shielding Technology from Phoenix Contact is the innovative shielding concept for sensor/actuator cabling. The large-area, material-bonding 360° shield connection is unique on the market and optimizes the current design of M8 and M12 connectors.
With Advanced Shielding Technology you are investing in reliable data, signal, and power transmission for the factory automation of the future.

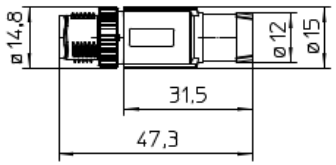
The next slides show you the change of the current design of A-coded cable assemblies and describe the advantages of the unique Advanced Shielding Technology.

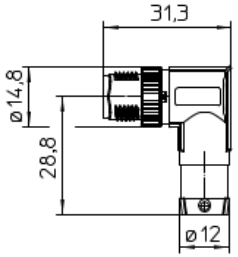
CBF240009

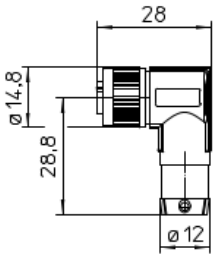
Change of A-coded cable assemblies to Advanced shielding technology

Size of the connector heads

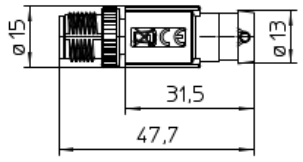
current design

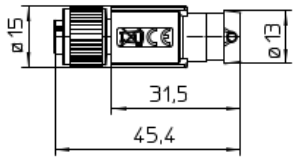


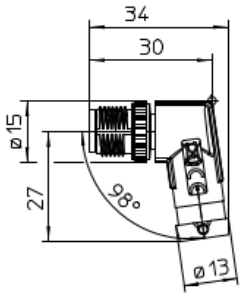


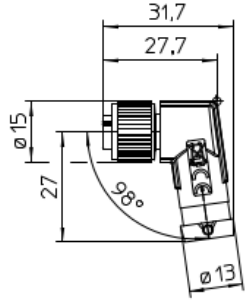


new AST design









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INSPIRING INNOVATIONS

CBF240009

Change of A-coded cable assemblies to Advanced shielding technology

Speedcon to Standard M12 thread

Current design

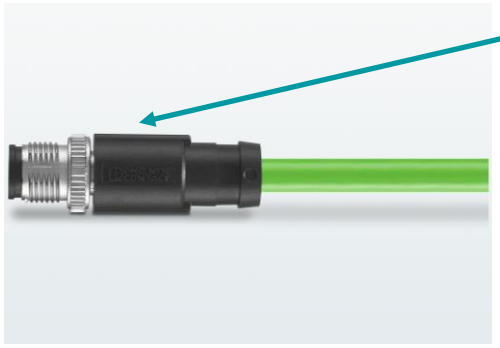
New design

CBF240009

Change of A-coded cable assemblies to Advanced shielding technology

CE and WEEE mark

Current design



New design

Additional to the brand logo of Phoenix Contact, the grip body gets the CE mark and the WEEE logo to be compliant with the european regulations.

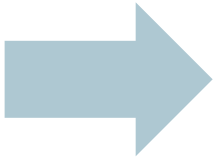
CBF240009

Change of A-coded cable assemblies to Advanced shielding technology

Article description from Speedcon to Standard M12

In case of the change from Speedcon to Standard M12 knurl,
the article description has to be changed.

Example:

NBC-MS/10,0-94B/FS SCO  NBC-M12MS/10,0-94B/M12FS

The new descriptions of each articles are included in the attached excel sheet.

How it all started

Current shielding concept

Cut cable

Brush shield

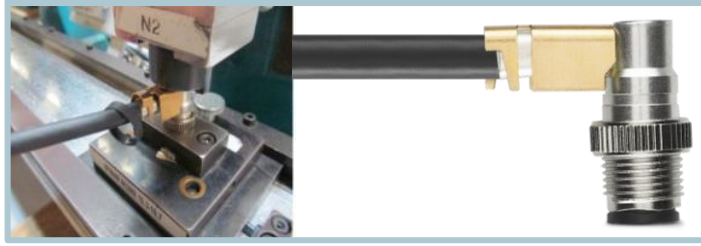
Push it over the cable jacket

Paste a foil on the cable

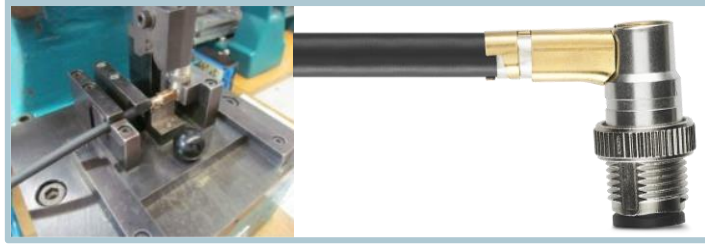
Cut the shield

Fit the shield sleeve on the cable

Prepare hand press



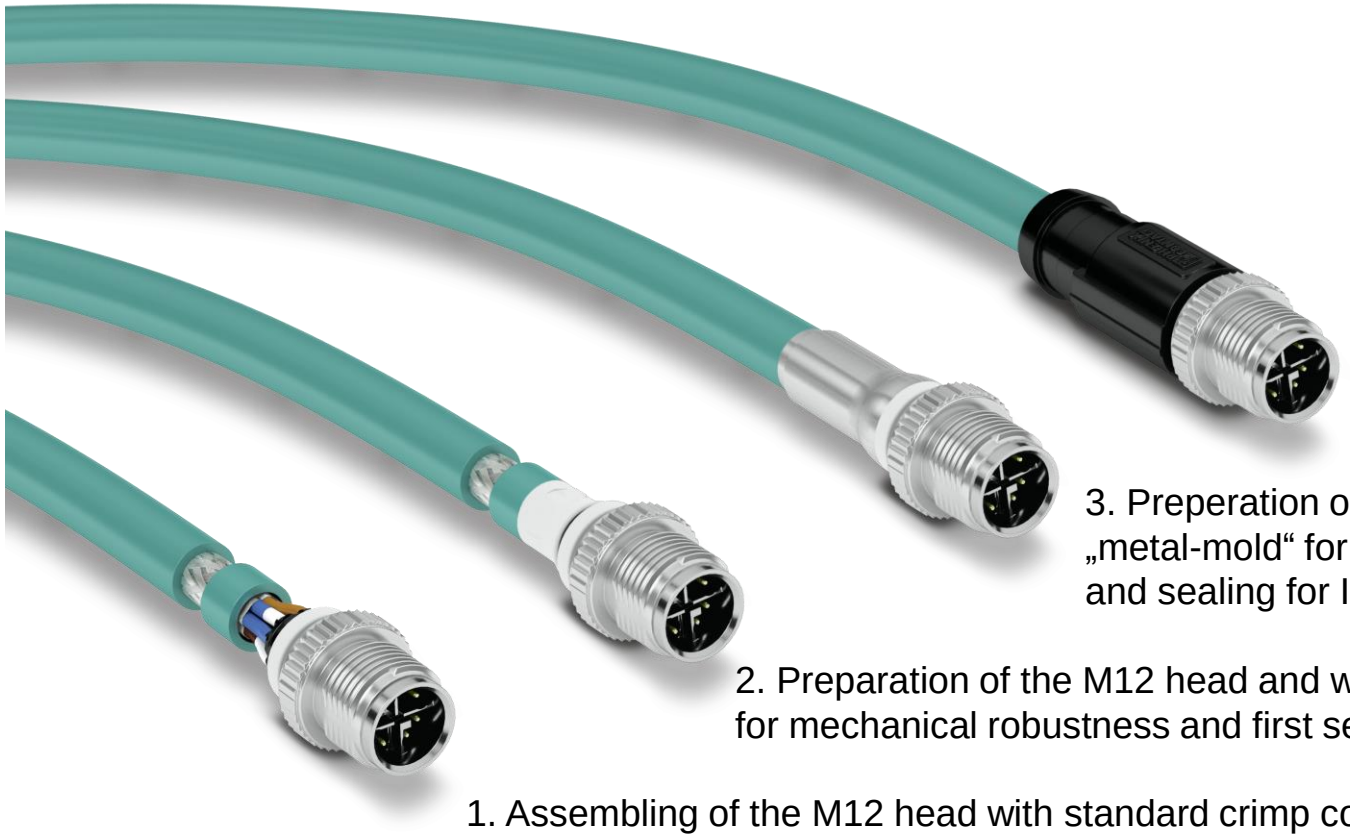
Crimp the lid



*Please note that the realization regarding the coding is the same even M12 x-coded is shown in the illustrations

Presentation of the new shielding concept

Realization



4. Preperation of the M12 handle body with standard overmolding

3. Preperation of the M12 head and cableshield with the special „metal-mold“ for 360° shielding connection, mechanical robustness and sealing for IP protection

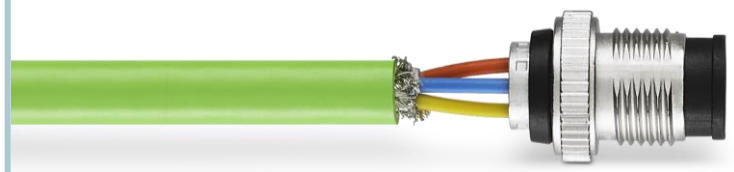
2. Preparation of the M12 head and wires with the special „pre-mold“ for mechanical robustness and first sealing for IP protection

1. Assembling of the M12 head with standard crimp contacts

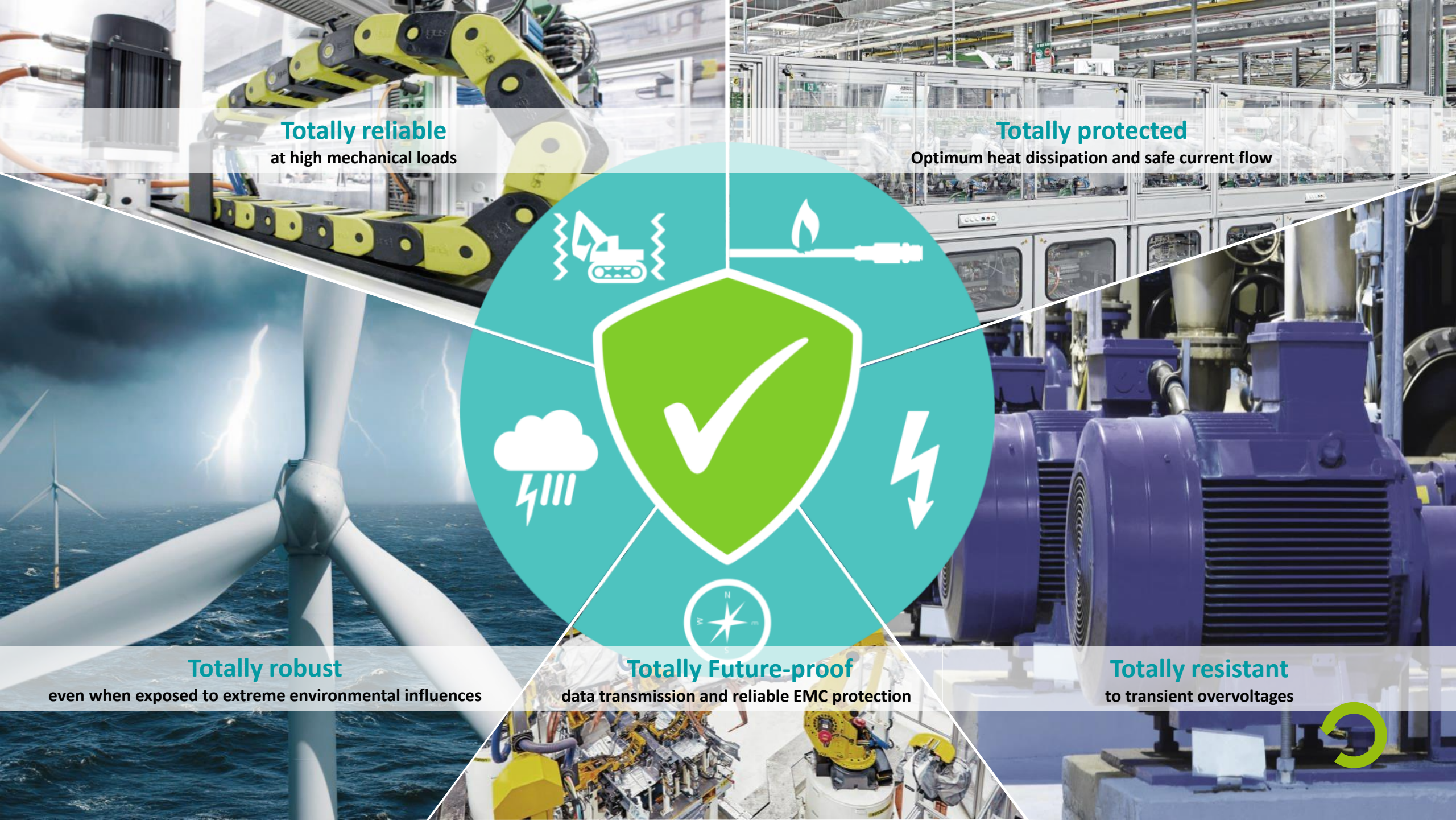
*Please note that the realization regarding the coding is the same even M12 x-coded is shown in the illustrations

Presentation of the new shielding concept

Realization

Cable Preparation	Pre-Mold	Metal-Mold
		

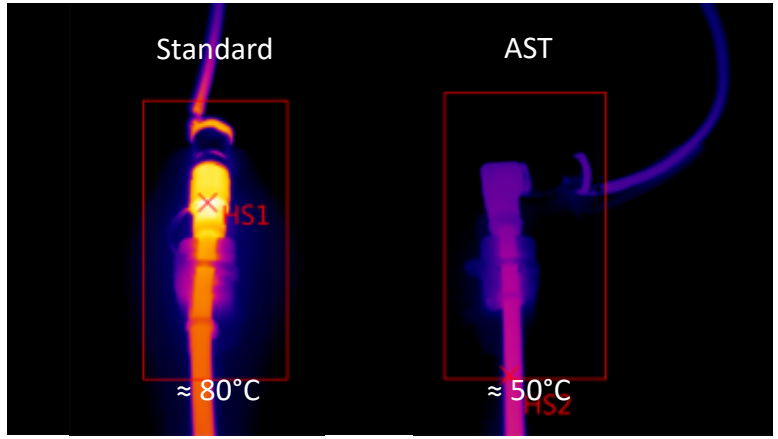
The ideal shield sleeve does not require a crimp

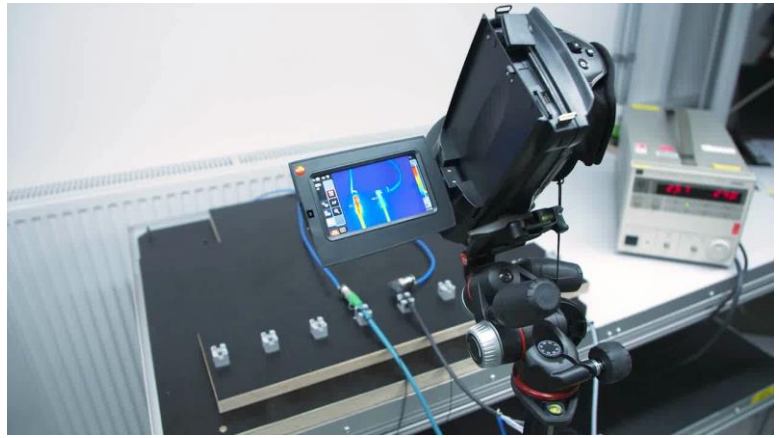

Totally reliable
at high mechanical loads
Totally protected
Optimum heat dissipation and safe current flow
Totally robust
even when exposed to extreme environmental influences
Totally Future-proof
data transmission and reliable EMC protection
Totally resistant
to transient overvoltages

Advanced Shielding Technology

Totally protected

If there is a short circuit in the machine parts, Advanced Shielding Technology can be used to enable a current to flow via the shield until the fuses are triggered. Thanks to the minimal generation of heat, the large-area shielding ensures greater safety and reduces the risk of fire.





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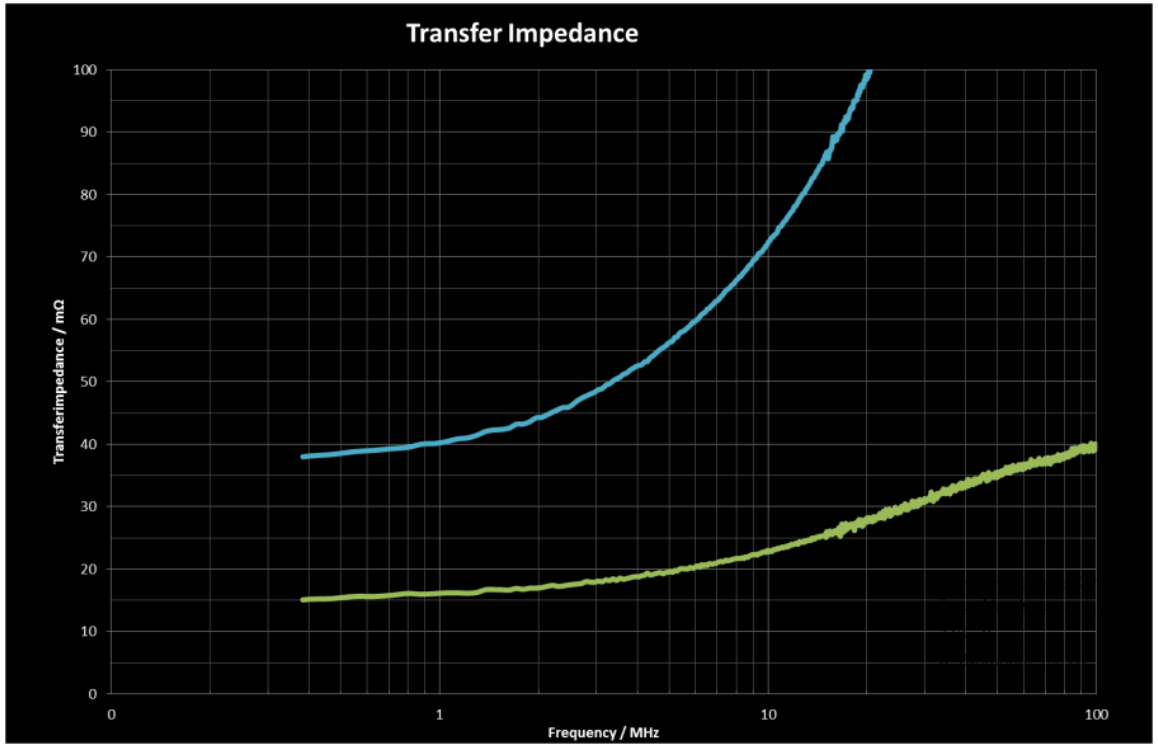
Totally future-proof

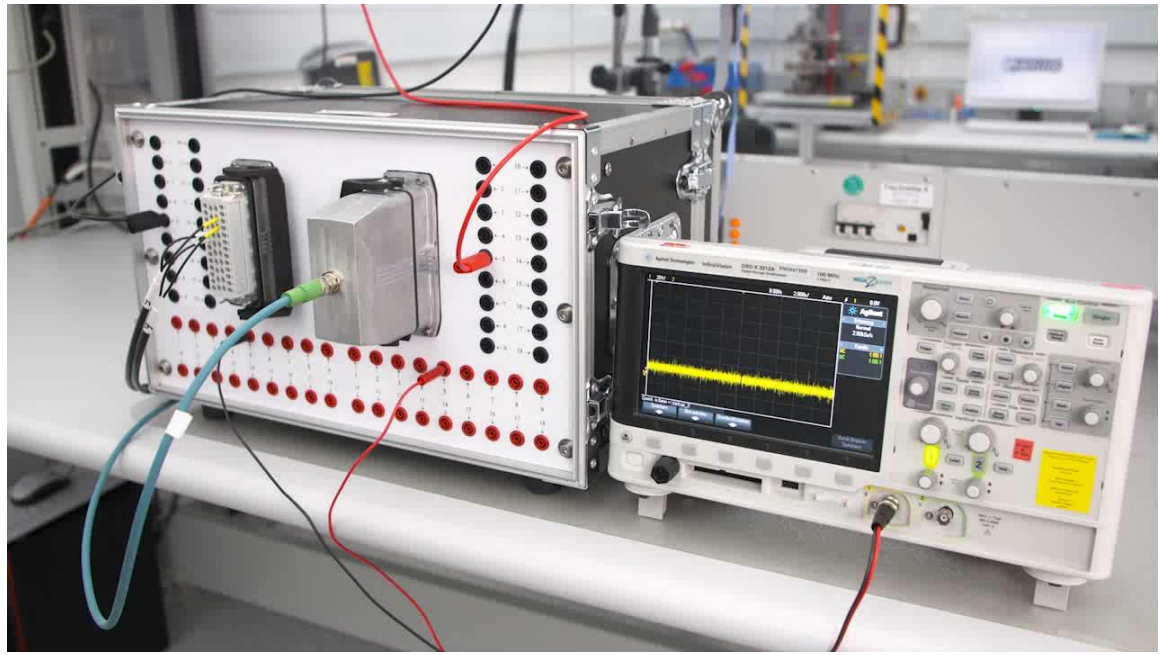
In the field of intelligent production plants and industrial networks, Advanced Shielding Technology realizes the future-proof transmission of high data volumes and continuously increasing transmission rates of up to 40 Gbps. The improved shield dissipation thus provides secure protection against electromagnetic interferences.

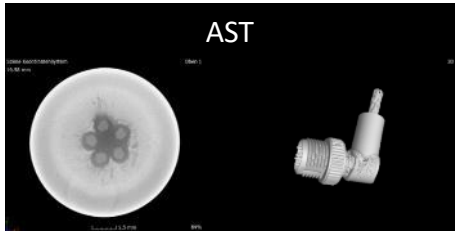


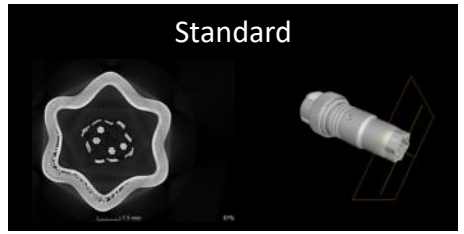
Advanced Shielding Technology

Totally reliable

Advanced Shielding Technology guarantees shock- and vibration-resistance at high mechanical loads in torsion, drag chain or robotic applications.







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Advanced Shielding Technology

Totally resistant

High voltages are briefly generated when switching inductive loads such as motors. Thanks to the continuous connection between the shielding braid and plug, assembled connectors with Advanced Shielding Technology are resistant to transient overvoltages and guarantee a higher level of system availability.

Advanced Shielding Technology

Totally robust

Thanks to the robust connection and 360° shield cover, connectors with Advanced Shielding Technology will easily even withstand lightning strikes and current peaks up to 20 kA. They are thus particularly suitable for use in outdoor applications.

Advanced Shielding Technology

Designed by PHOENIX CONTACT

The new dimension of shielding for assembled M8 and M12 circular connectors

Further information under:
www.phoenixcontact.com/webcode/#2253

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