

CONNECTION TECHNOLOGY

UL 486A-486B CERTIFIED PRODUCTS

GPH[®]

SHEAR BOLT CONNECTORS AND CABLE LUGS

GPH® Connection technology

Nexans Power Accessories is the leading innovator, manufacturer and distributor of low, medium and high voltage accessories as well as connection technology for energy transmission and distribution networks.

Beside the standard product range of GPH® shear bolt connectors, Nexans is doing customized solutions for different applications – all tested according to the relevant standards. Nexans also develops and manufactures ready-to-install pre-assembled cable lengths and customized factory tested cable bridges. An extensive range of additional equipment and a variety of dedicated installation training and tooling make Nexans a strong partner in the transmission and distribution of energy.

Nexans Power Accessories have set industrial standards and shaped European norms. Quality and environmental awareness are central components of the corporate philosophy and management system. In addition to being certified according to DIN EN ISO 9001 and UL 486A-486B, we are also certified in the important sectors of environmental protection, energy and occupational safety.

DISTINCTIVE FEATURES TO COMPRESSION PRODUCTS

Fewer connector types cover the most cross-sections

GPH® shear bolt connectors are made of high-strength aluminum alloy with tin-plated surface. They allow the safe connection of copper and aluminum conductors of all designs and cross-sections of #8 AWG up to 1250 kcmil.

Reliable and tested for safety

GPH® mechanical connection technology clamps all conductors with an optimum contact force. The design is tested according to ANSI 119.4 as well as IEC 61238-1 class A and UL 486A-486B and provides the highest contact quality for a maximum lifetime of the application.

Special conductor channel

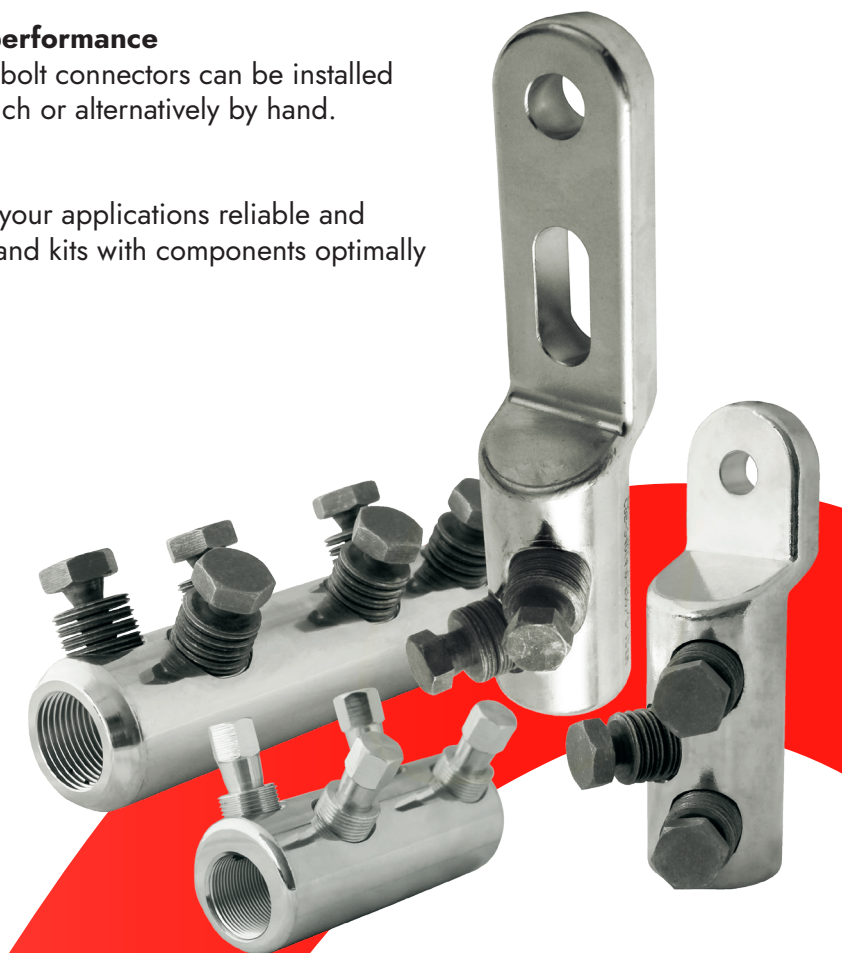
The special conductor channel allows the installation of all common, compressed and compacted conductors.

Simple installation – best performance

With only one tool, our shear bolt connectors can be installed with an approved impact wrench or alternatively by hand.

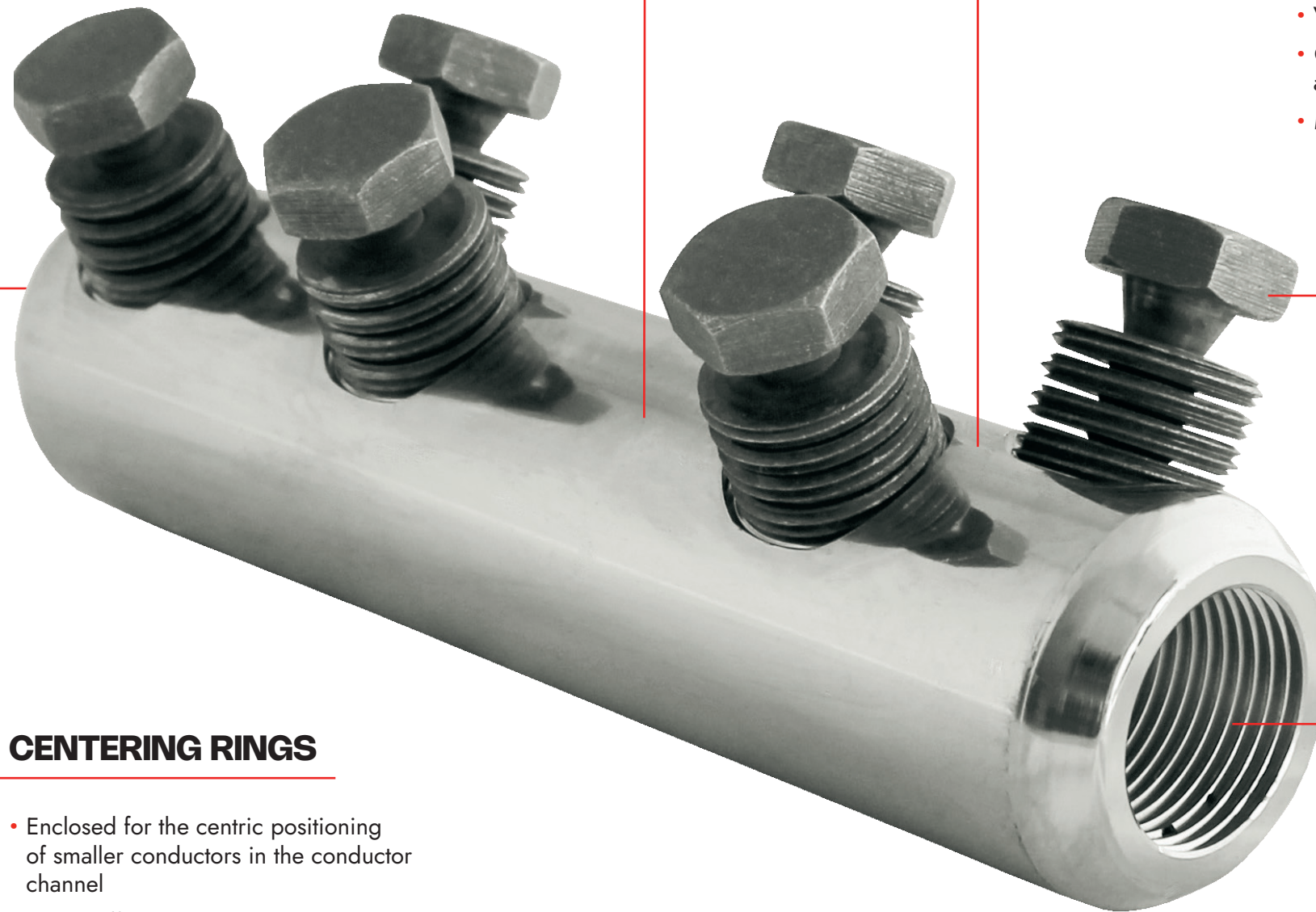
One stop shop

From one source we offer for your applications reliable and economic power accessories and kits with components optimally harmonized.



Quality made in Germany for more than 65 years

GPH® contacts ensure highest ampacity for any kind of conductor design. For the installation of durable, long lasting connections with optimum contact force.

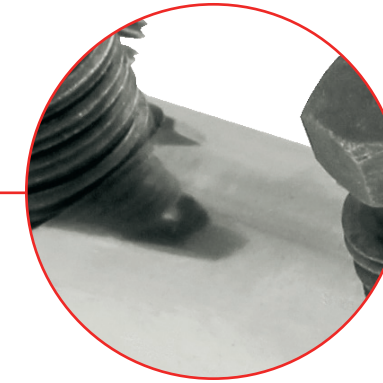


CENTERING RINGS

- Enclosed for the centric positioning of smaller conductors in the conductor channel
- Rings differ in color, assigned to respective conductor types

OIL STOP

- Supports proper conductor positioning
- Prevents oil leakage when connecting paper-insulated belted cable with polymeric insulated cables in transition applications



CONNECTOR BODY

- Allows the range-taking connection of copper and aluminum conductors
- Made of high-strength aluminum alloy
- V-shaped bolt layout for highest contact quality
- Compact size fits to the accessories design for various applications
- Matching cable lugs for all conductor sizes available



SHEAR BOLTS

- GPH® shear bolt system for quick and simple installation with standard tools
- Bolts made of aluminum or tin-plated brass, lubricated with special grease for optimum contact force
- Bolts shear-off at the appropriate torque moment, no torque wrench required



TRANSVERSE GROOVING

- Rolled thread breaks the oxide layer of aluminum conductors and creates stable contacts
- Ensures high level cross-line conductivity of stranded conductors due to increased current flow from inner to outer strands
- Generates long term contact quality



GPH® Shear bolt connectors and cable lugs

Shear bolt connectors by GPH® are a reliable and efficient way of connecting different conductor cross-sections and conductor materials for 1 kV up to 52 kV. All connectors are available with either Allen shear bolts or outer hexagon shear bolts.

ECONOMIC BENEFITS & TECHNICAL ADVANCE

- Connects all common, compressed and compacted copper and aluminum conductors
- Fewer connector types cover the most common cross-sections
- Shear bolt connectors compensate conductor tolerances
- Quick and simple installation with standard tools, no crimping tools required
- Prevents installation mistakes
- Tested acc. to UL 486A-486B, ANSI 119.4, IEC 61238-1 class A
- Wide application range
- Customized solutions, special types and dedicated designs available on request

LOW VOLTAGE

- Standard connectors and cable lugs for copper and aluminum conductors
- For conductor cross-sections from #8 AWG up to 350 kcmil
- Tested acc. to UL 486A-486B, ANSI 119.4, IEC 61238-1 class A
- Up to 0.6/1 kV

MEDIUM VOLTAGE

- Transition connectors, branch connectors, repair connectors, standard connectors and cable lugs for copper and aluminum conductors
- For conductor cross-sections from #2 AWG up to 1250 kcmil
- Tested acc. to UL 486A-486B, ANSI 119.4, IEC 61238-1 class A
- Up to 52 kV

PRODUCT SELECTION GUIDE

Shear bolt connector up to 1 kV for Al and Cu conductors

Cat. no.	Al/Cu - AWG - KCMIL	No. of bolts	Dimensions (inch)				Tool outer hexagon
			L	d	D	b	
#8-#2 AWG SV-T-V-K	#8-#2	2	1.417	0.315	0.630	0.630	AF 3/8"
#2-4/0 AWG SV-T-V-K	#2-4/0	2	2.165	0.551	0.984	0.945	AF 3/8"
4/0-350 AWG-KCMIL SV-T-V-K	4/0-350	4	3.150	0.748	1.260	1.457	AF 3/8"

Shear bolt connector up to 52 kV for Al and Cu conductors

Cat. no.	Al/Cu - AWG - KCMIL	No. of bolts	Dimensions (inch)				Tool outer hexagon
			L	d	D	b	
M#2-300 AWG-KCMIL EW	#2-300	2	3.346	0.61	1.181	1.378	AF 3/8"
M4/0-500 AWG-KCMIL EW	4/0-500	4	4.724	0.787	1.299	2.205	AF 1/2"
M350-750 KCMIL EW	350-750	6	6.693	1.024	1.654	3.228	AF 3/4"
M750-1000 KCMIL EW	750-1000	6	5.984	1.181	1.850	2.835	AF 1/2"
M750-1250 KCMIL EW	750-1250	6	7.874	1.339	2.047	3.701	AF 3/4"

Shear bolt lug up to 52 kV for Al and Cu conductors

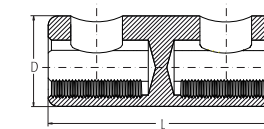
Cat. no.	Al/Cu - AWG - KCMIL	No. of bolts	Dimensions (inch)				Tool outer hexagon	Palm hole size in inch
			L	d	D	b		
C#2-300 X 12 AWG-KCMIL EW	#2-300	1	3.110	0.610	1.181	1.378	AF 3/8"	0.512
C4/0-500 X 16 AWG-KCMIL EW	4/0-500	2	3.740	0.787	1.299	2.205	AF 1/2"	0.669
C350-750 X 16 KCMIL EW	350-750	3	4.724	1.024	1.654	3.228	AF 3/4"	0.669
C750-1250 X 16 KCMIL EW	750-1250	3	5.118	1.339	2.047	3.701	AF 3/4"	0.669

Shear bolt lug NEMA up to 52 kV for Al and Cu conductors

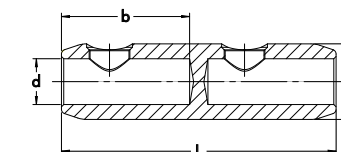
Cat. no.	Al/Cu - AWG - KCMIL	No. of bolts	Dimensions (inch)				Tool outer hexagon	Palm hole size in inch	Distance between holes in inch (x)
			L	d	D	b			
C25-150/2 (#2-300) X 2 X 14 EW 32-50	#2-300	2	2.894	0.61	1.181	1.614	AF 3/8"	0.559	1.26-1.97
C95-240 (4/0-500) X 2 X 14 EW 32-50	4/0-500	2	3.524	0.787	1.299	2.205	AF 1/2"	0.559	1.26-1.97
C185-400 (350-750) X 2 X 14 EW 32-50	350-750	3	4.508	1.024	1.654	3.228	AF 3/4"	0.559	1.26-1.97
C400-500 (750-1000) X 2 X 14 EW 44.5	750-1000	3	4.488	1.181	1.850	2.835	AF 1/2"	0.559	1.75
C400-630 (750-1250) X 2 X 14 EW 32-50	750-1250	3	5.118	1.339	2.047	3.701	AF 3/4"	0.559	1.26-1.97

TECHNICAL DRAWINGS

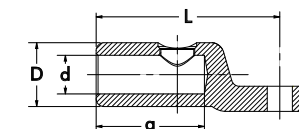
Shear bolt connector up to 1 kV for Al and Cu conductors



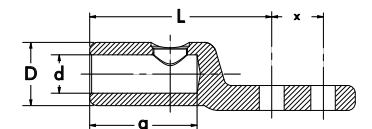
Shear bolt connector up to 52 kV for Al and Cu conductors



Shear bolt cable lug up to 52 kV for Al and Cu conductors



Shear bolt cable lug NEMA up to 52 kV for Al and Cu conductors



CONNECTION TECHNOLOGY

UL 486A-486B CERTIFIED PRODUCTS

For over a century, Nexans has played a crucial role in the electrification of the planet and is committed to electrifying the future. With approximately 28,500 people in 41 countries, the Group is paving the way to a new world of safe, sustainable and decarbonized electricity that is accessible to everyone. In 2023, Nexans generated 6.5 billion euros in standard sales. The Group is a leader in the design and manufacturing of cable systems and services across four main business areas: Power Generation & Transmission, Distribution, Usage and Industry & Solutions. Nexans was the first company in its industry to create a Foundation supporting sustainable initiatives, bringing access to energy to disadvantaged communities worldwide. The Group is recognized on the CDP Climate Change A List as a global leader on climate action and has committed to Net-Zero emissions by 2050 aligned with the Science Based Targets initiative (SBTi).

Nexans. *Electrify the future.*

Nexans is listed on Euronext Paris, compartment A.
For more information, please visit www.nexans.com

—
Nexans Power Accessories Germany
Ferdinand-Porsche-Str. 12
25028 Hof/Saale
Deutschland
Tel: +49 (0)9281 8306-0
E-mail: kundenzentrum.hof@nexans.com
www.nexans.de/poweraccessories

As of 09/2024

