



Mechanical Connectors, Lugs and Repair Sleeves
for Medium Voltage Cable Accessories
up to 42 kV

Mechanical Connectors, Lugs and Repair Sleeves for Medium Voltage Cable Accessories up to 42 kV

Features & benefits

- Wide application range
- Compact design
- Can be used with almost every type of conductor and material
- Torque-controlled shear-head bolts guarantee a good electrical contact
- Easy installation with standard socket spanner
- Pre-engineered design for perfect fit in medium voltage cable accessories up to 42 kV
- Tested according to IEC 61238-1 class A

General description

Mechanical connectors, lugs and repair sleeves are designed for use in low and medium voltage applications. Only three sizes cover conductor sizes from 25 mm² to 400 mm²

All products consist of a tin-plated body, shear-head bolts and inserts for small conductor sizes.

Body

Connector and lug bodies are made of a high-tensile, tin-plated aluminium alloy. The internal surfaces of the conductor holes are grooved.

Connectors are chamfered at the edges and available with or without oil barrier (as blocked and unblocked types) depending on the application requirements.

Lugs are suitable for outdoor and indoor applications and are available with different palm hole sizes.



Contact bolts

Made of a special aluminium alloy, these contact bolts are double shear-head bolts with hexagon heads. The bolts are treated with a highly lubricating agent and equipped with a special contact ring. Contact bolts are irremovable once their heads have been sheared off.



Inserts

Lugs and connectors are provided with inserts for smaller conductors.

These inserts have lengthwise striations and a positioning guide.



Features & Benefits**Functions****of mechanical lugs and connectors**

Wide application range	Only three sizes cover conductor cross-sections from 25 mm ² to 400 mm ² and can be used for almost every type of conductor and material
Bodies made of a high-tensile, tin-plated aluminium alloy Bolts made of special aluminium alloy	Good contact properties Connection between copper and aluminium conductors is possible
Compact design	Requires little installation space, particularly for large sizes
Conductor connection hole with crosswise and lengthwise grooves	Good electrical performance Conductor oxide film is disrupted
Centered hole and inserts	Conductors of every size are centered Height of the step between the conductor insulation and connector surface is reduced Same cut-back length even when centering insert is used Wires are not distorted when bolts are tightened
Shear bolts with predetermined shear torque, hexagon head and specially shaped contact ring	No torque wrench necessary Head shears off when a specific level of torque is applied High tensile strength
Lubricated bolts	Reduces friction Converts tightening torque into contact force for maximum effect
No elongation during installation	Easier to design relevant accessories

Special features of mechanical connectors

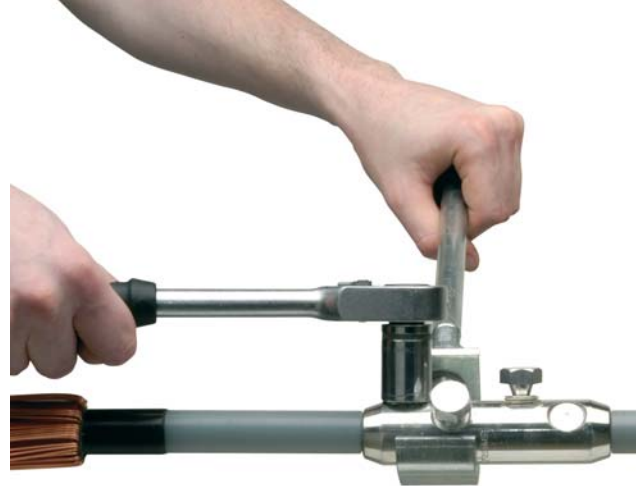
Chamfered edges	Suitable for up to 42 kV and adaptable to existing joint designs
Available with and without oil barrier	Oil stop when used in transition joints

Special features of mechanical lugs

Long shank	Extra-long for moisture barrier
Lengthwise seal	For indoor and outdoor applications

Installation

- Easy and secure installation without special tools
- All it takes to tighten bolts is a wrench and hexagon socket
- Same cut-back length for each type
- Inserts are included
- Shear head bolts with predetermined torque ensure a reliable and secure contact
- The use of a support tool is recommended (see accessories) to prevent conductor bending
- Separate installation instructions included with every connector or cable lug



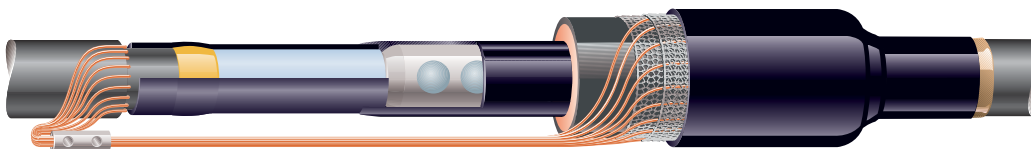
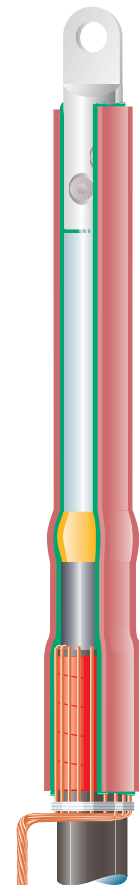
Use in cable accessories

The bolted fittings featured herein were developed especially for use in medium voltage cable accessories up to 42 kV. They may also be used in the 1 kV range. Before using mechanical connectors in cable accessories, confirm that they are suitable for the given application and, if necessary, consult the manufacturer.

Together with bolted connectors for cable accessories, TE Connectivity offers an extensive range of cable accessories tested in accordance with CENELEC HD 629.1 and HD 629.2 standard.

The range includes all required connectors.

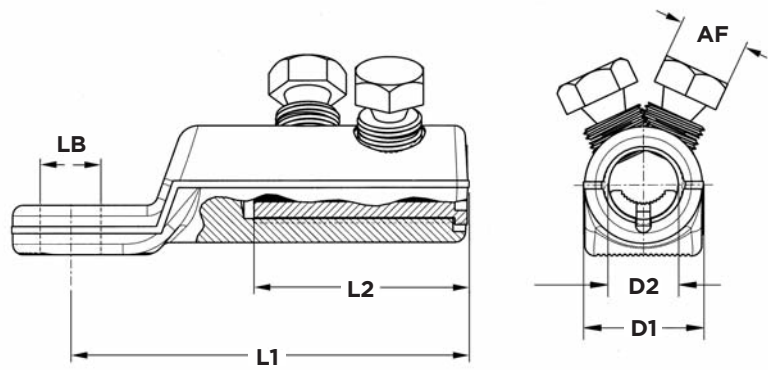
Further information are available on request.



Tested quality

Mechanical connectors and lugs have been tested to IEC 61238-1 class A. Detailed test reports available on request.

Ordering information - Dimensions - Selection tables
Mechanical lugs



Dimensions

Product reference	Cross-sectional range mm ²	Palm hole diameter mm LB	Dimensions mm				Contact bolts Quantity	Head size AF mm
			L1	L2	D1	D2		
BLMT-25/95-13	25-95	13	60	30	24	12.8	1	13
BLMT-25/95-17	25-95	17	60	30	24	12.8	1	13
BLMT-35/150-13	35-150	13	86	35	28	15.8	1	17
BLMT-35/150-17	35-150	17	86	35	28	15.8	1	17
BLMT-95/240-13	95-240	13	112	60	33	20	2	19
BLMT-95/240-17	95-240	17	112	60	33	20	2	19
BLMT-120/300-13	120-300	13	115	65	37	24	2	22
BLMT-120/300-17	120-300	17	115	65	37	24	2	22
BLMT-185/400-13	185-400	13	137	80	42	25.5	3	22
BLMT-185/400-17	185-400	17	137	80	42	25.5	3	22
BLMT-185/400-21	185-400	21	137	80	42	25.5	3	22
BLMT-500/630-13	500-630	13	150	95	50	33	3	27
BLMT-500/630-17	500-630	17	150	95	50	33	3	27
BLMT-500/630-21	500-630	21	150	95	50	33	3	27
BLMT-800-50x56-D21	800	21	202	120	56	36	4	27
BLMT-800-80x40-2D14x40	800	2x14	237	120	56	36	4	27

Selection and application table

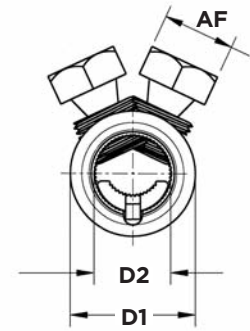
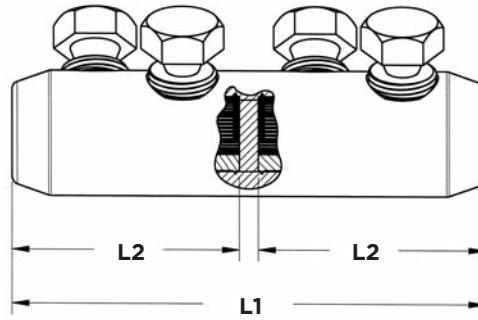
Product reference	Application range	Conductor type						
		Al circular stranded	Al circular solid	Al sector stranded	Al sector solid	Cu circular stranded	Cu circular solid	Cu sector stranded
BLMT-25/95-XX	Cross-sectional range (mm ²)	25-95	16-95	25-70		16-95	10-50	25-70
	Cross-sectional range (mm ²)			95**				95**
	Conductor diameter (mm)	5.7-12.5	4.1-11			4.8-12.5	3.6-8	
BLMT-35/150-XX	Cross-sectional range (mm ²)	35-150	35-150	50-95	50-120	35-150	35-50	50-95
	Cross-sectional range (mm ²)			120*-150**				120*-150**
	Conductor diameter (mm)	6.8-15	6.5-14			6.6-15	6.5-8	
BLMT-95/240-XX	Cross-sectional range (mm ²)	70-240	95-300	95-150	95-150	70-240		95-150
	Cross-sectional range (mm ²)			185*-240**	185(90°)			185*-240**
	Conductor diameter (mm)	9.3-19.2	10.5-19			9.3-19.2		
BLMT-120/300-XX	Cross-sectional range (mm ²)	120-300	150-300	120-185	120-240	120-300		120-185
	Cross-sectional range (mm ²)			240*-300**				240*-300**
	Conductor diameter (mm)	12.7-23.1	12.9-19.8			12.7-22.6		
BLMT-185/400-XX	Cross-sectional range (mm ²)	185-400	185-400	185-240	185-240	185-400		185-240
	Cross-sectional range (mm ²)			300*-400**	300(90°)			300*-400**
	Conductor diameter (mm)	15.5-24.6	14.8-24.6			15.5-24.6		
BLMT-500/630-XX	Cross-sectional range (mm ²)	500-630	500-630			500-630		
	Cross-sectional range (mm ²)							
	Conductor diameter (mm)	25.3-32.5	24.0-28.4			25.3-32.5		
BLMT-800-XX	Cross-sectional range (mm ²)	800	800			800		
	Cross-sectional range (mm ²)							
	Conductor diameter (mm)	32.5-35.3	30.9-32.1			32.5-35.3		

* - slightly rounded with pliers

** - pressed round

XX - Palm hole

Ordering information - Dimensions - Selection tables
 Mechanical connectors



Dimensions

Product reference	Cross-sectional range mm ²	Blocked	Dimensions mm				Contact bolts	
			L1	L2	D1	D2	Quantity	Head size AF mm
BSMB-10/35	10-35	yes	45	20	19	8.5	2	10
BSM-25/95	25-95	yes	65	30	24	12.8	2	13
BSM-25/95-U	25-95	no	65		24	12.8	2	13
BSMB-35/150	35-150	yes	80	35	28	15.8	2	17
BSMU-35/150	35-150	no	80		28	15.8	2	17
BSM-95/240	95-240	yes	125	60	33	20	4	19
BSM-95/240-U	95-240	no	125		33	20	4	19
BSMB-95/240-34	95-240	yes	125	60	34	22	4	19
BSMB-120/300	120-300	yes	140	65	37	24	4	22
BSMU-120/300	120-300	no	140		37	24	4	22
BSM-185/400	185-400	yes	170	80	42	25.5	6	22
BSM-185/400-U	185-400	no	170		42	25.5	6	22
BSMB-500mk2	500	yes	160	70	46	30	6	13
BSMB-630mk2	630	yes	160	70	50	33	6	13
BSMB-800mk2	800	yes	180	85	56	36	8	13
BSMB-1000	1000	yes	180	85	60	40	8	13

Ordering information - Selection tables

Mechanical connectors



Selection and application table

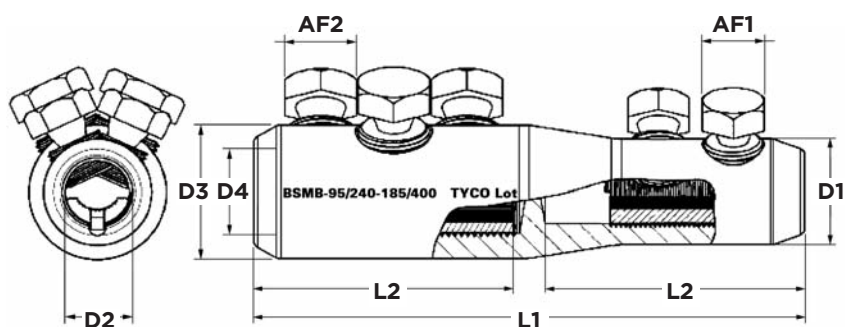
Product reference		Application range						
		Conductor type		Al		Cu		Cu
		Al circular stranded	Al circular solid	Al sector stranded	Al sector solid	Cu circular stranded	Cu circular solid	Cu sector stranded
BSMB-10/35	Cross-sectional range (mm ²)	10-35	10-50	10-25	10-35	10-35	10-35	10-25
	Cross-sectional range (mm ²)			35**				35**
	Conductor diameter (mm)	3.7-7.5	3.4-7.8			3.7-7.5	3.4-6.7	
BSM-25/95 BSMU-25/95-U	Cross-sectional range (mm ²)	25-95	16-95	25-70		16-95	10-50	25-70
	Cross-sectional range (mm ²)			95**				95**
	Conductor diameter (mm)	5.7-12.5	4.1-11			4.8-12.5	3.6-8	
BSMB-35/150 BSMU-35/150	Cross-sectional range (mm ²)	35-150	35-150	50-95	50-120	35-150	35-50	50-95
	Cross-sectional range (mm ²)			120*-150**				120*-150**
	Conductor diameter (mm)	6.8-15	6.5-14			6.6-15	6.5-8	
BSM-95/240 BSMU-95/240-U	Cross-sectional range (mm ²)	70-240	95-300	95-150	95-150	70-240		95-150
	Cross-sectional range (mm ²)			185*-240**	185(90°)			185*-240**
	Conductor diameter (mm)	9.3-19.2	10.5-19			9.3-19.2		
BSMB-95/240-34	Cross-sectional range (mm ²)	95-240	95-240	95-150	95-185	95-240		95-150
	Cross-sectional range (mm ²)			185-240*				185-240*
	Conductor diameter (mm)	11-20.8	10.5-18			11-19.2		
BSMB-120/300 BSMU-120/300	Cross-sectional range (mm ²)	120-300	150-300	120-185	120-240	120-300		120-185
	Cross-sectional range (mm ²)			240*-300**				240*-300**
	Conductor diameter (mm)	12.7-23.1	12.9-19.8			12.7-22.6		
BSM-185/400 BSMU-185/400-U	Cross-sectional range (mm ²)	185-400	185-400	185-240	185-240	185-400		185-240
	Cross-sectional range (mm ²)			300*-400**	300(90°)			300*-400**
	Conductor diameter (mm)	15.5-24.6	14.8-24.6			15.5-24.6		
BSMB-500mk2	Cross-sectional range (mm ²)	500	500			500		
	Cross-sectional range (mm ²)							
	Conductor diameter (mm)	25.3-28.9	24-25.1			25.3-28.6		
BSMB-630mk2	Cross-sectional range (mm ²)	630	630			630		
	Cross-sectional range (mm ²)							
	Conductor diameter (mm)	28.7-32.5	27.3-28.4			28.7-32.5		
BSMB-800mk2	Cross-sectional range (mm ²)	800	800			800		
	Cross-sectional range (mm ²)							
	Conductor diameter (mm)	32.5-35.3	30.9-32.1			32.5-35.3		
BSMB-1000	Cross-sectional range (mm ²)	1000	1000			1000		
	Cross-sectional range (mm ²)							
	Conductor diameter (mm)	37-39.5	34.8-36			37-39.5		

* - slightly rounded with pliers

** - pressed round

Ordering information - Dimensions - Selection tables

Reduction connectors



Dimensions

Product reference	Cross-sectional range		Blocked	Dimensions						Contact bolts Quantity Side1	Head size AF mm Side1	Contact bolts Quantity Side2	Head size AF mm Side2
	mm ² Side1	mm ² Side2		L1	L2	D1	D2	D3	D4				
BSMB 25/95-95/240	25-95	95-240	yes	125	60	24	12.8	33	20	1	13	2	19
BSMB 95/240-185/400	95-240	185-400	yes	170	80	33	20	42	25.5	2	19	3	22
BSMB 185/400-500	185-400	500	yes	190	90	42	25.5	46	30	3	22	3	27
BSMB 185/400-630	185-400	630	yes	200	95	42	25.5	50	33	3	22	3	27
BSMB 500-630mk2	500	630	yes	160	70	46	30	50	33	3	13	3	13
BSMB 500-800	500	800	yes	180	85	46	30	56	36	3	13	4	13
BSMB 630-800	630	800	yes	180	85	50	33	56	36	3	13	4	13
BSMB 630-1000	630	1000	yes	180	85	50	33	60	40	3	13	4	13
BSMB 800-1000	800	1000	yes	180	85	56	36	60	40	3	13	4	13

Ordering information - Dimensions - Selection tables
Reduction connectors

Selection and application table

Product reference		Application range							
		Conductor type		Al	Al	Al	Al	Cu	Cu
BSMB		Al	Al	Al	Al	Cu	Cu	Cu	Cu
25/95-95/240		circular	circular	sector	sector	circular	circular	sector	sector
		stranded	solid	stranded	solid	stranded	solid	stranded	solid
25-95mm ² Side	Cross-sectional range (mm ²)	25-95	16-95	25-70		16-95	10-50	25-70	
	Cross-sectional range (mm ²)			95*				95*	
	Conductor diameter (mm)	5.7-12.5	4.1-11			4.8-12.5	3.6-8		
95-240mm ² Side	Cross-sectional range (mm ²)	70-240	95-300	95-150	95-150	70-240		95-150	
	Cross-sectional range (mm ²)			185*-240*	185(90°)			185*-240*	
	Conductor diameter (mm)	9.3-19.2	10.5-19			9.3-19.2			
Product reference									
BSMB									
95/240-185/400									
95-240mm ² Side	Cross-sectional range (mm ²)	70-240	95-300	95-150	95-150	70-240		95-150	
	Cross-sectional range (mm ²)			185*-240*	185(90°)			185*-240*	
	Conductor diameter (mm)	9.3-19.2	10.5-19			9.3-19.2			
185-400mm ² Side	Cross-sectional range (mm ²)	185-400	185-400	185-240	185-240	185-400		185-240	
	Cross-sectional range (mm ²)			300*-400*	300(90°)			300*-400*	
	Conductor diameter (mm)	15.5-24.6	14.8-24.6			15.5-24.6			
Product reference									
BSMB									
185/400-500									
185-400mm ² Side	Cross-sectional range (mm ²)	185-400	185-400	185-240	185-240	185-400		185-240	
	Cross-sectional range (mm ²)			300*-400*	300(90°)			300*-400*	
	Conductor diameter (mm)	15.5-24.6	14.8-24.6			15.5-24.6			
500mm ² Side	Cross-sectional range (mm ²)	500	500			500			
	Cross-sectional range (mm ²)								
	Conductor diameter (mm)	25.3-28.9	24-25.1			25.3-28.6			
Product reference									
BSMB									
185/400-630									
185-400mm ² Side	Cross-sectional range (mm ²)	185-400	185-400	185-240	185-240	185-400		185-240	
	Cross-sectional range (mm ²)			300*-400*	300(90°)			300*-400*	
	Conductor diameter (mm)	15.5-24.6	14.8-24.6			15.5-24.6			
630mm ² Side	Cross-sectional range (mm ²)	630	630			630			
	Cross-sectional range (mm ²)								
	Conductor diameter (mm)	28.7-32.5	27.3-28.4			28.7-32.5			
Product reference									
BSMB									
500-630									
500mm ² Side	Cross-sectional range (mm ²)	500	500			500			
	Cross-sectional range (mm ²)								
	Conductor diameter (mm)	25.3-28.9	24-25.1			25.3-28.6			
630mm ² Side	Cross-sectional range (mm ²)	630	630			630			
	Cross-sectional range (mm ²)								
	Conductor diameter (mm)	28.7-32.5	27.3-28.4			28.7-32.5			

* - pressed round

Ordering information - Dimensions - Selection tables

Reduction connectors

Selection and application table

Product reference		Application range						
		Conductor type		Al sector stranded	Al sector solid	Cu circular stranded	Cu circular solid	Cu sector stranded
BSMB		Al circular stranded	Al circular solid					
500-800								
500mm ² Side	Cross-sectional range (mm ²)	500	500			500		
	Cross-sectional range (mm ²)							
	Conductor diameter (mm)	25.3-28.9	24-25.1			25.3-28.9		
800mm ² Side	Cross-sectional range (mm ²)	800	800			800		
	Cross-sectional range (mm ²)							
	Conductor diameter (mm)	32.5-35.3	30.9-32.1			32.5-35.3		

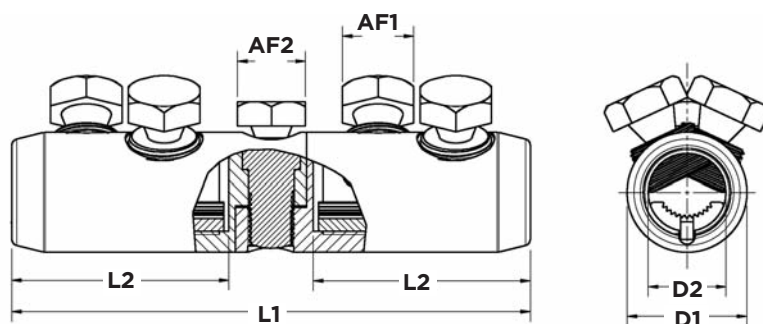
Product reference		Application range						
BSMB		Conductor type		Al sector stranded	Al sector solid	Cu circular stranded	Cu circular solid	Cu sector stranded
630-800		Al circular stranded	Al circular solid					
630mm ² Side	Cross-sectional range (mm ²)	630	630			630		
	Cross-sectional range (mm ²)							
	Conductor diameter (mm)	28.7-32.5	27.3-28.4			28.7-32.5		
800mm ² Side	Cross-sectional range (mm ²)	800	800			800		
	Cross-sectional range (mm ²)							
	Conductor diameter (mm)	32.5-35.3	30.5-32.1			32.5-35.3		

Product reference		Application range						
BSMB		Conductor type		Al sector stranded	Al sector solid	Cu circular stranded	Cu circular solid	Cu sector stranded
630-1000		Al circular stranded	Al circular solid					
630mm ² Side	Cross-sectional range (mm ²)	630	630			630		
	Cross-sectional range (mm ²)							
	Conductor diameter (mm)	28.7-32.5	27.3-28.4			28.7-32.5		
1000mm ² Side	Cross-sectional range (mm ²)	1000	1000			1000		
	Cross-sectional range (mm ²)							
	Conductor diameter (mm)	37-39.5	34.8-36			37-39.5		

Product reference		Application range						
BSMB		Conductor type		Al sector stranded	Al sector solid	Cu circular stranded	Cu circular solid	Cu sector stranded
800-1000		Al circular stranded	Al circular solid					
800mm ² Side	Cross-sectional range (mm ²)	800	800			800		
	Cross-sectional range (mm ²)							
	Conductor diameter (mm)	32.5-35.3	30.5-32.1			32.5-35.3		
1000mm ² Side	Cross-sectional range (mm ²)	1000	1000			1000		
	Cross-sectional range (mm ²)							
	Conductor diameter (mm)	37-39.5	34.8-36			37-39.5		

Ordering information - Dimensions - Selection tables

Split connectors



Dimensions

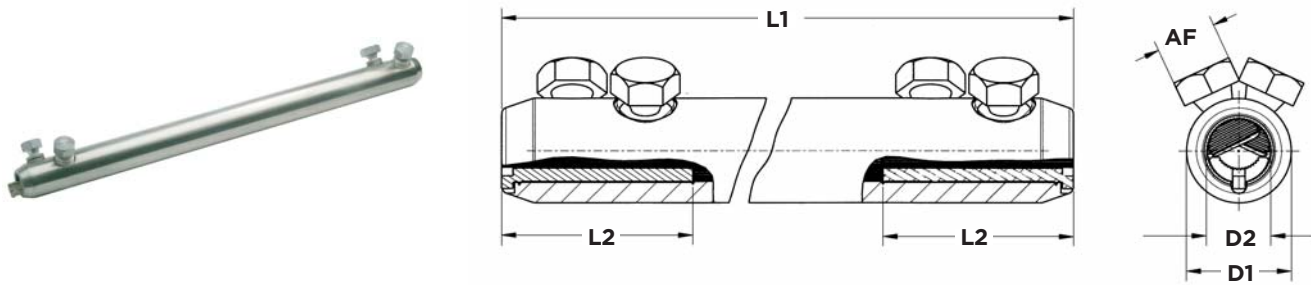
Product reference	Cross-sectional range mm ²	Blocked	Dimensions mm				Contact bolts		Central bolt	
			L1	L2	D1	D2	Quantity	Head size AF1 mm	Quantity	Head size AF2 mm
BSMV-120/300	120-300	yes	160	65	37	24	4	22	1	21
BSMV-185/400	185-400	yes	190	80	42	25.5	6	22	1	19

Selection and application table

Product reference	Application range	Conductor type						
		Al circular stranded	Al circular solid	Al sector stranded	Al sector solid	Cu circular stranded	Cu circular solid	Cu sector stranded
BSMV-120/300	Cross-sectional range (mm ²)	120-300	150-300	120-185	120-240	120-300		120-185
	Cross-sectional range (mm ²)			240*-300*				240*-300*
	Conductor diameter (mm)	12.7-23.1	12.9-19.8			12.7-22.6		
BSMV-185/400	Cross-sectional range (mm ²)	185-400	185-400	185-240	185-240	185-400		185-240
	Cross-sectional range (mm ²)			300*-400*	300(90°)			300*-400*
	Conductor diameter (mm)	15.5-24.6	14.8-24.6			15.5-24.6		

* - pressed round

Ordering information - Dimensions - Selection tables
 Mechanical repair sleeves



Dimensions

Product reference	Cross-sectional range mm ²	Blocked	Dimension mm				Contact bolts Quantity	Head size AF mm
			L1	L2	D1	D2		
BSM-25/95-U-L440	25-95	no	440	30	24	12.8	2	13
BSM-95/240-U-L440	95-240	no	440	60	33	20	4	19
BSMU-95/240-34-L440	95-240	no	440	60	34	22	4	19
BSMU-120/300-L440	120-300	no	440	65	37	24	4	22
BSM-185/400-U-L440	185-400	no	440	80	42	25.5	6	22
BSMU-500-L440	500	no	440	90	46	30	6	27

Selection and application table

Product reference	Application range	Conductor type						
		Al circular stranded	Al circular solid	Al sector stranded	Al sector solid	Cu circular stranded	Cu circular solid	Cu sector stranded
BSM-25/95-U-L440	Cross-sectional range (mm ²)	25-95	16-95	25-70		16-95	10-50	25-70
	Cross-sectional range (mm ²)			95*				
	Conductor diameter (mm)	5.7-12.5	4.1-11				4.8-12.5	3.6-8
BSM-95/240-U-L440	Cross-sectional range (mm ²)	70-240	95-300	95-150	95-150	70-240		95-150
	Cross-sectional range (mm ²)			185*-240*				
	Conductor diameter (mm)	9.3-19.2	10.5-19				9.3-19.2	
BSMU-95/240-34-L440	Cross-sectional range (mm ²)	95-240	95-300	95-150	95-185	95-240		95-150
	Cross-sectional range (mm ²)			185*-240*				
	Conductor diameter (mm)	11-20.8	10.5-19.8				11-19.2	
BSMU-120/300-L440	Cross-sectional range (mm ²)	120-300	150-300	120-185	120-240	120-300		120-185
	Cross-sectional range (mm ²)			240*-300*				
	Conductor diameter (mm)	12.7-23.1	12.9-19.8				12.7-22.6	
BSM-185/400-U-L440	Cross-sectional range (mm ²)	185-400	185-400	185-240	185-240	185-400		185-240
	Cross-sectional range (mm ²)			300*-400*				
	Conductor diameter (mm)	15.5-24.6	14.8-24.6				15.5-24.6	
BSMU-500-L440	Cross-sectional range (mm ²)	500	500			500		
	Cross-sectional range (mm ²)							
	Conductor diameter (mm)	25.3-28.9	24-25.1				25.3-28.6	

* - pressed round

**Ordering information - Dimensions - Selection tables
Accessories**

Support tool



Product reference	Description
IT 1000-019	Support tool for mechanical connectors and lugs Grip length: 205 mm For diameters ranging from 16 to 60 mm

Cordless impact wrench



Product reference	Description
IT-1000-033	Installation tool for shear-head bolt connectors and lugs

Filling mastic



Product reference	Description
EPPA-048-Clay-Pack	Mastic for profiling over bolt area Quantity 30 ± 5 g

Notes:

Notes:

ABOUT TE CONNECTIVITY

TE Connectivity is a global, \$14 billion company that designs and manufactures approximately 500,000 products that connect and protect the flow of power and data inside the products that touch every aspect of our lives. Our nearly 100,000 employees partner with customers in virtually every industry—from consumer electronics, energy and healthcare, to automotive, aerospace and communication networks—enabling smarter, faster, better technologies to connect products to possibilities.

More information on TE Connectivity can be found at <http://www.te.com>.

While TE Connectivity (TE) has made every reasonable effort to ensure the accuracy of the information in this catalog, TE does not guarantee that it is error-free, nor does TE make any other representation, warranty or guarantee that the information is accurate, correct, reliable or current. TE reserves the right to make any adjustments to the information contained herein at any time without notice. TE expressly disclaims all implied warranties regarding the information contained herein, including, but not limited to, any implied warranties of merchantability or fitness for a particular purpose. The dimensions in this catalog are for reference purposes only and are subject to change without notice. Specifications are subject to change without notice. Consult TE for the latest dimensions and design specifications. TE Connectivity and TE connectivity (logo) are trademarks.

TE Energy - innovative and economical solutions for the electrical power industry: cable accessories, connectors & fittings, insulators & insulation, surge arresters, switching equipment, street lighting, power measurement and control.

Tyco Electronics SIMEL S.A.S
Route de Saulon
21220 Gevrey-Chambertin, France

Phone: +33-(0)3-80583200
Fax: +33-(0)3-80583155

energy.te.com

