



Raychem In-Line Joint System LJSM Including  
New Mechanical Shear Bolt Connectors BSL, for  
Plastic and Rubber Insulated Cables up to 1 kV

**Raychem**  
from TE Connectivity

# Raychem Inline Joint System LJSM Including New Mechanical Shear Bolt Connectors BSL, for Plastic and Rubber Insulated Cables up to 1 kV

## General

The new Raychem LJSM product line of low voltage joints combines the characteristics of the well-known, long-term tested and reliable Raychem heat shrink technology with the advantages of mechanical shear bolt connectors.

The design of the joints follows the requirements of the new DIN 47640 standard for low voltage joints, defining the compatibility between low voltage heat shrink tubings and mechanical connectors. All requirements of the standard are met by using the advanced Raychem WCSM insulation sleeves with larger application range and the new developed Raychem BSLU mechanical shear bolt connectors.

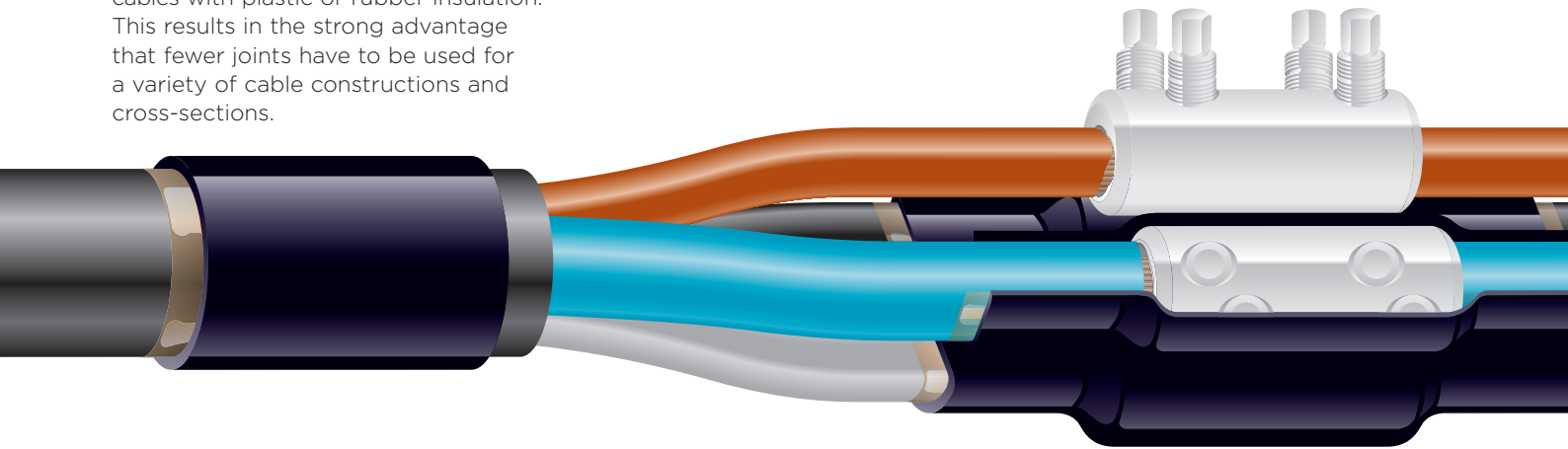
Raychem LJSM joints allow connections of many cable types and sizes for cables with plastic or rubber insulation. This results in the strong advantage that fewer joints have to be used for a variety of cable constructions and cross-sections.

## Features & Benefits

- Standardized LV jointing system, fully compliant to the new specification DIN 47640
- Fixed application ranges, with clear allocation for selection of mechanical connectors, sleeve sizes and length as well as cutback dimensions
- Joints designed to meet modern requirements for LV accessories and to cover all relevant customer specifications for LV joints
- Focus on high range-taking, i.e. a smaller number of kits and components will be used
- Using the advanced Raychem WCSM insulation sleeves allows unrestricted use of mechanical shear bolt connectors

- Wall thickness of the insulation sleeves optimized to ensure mechanical and electrical strength over connectors
- Shear-torque-controlled more reliable mechanical connectors
- No shelf-life issues with main components
- Easy and fast installation
- Base design easily transferable to other types of polymeric cable types, cables with armour and also to transition joints

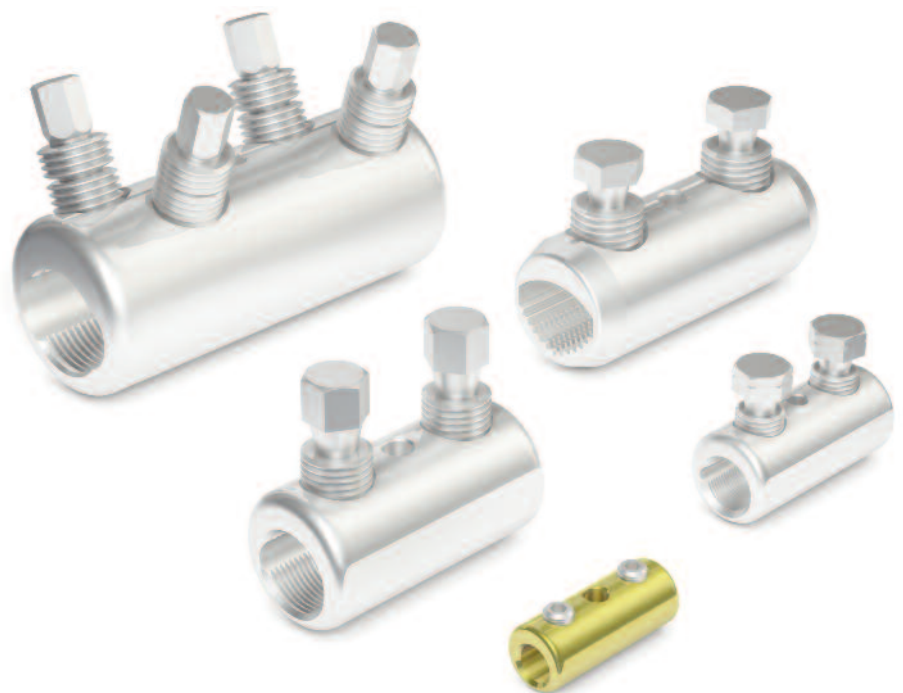
All joint components combine excellent electrical performance, mechanical strength and moisture sealing to provide the main functions required for low voltage products.



## BSLU and BSLB - Mechanical shear bolt connectors - Features & Benefits

Standardized range of five sizes of LV mechanical connectors, fully compliant to the new specification DIN 47640

- Bodies and shear off bolts made of high strength Aluminium alloy
- Cross-grooved conductor channels for improved long term contact performance
- Bodies, with rounded edges, completely electro-tinned
- Bolts with outer hexagonal head, waxed for better installation, not removable
- Connectors available unblocked and blocked
- Unique design with round bores and milled notches to allow installation of sector-shaped conductors without rounding

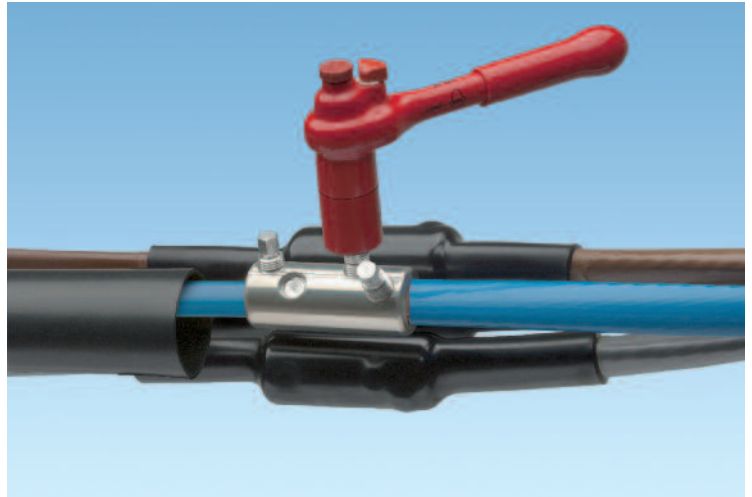


The new Raychem LJSM product line has passed all type tests in accordance with:

EN50393 - Test requirements on cable accessories for applications on energy power cables of rated voltages up to 0.6/1(1.2) kV

Independent qualifications tests have been carried out on the sizes 35/150 and 95/240 at the "Institute for Electrical Engineering and High voltage technology" (IEH) at the University of Karlsruhe, Germany.

All other sizes have also been completely tested in the TE Connectivity Raychem Laboratories in Ottobrunn/ Munich in Germany.



LJSM-PP Joints – Appropriate for Live-line-installations



**Mechanical shear bolt connectors - General advantages**

- Designed for high range taking
- Application independent from conductor materials and constructions
- Easier and safer installation of the mechanical connectors  
→ improved network reliability  
→ fast installation using standard spanners, ratchets or electrical torque wrenches
- Less compression connectors types required → inventory reduction
- No purchasing or maintenance cost for installation tools used on compression connectors

The new BSL product line has passed all required type tests in accordance with:  
IEC-61238-1, class A - Test requirements on connectors for use on energy power cables



**Cordless impact wrench**

For the installation of mechanical connectors a cordless impact wrench is available. For more details see brochure EPP 1297.

## Ordering information

Raychem LJSM inline joint kits are currently available for polymeric insulated cables without armours, for the applications on 4-core and 5-core cables and cross-sections from 4-240 mm<sup>2</sup>. Each joint covers a large range of cable sizes and is supplied as a complete set, including the new BSLU (unblocked) mechanical shear bolt connectors and all other required heat shrink components. The joint application ranges, defined in the selection table are defined by the max. application limits of the heat shrinkable components and the design limits for the mech. connectors. Due to different conductor and cable dimensions the minimum and maximum application range may be extendable or have to be limited. Please contact your local TE sales representative.

### Standard kits available

Application range (mm <sup>2</sup> )	Kit name	Part number	Kits contain connectors
4-16	LJSM-4X/004-016	CY1507-000	BSLU-4/16
16-50	LJSM-4X/016-050	CY1514-000	BSLU-10/50
35-95	LJSM-4X/035-095	CY1503-000	BSLU-35/95
35-150	LJSM-4X/035-150	CY1502-000	BSLU-25/150
95-240	LJSM-4X/095-240	CY1501-000	BSLU-95/240
1.5-6	LJSM-5X/1.5-006	CY1555-000	HEL-4102.1
4-16	LJSM-5X/004-016	CY1556-000	BSLU-4/16
16-35	LJSM-5X/016-035	CY1557-000	BSLU-10/50

### Additional kits for life-line working (working method to be approved from the customer)

Application range (mm <sup>2</sup> )	Kit name	Part number	Kits contain connectors
4-16	LJSM-4X/004-016-PP	CY1518-000	BSLU-4/16
16-50	LJSM-4X/016-050-PP	CY1522-000	BSLU-10/50
35-95	LJSM-4X/035-095-PP	CY1546-000	BSLU-35/95
35-150	LJSM-4X/035-150-PP	CY1543-000	BSLU-25/150
95-240	LJSM-4X/095-240-PP	CY1544-000	BSLU-95/240

### Kits with blocked mechanical connectors

Application range (mm <sup>2</sup> )	Kit name	Part number	Kits contain connectors
4-16	LJSM-B-4X004-016	CY8275-000	BSLB-4/16
16-50	LJSM-B-4X016-050	CY8270-000	BSLB-10/50
35-95	LJSM-B-4X035-095	CY8276-000	BSLB-35/95
35-150	LJSM-B-4X035-150	CY8277-000	BSLB-25/150
95-240	LJSM-B-4X095-240	CY8278-000	BSLB-95/240
4-16	LJSM-B-5X004-016	CY8280-000	BSLB-4/16
16-35	LJSM-B-5X016-35	CY8282-000	BSLB-10/50

### Kits without mechanical connectors (designed for crimp and mechanical connectors)

Application range (mm <sup>2</sup> )	Kit name	Part number
4-16	LJSM-B-4X004-016	CY8275-000
16-50	LJSM-B-4X016-050	CY8270-000
35-95	LJSM-B-4X035-095	CY8276-000
35-150	LJSM-B-4X035-150	CY8277-000
95-240	LJSM-B-4X095-240	CY8278-000
4-16	LJSM-B-5X004-016	CY8280-000
16-35	LJSM-B-5X016-35	CY8282-000

The difference to the standard kits is only the longer length of the inner insulation sleeves the outer re-jacketing and the increased cutback, according to the requirements of DIN47640.

Joints for other cable types, different number of cores or armoured cables are available on request.

For further information on these new Raychem products from TE Connectivity, please contact the local TE sales teams.

As one of the leaders in heat-shrinkable materials and one of the largest cable accessories makers, we additionally offer customer training, service and technical assistance to meet the demands of the growing world of energy.

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