

## Heat-Shrink Joints

**MXSU****Jointing system up to 36kV complete with mechanical connectors****General Description**

Raychem MXSU series of heat shrinkable cable joints have been specifically designed for use with mechanical connectors. The inclusion of range taking connectors ensures the kits can be supplied complete, with connectors that cover the use range of the kits. MXSU kits exceed international performance standards including CENELEC HD 629 and IEC 60502-4. Tested for 800 hours of heat cycling at a conductor temperature of 130°C @ 2.5U<sub>0</sub>.

**Features & Benefits**

- Polymeric/elastomeric triple extruded, conducting/insulating joint body ensures higher recovery force and fewer components, improving reliability and simplifying installation.
- Range taking capability of mechanical connectors makes it possible to include a single connector that covers the use range of the kit.
- Mechanical connectors eliminate the need for a crimping tool.
- Shear head bolts, with a pre-set shear torque, ensure consistent contact pressure. Specially designed contact surface at the bolt tip breaks up the conductor oxide layer resulting in an excellent electrical contact and improved tensile strength. Eliminates jointer errors.
- Tin plated mechanical connectors with corrosion inhibiting compound facilitates installation on aluminium or copper conductors.
- Can withstand sheath testing for 15 minutes at 15kV DC and 8kV AC.
- Range taking kits with unlimited shelf life.

**Selection Information: dimensions shown in millimeters****Inline joint for 3 core poly cables with copper wire shield, without armour**

| Mechanical Connectors included | 12 kV   | 24 kV   | Diameter Conductor | Diameter over Core insulation | Diameter Cable Over sheath |
|--------------------------------|---------|---------|--------------------|-------------------------------|----------------------------|
| MXSU-3311                      | 25-95   |         | 5.2-12.0mm         | 13.2-21.8mm                   | 40-61mm                    |
| MXSU-3321                      | 70-150  |         | 8.7-15.0mm         | 17.6-24.3mm                   | 45-68mm                    |
| MXSU-3331                      | 95-240  |         | 10.3-19.2mm        | 18.5-29.4mm                   | 53-77mm                    |
| MXSU-3332                      | 150-300 |         | 12.9-21.6mm        | 21.6-31.4mm                   | 59-85mm                    |
| MXSU-5311                      |         | 25-95   | 5.2-12.0mm         | 17.9-26.0mm                   | 48-72mm                    |
| MXSU-5321                      |         | 50-150  | 7.2-15.0mm         | 20.2-29.5mm                   | 55-80mm                    |
| MXSU-5331                      |         | 95-240  | 10.3-19.2mm        | 23.0-33.6mm                   | 62-89mm                    |
| MXSU-5332                      |         | 150-300 | 12.9-21.6mm        | 25.0-35.5mm                   | 70-96mm                    |

**Inline joint for 3 core poly cables with copper wire shield, and steel tape armour**

| Mechanical Connectors included | 12 kV   | 24 kV   | Diameter Conductor | Diameter over Core insulation | Diameter Cable Over sheath |
|--------------------------------|---------|---------|--------------------|-------------------------------|----------------------------|
| MXST-3331                      | 95-240  |         | 10.3-19.2mm        | 17.6-29.4mm                   | 60-80mm                    |
| MXST-3332                      | 150-300 |         | 12.9-21.6mm        | 22.0-31.4mm                   | 64-85mm                    |
| MXST-5331                      |         | 95-240  | 10.3-19.2mm        | 23.0-33.6mm                   | 70-90mm                    |
| MXST-5332                      |         | 150-300 | 12.9-21.6mm        | 25.0-35.5mm                   | 76-95mm                    |

**Inline joint for 3 core poly cables with copper wire shield and steel wire armour**

| Mechanical Connectors included | 12 kV   | 24 kV   | Diameter Conductor | Diameter over Core insulation | Diameter Cable Over sheath |
|--------------------------------|---------|---------|--------------------|-------------------------------|----------------------------|
| MXSW-3331                      | 95-240  |         | 10.3-19.2mm        | 17.6-29.4mm                   | 60-80mm                    |
| MXSW-3332                      | 150-300 |         | 12.9-21.6mm        | 22.0-31.4mm                   | 64-85mm                    |
| MXSW-5331                      |         | 95-240  | 10.3-19.2mm        | 23.0-33.6mm                   | 70-90mm                    |
| MXSW-5332                      |         | 150-300 | 12.9-21.6mm        | 25.0-35.5mm                   | 76-95mm                    |

Note: For armoured and tape shield cables, please contact your local sales representative

**Inline joint for 1 core poly cables with copper wire shield without armour**

| <b>Mechanical Connectors included</b> | <b>12 kV</b> | <b>24 kV</b> | <b>36 kV</b> | <b>Diameter Conductor</b> | <b>Diameter over Core insulation</b> | <b>Diameter Cable Over sheath</b> |
|---------------------------------------|--------------|--------------|--------------|---------------------------|--------------------------------------|-----------------------------------|
| MXSU-3111                             | 25-95        |              |              | 5.2-12.0 mm               | 13.2-21.8 mm                         | 23-32 mm                          |
| MXSU-3121                             | 70-152       |              |              | 8.7-15.0 mm               | 17.6-24.3 mm                         | 25-38 mm                          |
| MXSU-3131                             | 95-240       |              |              | 10.3-19.2 mm              | 17.6-29.4 mm                         | 26-40 mm                          |
| MXSU-3132                             | 150-300      |              |              | 12.9-21.6 mm              | 21.6-30.4 mm                         | 29-43 mm                          |
| MXSU-3141                             | 240-400      |              |              | 17.8-24.6 mm              | 25.7-32.6 mm                         | 33-47 mm                          |
| MXSU-3151                             | 500          |              |              | 25.5-27.6 mm              | 33.8-37.2 mm                         | 44-50 mm                          |
| MXSU-3161                             | 630          |              |              | 29.0-32.5 mm              | 37.5-40.0 mm                         | 47-54 mm                          |
| MXSU-3171                             | 800          |              |              | 32.0-33.8 mm              | 39.5-42.6 mm                         | 52-57 mm                          |
| MXSU-3181                             | 1000         |              |              | 38.5-39.2 mm              | 45.0-47.6 mm                         | 59-64 mm                          |
| MXSU-5101                             |              | 10-35        |              | 3.7-7.5 mm                | 15.0-22.0 mm                         | 17-33 mm                          |
| MXSU-5111                             |              | 25-95        |              | 5.2-12.0 mm               | 17.9-26.0 mm                         | 25-38 mm                          |
| MXSU-5121                             |              | 50-150       |              | 7.2-15.0 mm               | 20.2-29.5 mm                         | 28-38 mm                          |
| MXSU-5131                             |              | 95-240       |              | 10.3-19.2 mm              | 23.0-33.6 mm                         | 30-43 mm                          |
| MXSU-5132                             |              | 150-300      |              | 12.9-21.6 mm              | 25.0-35.5 mm                         | 33-48 mm                          |
| MXSU-5141                             |              | 240-400      |              | 17.8-24.6 mm              | 29.9-38.8 mm                         | 35-49 mm                          |
| MXSU-5151                             |              | 500          |              | 25.5-27.6 mm              | 37.2-41.6 mm                         | 48-54 mm                          |
| MXSU-5161                             |              | 630          |              | 29.0-32.5 mm              | 39.2-44.7 mm                         | 50-58 mm                          |
| MXSU-5171                             |              | 800          |              | 32.0-33.8 mm              | 44.8-46.9 mm                         | 58-61 mm                          |
| MXSU-5181                             |              | 1000         |              | 38.5-39.2 mm              | 49.4-53.2 mm                         | 64-67 mm                          |
| MXSU-6111                             |              |              | 35-95        | 6.0-12.0 mm               | 24.0-30.0 mm                         | 32-43 mm                          |
| MXSU-6121                             |              |              | 70-150       | 8.7-15.0 mm               | 26.2-34.5 mm                         | 34-44 mm                          |
| MXSU-6131                             |              |              | 150-300      | 13.9-21.6 mm              | 31.1-39.6 mm                         | 38-53 mm                          |
| MXSU-6141                             |              |              | 240-400      | 17.8-24.6 mm              | 36.2-42.8 mm                         | 40-54 mm                          |
| MXSU-6151                             |              |              | 500          | 25.5-29.2 mm              | 40.1-46.6 mm                         | 52-60 mm                          |
| MXSU-6161                             |              |              | 630          | 29.0-32.5 mm              | 45.8-50.5 mm                         | 55-68 mm                          |
| MXSU-6171                             |              |              | 800          | 32.0-33.8 mm              | 50.1-53.4 mm                         | 62-66 mm                          |
| MXSU-6181                             |              |              | 1000         | 38.5-39.2 mm              | 55.7-58.8 mm                         | 69-73 mm                          |

Note: For armoured and tape shield cables, please contact your local sales representative

**Inline joint for 1 core poly cables with copper wire or tape shield with aluminium wire armour**

| <b>Mechanical Connectors included</b> | <b>24 kV</b> | <b>Diameter Conductor</b> | <b>Diameter over Core insulation</b> | <b>Diameter Cable Over sheath</b> |
|---------------------------------------|--------------|---------------------------|--------------------------------------|-----------------------------------|
| MXAW5131                              | 95-185       | 10.3-17.6 mm              | 23.0-31.2 mm                         | 37-43 mm                          |
| MXAW5132                              | 150-300      | 12.9-21.6 mm              | 25.8-34.6 mm                         | 40-48 mm                          |
| MXAW5141                              | 240-400      | 17.8-24.6 mm              | 29.4-38.8 mm                         | 44-54 mm                          |
| MXAW5151                              | 500          | 25.5-27.6 mm              | 37.2-41.6 mm                         | 48-56 mm                          |
| MXAW5161                              | 630          | 29.0-32.5 mm              | 39.2-44.7 mm                         | 50-60 mm                          |

Note: For cable constructions or voltages not listed, please contact your local sales representative

Heat-Shrink Joints



**SXSU**

**Joints for polymeric insulated cables from 12 kV up to 36 kV**

**General Description**

Raychem SXSU series of heat shrinkable joints is based on well established, highly reliable, radiation cross linked polymeric tubes which are easy to install, eliminates shelf life limitations even in severe climates and permits immediate back filling of trenches and quick energization.

With millions of installations throughout the world, Raychem SXSU cable joints for up to 36 kV are acknowledged to be more reliable and quicker to install than conventional systems.

SXSU kits exceed International performance standards including CENELEC HD 629 and IEC 60502-4.

**Features & Benefits**

- Polymeric/elastomeric triple extruded, conducting/insulating joint body ensures higher recovery force and fewer components, improving reliability and simplifying installation.
- Insulating, screening and electric field control derived from specially formulated, crosslinked polymeric materials with precisely defined electrical characteristics.
- Factory engineered components ensure consistent installations with pre-determined insulation thickness, eliminating installer errors.
- No penciling of insulation required, reducing installation time.
- Shrinking process drives out moisture / condensation in the jointing area, ensuring no moisture entrapment within the joint.
- Wide use range of kits ensures fewer kits to cover a range of conductor sizes, reducing inventory.
- Special low viscosity void filler flows and uniformly envelops the connector, creating a smooth profile.
- Unlimited shelf life allows stocking of economic quantities without product spoilage.
- Enhanced range-taking ability means that one kit fits more conductor sizes, reducing stocking requirements.

**Selection Information: dimensions shown in millimeters**

**Inline joint for 1-core polymeric cables with copper wire shield, without armour**

| Kit Number | 12kV     | 24kV      | 36kV     | Diameter over Core insulation | Diameter Cable oversheath | Connector dimensions max. diameter/max.length |
|------------|----------|-----------|----------|-------------------------------|---------------------------|---|
| SXSU-3111  | 35-70    |           |          | 15,4-20,2 mm                  | 23-29 mm                  | 23 mm/ 110 mm                                 |
| SXSU-3121  | 95-185   |           |          | 17,6-26,9 mm                  | 25-37 mm                  | 29 mm/ 160 mm                                 |
| SXSU-3131  | 185-300  |           |          | 22,0-31,4 mm                  | 29-43 mm                  | 34 mm/ 180 mm                                 |
| SXSU-3141  | 300-500  |           |          | 28,4-38,8 mm                  | 36-52 mm                  | 44 mm/ 220 mm                                 |
| SXSU-4111  | 50-70    |           |          | 15,4-20,2 mm                  | 23-29 mm                  | 22 mm/ 110 mm                                 |
| SXSU-4121  | 95-185   |           |          | 17,6-26,9 mm                  | 25-37 mm                  | 29 mm/ 160 mm                                 |
| SXSU-4131  | 185-300  |           |          | 23,2-31,4 mm                  | 29-43 mm                  | 36 mm/ 180 mm                                 |
| SXSU-4141  | 400-630  |           |          | 29,8-42,5 mm                  | 40-52 mm                  | 52 mm/ 250 mm                                 |
| SXSU-4151  | 800-1200 |           |          | 39,4-50,0 mm                  | 48-66 mm                  | 62mm/ 280 mm                                  |
| SXSU-5121  |          | 25-95     |          | 17,6-26,0 mm                  | 25-37 mm                  | 23 mm/ 120 mm                                 |
| SXSU-5131  |          | 95-240    |          | 23,2-33,6 mm                  | 28-44 mm                  | 34 mm/ 140 mm                                 |
| SXSU-5141  |          | 240-500   |          | 29,8-41,6 mm                  | 33-52 mm                  | 44 mm/ 230 mm                                 |
| SXSU-5151  |          | 630-800   |          | 39,4-48,0 mm                  | 48-66 mm                  | 58 mm/ 250 mm                                 |
| SXSU-5161  |          | 1000-1200 |          | 49,4-56,2 mm                  | 55-75 mm                  | 62 mm/ 280 mm                                 |
| SXSU-6121  |          |           | 35-95    | 24,0-31,4 mm                  | 32-41 mm                  | 22 mm/ 140 mm                                 |
| SXSU-6131  |          |           | 95-150   | 26,4-34,4 mm                  | 35-46 mm                  | 29 mm/ 160 mm                                 |
| SXSU-6141  |          |           | 185-400  | 31,9-43,7 mm                  | 40-54 mm                  | 42 mm/ 220 mm                                 |
| SXSU-6151  |          |           | 500-800  | 42,9-53,4 mm                  | 55-66 mm                  | 58 mm/ 250 mm                                 |
| SXSU-6161  |          |           | 800-1200 | 46,2-61,5 mm                  | 55-73 mm                  | 62 mm/ 280 mm                                 |
| SXSU-6122  |          |           | 35-150   | 24,0-34,4 mm                  | 33-44 mm                  | 29 mm/ 160 mm                                 |
| SXSU-6132  |          |           | 150-300  | 30,8-40,5 mm                  | 36-52 mm                  | 38 mm/ 160 mm                                 |
| SXSU-6142  |          |           | 400-630  | 40,1-50,5 mm                  | 40-62 mm                  | 52 mm/ 250 mm                                 |
| SXSU-6152  |          |           | 800-1200 | 45,6-61,5 mm                  | 55-76 mm                  | 62 mm/ 280 mm                                 |

Note: For copper tape shield or armoured cables, please contact your local sales representative.

**Inline joint for 3-core polymeric cables with copper wire shield, without armour**

| Kit Number | 12kV    | 24kV    | 36kV | Diameter over Core insulation | Diameter Cable oversheath | Connector dimensions max. diameter/max.length |
|------------|---------|---------|------|-------------------------------|---------------------------|---|
| SXSU-3311  | 35-70   |         |      | 15,4-20,2 mm                  | 40-57 mm                  | 23 mm/ 110 mm                                 |
| SXSU-3321  | 95-185  |         |      | 17,6-26,9 mm                  | 53-73 mm                  | 29 mm/ 160 mm                                 |
| SXSU-3331  | 185-300 |         |      | 22,0-31,4 mm                  | 63-82 mm                  | 34 mm/ 180 mm                                 |
| SXSU-4302  | 16-35   |         |      | 13,2-17,3 mm                  | 38-49 mm                  | 17 mm/ 100 mm                                 |
| SXSU-4312  | 50-70   |         |      | 15,4-20,2 mm                  | 46-57 mm                  | 22 mm/ 110 mm                                 |
| SXSU-4322  | 95-185  |         |      | 17,6-26,9 mm                  | 53-73 mm                  | 29 mm/ 160 mm                                 |
| SXSU-4332  | 185-300 |         |      | 23,2-31,4 mm                  | 63-82 mm                  | 36 mm/ 180 mm                                 |
| SXSU-5322  |         | 25-95   |      | 17,6-26,0 mm                  | 48-72 mm                  | 23 mm/ 120 mm                                 |
| SXSU-5332  |         | 95-240  |      | 23,2-33,6 mm                  | 62-89 mm                  | 34 mm/ 140 mm                                 |
| SXSU-5342  |         | 240-500 |      | 29,8-41,6 mm                  | 78-100 mm                 | 44 mm/ 230 mm                                 |

Note: For copper tape shield or armoured cables, please contact your local sales representative.

**Inline joint for 3-core polymeric cables with copper wire shield and steel tape armour**

| Kit Number | 12kV    | Diameter over Core insulation | Diameter Cable oversheath | Connector dimensions max. diameter/max.length |
|------------|---------|-------------------------------|---------------------------|---|
| SXST-4303  | 16-35   | 13,2-17,3 mm                  | 38-52 mm                  | 17 mm/ 100 mm                                 |
| SXST-4313  | 50-70   | 15,4-20,2 mm                  | 48-57 mm                  | 22 mm/ 110 mm                                 |
| SXST-4323  | 95-185  | 17,6-26,9 mm                  | 56-73 mm                  | 29 mm/ 160 mm                                 |
| SXST-4333  | 185-300 | 23,2-31,4 mm                  | 68-84 mm                  | 36 mm/ 180 mm                                 |

Note: For tape shield cables, please contact your local sales representative.

**Inline joint for 3-core polymeric cables with copper wire shield and steel wire armour**

| Kit Number | 12kV    | Diameter over Core insulation | Diameter Cable oversheath | Connector dimensions max. diameter/max.length |
|------------|---------|-------------------------------|---------------------------|---|
| SXSW-4304  | 16-35   | 13,2-17,3 mm                  | 38-54 mm                  | 17 mm/ 100 mm                                 |
| SXSW-4314  | 50-70   | 15,4-20,2 mm                  | 48-60 mm                  | 22 mm/ 110 mm                                 |
| SXSW-4324  | 95-185  | 17,6-26,9 mm                  | 56-75 mm                  | 29 mm/ 160 mm                                 |
| SXSW-4334  | 185-300 | 23,2-31,4 mm                  | 68-86 mm                  | 36 mm/ 180 mm                                 |

Note: For copper tape shield cables, please contact your local sales representative.

**Inline joint for 1-core polymeric cables with copper wire screen and aluminium wire armour**

| Kit Number | 12kV    | 24kV    | 36kV    | Diameter over Core insulation | Diameter Cable oversheath | Connector dimensions max. diameter/max.length |
|------------|---------|---------|---------|-------------------------------|---------------------------|---|
| SXAW-3121  | 95-185  |         |         | 17,6-26,9 mm                  | 28-39 mm                  | 28,5 mm/ 140 mm                               |
| SXAW-3131  | 185-300 |         |         | 22,0-31,4 mm                  | 33-45 mm                  | 34 mm/ 180 mm                                 |
| SXAW-3141  | 400-500 |         |         | 28,4-38,8 mm                  | 40-52 mm                  | 44 mm/ 220 mm                                 |
| SXAW-3151  | 630-800 |         |         | 39,4-45,5 mm                  | 53-59 mm                  | 58 mm/ 250 mm                                 |
| SXAW-5121  |         | 50-95   |         | 17,6-26,0 mm                  | 28-39 mm                  | 23 mm/ 120 mm                                 |
| SXAW-5131  |         | 120-185 |         | 23,2-33,6 mm                  | 33-44 mm                  | 28,5 mm/ 140 mm                               |
| SXAW-5141  |         | 240-400 |         | 29,8-38,8 mm                  | 40-54 mm                  | 38,5 mm/ 220 mm                               |
| SXAW-5151  |         | 500-630 |         | 39,4-45,0 mm                  | 54-64 mm                  | 52 mm/ 250 mm                                 |
| SXAW-6122  |         |         | 50-95   | 24,0-31,4 mm                  | 33-44 mm                  | 23 mm/ 120 mm                                 |
| SXAW-6132  |         |         | 120-240 | 30,8-40,5 mm                  | 44-54 mm                  | 32 mm/ 160 mm                                 |
| SXAW-6142  |         |         | 300-630 | 40,1-50,5 mm                  | 54-68 mm                  | 52 mm/ 250 mm                                 |

Note: For tape shield cables, please contact your local sales representative.