

# TYPE APPROVAL CERTIFICATE

**This is to certify:****That the Termination and Joint for Cable**

with type designation(s)

**Terminations for Medium Voltage cable: IXSU-F and OXSU-F**

Issued to

**Tyco Electronics Raychem GmbH  
Ottobrunn, Germany**

is found to comply with

**DNV GL rules for classification – Ships, offshore units, and high speed and light craft****Application :****Terminations for Medium Voltage cable 12, 17 & 24 kV.****Indoor and outdoor application for single core and three core.****Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**Issued at **Hamburg** on **2019-04-11**This Certificate is valid until **2024-04-10**.DNV GL local station: **Augsburg**for **DNV GL**Approval Engineer: **Carsten Hunsalz**

---

**Arne Schaarmann  
Head of Section**

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid. The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.



## Product description

Terminations for Medium Voltage cable: IXSU-F and OXSU-F

| Voltage class<br>kV | Cross-section<br>mm <sup>2</sup> | Kit number<br>INDOOR<br>IXSU-FXXXX | Kit number<br>OUTDOOR<br>OXSU-FXXXX |
|---------------------|----------------------------------|------------------------------------|-------------------------------------|
|                     |                                  | Single core                        | Single core                         |
| 12                  | 10-35                            | IXSU - F3111                       | OXSU - F3111                        |
| 12                  | 25-95                            | IXSU - F3121                       | OXSU - F3121                        |
| 12                  | 95-240                           | IXSU - F3131                       | OXSU - F3131                        |
| 12                  | 240-500                          | IXSU - F3141                       | OXSU - F3141                        |
| 12                  | 500-800                          | IXSU - F3151                       | OXSU - F3151                        |
|                     |                                  |                                    |                                     |
| 17,5                | 16-25                            | IXSU - F4111                       | OXSU - F4111                        |
| 17,5                | 35-95                            | IXSU - F4121                       | OXSU - F4121                        |
| 17,5                | 95-240                           | IXSU - F4131                       | OXSU - F4131                        |
| 17,5                | 240-400                          | IXSU - F4141                       | OXSU - F4141                        |
| 17,5                | 400-800                          | IXSU - F4151                       | OXSU - F4151                        |
|                     |                                  |                                    |                                     |
|                     |                                  |                                    |                                     |
| 24                  | 25-70                            | IXSU - F5121                       | OXSU - F5121                        |
| 24                  | 70-240                           | IXSU - F5131                       | OXSU - F5131                        |
| 24                  | 185-400                          | IXSU - F5141                       | OXSU - F5141                        |
| 24                  | 400-800                          | IXSU - F5151                       | OXSU - F5151                        |
|                     |                                  |                                    |                                     |
|                     |                                  | Three core                         | Three core                          |
| 12                  | 10-16                            | IXSU - F3301                       | OXSU - F3301                        |
| 12                  |                                  | IXSU - F3304                       | OXSU - F3304                        |
| 12                  | 16-35                            | IXSU - F3311                       | OXSU - F3311                        |
| 12                  |                                  | IXSU - F3314                       | OXSU - F3314                        |
| 12                  | 25-70                            | IXSU - F3321                       | OXSU - F3321                        |
| 12                  |                                  | IXSU - F3324                       | OXSU - F3324                        |
| 12                  | 95-240                           | IXSU - F3331                       | OXSU - F3331                        |
| 12                  |                                  | IXSU - F3334                       | OXSU - F3334                        |
| 12                  | 240-500                          | IXSU - F3341                       | OXSU - F3341                        |
| 12                  |                                  | IXSU - F3344                       | OXSU - F3344                        |
|                     |                                  |                                    |                                     |
| 17,5                | 25-50                            | IXSU - F4321                       | OXSU - F4321                        |
| 17,5                |                                  | IXSU - F4324                       | OXSU - F4324                        |
| 17,5                | 70-185                           | IXSU - F4331                       | OXSU - F4331                        |
| 17,5                |                                  | IXSU - F4334                       | OXSU - F4334                        |
| 17,5                | 185-400                          | IXSU - F4341                       | OXSU - F4341                        |
| 17,5                |                                  | IXSU - F4344                       | OXSU - F4344                        |
|                     |                                  |                                    |                                     |
| 24                  | 10-25                            | IXSU - F5311                       | OXSU - F5311                        |
| 24                  |                                  | IXSU - F5314                       | OXSU - F5314                        |
| 24                  | 25-50                            | IXSU - F5321                       | OXSU - F5321                        |
| 24                  |                                  | IXSU - F5324                       | OXSU - F5324                        |
| 24                  | 70-185                           | IXSU - F5331                       | OXSU - F5331                        |
| 24                  |                                  | IXSU - F5334                       | OXSU - F5334                        |
| 24                  | 185-400                          | IXSU - F5341                       | OXSU - F5341                        |
| 24                  |                                  | IXSU - F5344                       | OXSU - F5344                        |

## **Application/Limitation**

Installation has to be done in accordance with the installation instructions.

## **Type Approval documentation**

### **Tests carried out**

Tested according to CENELEC HD 629.1 S1 1996 and IEC 60502-4.

### **Marking of product**

Raychem – Product Type – Batch no.

### **Periodical assessment**

The scope of the periodical assessment is to verify that the conditions stipulated for the Type approval are complied with and that no alterations are made to the product design or choice of materials.

The main elements of the assessment are:

- Inspection on factory samples, selected at random from the production line (where practicable)
- Results from Routine Tests (RT) checked (if not available tests according to RT to be carried out)
- Review of type approval documentation
- Review of possible change in design, materials and performance
- Ensuring traceability between manufacturer's product type marking and Type Approval Certificate.

Periodical assessment is to be performed after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.

END OF CERTIFICATE