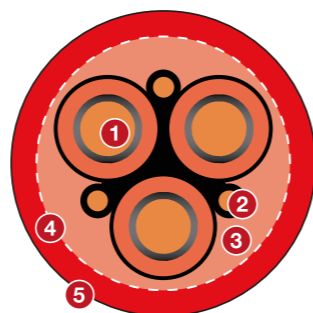


# UTVFLEX® - R MT

(N) TSCGEWÖU

Based on DIN VDE 0250 Part 813

Flexible reeling cable (UTVFLEX® R/MT) for high and extreme mechanical stresses, e.g. torsional stress, deflection into different planes and high reeling speed. Also usable for reeling application in underground and opencast mining.



### 1 PHASE CONDUCTORS

**MATERIAL:** tinned copper  
**CONSTRUCTION:** class 5 VDE 0295 (IEC 60228), special construction for higher flexibility  
**INSULATION MATERIAL:** 3GI3 quality rubber compound, according to VDE 0207 Part 20  
**SEMICONDUCTIVE LAYERS:** semiconductive tape over the conductor and inner and outer semiconductive rubber layer on the insulation

### 2 EARTH CONDUCTORS

**MATERIAL:** tinned copper  
**CONSTRUCTION:** class 5 VDE 0295 (IEC 60228), special construction for higher flexibility  
**COVERING MATERIAL:** semiconductive layer

### CENTRAL FILLER

**MATERIAL:** semiconductive compound on textile polyester support

### CORES ASSEMBLY

**ASSEMBLY:** twisted cores with earth conductor split into 3 parts  
**SEPARATOR ON THE TWISTED ASSEMBLY:** semiconductive tape wound on the twisted cores

### 3 INNER SHEATH

**MATERIAL:** Gm1b/5GM5 quality rubber compound, according to VDE 0207 Part 21

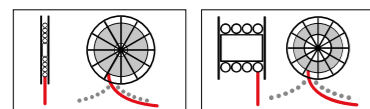
### 4 ANTITWISTING ELEMENT

**MATERIAL:** polyester braid between inner and outer sheath

### 5 OUTER SHEATH

**MATERIAL:** 5GM5 quality rubber compound, according to VDE 0207 Part 21 **COLOUR:** red

### APPLICATION



### ELECTRICAL WORKING DATA

|                                 |   |                              |        |         |         |
|---------------------------------|---|------------------------------|--------|---------|---------|
| Nominal rated voltage $U_0 / U$ | kV  | 3,6/6                        | 6/10   | 8,7/15  | 12/20   |
| Test voltage                    | kV  | 11                           | 17     | 24      | 29      |
| Max AC voltage                  | kV  | 4,2/7,2                      | 6,9/12 | 10,4/18 | 13,9/24 |
| Electrical field control        | Inner and outer semiconductive layers extruded in a single-pass with the insulation |                              |        |         |         |
| Current rating                  | A   | According to VDE 0298 Part 4 |        |         |         |

### THERMAL WORKING DATA

|  |    |  |
|--|----|--|
| Maximum short circuit temperature      | °C | 250  |
| Maximum working temp. on the conductor | °C | 90   |
| Minimum ambient temperature            | °C | Mobile condition: -30<br>Static condition: -50 |

### MECHANICAL WORKING DATA

|                          |                   |                              |
|--------------------------|-------------------|------------------------------|
| Bending radius           | mm                | According to VDE 0298 Part 3 |
| Maximum torsional stress | °/m               | ±25                          |
| Maximum tensile load*    | N/mm <sup>2</sup> | 30                           |
| Max working speed        | m/min             | 120                          |

\* Referred to the total phase conductors cross section  
 Upon request it's available the RF version with improved mechanical characteristics designed for ASC's and ARMG's for speed up to 240 m/min

### CHEMICAL WORKING DATA

|                   |                            |
|-------------------|----------------------------|
| Oil resistance    | According to IEC 60811-404 |
| Ozone resistance  | According to IEC 60811-403 |
| Burning behaviour | According to IEC 60332-1-2 |
| UV resistance     | According to ISO 4892-2    |

## UTVFLEX® - R MT

| VOLTAGE | CORES X CROSS SECTION | CONDUCTOR Ø | MIN OVERALL Ø | MAX OVERALL Ø | APPROX WEIGHT | MAX TENSILE LOAD |
|---------|-----------------------|-------------|---------------|---------------|---------------|------------------|
| kV      | Nr x mm <sup>2</sup>  | mm          | mm            | mm            | kg/km         | N                |
| 3,6/6   | 3x25 + 3x25/3         | 6,9         | 39,5          | 40,8          | 2390          | 2250             |
| 3,6/6   | 3x35 + 3x25/3         | 7,8         | 43,2          | 45,1          | 2930          | 3150             |
| 3,6/6   | 3x50 + 3x25/3         | 9,3         | 46,3          | 48,2          | 3540          | 4500             |
| 3,6/6   | 3x70 + 3x35/3         | 11,1        | 50,1          | 52,1          | 4450          | 6300             |
| 3,6/6   | 3x95 + 3x50/3         | 12,7        | 56,1          | 58,1          | 5610          | 8550             |
| 3,6/6   | 3x120 + 3x70/3        | 14,5        | 59,9          | 61,9          | 6800          | 10800            |
| 3,6/6   | 3x150 + 3x70/3        | 16,7        | 66,3          | 68,8          | 8300          | 13500            |
| 3,6/6   | 3x185 + 3x95/3        | 17,6        | 68,2          | 70,7          | 9440          | 16650            |
| 3,6/6   | 3x240 + 3x120/3       | 20,05       | 70,0          | 74,0          | 11650         | 21600            |

|      |                 |       |      |      |       |       |
|------|-----------------|-------|------|------|-------|-------|
| 6/10 | 3x25 + 3x25/3   | 6,9   | 39,5 | 40,8 | 2390  | 2250  |
| 6/10 | 3x35 + 3x25/3   | 7,8   | 43,2 | 45,1 | 2930  | 3150  |
| 6/10 | 3x50 + 3x25/3   | 9,3   | 46,3 | 48,2 | 3540  | 4500  |
| 6/10 | 3x70 + 3x35/3   | 11,1  | 50,1 | 52,1 | 4450  | 6300  |
| 6/10 | 3x95 + 3x50/3   | 12,7  | 56,1 | 58,1 | 5670  | 8550  |
| 6/10 | 3x120 + 3x70/3  | 14,5  | 59,9 | 61,9 | 6860  | 10800 |
| 6/10 | 3x150 + 3x70/3  | 16,7  | 66,3 | 68,8 | 8360  | 13500 |
| 6/10 | 3x185 + 3x95/3  | 17,6  | 68,2 | 70,7 | 9540  | 16650 |
| 6/10 | 3x240 + 3x120/3 | 20,05 | 72,4 | 76,4 | 12080 | 21600 |

| VOLTAGE | CORES X CROSS SECTION | CONDUCTOR Ø | MIN OVERALL Ø | MAX OVERALL Ø | APPROX WEIGHT | MAX TENSILE LOAD |
|---------|-----------------------|-------------|---------------|---------------|---------------|------------------|
| kV      | Nr x mm <sup>2</sup>  | mm          | mm            | mm            | kg/km         | N                |
| 8,7/15  | 3x25 + 3x25/3         | 6,9         | 45            | 46,9          | 2870          | 2250             |
| 8,7/15  | 3x35 + 3x25/3         | 7,8         | 46,5          | 48,4          | 3220          | 3150             |
| 8,7/15  | 3x50 + 3x25/3         | 9,3         | 49,7          | 51,7          | 3850          | 4500             |
| 8,7/15  | 3x70 + 3x35/3         | 11,1        | 55,3          | 57,3          | 5020          | 6300             |
| 8,7/15  | 3x95 + 3x50/3         | 12,7        | 58,7          | 60,7          | 5900          | 8550             |
| 8,7/15  | 3x120 + 3x70/3        | 14,5        | 64,2          | 66,7          | 7400          | 10800            |
| 8,7/15  | 3x150 + 3x70/3        | 16,7        | 68,8          | 71,4          | 8630          | 13500            |
| 8,7/15  | 3x185 + 3x95/3        | 17,6        | 70,9          | 73,5          | 9790          | 16650            |
| 8,7/15  | 3x240 + 3x120/3       | 20,05       | 75,4          | 79,4          | 12550         | 21600            |

|       |                 |       |      |      |       |       |
|-------|-----------------|-------|------|------|-------|-------|
| 12/20 | 3x25 + 3x25/3   | 6,9   | 46,7 | 48,6 | 3090  | 2250  |
| 12/20 | 3x35 + 3x25/3   | 7,8   | 49,1 | 51,1 | 3470  | 3150  |
| 12/20 | 3x50 + 3x25/3   | 9,3   | 54   | 56   | 4330  | 4500  |
| 12/20 | 3x70 + 3x35/3   | 11,1  | 57,8 | 59,8 | 5330  | 6300  |
| 12/20 | 3x95 + 3x50/3   | 12,7  | 61,1 | 63,6 | 6210  | 8550  |
| 12/20 | 3x120 + 3x70/3  | 14,5  | 66,7 | 69,2 | 7760  | 10800 |
| 12/20 | 3x150 + 3x70/3  | 16,7  | 71,3 | 73,9 | 9010  | 13500 |
| 12/20 | 3x185 + 3x95/3  | 17,6  | 73,7 | 77,8 | 10640 | 16650 |
| 12/20 | 3x240 + 3x120/3 | 20,05 | 78,8 | 83,8 | 13160 | 21600 |

## UTVFLEX® - RS MT (smaller version)

| VOLTAGE | CORES X CROSS SECTION | CONDUCTOR Ø | MIN OVERALL Ø | MAX OVERALL Ø | APPROX WEIGHT | MAX TENSILE LOAD |
|---------|-----------------------|-------------|---------------|---------------|---------------|------------------|
| kV      | Nr x mm <sup>2</sup>  | mm          | mm            | mm            | kg/km         | N                |
| 3,6/6   | 3x25 + 3x25/3         | 6,6         | 37,9          | 40,9          | 2360          | 2250             |
| 3,6/6   | 3x35 + 3x25/3         | 8           | 39,6          | 42,6          | 2730          | 3150             |
| 3,6/6   | 3x50 + 3x25/3         | 9,3         | 42,8          | 45,8          | 3350          | 4500             |
| 3,6/6   | 3x70 + 3x35/3         | 11,2        | 46,9          | 49,9          | 4290          | 6300             |
| 3,6/6   | 3x95 + 3x50/3         | 13          | 51,1          | 55,1          | 5320          | 8550             |
| 3,6/6   | 3x120 + 3x70/3        | 15          | 55,8          | 59,8          | 6690          | 10800            |
| 3,6/6   | 3x150 + 3x70/3        | 16,9        | 61,1          | 65,1          | 7870          | 13500            |
| 3,6/6   | 3x185 + 3x95/3        | 18,3        | 65,3          | 69,3          | 9360          | 16650            |
| 3,6/6   | 3x240 + 3x120/3       | 20,5        | 70,0          | 74,0          | 11650         | 21600            |

|      |                 |      |      |      |       |       |
|------|-----------------|------|------|------|-------|-------|
| 6/10 | 3x25 + 3x25/3   | 6,6  | 38,7 | 41,7 | 2410  | 2250  |
| 6/10 | 3x35 + 3x25/3   | 8    | 40,8 | 43,8 | 2810  | 3150  |
| 6/10 | 3x50 + 3x25/3   | 9,3  | 43,7 | 46,7 | 3430  | 4500  |
| 6/10 | 3x70 + 3x35/3   | 11,2 | 47,8 | 50,8 | 4380  | 6300  |
| 6/10 | 3x95 + 3x50/3   | 13   | 52   | 56   | 5410  | 8550  |
| 6/10 | 3x120 + 3x70/3  | 15   | 56,3 | 60,3 | 6750  | 10800 |
| 6/10 | 3x150 + 3x70/3  | 16,9 | 62   | 66   | 7980  | 13500 |
| 6/10 | 3x185 + 3x95/3  | 18,3 | 65,9 | 69,9 | 9430  | 16650 |
| 6/10 | 3x240 + 3x120/3 | 20,5 | 72,4 | 76,4 | 12080 | 21600 |

| VOLTAGE | CORES X CROSS SECTION | CONDUCTOR Ø | MIN OVERALL Ø | MAX OVERALL Ø | APPROX WEIGHT | MAX TENSILE LOAD |
|---------|-----------------------|-------------|---------------|---------------|---------------|------------------|
| kV      | Nr x mm <sup>2</sup>  | mm          | mm            | mm            | kg/km         | N                |
| 8,7/15  | 3x25 + 3x25/3         | 6,6         | 40,5          | 43,5          | 2590          | 2250             |
| 8,7/15  | 3x35 + 3x25/3         | 8           | 42,6          | 45,6          | 3000          | 3150             |
| 8,7/15  | 3x50 + 3x25/3         | 9,3         | 45,8          | 48,8          | 3640          | 4500             |
| 8,7/15  | 3x70 + 3x35/3         | 11,2        | 50,2          | 54,2          | 4690          | 6300             |
| 8,7/15  | 3x95 + 3x50/3         | 13          | 54,5          | 58,5          | 5710          | 8550             |
| 8,7/15  | 3x120 + 3x70/3        | 15          | 60,5          | 64,5          | 7290          | 10800            |
| 8,7/15  | 3x150 + 3x70/3        | 16,9        | 64,6          | 68,6          | 8330          | 13500            |
| 8,7/15  | 3x185 + 3x95/3        | 18,3        | 68            | 72            | 9760          | 16650            |
| 8,7/15  | 3x240 + 3x120/3       | 20,5        | 75,4          | 79,4          | 12550         | 21600            |

|       |                 |      |      |      |       |       |
|-------|-----------------|------|------|------|-------|-------|
| 12/20 | 3x25 + 3x25/3   | 6,6  | 45   | 48   | 2990  | 2250  |
| 12/20 | 3x35 + 3x25/3   | 8    | 47   | 50   | 3370  | 3150  |
| 12/20 | 3x50 + 3x25/3   | 9,3  | 50   | 54   | 4110  | 4500  |
| 12/20 | 3x70 + 3x35/3   | 11,2 | 54,1 | 58,1 | 5120  | 6300  |
| 12/20 | 3x95 + 3x50/3   | 13   | 58   | 62   | 6120  | 8550  |
| 12/20 | 3x120 + 3x70/3  | 15   | 64,3 | 68,3 | 7810  | 10800 |
| 12/20 | 3x150 + 3x70/3  | 16,9 | 68,4 | 72,4 | 8870  | 13500 |
| 12/20 | 3x185 + 3x95/3  | 18,3 | 73,7 | 77,7 | 10640 | 16650 |
| 12/20 | 3x240 + 3x120/3 | 20,5 | 78,8 | 83,8 | 13160 | 21600 |

The diameter and weight shown is approximate, they may have some tolerance (to be confirmed when ordering). Other cross sections and colors available upon request.