

# T/C Extension & Compensating Cable

Flame Retardant

Single- & Multi-Pair, PE-Insulation, Collective Screen, PVC-Sheath

RT-2Y(St)Y-fl

## Construction

**Conductor**..... thermocouple extension or compensating material acc. to page ....  
solid, sizes: 0.5 mm<sup>2</sup>, 0.8 mm<sup>2</sup>, 1.0 mm<sup>2</sup>, 1.3 mm<sup>2</sup> or 1.5 mm<sup>2</sup>

**Insulation**..... polyethylene PE

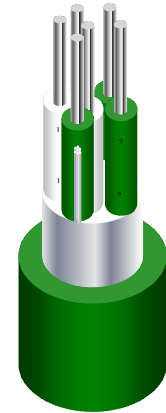
**Colour code**..... acc. to page 5  
continuously numbered on cores (1-1, 2-2, ...) for multipairs

**Wrapping**..... at least 1 layer of plastic tape

**Collective screen**... 24 µm aluminium / PETP tape over 7-stranded tinned copper  
drain wire, 0.5 mm<sup>2</sup>

**Outer sheath**..... polyvinyl chloride PVC, colour acc. to page 5 or blue for  
intrinsic safety

**Cable marking**..... KERPENWERK EXTENSION CABLE 300 V IEC 60332 PART 3 or  
KERPENWERK COMPENSATING CABLE 300 V IEC 60332 PART 3



Example: KX to IEC 60584-3

Multi-Pair, PE-Insulation, Pair & Collective Screen, PVC-Sheath

RT-2Y(St)Y-fl PiMF

## Construction

**Conductor**..... thermocouple extension or compensating material acc. to page ....  
solid, sizes: 0.5 mm<sup>2</sup>, 0.8 mm<sup>2</sup>, 1.0 mm<sup>2</sup>, 1.3 mm<sup>2</sup> or 1.5 mm<sup>2</sup>

**Insulation**..... polyethylene PE

**Colour code**..... acc. to page 5  
continuously numbered on cores (1-1, 2-2, ...) for multipairs

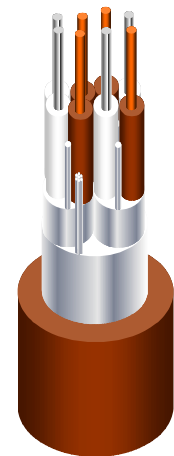
**Pair screen**... 24 µm aluminium / PETP tape over solid tinned copper  
drain wire, 0.6 mm Ø

**Wrapping**..... at least 1 layer of plastic tape

**Collective screen**... 24 µm aluminium / PETP tape over 7-stranded tinned copper  
drain wire, 0.5 mm<sup>2</sup>

**Outer sheath**..... polyvinyl chloride PVC, colour acc. to page 5 or blue for  
intrinsic safety

**Cable marking**..... KERPENWERK EXTENSION CABLE 300 V IEC 60332 PART 3 or  
KERPENWERK COMPENSATING CABLE 300 V IEC 60332 PART 3



Example: TX to IEC 60584-3

Single- & Multi-Pair, PE-Insulation, Collective Screen, Armour, PVC-Sheath

RT-2Y(St)YSWAY-fl

## Construction

**Conductor**..... thermocouple extension or compensating material acc. to page ....  
solid, sizes: 0.5 mm<sup>2</sup>, 0.8 mm<sup>2</sup>, 1.0 mm<sup>2</sup>, 1.3 mm<sup>2</sup> or 1.5 mm<sup>2</sup>

**Insulation**..... polyethylene PE

**Colour code**..... acc. to page 5  
continuously numbered on cores (1-1, 2-2, ...) for multipairs

**Wrapping**..... at least 1 layer of plastic tape

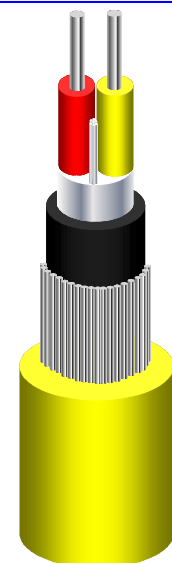
**Collective screen**... 24 µm aluminium / PETP tape over 7-stranded tinned copper  
drain wire, 0.5 mm<sup>2</sup>

**Bedding**..... polyvinyl chloride PVC, colour black

**Armour**..... galvanised round steel wires

**Outer sheath**..... polyvinyl chloride PVC, colour acc. to page 5 or blue for  
intrinsic safety

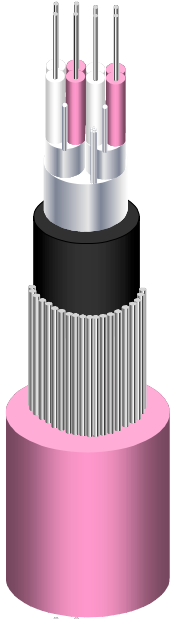
**Cable marking**..... KERPENWERK EXTENSION CABLE 300 V IEC 60332 PART 3 or  
KERPENWERK COMPENSATING CABLE 300 V IEC 60332 PART 3



Example: KX to ANSI MC 96.1

**Multi-Pair, PE-Insulation, Pair & Collective Screen, Armour, PVC-Sheath** **RT-2Y(St)YSWAY-fl PiMF**

<b>Construction</b>	
<b>Conductor</b> .....	thermocouple extension or compensating material acc. to page .... solid, sizes: 0.5 mm <sup>2</sup> , 0.8 mm <sup>2</sup> , 1.0 mm <sup>2</sup> , 1.3 mm <sup>2</sup> or 1.5 mm <sup>2</sup>
<b>Insulation</b> .....	polyethylene PE
<b>Colour code</b> .....	acc. to page 5 continuously numbered on cores (1-1, 2-2, ...) for multipairs
<b>Pair screen</b> ...	24 µm aluminium / PETP tape over solid tinned copper drain wire, 0.6 mm Ø
<b>Wrapping</b> .....	at least 1 layer of plastic tape
<b>Collective screen</b> ...	24 µm aluminium / PETP tape over 7-stranded tinned copper drain wire, 0.5 mm <sup>2</sup>
<b>Bedding</b> .....	polyvinyl chloride PVC, colour black
<b>Armour</b> .....	galvanised round steel wires
<b>Outer sheath</b> .....	polyvinyl chloride PVC, colour acc. to page page 5 or blue for intrinsically safety
<b>Cable marking</b> .....	KERPENWERK EXTENSION CABLE 300 V IEC 60332 PART 3 or KERPENWERK COMPENSATING CABLE 300 V IEC 60332 PART 3



**Example: NX to IEC 60584-3**

<b>Technical Data</b>			<b>Abbreviations</b>	
<b>Flame retardancy:</b>	IEC 60332-1	<b>Temperature range:</b>	RT-	thermoelectric cable
<b>Flame propagation:</b>	IEC 60332-3 cat. C	-30°C up to +70°C (during operation)	2Y	insulation of PE
Outer sheath:		- 5°C up to +50°C (during installation)	(St)	collective screen
<b>Amount of halogen acid gas:</b>	<b>max. 17%</b> (IEC 60754-1)	<b>Min. bending radius:</b>	Y	bedding & outer sheath of PVC
<b>Limiting Oxygen Index (LOI):</b>	<b>min. 30%</b> (IEC 60332-3 annex B)	Unarmoured: 7.5 x cable-Ø	SWA	steel wire armour
<b>Temperature index (TI):</b>	<b>min. 300°C</b> (ASTM-D-2863)	Armoured: 10 x cable-Ø	-fl	reduced flame propagation
<b>Sunlight resistance:</b>	(UL 1581 section 1200)			
<b>Oil resistance:</b>	(ICEA S-82-552)			

<b>Electrical data at 20°C</b>					
		<b>Character</b>	<b>Unit</b>	<b>Values</b>	
<b>IEC 60584-3</b>	<b>ANSI MC 96.1</b>	nom.	mm <sup>2</sup>	<b>EMF at 100 °C</b>	<b>EMF at 200°C</b>
<b>RC</b>		nom.	µV	647	1468
<b>SC</b>	<b>SX</b>			645	1440
<b>BC</b>	<b>BX</b>			33	178 **)
<b>JX</b>	<b>JX</b>			5268	10777
<b>TX</b>	<b>TX</b>			4277	9286
<b>EX</b>	<b>EX</b>			6317	13419
<b>KX/KC</b>	<b>KX/VX</b>			4095	8137 *)
<b>NX/NC</b>				2774	5912 *)
<b>Insulation resistance</b>		min.	MΩ x km	5000	
<b>Mutual capacitance at 0.8 resp. 1 kHz single pair and pair screened cables: up to 4 pairs overall screened: above 4 pairs overall screened:</b>		max.	nF/km	120	
				96	
				80	
<b>Test voltage</b>		$U_{rms}$ core : core	V	2000	
		$U_{rms}$ core : screen	V	1000	
<b>Operating voltage</b>		max.	V	300	

\*) for extension material only

\*\*) for ANSI MC 96.1 only

<b>Single- &amp; Multi-Pair, PE-Insulation, Collective Screen, PVC-Sheath RT-2Y(St)Y-fl</b>			
<b>Geometrical data</b>			
No. of pairs	RT of insulation nom. (mm)	RT of outer sheath nom. (mm)	Overall Diameter approx. (mm)
<b>0.5 mm<sup>2</sup></b>			
1	0.4	1.0	5.6
2	0.4	1.0	7.9
4	0.4	1.0	9.0
6	0.4	1.0	10.6
8	0.4	1.0	11.3
10	0.4	1.2	13.1
12	0.4	1.2	13.7
16	0.4	1.2	15.4
20	0.4	1.2	16.8
24	0.4	1.4	18.6
<b>0.8 mm<sup>2</sup></b>			
1	0.4	1.0	6.0
2	0.4	1.0	8.6
4	0.4	1.0	9.9
6	0.4	1.0	11.7
8	0.4	1.2	12.8
10	0.4	1.2	14.4
12	0.4	1.2	15.1
16	0.4	1.2	17.0
20	0.4	1.4	19.1
24	0.4	1.4	20.6
<b>1.0 mm<sup>2</sup></b>			
1	0.4	1.0	6.3
2	0.4	1.0	9.0
4	0.4	1.0	10.3
6	0.4	1.2	12.6
8	0.4	1.2	13.4
10	0.4	1.2	15.2
12	0.4	1.2	15.8
16	0.4	1.4	18.3
20	0.4	1.4	20.0
24	0.4	1.4	21.6
<b>1.3 mm<sup>2</sup></b>			
1	0.4	1.0	6.6
2	0.4	1.0	10.2
4	0.4	1.0	11.8
6	0.4	1.2	14.5
8	0.4	1.2	15.4
10	0.4	1.2	17.5
12	0.4	1.2	18.3
16	0.4	1.4	21.1
20	0.4	1.4	23.2
24	0.4	1.6	25.6
<b>1.5 mm<sup>2</sup></b>			
1	0.5	1.0	7.2
2	0.5	1.0	11.3
4	0.5	1.2	13.5
6	0.5	1.2	16.2
8	0.5	1.2	17.2
10	0.5	1.4	20.0
12	0.5	1.4	20.9
16	0.5	1.4	23.6
20	0.5	1.6	26.5
24	0.5	1.6	28.7

RT = radial thickness

<b>Multi-Pair, PE-Insulation, Pair &amp; Collective Screen, PVC-Sheath RT-2Y(St)Y-fl PiMF</b>			
<b>Geometrical data</b>			
No. of pairs	RT of insulation nom. (mm)	RT of outer sheath nom. (mm)	Overall Diameter approx. (mm)
<b>0.5 mm<sup>2</sup></b>			
2	0.4	1.0	9.1
4	0.4	1.0	10.4
6	0.4	1.2	12.8
8	0.4	1.2	13.6
10	0.4	1.2	15.3
12	0.4	1.2	16.0
16	0.4	1.4	18.5
20	0.4	1.4	20.3
24	0.4	1.4	21.9
<b>0.8 mm<sup>2</sup></b>			
2	0.4	1.0	9.8
4	0.4	1.0	11.3
6	0.4	1.2	13.9
8	0.4	1.2	14.7
10	0.4	1.2	16.7
12	0.4	1.4	17.9
16	0.4	1.4	20.1
20	0.4	1.4	22.1
24	0.4	1.6	24.4
<b>1.0 mm<sup>2</sup></b>			
2	0.4	1.0	10.2
4	0.4	1.0	11.7
6	0.4	1.2	14.4
8	0.4	1.2	15.3
10	0.4	1.2	17.4
12	0.4	1.4	18.6
16	0.4	1.4	21.0
20	0.4	1.6	23.5
24	0.4	1.6	25.5
<b>1.3 mm<sup>2</sup></b>			
2	0.4	1.0	11.5
4	0.4	1.2	13.8
6	0.4	1.2	16.5
8	0.4	1.2	17.6
10	0.4	1.4	20.4
12	0.4	1.4	21.3
16	0.4	1.4	24.1
20	0.4	1.6	27.1
24	0.4	1.6	29.3
<b>1.5 mm<sup>2</sup></b>			
2	0.5	1.0	12.6
4	0.5	1.2	15.1
6	0.5	1.2	18.1
8	0.5	1.4	19.7
10	0.5	1.4	22.4
12	0.5	1.4	23.5
16	0.5	1.6	27.1
20	0.5	1.6	29.9
24	0.5	1.8	32.8

RT = radial thickness

<b>Single- &amp; Multi-Pair, PE-Insulation, Collective Screen, Armour, PVC-Sheath RT-2Y(St)YSWAY-fl</b>						
No. of pairs	RT of insulation nom. (mm)	RT of bedding nom. (mm)	Dia. over bedding approx. (mm)	Dia. of armour wire nom. (mm)	RT of outer sheath nom. (mm)	Overall Diameter approx. (mm)
<b>0.5 mm<sup>2</sup></b>						
1	0.4	0.8	5.2	0.9	1.3	9.6
2	0.4	0.8	7.5	0.9	1.4	12.1
4	0.4	0.9	8.8	0.9	1.4	13.4
6	0.4	1.1	10.8	0.9	1.4	15.4
8	0.4	1.1	11.5	0.9	1.5	16.3
10	0.4	1.2	13.1	0.9	1.5	17.9
12	0.4	1.2	13.7	0.9	1.5	18.5
16	0.4	1.2	15.4	1.25	1.6	21.1
20	0.4	1.2	16.8	1.25	1.6	22.5
24	0.4	1.3	18.4	1.25	1.7	24.3
<b>0.8 mm<sup>2</sup></b>						
1	0.4	0.8	5.6	0.9	1.3	10.0
2	0.4	0.9	8.4	0.9	1.4	13.0
4	0.4	0.9	9.7	0.9	1.4	14.3
6	0.4	1.1	11.9	0.9	1.5	16.7
8	0.4	1.2	12.8	0.9	1.5	17.6
10	0.4	1.2	14.4	0.9	1.6	19.4
12	0.4	1.2	15.1	1.25	1.6	20.8
16	0.4	1.2	17.0	1.25	1.7	22.9
20	0.4	1.3	18.9	1.25	1.7	24.8
24	0.4	1.3	20.4	1.25	1.7	26.3
<b>1.0 mm<sup>2</sup></b>						
1	0.4	0.8	5.9	0.9	1.3	10.3
2	0.4	0.9	8.8	0.9	1.4	13.4
4	0.4	1.1	10.5	0.9	1.4	15.1
6	0.4	1.2	12.6	0.9	1.5	17.4
8	0.4	1.2	13.4	0.9	1.5	18.2
10	0.4	1.2	15.2	1.25	1.6	20.9
12	0.4	1.2	15.8	1.25	1.6	21.5
16	0.4	1.3	18.1	1.25	1.7	24.0
20	0.4	1.3	19.8	1.25	1.7	25.7
24	0.4	1.3	21.4	1.25	1.7	27.3
<b>1.3 mm<sup>2</sup></b>						
1	0.4	0.8	6.2	0.9	1.3	10.6
2	0.4	0.9	10.0	0.9	1.4	14.6
4	0.4	1.1	12.0	0.9	1.5	16.8
6	0.4	1.2	14.5	0.9	1.5	19.3
8	0.4	1.2	15.4	0.9	1.6	20.4
10	0.4	1.2	17.5	1.25	1.6	23.2
12	0.4	1.2	18.3	1.25	1.7	24.2
16	0.4	1.3	20.9	1.25	1.7	26.8
20	0.4	1.3	23.0	1.25	1.7	28.9
24	0.4	1.5	25.4	1.25	1.8	31.5
<b>1.5 mm<sup>2</sup></b>						
1	0.5	0.8	6.8	0.9	1.3	11.2
2	0.5	1.1	11.5	0.9	1.4	16.1
4	0.5	1.2	13.5	0.9	1.5	18.3
6	0.5	1.2	16.2	0.9	1.6	21.2
8	0.5	1.2	17.2	1.25	1.6	22.9
10	0.5	1.3	19.8	1.25	1.7	25.7
12	0.5	1.3	20.7	1.25	1.7	26.6
16	0.5	1.3	23.4	1.25	1.7	29.3
20	0.5	1.5	26.3	1.25	1.8	32.4
24	0.5	1.5	28.5	1.6	1.9	35.5

RT = radial thickness

<b>Multi-Pair, PE-Insulation, Pair &amp; Collective Screen, Armour, PVC-Sheath RT-2Y(St)YSWAY-fl PiMF</b>						
No. of pairs	RT of insulation nom. (mm)	RT of bedding nom. (mm)	Dia. over bedding approx. (mm)	Dia. of armour wire nom. (mm)	RT of outer sheath nom. (mm)	Overall Diameter approx. (mm)
<b>0.5 mm<sup>2</sup></b>						
2	0.4	0.9	8.9	0.9	1.4	13.5
4	0.4	1.1	10.6	0.9	1.4	15.2
6	0.4	1.2	12.8	0.9	1.5	17.6
8	0.4	1.2	13.6	0.9	1.5	18.4
10	0.4	1.2	15.3	1.25	1.6	21.0
12	0.4	1.2	16.0	1.25	1.6	21.7
16	0.4	1.3	18.3	1.25	1.7	24.2
20	0.4	1.3	20.1	1.25	1.7	26.0
24	0.4	1.3	21.7	1.25	1.8	27.8
<b>0.8 mm<sup>2</sup></b>						
2	0.4	0.9	9.6	0.9	1.4	14.2
4	0.4	1.1	11.5	0.9	1.5	16.3
6	0.4	1.2	13.9	0.9	1.5	18.7
8	0.4	1.2	14.7	0.9	1.6	19.7
10	0.4	1.2	16.7	1.25	1.6	22.4
12	0.4	1.3	17.7	1.25	1.7	23.6
16	0.4	1.3	19.9	1.25	1.7	25.8
20	0.4	1.3	21.9	1.25	1.8	28.0
24	0.4	1.5	24.2	1.25	1.8	30.3
<b>1.0 mm<sup>2</sup></b>						
2	0.4	1.1	10.4	0.9	1.4	15.0
4	0.4	1.1	11.9	0.9	1.5	16.7
6	0.4	1.2	14.4	0.9	1.6	19.4
8	0.4	1.2	15.3	1.25	1.6	21.0
10	0.4	1.2	17.4	1.25	1.7	23.3
12	0.4	1.3	18.4	1.25	1.7	24.3
16	0.4	1.3	20.8	1.25	1.7	26.7
20	0.4	1.5	23.3	1.25	1.8	29.4
24	0.4	1.5	25.3	1.6	1.9	32.3
<b>1.3 mm<sup>2</sup></b>						
2	0.4	1.1	11.7	0.9	1.5	16.5
4	0.4	1.2	13.8	0.9	1.5	18.6
6	0.4	1.2	16.5	1.25	1.6	22.2
8	0.4	1.2	17.6	1.25	1.6	23.3
10	0.4	1.3	20.2	1.25	1.7	26.1
12	0.4	1.3	21.1	1.25	1.7	27.0
16	0.4	1.3	23.9	1.25	1.8	30.0
20	0.4	1.5	26.9	1.25	1.9	33.2
24	0.4	1.5	29.1	1.6	1.9	36.1
<b>1.5 mm<sup>2</sup></b>						
2	0.5	1.1	12.8	0.9	1.5	17.6
4	0.5	1.2	15.1	0.9	1.5	19.9
6	0.5	1.2	18.1	1.25	1.6	23.8
8	0.5	1.3	19.5	1.25	1.7	25.4
10	0.5	1.3	22.2	1.25	1.7	28.1
12	0.5	1.3	23.3	1.25	1.7	29.2
16	0.5	1.5	26.9	1.25	1.9	33.2
20	0.5	1.5	29.7	1.6	1.9	36.7
24	0.5	1.7	32.6	1.6	2.0	39.8

RT = radial thickness