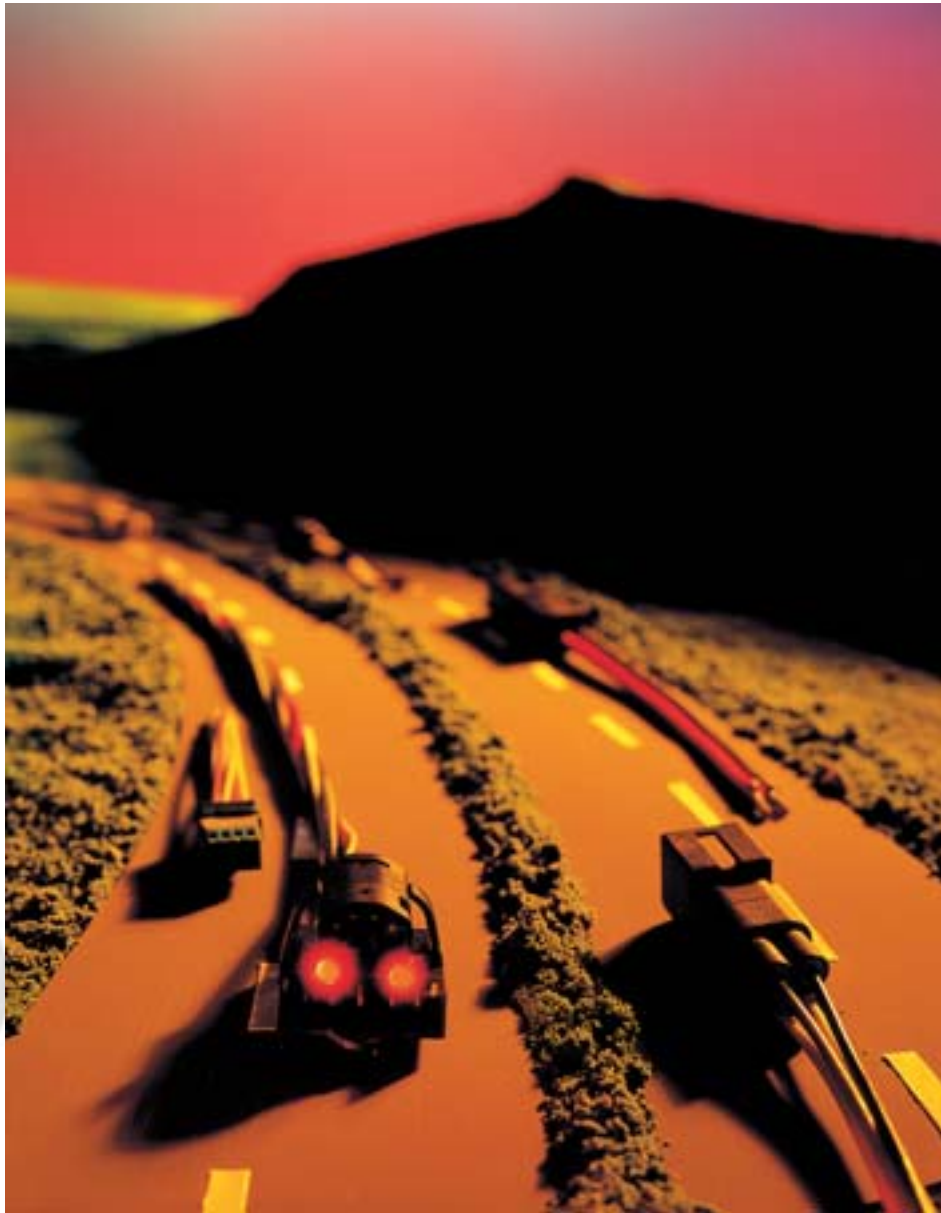


TPE-INSULATED CABLES



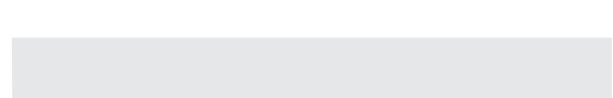
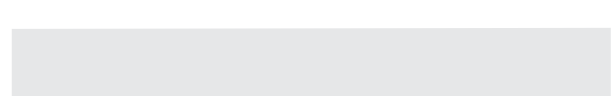
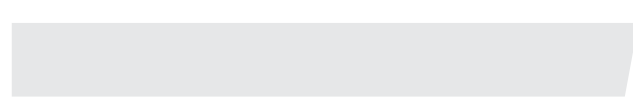
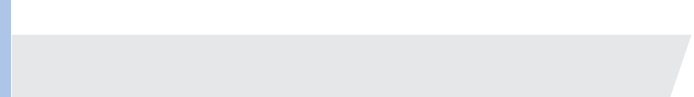
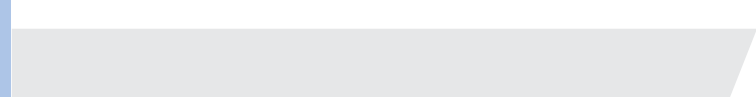
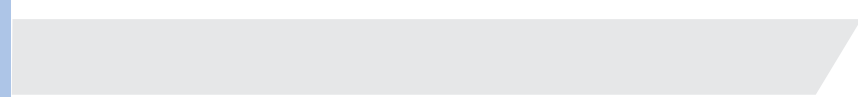
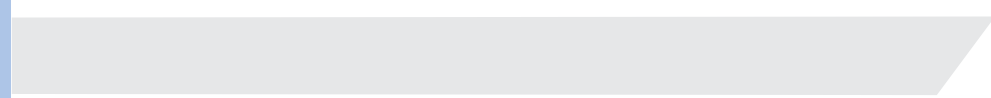
TPE-INSULATED CABLES

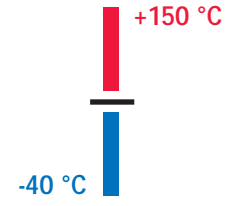
Products

*TPE -
Cables*

C O N T E N T S
C O N T E N T S

	Page
TPE single cores according to DIN 72551, type A	107
TPE single cores according to DIN 72551, type B	108
TPE single cores stranded	109
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TPE insulated cables with copper screen	111





TPE-single core, stranded, according to DIN 72551 Type A Y

Construction

Conductor: Cu bare, tp, stranded, acc. to DIN 72551 part 6, type A
 Insulation: Thermoplastic elastomer
 Colour: On request
 Identification: $\geq 0,5 \text{ mm}^2$ printing HEW-KABEL/CDT

Application

For wiring in vehicles, e.g. wiring in engine compartments.

Technical data

Temperature range: - 40 °C to + 150 °C / 3000 h
 Rated voltage : 48 Volt
 Test voltage: 2000 Volt
 Min. bending radius: 5 x diameter
 Insulation resistance: $>10^{10}$ Ohm x cm at 20 °C

Note

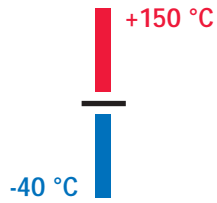
→ TPE cables with asymmetric conductor constructions (type B) see page 108.

Products

TPE - Cables

cross section [mm ²]	number of single wires	maximum Ø of single wire [mm]	maximum strand diameter [mm]	o.d. [mm]	copper weight [kg/km]	weight approx. [kg/km]
0,35	7	0,26	0,80	1,25 ± 0,05	3,4	4,5
0,5	19	0,19	1,00	1,5 ± 0,1	4,8	6,6
0,75		0,23	1,20	1,8 ± 0,1	5,9	9
1		0,26	1,35	2,0 ± 0,1	9,2	11
1,5		0,32	1,70	2,3 ± 0,1	13,8	16
2,5		0,41	2,20	2,85 ± 0,15	23,4	26





Y

TPE-single core, stranded, according to DIN 72551 Type B

Construction

Conductor: Cu bare, tp, stranded, acc. to DIN 72551 part 6, type B
 Insulation: Thermoplastic elastomer
 Core colours: On request
 Identification: $\geq 0,5 \text{ mm}^2$ printing HEW-KABEL/CDT

Application

For wiring in vehicles, e.g. wiring in engine compartments

Technical data

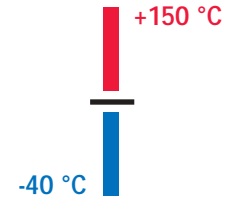
Temperature range: - 40 °C up to + 150 °C / 3000 h
 Rated voltage : 48 Volt
 Test voltage: 2000 Volt
 Min. bending radius: 5 x diameter
 Insulation resistance: $>10^{10}$ Ohm x cm at 20 °C

Note

→ TPE cables with symmetric conductor constructions (type A) see page 107.

cross section [mm ²]	number of single wires	maximum Ø of single wire [mm]	maximum strand diameter [mm]	o.d. [mm]	copper weight [kg/km]	weight approx. [kg/km]
0,35	12	0,21	0,90	1,3 ± 0,1	3,7	4,5
0,5	16		1,00	1,5 ± 0,1	4,8	6,6
0,75	24		1,20	1,8 ± 0,1	7,2	9
1	32	0,26	1,35	2,0 ± 0,1	9,6	11
1,5	30		1,70	2,3 ± 0,1	14,4	16
2,5	50		2,20	2,85 ± 0,15	24	26
4	56	0,31	2,75	3,55 ± 0,15	38	42
6	84		3,30	4,15 ± 0,15	58	61





TPE-single core, stranded Y

Products

Construction

Conductor: Cu bare, tp, stranded, acc. to VDE 0295
 Insulation: Thermoplastic elastomer
 Colour: On request

Application

- Traffic and automotive
- Installations in buildings
- Medical equipment
- Robotics
- Tool and mechanical engineering

Technical data

Temperature range: - 40 °C up to + 150 °C
 Rated voltage : 300 Volt
 Test voltage: 2000 Volt
 Min. bending radius: 5 x diameter
 Insulation resistance: >10¹⁰ Ohm x cm at 20 °C

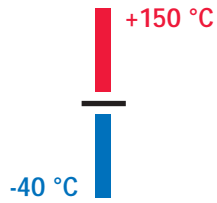
Note

→ TPE cables are also available in different metric and AWG cross sections, conductor materials and various insulation materials (TPE-E, -S, -O, -U, -V).

TPE -
Cables

cross section [mm ²]	maximum Ø of single core [mm]	maximum strandØ [mm]	o.d. [mm] ± 5 %	copper weight [kg/km]	weight approx. [kg/km]
0,25	0,17	0,77	1,2	2,4	3,6
0,5	0,21	0,98	1,5	4,8	6,3
0,75	0,21	1,16	1,7	7,2	9
1	0,21	1,35	1,9	9,6	11,4
1,5	0,26	1,61	2,1	14,4	16,3
2,5	0,26	2,11	2,8	24	27,5
4	0,31	2,58	3,4	38	42
6	0,31	3,22	4,0	58	61,5
10	0,41	4,78	5,7	96	106
16	0,41	6,0	6,8	154	163
25	0,41	7,46	8,3	240	250
35	0,41	8,93	9,7	336	357
50	0,41	10,4	11,3	480	506
70	0,51	12,44	13,3	672	712
95	0,51	14,91	16,0	912	946
120	0,51	16,53	17,8	1152	1187





YHY

TPE-insulated multicore cable

Construction

Conductor:	Cu bare, tp, stranded, acc. to VDE 0295
Insulation:	Thermoplastic elastomer
Colour:	On request
Twisting:	In layers
Sheath:	Thermoplastic elastomer
Colour:	On request

Application

- Traffic and automotive
- Installations in buildings
- Instrumentation engineering
- Robotics
- Tool and mechanical engineering

Technical data

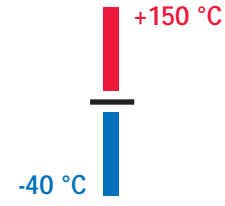
Temperature range:	- 40 °C up to + 150 °C (depending on insulation and sheath material)
Rated voltage:	300 Volt
Test voltage:	2000 Volt
Min. bending radius:	10 x diameter

Note

→ TPE insulated multicore cables are also available in different metric and AWG cross sections as well as with various conductor materials

number of cores x cross section [mm²]	maximum Ø of single wire [mm]	maximum strandØ [mm]	coreØ [mm] ± 5 %	o.d. [mm] ± 5 %	weight approx. [kg/km]
2 x 0,5	0,21	0,98	1,54	3,9	23
3 x 0,5	0,21	0,98	1,54	4,1	28
4 x 0,5	0,21	0,98	1,54	4,7	36
5 x 0,5	0,21	0,98	1,54	5,2	45
7 x 0,5	0,21	0,98	1,54	5,6	57
2 x 0,75	0,21	1,16	1,7	4,2	29
3 x 0,75	0,21	1,16	1,7	4,5	36
4 x 0,75	0,21	1,16	1,7	5,1	47
5 x 0,75	0,21	1,16	1,7	5,6	59
7 x 0,75	0,21	1,16	1,7	6,1	75
2 x 1	0,21	1,35	1,9	4,8	37
3 x 1	0,21	1,35	1,9	5,1	47
4 x 1	0,21	1,35	1,9	5,5	58
5 x 1	0,21	1,35	1,9	6,1	70
7 x 1	0,21	1,35	1,9	6,8	96
2 x 1,5	0,26	1,61	2,14	5,3	48
3 x 1,5	0,26	1,61	2,14	5,6	62
4 x 1,5	0,26	1,61	2,14	6,2	78
5 x 1,5	0,26	1,61	2,14	7,0	100
7 x 1,5	0,26	1,61	2,14	7,6	129





TPE insulated cable with copper screen **YHCY**

Products

Construction

Conductor: Cu bare, tp, stranded, 7 or 19 wires
 Insulation: Thermoplastic elastomer
 Colour: On request
 Twisting: In layers
 Wrapping: 1 layer separator foil
 Screen: Braid, cu bare, tp, approx. 85% coverage
 Sheath: Thermoplastic elastomer
 Colour: On request

Application

- Traffic and automotive
- Installations in buildings
- Instrumentation engineering
- Robotics
- Tool and mechanical engineering

Technical data

Temperature range: - 40 °C up to + 150 °C
 (depending on insulation and sheath material)
 Rated voltage: 300 Volt
 Test voltage: Core/core 2000 Volt
 Core/screen 1500 Volt
 Min. bending radius: 10 x diameter

Notes

- Due to the copper screen electromagnetic interference is greatly reduced
- TPE insulated cables with copper screen are also available in different metric and AWG cross sections as well as with various conductor and sheath materials.

TPE - Cables

number of cores x cross section [mm ²]	maximum strandØ [mm]	coreØ [mm] ± 5 %	o.d. [mm] ± 5 %	weight approx. [kg/km]
2 x AWG 26	0,54	1,07	3,5	17,5
3 x AWG 26	0,54	1,07	3,7	21,3
4 x AWG 26	0,54	1,07	4,0	24,5
5 x AWG 26	0,54	1,07	4,3	33,2
6 x AWG 26	0,54	1,07	4,8	37
7 x AWG 26	0,54	1,07	4,8	46
2 x AWG 24	0,64	1,2	3,8	21
3 x AWG 24	0,64	1,2	4,0	25
4 x AWG 24	0,64	1,2	4,3	30
5 x AWG 24	0,64	1,2	4,9	41
6 x AWG 24	0,64	1,2	5,2	44
7 x AWG 24	0,64	1,2	5,2	47
2 x AWG 22	0,79	1,34	4,1	26
3 x AWG 22	0,79	1,34	4,3	31
4 x AWG 22	0,79	1,34	4,8	38
5 x AWG 22	0,79	1,34	5,3	51
6 x AWG 22	0,79	1,34	5,6	58
7 x AWG 22	0,79	1,34	5,6	60
2 x AWG 20	1,02	1,52	4,5	34
3 x AWG 20	1,02	1,52	4,9	44
4 x AWG 20	1,02	1,52	5,3	54
5 x AWG 20	1,02	1,52	5,8	67
6 x AWG 20	1,02	1,52	6,3	80
7 x AWG 20	1,02	1,52	6,3	85



High temperature cables

In addition to their resistance to high temperatures special properties of this product type are good mechanical strength and high aging stability if applied in dry environments.

We divide high temperature cables into two categories :

1. Standard glass fibre cables

Application temperature range: -50°C up to +350°C.

By using special high temperature resistant glass fibre and corresponding conductor materials the maximum temperature reaches up to +550°C.

2. Ceramic material insulated cables

HEW-KABEL/CDT offers special insulation and sheath materials based on ceramic and mica.

These materials allow service at a constant ambient temperature of + 800 °C and peak temperatures up to +1550°C even under extreme conditions, e.g. application in glass-, iron- and steel fabrication.

In order to extend the fields of application, glass fibre materials can be combined with other high performance materials e.g. PTFE, FEP, Kapton[®], Silicone or Mica. These combinations ensure application in humid areas at an excellent dielectric strength.

Typical applications for high temperature cables are e.g.:

Electric heating systems, domestic appliances (stoves, ovens, heating plates), extrusion- and drying installation, industrial furnaces, steel-,iron-,glass- and ceramic fabrication etc.

For further information and technical data concerning insulation and sheath materials please refer to insert.

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