

TITANEX®

Industrial flexible cable, insulation and outer sheath in elastomer.
Oil resistant, flame retardant according to IEC/EN 60332-1-2 standard.

Description

Application

TITANEX® flexible cable is intended for installations with moving equipment, electric appliances and for building sites. The cable may be rated 0,6/1 kV where the installation has built-in protection and for motors in lifting appliances - machine tools - etc.

This cable can be used in refrigerating installations.

Installation

This cable can be installed in open air or be buried but with extra mechanical protection.

Conductors laid up

Assembled conductors.

Nota

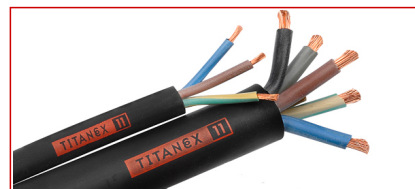
Max continuous operating conductor temperature in normal use :

+60°C (in every case of mobile installation)

+85°C (fixed protected installation)

+200°C (in short circuit)

Permissible current rating is measured for an ambient temperature of 30°C and a maximum operating and conductor temperature of 85°C . For other temperature please refer to correction factors .



Standards

International EN 50525-2-21;
HD 22.4; HD 516;
IEC 60245-4 type 66

National NF C 32-102-4



Lead free
Yes



Mechanical resistance to
impacts
Very good



Cable
flexibility
Flexible



Chemical
resistance
Accidental



Water proof
Good



RoHS
conform
Yes



Operating temp.
range
-25 .. 55 °C



Oil resistance
Yes

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Characteristics

Construction characteristics	
Lead free	Yes
Sheath colour	Black
Conductor material	Bare copper
Outer sheath	Special cross-linked elastomer
Insulation	Special cross-linked elastomer
Mechanical characteristics	
Mechanical resistance to impacts	Very good
Cable flexibility	Flexible
Usage characteristics	
Chemical resistance	Accidental
Water proof	Good
RoHS conform	Yes
Operating temperature, range	-25 .. 55 °C
Short-circuit max. conductor temperature	200 °C
Oil resistance	Yes
Max. conductor temperature in service	85 °C

Single Core

Cross section [mm²]	Perm. current rating open air [A]	Voltage drop, single phase [V/A.km]	Max. outer diam. [mm]	Min. outer diam. [mm]	Approx. weight [kg/km]
1.5	23	23.3	7.1	5.7	50
2.5	32	14.0	7.9	6.3	66
4	43	8.7	9.0	7.2	94
6	56	5.9	9.8	7.9	109
10	77	3.4	11.9	9.5	182
16	102	2.2	13.4	10.8	256
25	136	1.4	15.8	12.7	369
35	168	1.04	17.9	14.3	482
50	203	0.75	20.6	16.5	662
70	254	0.56	23.3	18.6	895
95	-	-	-	-	1144
120	363	0.36	28.6	22.8	1430
150	416	0.31	31.4	25.2	1740
185	475	0.28	34.4	27.6	2160
240	559	0.23	38.3	30.6	2730
240	637	0.2	41.9	33.5	3480

							
Lead free Yes	Mechanical resistance to impacts Very good	Cable flexibility Flexible	Chemical resistance Accidental	Water proof Good	RoHS conform Yes	Operating temp. range -25 .. 55 °C	Oil resistance Yes

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Cross section [mm²]	Perm. current rating open air [A]	Voltage drop, single phase [V/A.km]	Max. outer diam. [mm]	Min. outer diam. [mm]	Approx. weight [kg/km]
500	833	0.16	52.0	41.3	5700

Two cores

Cross section [mm²]	Perm. current rating open air [A]	Voltage drop, single phase [V/A.km]	Max. outer diam. [mm]	Min. outer diam. [mm]	Approx. weight [kg/km]
1	18	39.4	10.0	7.7	99
1.5	23	27.0	11.0	8.5	111
4	43	10.1	15.1	11.8	238
6	56	6.7	16.8	13.1	279
10	77	3.8	22.6	17.7	538
16	102	2.5	25.7	20.2	744
25	136	1.68	30.7	24.3	1074

Three cores

Cross section [mm²]	Perm. current rating open air [A]	Voltage drop, single phase [V/A.km]	Max. outer diam. [mm]	Min. outer diam. [mm]	Approx. weight [kg/km]
1	18	39.4	10.7	8.3	117
1.5	23	27.0	11.9	9.2	134
1.5	23	27.0	11.9	9.2	134
2.5	32	16.2	14.0	10.9	195
2.5	32	16.2	14.0	10.9	195
6	56	7.0	18.0	14.1	346
10	77	4.0	24.2	19.1	663
16	102	2.5	27.6	21.8	924
25	136	1.7	33.0	26.1	1345
35	168	1.21	37.1	29.3	1760
50	203	0.87	42.9	34.1	2390
70	262	0.64	48.3	38.4	3110
95	320	0.5	54.0	43.3	4170
120	373	0.4	60.0	47.4	5080
150	432	0.35	66.0	52.0	6220
185	495	0.3	72.0	57.0	7730
240	587	0.26	82.0	65.0	9780
300	680	0.22	90.0	72.0	12620

							
Lead free Yes	Mechanical resistance to impacts Very good	Cable flexibility Flexible	Chemical resistance Accidental	Water proof Good	RoHS conform Yes	Operating temp. range -25 .. 55 °C	Oil resistance Yes

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Four cores



Cross section [mm²]	Perm. current rating open air [A]	Voltage drop, single phase [V/A.km]	Max. outer diam. [mm]	Min. outer diam. [mm]	Approx. weight [kg/km]
1	16	34.08	12.0	9.6	144
1.5	21	23.3	13.1	10.2	165
1.5	21	23.3	13.1	10.2	165
2.5	29	14.0	15.5	12.5	245
4	38	8.71	18.0	14.0	357
6	50	5.84	20.0	15.7	443
10	68	3.42	26.5	20.8	818
16	92	2.2	30.1	23.8	1150
25	122	1.44	36.6	28.9	1700
35	150	1.04	41.1	32.5	2180
50	182	0.75	47.5	37.7	3030
70	232	0.56	54.0	42.7	3990
95	281	0.44	61.0	48.4	5360
120	325	0.36	66.0	53.0	6500
150	373	0.31	73.0	58.0	7990
185	425	0.28	80.0	64.0	9910
240	500	0.23	91.0	72.0	13120

Five cores

Cross section [mm²]	Perm. current rating open air [A]	Voltage drop, single phase [V/A.km]	Max. outer diam. [mm]	Min. outer diam. [mm]	Approx. weight [kg/km]
1	16	34.1	14.0	10.9	180
1.5	21	23.6	14.4	11.2	238
2.5	29	14.0	17.0	13.3	297
4	38	8.72	19.9	15.6	453
6	50	5.84	22.2	17.5	557
10	68	3.43	29.1	22.9	1001
16	92	2.2	33.3	26.4	1430
25	122	1.44	40.4	32.0	2096

Seven cores

Cross section [mm²]	Perm. current rating open air [A]	Voltage drop, single phase [V/A.km]	Max. outer diam. [mm]	Min. outer diam. [mm]	Approx. weight [kg/km]
1.5	-	-	-	-	349

							
Lead free Yes	Mechanical resistance to impacts Very good	Cable flexibility Flexible	Chemical resistance Accidental	Water proof Good	RoHS conform Yes	Operating temp. range -25 .. 55 °C	Oil resistance Yes

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Cross section [mm²]	Perm. current rating open air [A]	Voltage drop, single phase [V/A.km]	Max. outer diam. [mm]	Min. outer diam. [mm]	Approx. weight [kg/km]
2.5	-	-	-	-	487

Twelve cores

Cross section [mm²]	Perm. current rating open air [A]	Voltage drop, single phase [V/A.km]	Max. outer diam. [mm]	Min. outer diam. [mm]	Approx. weight [kg/km]
1.5	11	23.3	22.14	17.6	510
2.5	-	-	-	-	702

Eighteen cores

Cross section [mm²]	Perm. current rating open air [A]	Voltage drop, single phase [V/A.km]	Max. outer diam. [mm]	Min. outer diam. [mm]	Approx. weight [kg/km]
1.5	9	20.7	26.3	20.7	730
2.5	-	-	-	-	1018

twenty four cores

Cross section [mm²]	Perm. current rating open air [A]	Voltage drop, single phase [V/A.km]	Min. outer diam. [mm]	Max. outer diam. [mm]	Approx. weight [kg/km]
1.5	8	-	24.3	30.7	1000

thirty six cores

Cross section [mm²]	Perm. current rating open air [A]	Voltage drop, single phase [V/A.km]	Min. outer diam. [mm]	Max. outer diam. [mm]	Approx. weight [kg/km]
1.5	6	-	27.8	35.2	1325
2.5	-	-	-	-	1879

New cores identification

Core identification in accordance with HD 308 S2 - Identification of cores in cables and flexible cords.





Number of cores	HD 308 S2 since january 2004	
	G (earth core)	X (without earth core)
1		Black (preferential)
2		Blue + Brown

							
Lead free Yes	Mechanical resistance to impacts Very good	Cable flexibility Flexible	Chemical resistance Accidental	Water proof Good	RoHS conform Yes	Operating temp. range -25 .. 55 °C	Oil resistance Yes

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3*	Green - Yellow + Blue + Brown	Brown + Black + Grey
3**		Blue + Brown + Black
4	Green - Yellow + Brown + Black + Grey	Blue + Brown + Black + Grey
5	Green - Yellow + Blue + Brown + Black + Grey	Blue + Brown + Black + Grey + Black
> 5	White printed numbers + 1 Green - Yellow	White printed numbers
* For the cables without Green/Yellow with a cross-section >4mm ²		
** For the cables without Green/Yellow with a cross-section of 1,5mm ² & 2,5mm ²		

Current capacity table PVC single phase single core

Conductor cross-section				
mm ²	Cu	Cu	Cu	Cu
1.5	18	20	32	23
2.5	24	27	42	31
4	32	36	54	42
6	41	48	67	54
10	57	63	90	75
16	76	85	116	100
25	96	112	148	127
35	119	138	178	158
50	144	168	211	192
70	184	213	261	246
95	223	258	308	298
120	259	299	351	346
150	299	344	397	395
185	341	392	445	450
240	403	461	514	538
300	464	530	581	621
400	-	-	-	754
500	-	-	-	868



Enclosed in troughs or ducts


Single core or multicore cables
on a wall

Single core or multicore cable buried in ground -
(duct or directly)

2 or 3 single core cables in
open air

Lead free
Yes

Mechanical resistance to
impacts
Very good

Cable
flexibility
Flexible

Chemical
resistance
Accidental

Water proof
Good





RoHS
conform
Yes

Operating temp.
range
-25 .. 55 °C

Oil resistance
Yes

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Current capacity table PVC single phase multicore

Conductor cross-section				
mm ²	Cu	Cu	Cu	Cu
1.5	18	20	32	22
2.5	24	27	42	30
4	32	36	54	40
6	41	48	67	51
10	57	63	90	70
16	76	85	116	94
25	96	112	148	119
35	119	138	178	147
50	144	168	211	179
70	184	213	261	229
95	223	258	308	278
120	259	299	351	322
150	299	344	397	371
185	341	392	445	424
240	403	461	514	500
300	464	530	581	576
400	-	-	-	656
500	-	-	-	749



Enclosed in troughs or ducts



Single core or multicore cables on a wall



Single core or multicore cable buried in ground - (duct or directly)



Cable with 2 or 3 conductors in open air



Lead free
Yes



Mechanical resistance to impacts
Very good



Cable flexibility
Flexible



Chemical resistance
Accidental



Water proof
Good



RoHS conform
Yes







Operating temp. range
-25 .. 55 °C



Oil resistance
Yes

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Current capacity table PVC three phase - singlecore

Conductor cross-section				
mm ²	Cu	Cu	Cu	Cu
1.5	16	18	26	20
2.5	21	24	34	27
4	28	32	44	36
6	36	41	56	48
10	50	57	74	63
16	68	76	96	85
25	89	96	123	112
35	110	119	147	138
50	164	144	174	168
70	171	184	216	213
95	207	223	256	258
120	239	259	290	299
150	-	299	328	344
185	-	341	367	392
240	-	403	424	461
300	-	464	480	530



Enclosed in troughs or ducts



Single core or multicore cables
on a wall



Single core or multicore cable buried in ground -
(duct or directly)



2 or 3 single core cables in
open air



Lead free
Yes



Mechanical resistance to
impacts
Very good



Cable
flexibility
Flexible



Chemical
resistance
Accidental



Water proof
Good



RoHS
conform
Yes







Operating temp.
range
-25 .. 55 °C



Oil resistance
Yes

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Current capacity table PVC three phase

Conductor cross-section				
mm ²	Cu	Cu	Cu	Cu
1.5	16	18	26	19
2.5	21	24	34	25
4	28	32	44	34
6	36	41	56	43
10	50	57	74	60
16	68	76	96	80
25	89	96	96	101
35	110	119	147	126
50	134	144	174	153
70	171	184	216	196
95	207	223	256	238
120	239	259	290	276
150	-	299	328	319
185	-	341	367	364
240	-	403	424	430
300	-	464	480	497



Enclosed in troughs or ducts



Single core or multicore cables
on a wall



Single core or multicore cable buried in ground -
(duct or directly)



Cable with 2 or 3 conductors in
open air

Selling information

Marking

USE <'HAR> H07RN-F N (x ou G) S mm² TITANEX®

N = number of cores

- G = with Green-Yellow
- x = without Green-Yellow
- S = section in mm²

							
Lead free Yes	Mechanical resistance to impacts Very good	Cable flexibility Flexible	Chemical resistance Accidental	Water proof Good	RoHS conform Yes	Operating temp. range -25 .. 55 °C	Oil resistance Yes