SPREADERFLEX 3GSLTOE 0,6/1KV

Spreader cables for basket operation

Feeder cable for load-lifting equipment, e.g. spreader with high mechanical stress in gravity-fed collector basket operation, with voltage rate up to 0,6/1 kV. Suitable for operation in cold environment.

STANDARDS / APPROVALS

EAC

DIN VDE 0207-20	Compound
DIN VDE 0298-4	Electrical parameters
DIN EN 60811-404 / IEC 60811-404	Chemical behaviour

CABLE DESIGN

Conductor	Extremely finely stranded copper, bare (class FS)
Core insulation material	EPR rubber
-	Special compound 3GI3
Core arrangement	Core assembly: cores laid-up into bundles Bundle assembly: bundles laid-up around the central support element. (where applicable) Individual Screen made of tinned copper braid, with coverage: individual 60%; TSP 80%
-	Aramide threads woven round lead ball cords, arranged centrally. The breaking load is rated to provide a safety factor of 5 when the cable is suspended vertically for 50 m. In case of bigger cross-section and higher number of cores, the support element is a round rubber filler with Aramid threads.
Material outer sheath	Polyurethane (PUR)
-	Special compound

ELECTRICAL PARAMETERS

Rated voltage U0/U (Um)	0.6/1 (1.2) kV
Test voltage [kV]	3.5
AC test voltage (control cores) [kV]	3.5
Nominal voltage U [V]	1,000

THERMAL PARAMETERS

Max. conductor temperature [°C]	90
Max. conductor temperature at short circuit [°C]	250
Ambient temperature fix installation (min) [°C]	-50
Ambient temperature fix installation (max) [°C]	80
Ambient temperature flexible installation (min) [°C]	-40
Ambient temperature flexible installation (max) [°C]	80

CHEMICAL PARAMETERS

Oil resistant	Yes
Ozone resistance	Yes
Resistant to UV	Yes

MECHANICAL PARAMETERS

Permanent tensile strength (rule)	Increased through additional support element
Travel speed	Hoist: up to 160 m/min
Bending radius (rule)	Acc. to VDE 0298-3: 4 X D fixed installation 5 X D flexible operation

NOTES ON INSTALLATION:

Cable must be laid into the basket in a counter-clockwise direction; detailed installation instructions available upon request.

Basket Design: "Dimensions depending on system (e.g. dependent on space requirements, hoisting height and speed, wind load). Recommended: basket diameter min. 30xD; basket height approx. 45xD (where D = cable diameter)."

CABLE PROPERTIES

Basic construction	SAP code	External code	Diameter conductor [mm]	Cable diameter (min) [mm]	Cable diameter (max) [mm]	Cable weight [kg/km]
7x4	20157109	5DE5668	3	18.1	20.1	690
24x2,5	20153610	5DE5625	2	29.1	32.1	1,860
24x3,5	20157105	5DE5678	2.4	32	35	2,460
30x2,5	20157101	5DE5698	2	31.1	34.1	2,360
30x3,5	20157106	5DE5680	2.4	34.3	37.3	3,100
36x2,5	20157102	5DE5688	2	34.5	37.5	2,920
36x3,5	20157107	5DE5681	2.4	37.9	40.9	3,920
42x2,5	20157103	5DE5690	2	36.8	39.8	3,670
42x3,5	20157108	5DE5685	2.4	42.4	45.4	4,720
48x1	20153609	5DE5697	1.3	31.1	34.1	2,470
48x2,5	20157104	5DE5660	2	41.3	44.3	4,240
48x3,5	20168277	5DE5665	2.4	48.1	51.1	4,470
54x2,5	20156743	5DE5667	2	45.5	48.5	4,090
24x2,5+1x(2x1)C	20167170	5DE5654	2	31.1	34.1	2,320
24x2,5+4x(2x1)C	20161731	5DE5661	2	41.2	44.2	3,760
36x2,5+2x(2x1)C	20161565	5DE5657	2	41.3	44.3	4,040
42x2,5+2x(2x1)C	20057241	5DE5732	2	43.5	46.5	3,700
20x12AWG	20164631	5DE5694	2.4	30.3	33.3	1,910
24x12AWG	20160976	5DE5695	2.4	31.6	34.6	2,470
30x12AWG	20164632	5DE5693	2.4	34.4	37.4	3,000
36x12AWG	20164633	5DE5696	2.4	38.1	41.1	3,910
42x12AWG	20154751	5DE5692	2.4	42.4	45.4	4,710
48x12AWG	20175750	5DE5***	2.4	48.1	51.1	4,500

CABLE PROPERTIES ELECTRICAL / MECHNICAL

Basic construction	SAP code	External code	Bending radius moving (min) [mm]	Conductor resistance at 20° C [Ohm/km]	Current carrying capacity [A]
7x4	20157109	5DE5668	101	4.95	41
24x2,5	20153610	5DE5625	161	7.98	30
24x3,5	20157105	5DE5678	175	5.55	39
30x2,5	20157101	5DE5698	171	7.98	30
30x3,5	20157106	5DE5680	187	5.55	39
36x2,5	20157102	5DE5688	188	7.98	30
36x3,5	20157107	5DE5681	205	5.55	39
42x2,5	20157103	5DE5690	199	7.98	30
42x3,5	20157108	5DE5685	227	5.55	39
48x1	20153609	5DE5697	171	19.5	18
48x2,5	20157104	5DE5660	222	7.98	30
48x3,5	20168277	5DE5665	256	5.55	39
54x2,5	20156743	5DE5667	243	7.98	30
24x2,5+1x(2x1)C	20167170	5DE5654	171	7.98	30
24x2,5+4x(2x1)C	20161731	5DE5661	221	7.98	30
36x2,5+2x(2x1)C	20161565	5DE5657	222	7.98	30
42x2,5+2x(2x1)C	20057241	5DE5732	233	7.98	30
20x12AWG	20164631	5DE5694	167	5.75	39
24x12AWG	20160976	5DE5695	173	5.75	39
30x12AWG	20164632	5DE5693	187	5.75	39
36x12AWG	20164633	5DE5696	206	5.75	39
42x12AWG	20154751	5DE5692	227	5.75	39
48x12AWG	20175750	5DE5***	256	5.75	39

Current carrying capacity acc. VDE 0298-4, Tab. 15, on a surface at 30°C ambient temperature.

SPREADERFLEX SYSLTOE 0,6/1KV

Spreader cables for basket operation

Feeder cable for load-lifting equipment, e.g. spreader with high mechanical stress in gravity-fed collector basket operation, with voltage rate up to 0,6/1 kV. Suitable for operation in cold environment.

STANDARDS / APPROVALS

DIN VDE 0298-4	Electrical parameters
DIN EN 60811-404	Chemical behaviour

CABLE DESIGN

Conductor	Extremely finely stranded copper, bare (class FS)
Core insulation material	Thermoplastic polymer
Core arrangement	Core assembly: cores laid-up into bundles Bundle assembly: bundles laid-up around the central support element. (where applicable) Individual Screen made of tinned copper braid, with coverage: individual 60%; TSP 80%
-	Aramide threads woven round lead ball cords, arranged centrally. The breaking load is rated to provide a safety factor of 5 when the cable is suspended vertically for 50 m. In case of bigger cross-section and higher number of cores, the support element is a round rubber filler with Aramid threads.
Material outer sheath	Polyurethane (PUR)
-	Special compound

ELECTRICAL PARAMETERS

Rated voltage U0/U (Um)	0.6/1 (1.2) kV
Test voltage [kV]	3.5
Nominal voltage U [V]	1,000

THERMAL PARAMETERS

Max. conductor temperature [°C]	90
Max. conductor temperature at short circuit [°C]	250
Ambient temperature fix installation (min) [°C]	-50
Ambient temperature fix installation (max) [°C]	80
Ambient temperature flexible installation (min) [°C]	-40
Ambient temperature flexible installation (max) [°C]	80

CHEMICAL PARAMETERS

Oil resistant	Yes
Ozone resistance	Yes
Resistant to UV	Yes

OPTICAL FIBER PROPERTIES

Fiber type	**G62,5/125 µm Multi-mode graded index**	**G50/125 µm Multi-mode graded index**	**E9/125 µm Single-mode graded index**
Cladding diameter	125 µm	125 µm	125 µm
Fiber diameter	250 µm	250 µm	250 µm
Attenuation at 850 nm	< 3,3 dB/km	< 2,8 dB/km	
Attenuation at 1310 nm	< 0,9 dB/km	< 0,8 dB/km	< 0,4 dB/km
Attenuation at 1550 nm			< 0,3 dB/km
Bandwidth at 850 nm	> 400 MHz	> 400 MHz	
Bandwidth at 1310 nm	> 600 MHz	> 1200 MHz	
Numerical Aperture	0,275 +/- 0,02	0,2 +/- 0,02	0,14 +/- 0,02
Chromatic Dispersion at 1300 nm			< 3,5 ps/nm km
Chromatic Dispersion at 1550 nm			< 18 ps/nm km

MECHANICAL PARAMETERS

Permanent tensile strength (rule)	Increased through additional support element
Travel speed	Hoist: up to 160 m/min
Bending radius (rule)	Acc. to VDE 0298-3: 4 X D fixed installation 5 X D flexible operation

NOTES ON INSTALLATION:

Cable must be laid into the basket in a counter-clockwise direction; detailed installation instructions available upon request.

Basket Design: "Dimensions depending on system (e.g. dependent on space requirements, hoisting height and speed, wind load). Recommended: basket diameter min. 30xD; basket height approx. 45xD (where D = cable diameter)."

CABLE PROPERTIES

Basic construction	SAP code	External code	Diameter conductor [mm]	Cable diameter (min) [mm]	Cable diameter (max) [mm]	Cable weight [kg/km]
24x2,5+1x(12G62,5LWL)	SPREADE_SY_1KV_003	5DE5***	2	31.1	34.1	2,200
24x2,5+1x(12G50LWL)	SPREADE_SY_1KV_002	5DE5***	2	31.1	34.1	2,200
24x2,5+1x(12E9LWL)	SPREADE_SY_1KV_001	5DE5***	2	31.1	34.1	2,200
24x2,5+1x(18G62,5LWL)	SPREADE_SY_1KV_006	5DE5***	2	31.1	34.1	2,200
24x2,5+1x(18G50LWL)	SPREADE_SY_1KV_005	5DE5***	2	31.1	34.1	2,200
24x2,5+1x(18E9LWL)	SPREADE_SY_1KV_004	5DE5***	2	31.1	34.1	2,200
30x2,5+1x(12G62,5LWL)	20366764	5DE5***	2	34.5	37.5	2,700
30x2,5+1x(12G50LWL)	SPREADE_SY_1KV_008	5DE5***	2	34.5	37.5	2,700
30x2,5+1x(12E9LWL)	SPREADE_SY_1KV_007	5DE5***	2	34.5	37.5	2,700
30x2,5+1x(18G62,5LWL)	SPREADE_SY_1KV_012	5DE5***	2	34.5	37.5	2,700
30x2,5+1x(18G50LWL)	SPREADE_SY_1KV_011	5DE5***	2	34.5	37.5	2,700
30x2,5+1x(18E9LWL)	SPREADE_SY_1KV_010	5DE5***	2	34.5	37.5	2,700
36x2,5+1x(12G62,5LWL)	20349161	5DE5611	2	36.8	39.8	3,350
36x2,5+1x(12G50LWL)	SPREADE_SY_1KV_014	5DE5***	2	36.8	39.8	3,350
36x2,5+1x(12E9LWL)	20357269	5DE5***	2	36.8	39.8	3,350
36x2,5+1x(18G62,5LWL)	SPREADE_SY_1KV_017	5DE5***	2	36.8	39.8	3,350
36x2,5+1x(18G50LWL)	SPREADE_SY_1KV_016	5DE5***	2	36.8	39.8	3,350
36x2,5+1x(18E9LWL)	20361912	5DE5***	2	36.8	39.8	3,350
42x2,5+1x(12G62,5LWL)	20313288	5DE5607	2	41.3	44.3	4,090
42x2,5+1x(12G50LWL)	20316179	5DE5608	2	41.3	44.3	4,090
42x2,5+1x(12E9LWL)	SPREADE_SY_1KV_018	5DE5***	2	41.3	44.3	4,090
42x2,5+1x(18G62,5LWL)	SPREADE_SY_1KV_020	5DE5***	2	41.3	44.3	4,090
42x2,5+1x(18G50LWL)	SPREADE_SY_1KV_019	5DE5***	2	41.3	44.3	4,090
42x2,5+1x(18E9LWL)	20360587	5DE5***	2	41.3	44.3	4,090
42x3,5+1x(12G62,5LWL)	20379212	5DE5***	2.4	46	49	4,400
48X2,5+1X(18G62,5)	20310815	5DE5606	2	45.5	48.5	3,970
48x2,5+1x(12G62,5LWL)	20310813	5DE5605	2	45.5	48.5	3,950
48x2,5+1x(12G50LWL)	20349689	5DE5***	2	45.5	48.5	3,950
48x2,5+1x(12E9LWL)	20310814	5DE5604	2	45.5	48.5	3,950
48x2,5+1x(18G50LWL)	SPREADE_SY_1KV_023	5DE5***	2	45.5	48.5	3,950
48x3,5+1x(12G62,5LWL)	20336920	5DE5***	2.4	51.4	54.4	5,300
48x3,5+1x(12E9LWL)	20386134	5DE5***	2.4	51.4	54.4	5,300
48x2,5+1x(18E9LWL)	SPREADE_SY_1KV_022	5DE5***	2	45.5	48.5	3,950

CABLE PROPERTIES

Basic construction	SAP code	External code	Diameter conductor [mm]	Cable diameter (min) [mm]	Cable diameter (max) [mm]	Cable weight [kg/km]
48x2,5+2x(2x1)C	20315923	5DE5751	2	49.3	53.3	4,400
54x2,5	20360911	5DE5613	2	45.5	48.5	4,090

CABLE PROPERTIES ELECTRICAL / MECHNICAL

Basic construction	SAP code	External code	Bending radius moving (min) [mm]	Conductor resistance at 20° C [Ohm/km]	Current carrying capacity [A]
24x2,5+1x(12G62,5LWL)	SPREADE_SY_1KV_003	5DE5***	171	7.98	30
24x2,5+1x(12G50LWL)	SPREADE_SY_1KV_002	5DE5***	171	7.98	30
24x2,5+1x(12E9LWL)	SPREADE_SY_1KV_001	5DE5***	171	7.98	30
24x2,5+1x(18G62,5LWL)	SPREADE_SY_1KV_006	5DE5***	171	7.98	30
24x2,5+1x(18G50LWL)	SPREADE_SY_1KV_005	5DE5***	171	7.98	30
24x2,5+1x(18E9LWL)	SPREADE_SY_1KV_004	5DE5***	171	7.98	30
30x2,5+1x(12G62,5LWL)	20366764	5DE5***	188	7.98	30
30x2,5+1x(12G50LWL)	SPREADE_SY_1KV_008	5DE5***	188	7.98	30
30x2,5+1x(12E9LWL)	SPREADE_SY_1KV_007	5DE5***	188	7.98	30
30x2,5+1x(18G62,5LWL)	SPREADE_SY_1KV_012	5DE5***	188	7.98	30
30x2,5+1x(18G50LWL)	SPREADE_SY_1KV_011	5DE5***	188	7.98	30
30x2,5+1x(18E9LWL)	SPREADE_SY_1KV_010	5DE5***	188	7.98	30
36x2,5+1x(12G62,5LWL)	20349161	5DE5611	199	7.98	30
36x2,5+1x(12G50LWL)	SPREADE_SY_1KV_014	5DE5***	199	7.98	30
36x2,5+1x(12E9LWL)	20357269	5DE5***	199	7.98	30
36x2,5+1x(18G62,5LWL)	SPREADE_SY_1KV_017	5DE5***	199	7.98	30
36x2,5+1x(18G50LWL)	SPREADE_SY_1KV_016	5DE5***	199	7.98	30
36x2,5+1x(18E9LWL)	20361912	5DE5***	199	7.98	30
42x2,5+1x(12G62,5LWL)	20313288	5DE5607	222	7.98	30
42x2,5+1x(12G50LWL)	20316179	5DE5608	222	7.98	30
42x2,5+1x(12E9LWL)	SPREADE_SY_1KV_018	5DE5***	222	7.98	30
42x2,5+1x(18G62,5LWL)	SPREADE_SY_1KV_020	5DE5***	222	7.98	30
42x2,5+1x(18G50LWL)	SPREADE_SY_1KV_019	5DE5***	222	7.98	30
42x2,5+1x(18E9LWL)	20360587	5DE5***	222	7.98	30
42x3,5+1x(12G62,5LWL)	20379212	5DE5***	245	5.55	39
48X2,5+1X(18G62,5)	20310815	5DE5606	243	7.98	30
48x2,5+1x(12G62,5LWL)	20310813	5DE5605	243	7.98	30
48x2,5+1x(12G50LWL)	20349689	5DE5***	243	7.98	30
48x2,5+1x(12E9LWL)	20310814	5DE5604	243	7.98	30
48x2,5+1x(18G50LWL)	SPREADE_SY_1KV_023	5DE5***	243	7.98	30
48x3,5+1x(12G62,5LWL)	20336920	5DE5***	272	5.55	39
48x3,5+1x(12E9LWL)	20386134	5DE5***	272	5.55	39
48x2,5+1x(18E9LWL)	SPREADE_SY_1KV_022	5DE5***	243	7.98	30

CABLE PROPERTIES ELECTRICAL / MECHNICAL

Basic construction	SAP code	External code	Bending radius moving (min) [mm]	Conductor resistance at 20° C [Ohm/km]	Current carrying capacity [A]
48x2,5+2x(2x1)C	20315923	5DE5751	268	7.98	30
54x2,5	20360911	5DE5613	243	7.98	30

Current carrying capacity acc. VDE 0298-4, Tab. 15, on a surface at 30°C ambient temperature.
Design with 6, 12, 18 or 24 fibers, in G62,5, G50 and E9 available upon request. Further combination with different fiber types is also possible.