



CORDAFLEX (SM) - AWG

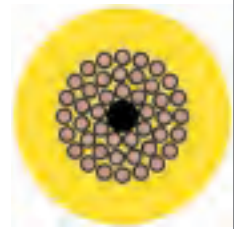
Portable Reel Cable - EP insulation, Dual
Neoprene jacket with braid reinforcement, 90°C,
600 V

ENERGY



Technical Data

	Type	CORDAFLEX (SM)
	Type designation	NSHTOUE -J/-O
	Approvals	UL File E 113313; DIN VDE 0250 part 814; MSHA P-189-1
	Application	Flexible power and control cable for use on reels and drum systems for connecting movable parts of machine tools, material handling equipment, etc., associated with high mechanical stresses. RS-version for use in vertical reeling application. e.g.: - Timber crane grapple reels - all tenders on plow feeders, container cranes, steel mill cranes, shiploaders and unloaders - Magnet cranes - Container crane spreader reels
Electrical parameters	Rated voltage	600 V
	Maximum permissible operating voltage in AC systems	1200 V
	Maximum operating voltage in DC systems	1800 V
	AC test voltage	2.5 kV, 5 min.
	Current-carrying capacity	According to DIN VDE 0298, Part4
Thermal parameters	Ambient temperature - Fully flexible operation - Fixed installation	- 35 °C to + 80 °C - 50 °C to + 80 °C
	Maximum permissible operating temperature of the conductor	90 °C
	Short-circuit temperature of the conductor	250 °C
Mechanical parameters	Tensile load	Up to 30 N/mm ²
	Torsional stresses	+/- 25 °/m
	Minimum bending radii	According to DIN VDE 0298, Part 3
	Minimum distance with S-type directional changes	20 x D
	Travel speed - Gantry (reeling operation) - Trolley (festoon operation)	No restriction. It is recommended to consult the manufacturer for speeds beyond 240m/min Up to 240 m/min
	Additional tests	Reserved bending test, roller bending test
Chemical parameters	Resistance to oil	DIN VDE 0473; Part 811-2-1; Para 10
	Weather resistance	Unrestricted use outdoors and indoors, resistant to ozone, UV and moisture



Design features

Type	CORDAFLEX (SM)
Conductor	Electrolytic copper tinned, very finely stranded class FS
Insulation	PROTOLON compound based on EPR (> 3GI3)
Core identification	best identification as a result of light colored insulation with numbers printed in black for power and control cables, earth conductor green-yellow colored
Central messenger	for CORDAFLEX (SM) RS specific central messenger made of Aramid threads ("kN"-Value = break load)
Core arrangement	Laid-up in a maximum of 3 layers
Sheath system PROTOFIRM: Inner sheath	- compound based on PCP, 5GM5 color: yellow
Anti-torsion braid PROTOFIRM: outer sheath	- Reinforced braid made of polyester threads, in a vulcanized bond between the sheaths. - compound based on PCP, 5GM5, color: yellow.
Marking	E113313 600V 90°C (UL) CORDAFLEX (SM) (cross section)x(number of cores) P-189-3-MSHA Germany
FEATURES	BENEFITS
Central messenger	- Superior tensile force capabilities
Extra finely stranded tin coated copper conductors with a short length of lay	- High durability under constant flexing conditions Highly flexible conductor assembly
PROTOLON EP insulation	- Highly resistant to ozone
Inner jacket locked construction of conductor assembly	- Resistance to sheave induced corkscrewing Water blocked
Wide mesh textile braid reinforcement in a vulcanized bond	- High torsion resistance
Extra heavy duty yellow neoprene double extruded jacket	- Very resistant to deformation and compressive forces Highly resistant to oil, flame, & high temperatures
Reinforced RS version available	- Improved vertical suspension performance
Good conductor geometry	- Promotes long conductor life Less spare conductors required
Large standard range with many sizes stocked	- Readily available
Metric sizes available	- International jobs
Composite cables with integrated fiber optics available (Please refer to catalog P9204)	- Power and control/data transmission through one single cable No interference on control/data circuits
Design exceeds NSHTÖU construction requirements specified in VDE 0250	- Optimal operational performance

Selection and ordering data

Ordering Part No.	Prysmian Part No.	Number of Conductors	Conductor Size	max. OD	Cable weight	Max. Continuous Safe Tension
			AWG	Inch -- mm	Lbs/1000 ft -- kg/km	lbs -- Newton
CORDAFLEX (SM) Control Cable - #16 AWG						
4EC-1603-05	5DH3 446	3	#16	0.570 -- 14.5	145 -- 215	29 -- 123
4EC-1604-05	5DH3 608	4	#16	0.591 -- 15.0	171 -- 255	38 -- 165
4EC-1607-05	5DH3 591	7	#16	0.772 -- 19.6	299 -- 445	60 -- 278
4EC-1609-05	5DH3 593	9	#16	0.870 -- 22.1	386 -- 575	83 -- 368
4EC-1612-05	5DH3 592	12	#16	1.031 -- 26.2	544 -- 810	105 -- 473
4EC-1616-05	5DH3 598	16	#16	0.965 -- 24.5	514 -- 765	135 -- 630
4EC-1620-05	5DH3 590	20	#16	1.075 -- 27.3	625 -- 930	180 -- 788
4EC-1624-05	5DH3 594	24	#16	1.193 -- 30.3	773 -- 1150	210 -- 945
4EC-1630-05	5DH3 595	30	#16	1.374 -- 34.9	1021 -- 1520	270 -- 1185
4EC-1636-05	5DH3 596	36	#16	1.362 -- 34.6	1035 -- 1540	315 -- 1418
4EC-1644-05	5DH3 597	44	#16	1.520 -- 38.6	1270 -- 1890	390 -- 1725
4EC-1654-05	5DH3 576	54	#16	1.736 -- 44.1	1660 -- 2470	480 -- 2123
CORDAFLEX (SM) Control Cable - #14 AWG						
4EC-1403-05	5DH3 467	3	#14	0.587 -- 14.9	178 -- 265	45 -- 203
4EC-1404-05	5DH3 600	4	#14	0.654 -- 16.6	228 -- 340	60 -- 270
4EC-1407-05	5DH3 581	7	#14	0.878 -- 22.3	413 -- 615	98 -- 435
4EC-1409-05	5DH3 583	9	#14	1.008 -- 25.6	561 -- 835	128 -- 570
4EC-1412-05	5DH3 582	12	#14	1.161 -- 29.5	716 -- 1066	165 -- 750
4EC-1416-05	5DH3 588	16	#14	1.130 -- 28.7	719 -- 1070	225 -- 998
4EC-1420-05	5DH3 580	20	#14	1.244 -- 31.6	887 -- 1320	285 -- 1245
4EC-1424-05	5DH3 584	24	#14	1.346 -- 34.2	1048 -- 1560	330 -- 1500
4EC-1430-05	5DH3 585	30	#14	1.598 -- 40.6	1445 -- 2150	420 -- 1875
4EC-1436-05	5DH3 586	36	#14	1.583 -- 40.2	1478 -- 2200	510 -- 2250
4EC-1444-05	5DH3 587	44	#14	1.787 -- 45.4	1902 -- 2830	615 -- 2745
4EC-1454-05	5DH3 575	54	#14	1.955 -- 49.4	2215 -- 3300	758 -- 3368
CORDAFLEX (SM) Control Cable - #12 AWG						
4EC-1203-05	5DH3 578	3	#12	0.654 -- 16.6	239 -- 355	68 -- 300
4EC-1204-05	5DH3 601	4	#12	0.776 -- 19.7	336 -- 500	90 -- 398
4EC-1207-05	5DH3 561	7	#12	0.988 -- 25.1	558 -- 830	150 -- 698
4EC-1209-05	5DH3 577	9	#12	1.142 -- 29	706 -- 1050	203 -- 900
4EC-1212-05	5DH3 562	12	#12	1.386 -- 35.2	1062 -- 1580	270 -- 1193
4EC-1216-05	5DH3 568	16	#12	1.268 -- 32.2	981 -- 1460	360 -- 1590
4EC-1220-05	5DH3 560	20	#12	1.433 -- 36.4	1243 -- 1850	450 -- 1988
4EC-1224-05	5DH3 564	24	#12	1.571 -- 39.9	1505 -- 2240	540 -- 2385
4EC-1230-05	5DH3 565	30	#12	1.811 -- 46.0	1976 -- 2940	675 -- 2978
4EC-1236-05	5DH3 566	36	#12	1.823 -- 46.3	2070 -- 3080	803 -- 3578
4EC-1244-05	5DH3 567	44	#12	2.012 -- 51.1	2466 -- 3670	983 -- 4365
4EC-1254-05	5DH3 574	54	#12	2.243 -- 59.0	3190 -- 4750	1208 -- 5363
CORDAFLEX (SM) Control Cable - #10 AWG						
4EC-1002-05	5DH3 610	2	#10	0.763 -- 20.0	305 -- 465	68 -- 300
4EC-1003-05	5DH3 620	3	#10	0.783 -- 20.5	379 -- 575	105 -- 465
4EC-1004-05	5DH3 460	4	#10	0.906 -- 23.0	477 -- 710	143 -- 630
4EC-1007-05	5DH3 626	7	#10	1.139 -- 30.0	822 -- 1240	248 -- 1103
4EC-1009-05	5DH3 627	9	#10	1.322 -- 34.7	1112 -- 1680	323 -- 1433
4EC-1012-05	5DH3 628	12	#10	1.650 -- 41.9	1579 -- 2350	428 -- 1905

Selection and ordering data

Ordering Part No.	Prysmian Part No.	Number of Conductors	Conductor Size	max. OD	Cable weight	Max. Continuous Safe Tension
			AWG	Inch -- mm	Lbs/1000 ft -- kg/km	lbs -- Newton
CORDAFLEX (SM) Power Cable - #16 AWG						
4EC-1603-05	5DH3 446	3	#16	0.570 -- 14.5	145 -- 215	29 -- 123
4EC-1604-05	5DH3 608	4	#16	0.591 -- 15.0	171 -- 255	38 -- 165
CORDAFLEX (SM) Power Cable - #14 AWG						
4EC-1403-05	5DH3 467	3	#14	0.587 -- 14.9	178 -- 265	45 -- 203
4EC-1404-05	5DH3 600	4	#14	0.654 -- 16.6	228 -- 340	60 -- 270
CORDAFLEX (SM) Power Cable - #12 AWG						
4EC-1203-05	5DH3 578	3	#12	0.654 -- 16.6	239 -- 355	68 -- 300
4EC-1204-05	5DH3 601	4	#12	0.776 -- 19.7	336 -- 500	90 -- 398
CORDAFLEX (SM) Power Cable - #10 AWG						
4EC-1002-05	5DH3 610	2	#10	0.763 -- 20.0	305 -- 465	68 -- 300
4EC-1003-05	5DH3 620	3	#10	0.783 -- 20.5	379 -- 575	105 -- 465
4EC-1004-05	5DH3 460	4	#10	0.906 -- 23.0	477 -- 710	95 -- 420
CORDAFLEX (SM) Power Cable - #8 AWG						
4EC-0802-05	5DH3 611	2	#8	0.882 -- 22.4	390 -- 580	113 -- 503
4EC-0803-05	5DH3 621	3	#8	0.900 -- 23.7	517 -- 780	173 -- 765
4EC-0804-05	5DH3 461	4	#8	1.047 -- 26.6	655 -- 975	225 -- 1005
CORDAFLEX (SM) Power Cable - #6 AWG						
4EC-0602-05	5DH3 612	2	#6	0.969 -- 24.6	517 -- 770	180 -- 803
4EC-0603-05	5DH3 622	3	#6	1.087 -- 27.6	699 -- 1040	270 -- 1200
4EC-0604-05	5DH3 462	4	#6	1.189 -- 30.2	904 -- 1345	360 -- 1590
4EC-0606-05	5DH3 458	6	#6	1.480 -- 37.6	1431 -- 2130	650 -- 2400
CORDAFLEX (SM) Power Cable - #4 AWG						
4EC-0402-05	5DH3 613	2	#4	1.122 -- 28.5	732 -- 1090	285 -- 1268
4EC-0403-05	5DH3 623	3	#4	1.221 -- 32.1	1063 -- 1610	428 -- 1905
4EC-0404-05	5DH3 463	4	#4	1.409 -- 35.8	1351 -- 2010	570 -- 2535
CORDAFLEX (SM) Power Cable - #2 AWG						
4EC-0202-05	5DH3 614	2	#2	1.319 -- 33.5	1115 -- 1660	450 -- 2003
4EC-0203-05	5DH3 624	3	#2	1.383 -- 36.3	1457 -- 2200	683 -- 3038
4EC-0204-05	5DH3 464	4	#2	1.594 -- 40.5	1882 -- 2800	908 -- 4035
CORDAFLEX (SM) Power Cable - #1 AWG						
4EC-0104-05	5DH3 465	4	#1	1.800 -- 47.4	2406 -- 3640	1140 -- 5085
CORDAFLEX (SM) Power Cable - Three Conductor with Grounds						
4EC-1013W/G3-05	5DH3 470	3 + (3)	#1/0+(#7)	1.728 -- 43.9	2379 -- 3540	1080 -- 4815
4EC-2023W/G3-05HB	5DH3 645	3 + (3)	#2/0+(#6)	2.008 -- 51.0	3253 -- 4850	1365 -- 6075
4EC-3033W/G3-05	5DH3 472	3 + (3)	#3/0+(#5)	2.034 -- 53.7	3519 -- 5320	1725 -- 7650
4EC-4043W/G3-05	5DH3 473	3 + (3)	#4/0+(#4)	2.264 -- 57.5	4280 -- 6370	2168 -- 9645
4EC-2503W/G3-05	5DH3 474	3 + (3)	250MCM+(#4)	2.370 -- 62.1	4893 -- 7400	2565 -- 11400
4EC-3503W/G3-05	5DH3 475	3 + (3)	350MCM+(#2)	2.787 -- 73.2	6865 -- 10380	3585 -- 15960
4EC-5003W/G3-05	5DH3 497	3 + (3)	500MCM+(#1)	3.193 -- 81.1	9139 -- 13600	5130 -- 22800

Selection and ordering data

Ordering Part No.	Prysmian Part No.	Number of Conductors	Conductor Size AWG	max. OD Inch -- mm	Cable weight Lbs/1000 ft -- kg/km	Max. Continuous Safe Tension lbs -- Newton
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CORDAFLEX (SM) Power Cable - Magnet Crane Cable - Two Conductor

4EC-1002-05	5DH3 610	2	#10	0.748 -- 19.5	305 -- 465	68 -- 300
4EC-0802-05	5DH3 611	2	#8	0.882 -- 22.4	390 -- 580	113 -- 503
4EC-0602-05	5DH3 612	2	#6	0.969 -- 24.6	517 -- 770	180 -- 803
4EC-0402-05	5DH3613	2	#4	1.122 -- 28.5	732 --1090	285 --1268
4EC-0202-05	5DH3 614	2	#2	1.319 -- 33.5	1115 -- 1660	450 -- 2003

CORDAFLEX (SM)-RS Reinforced Spreader Cable

4EC-1430RS-05	5DH3 845	30	#14	1.634 -- 41.5	1519 -- 2260	834 -- 3672
4EC-1230RS-05	5DH3 571	30	#12	1.823 -- 46.3	1996 -- 2970	1085 -- 4779
4EC- ...	5DH3 414	24	#12	1.583 -- 40.2	1498 -- 2230	950 -- 4183
4EC- ...	5DH3 415	56	#12	2.276 -- 57.8	3178 -- 4730	1671 -- 7361
4EC- ...	5DH3 494	44	#12	1.980 -- 50.3	2446 -- 3640	1401 -- 6169
4EC- ...	5DH3 579	9	#12	1.106 -- 28.1	679 -- 1010	612 -- 2694
4EC- ...	5DH3 617	24	#14	1.398 -- 35.5	1082 -- 1610	749 -- 3298

CORDAFLEX (SM)-RS Reinforced Spreader Cable with Optical Fibers (62,5/125µm)

4EC- ...	5DH3 615	20+(4OF)	#12+(62,5µm)	1.583 -- 40.2	1425 -- 2120	860 -- 3786
4EC- ...	5DH3 946	42+(6OF)	#12+(62,5µm)	2.012 -- 51.1	2430 -- 3616	1356 -- 5971