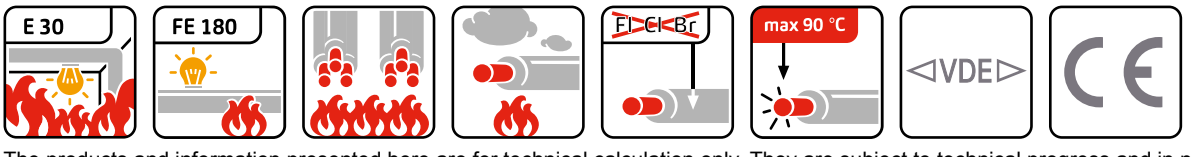
FRNC power cable (N)HXCH FE180/E30 acc. to VDE 0266

Conductor material:	bare copper
Conductor class:	class 1, from 25 sqmm class 2
insulation:	FRNC compound HI1
Concentric conductor:	Cu
Material outer sheath:	FRNC-compound HM1
colour outer sheath:	orange
Flame-retardance:	VDE 0482-266-2-4/IEC 60332-3-24 (Kat. C)
smoke density:	DIN EN 61034/IEC 61034
Halogen-free:	DIN EN 50267/IEC 60754
fire resistance:	FE 180 (IEC 60331)
Circuit integrity:	E30
Maximum permitted conductor temperature:	90 °C
Permitted cable outer temperature, fixed:	-5 - +70 °C
bending radius, fixed installation:	12 x DA
Nominal voltage Uo:	600 V
nominal voltage U:	1 kV
maximum permitted operating voltage in 3-phase systems:	1,2 kV
test voltage:	4 kV
core identification:	colours acc. VDE 0293 (HD308)

Application: For installation in dry and wet rooms, also for direct bedding in concrete, but not for direct burial in ground and not for use in water. The cable has improved properties in case of fire and may be used in public buildings with high safety requirements. The cables are halogen-free, have a low smoke density and are fire-resistant according to VDE 0472 part 814 (180 min., = IEC 60331). Furthermore the cable passed the test of 30 min. circuit integrity according to DIN 4102 part 12 (E 30) for all so-called standard installation systems (ladder, tray and ceiling) and is suitable for installation in fire alarm systems, safety lightning and other emergency electrical supply systems according to VDE 0108. A special test certificate about the circuit integrity is issued by the "The Civil Engineering Materials Testing Institute". For calculation of electrical systems with circuit integrity has to be considered that electrical resistance of copper conductors at 800 °C is approximately four times higher than at 20 °C and the current carrying capacity is reduced respectively.



The products and information presented here are for technical calculation only. They are subject to technical progress and in no way represent the ability of shipment. Outer diameters are approximately.

Table: Technical characteristics (N)HXCH E30

p/n	part name		R_l [Ω/km]	I_{bl} [A]	R_{bv} [mm]	D_A [mm]	Cu [kg/km]	G [kg/km]
011505	NHXCH E30 02X1,5/1,5 RE OR	RE	12,1	24	162	10,8	52	300
011506	NHXCH E30 02X2,5/2,5 RE OR	RE	7,41	32	174	11,9	80	350
011507	NHXCH E30 02X4/4 RE OR	RE	4,61	42	186	12,9	123	420
013253	NHXCH E30 02X6/6 RE OR	RE	3,08	53	225	15	182	301
011278	NHXCH E30 03X1,5/1,5 RE OR	RE	12,1	24	162	11,9	66	320
011215	NHXCH E30 03X2,5/2,5 RE OR	RE	7,41	32	174	12,9	104	380
013753	NHXCH E30 03X4/4 RE OR	RE	4,61	42	258	17,2	161	422
013754	NHXCH E30 03X6/6 RE OR	RE	3,08	53	275	18,3	240	513
013755	NHXCH E30 03X10/10 RE OR	RE	1,83	73	300	20,4	408	711
013756	NHXCH E30 03X16/16 RE OR	RE				22,9	643	1033
013856	NHXCH E30 03X25/16 RM OR	RM	0,727	135	401	26,7	902	1420
013857	NHXCH E30 03X50/25 RM OR	RM	0,387	201	507	33,8	1723	2342
013858	NHXCH E30 03X70/35 RM OR	RM	0,268	255	585	39	2410	3174
013859	NHXCH E30 03X95/50 RM OR	RM	0,193	314	657	43,8	3296	4269
013860	NHXCH E30 03X120/70 RM OR	RM	0,153	364	711	47,4	4236	5299
011831	NHXCH E30 03X150/70 RM OR	RM	0,124	416	629	46,9	5100	7713
011832	NHXCH E30 03X185/95 RM OR	RM	0,0991	480	678	52,9	6383	8810
011280	NHXCH E30 04X1,5/1,5 RE OR	RE	12,1	24	180	13,9	81	249
011281	NHXCH E30 04X2,5/2,5 RE OR	RE	7,41	32	192	14,1	128	313
011282	NHXCH E30 04X4/4 RE OR	RE	4,61	42	216	14,9	200	412
011226	NHXCH E30 04X6/6 RE OR	RE	3,08	53	240	16,9	297	522
011224	NHXCH E30 04X10/10 RE OR	RE	1,83	73	276	18,9	504	746
011181	NHXCH E30 04X16/16 OR	RE	1,15	97	324	21,9	796	1119
011167	NHXCH E30 04X25/16 RM OR	RM	0,727	135	384	28,1	1142	1583
011183	NHXCH E30 04X35/16 RM OR	RM	0,524	165	420	31,1	1526	2002
011227	NHXCH E30 04X50/25 RM OR	RM	0,387	201	480	36,2	2203	2700
011168	NHXCH E30 04X70/35 RM OR	RM	0,268	255	528	41,5	3082	3838
011184	NHXCH E30 04X95/50 RM OR	RM	0,193	314	624	45	4208	5181
011274	NHXCH E30 04X120/70 RM OR	RM	0,153	364	696	50,1	5388	6500
011275	NHXCH E30 04X150/70 RM OR	RM	0,124	416	756	52,9	6540	7950
011276	NHXCH E30 04X185/95 RM OR	RM	0,0991	480	780	60,5	8159	10130
011277	NHXCH E30 04X240/120 RM OR	RM	0,0754	565	792	64,9	10546	13190
011279	NHXCH E30 07X1,5/2,5 RE OR	RE	12,1	24	216	16,9	133	500
011283	NHXCH E30 07X2,5/2,5 RE OR	RE	7,41	32	228	17,9	200	600

p/n	part name		R_l [Ω/km]	I_{bl} [A]	R_{bv} [mm]	D_A [mm]	Cu [kg/km]	G [kg/km]
011284	NHXCH E30 12X1,5/2,5 RE OR	RE	12,1	24	264	19,9	205	700
011285	NHXCH E30 12X2,5/4 RM OR	RE	7,41	32	288	21,9	334	900
014465	NHXCH E30 14X2,5/6 RE OR					21,3	403	646
013621	NHXCH E30 19X1,5/2,5 RE OR	RE	12,1	24	375	24,8	310	913
013622	NHXCH E30 24X1,5/2,5 RE OR	RE	12,1	24	464	28,6	383	1113
013820	NHXCH E30 19X1,5/4 RE OR					25,4	328	829
013821	NHXCH E30 24X1,5/6 RE OR					29,2	412	1093

Rl	conductor resistance
Ibl	ampacity (in air) (30°C)
Rbv	bending radius, fixed installation
DA	outer diameter
Cu	copper weight (ger)
G	weight