

**PREVENTIVE FIRE PROTECTION**

**(N)HXH FE180 E90**

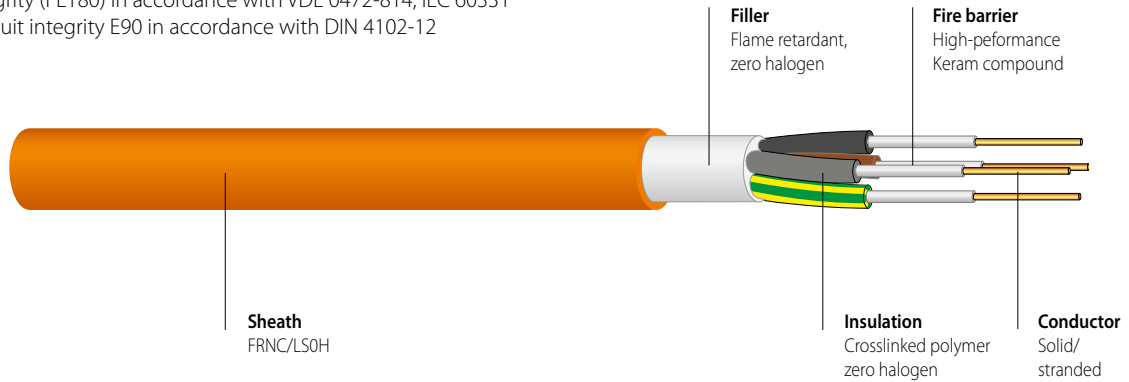
**Safety cable 0.6/1kV, pyrofil® Keram**

Halogen-free, with improved fire characteristics

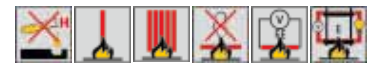
With reference to VDE 0266 and CENELEC HD 604 S1

Circuit integrity (FE180) in accordance with VDE 0472-814, IEC 60331

System Circuit integrity E90 in accordance with DIN 4102-12



**PRODUCT INFORMATION**



**APPLICATION**

Safety cables are used in all situations that require special protection against fire and flame damage for people and equipment and where a high degree of safety conditions must be fulfilled. Suitable for indoor applications. For outdoor applications, protection must be provided against exposure to direct sunlight. The cable should only be laid directly in earth or water if a protective conduit is used. These cables correspond to the demands of System Circuit integrity E90 in accordance with DIN 4102-12. System Circuit integrity is guaranteed at an operating voltage up to 400V. Permitted operating temperature at conductor +90°C.

**CONSTRUCTION**

Conductor	Bare copper, solid or stranded, IEC 60228, EN 60228, (VDE 0295)
Insulation	Double insulation, cross-linked, high-performance Keram special compound, VDE 0266 "HX11"
Filler	Flame retardant, halogen-free, thermoplastic compound
Outer sheath	Flame retardant Polyolefin compound, CENELEC HD 604 S1 and VDE 0276-604 "HM4"
Core colours	CENELEC HD 308 S2 and VDE 0293
Sheath colour	Orange
Imprint	DATWYLER PYROFIL KERAM (N)HXH FE180 E90 1kV "N X MM2" VDE REG. NR. 7780 "VDS" "ORDER NO." SWISS MADE "YEAR" "METRE MARKING" or on request

**ELECTRICAL PROPERTIES**

Nominal voltage	0.6/1kV
Test voltage	4000V, 50Hz

**GENERAL PROPERTIES**

Minimum bending radius	during and permanent installation	15* x D (single core cable) 12* x D (multicore cable) (D = outer diameter)	
	permanent installation	*50% reduction if installation at 30°C and with a template	
Operating temperature	permanent installation	-45°C to +90°C	
	during installation	-5°C to +50°C	
Zero halogen, non corrosive gases Flame propagation Flame spread		IEC 60754-2, EN 50267-2-2, VDE 0482-267-2-2 IEC 60332-1-2, EN 60332-1-2, VDE 0482-332-1-2 IEC 60332-3-22/-24 Cat. A/C, EN 60332-3-22/-24 Cat. A/C, VDE 0482-332-3-22/24 Cat. A/C	
	Smoke density Circuit integrity [FE/PH]		IEC 61034-1/-2, EN 61034-1/-2, VDE 0482-1034-1/-2 IEC 60331-11/-21 (180 minutes), VDE 0472 part 814 (FE180) IEC 60331-1, IEC 60331-2 (120 minutes), EN 50200, VDE 0482-200 (PH120) and EN 50362, VDE 0482-362 (120 minutes), BS 6387 C/W/Z
		System Circuit integrity [E90] System Circuit integrity under effect of water	DIN 4102 part 12 VdS 3423 [single core cable ≥ 16mm <sup>2</sup> ]

pyrofil® (N)HXHFE180/E90 Keram 0511/e

## PRODUCT INFORMATION

Article No.	No. of cores x cross section			Cu content kg/km	Total weight app. kg/km	Outer diameter app. mm	Fire load kWh/m
	n	x	n x mm <sup>2</sup>				
186 141	1	x	16 RM	154	243	10,2	0,35
186 142	1	x	25 RM	240	347	11,7	0,43
186 143	1	x	35 RM	336	449	12,8	0,49
186 144	1	x	50 RM	480	589	14,3	0,58
186 145	1	x	70 RM	672	810	16,1	0,67
186 146	1	x	95 RM	912	1090	18,5	0,85
186 147	1	x	120 RM	1152	1318	19,6	0,91
186 148	1	x	150 RM	1440	1648	21,8	1,11
186 149	1	x	185 RM	1776	2029	24,0	1,32
186 150	1	x	240 RM	2304	2658	27,2	1,63
186 151	1	x	300 RM	2880	3166	29,6	1,91
188 359	2	x	1,5 RE	29	178	11,0	0,48
187 247	2	x	2,5 RE	48	217	11,8	0,54
187 248	2	x	4 RE	77	272	12,8	0,62
187 249	2	x	6 RE	115	337	13,8	0,70
187 250	2	x	10 RE	192	459	15,4	0,83
187 254	2	x	16 RM	307	714	19,0	1,19
187 255	2	x	25 RM	480	1011	22,0	1,54
187 256	2	x	35 RM	672	1287	24,2	1,79
187 257	2	x	50 RM	960	1742	28,0	2,35
187 258	2	x	70 RM	1344	2346	31,6	2,86
187 259	2	x	95 RM	1824	3130	36,2	3,67
187 260	2	x	120 RM	2304	3729	38,6	4,11
186 174	3	x	1,5 RE	43	200	11,5	0,53
186 177	3	x	2,5 RE	72	250	12,4	0,60
186 182	3	x	4 RE	115	319	13,5	0,68
186 186	3	x	6 RE	173	403	14,6	0,77
186 189	3	x	10 RE	288	560	16,3	0,91
186 152	3	x	16 RM	461	878	20,2	1,29
186 153	3	x	25 RM	720	1299	24,0	1,75
186 154	3	x	35 RM	1008	1664	26,4	2,02
186 207	3	x	50 RM	1440	2189	29,8	2,51
187 261	3	x	70 RM	2016	2997	33,9	3,09
187 262	3	x	95 RM	2736	4007	38,9	3,95
187 263	3	x	120 RM	3456	4812	41,5	4,39
187 264	3	x	150 RM	4320	5988	46,0	5,32
187 265	3	x	185 RM	5328	7363	50,7	6,44
187 266	3	x	240 RM	6912	9632	57,6	8,10

RE = circular, solid conductor, RM= circular, stranded conductor

Additional dimensions available on request.

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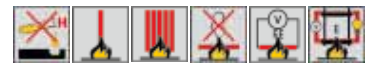
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	n x mm <sup>2</sup>							
191 069	3	x	35 + 1	x 16 RM	1162	1833	27,4	2,13
191 002	3	x	50 + 1	x 25 RM	1680	2457	31,3	2,69
191 003	3	x	70 + 1	x 35 RM	2352	3362	35,6	3,34
191 004	3	x	95 + 1	x 50 RM	3216	4488	40,7	4,24
191 005	3	x	120 + 1	x 70 RM	4128	5532	44,0	4,82
191 006	3	x	150 + 1	x 70 RM	4992	6666	48,0	5,70
191 068	3	x	185 + 1	x 95 RM	6240	8315	53,4	7,00
186 175	4	x	1,5	RE	58	234	12,4	0,61
186 178	4	x	2,5	RE	96	296	13,4	0,69
186 183	4	x	4	RE	154	381	14,6	0,78
186 187	4	x	6	RE	230	490	15,8	0,90
186 190	4	x	10	RE	384	695	17,8	1,07
186 155	4	x	16	RM	614	1089	22,1	1,54
186 156	4	x	25	RM	960	1618	26,3	2,05
186 157	4	x	35	RM	1344	2083	29,0	2,36
186 158	4	x	50	RM	1920	2752	32,8	2,97
186 159	4	x	70	RM	2688	3804	37,6	3,55
186 160	4	x	95	RM	3648	5092	43,1	4,75
187 274	4	x	120	RM	4608	6133	46,0	5,27
186 161	4	x	150	RM	5760	7662	51,2	6,49
187 275	4	x	185	RM	7104	9425	56,5	7,85
190 493	4	x	240	RM	9216	12334	64,1	9,85

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	n x mm <sup>2</sup>							
186 176	5	x	1,5	RE	72	278	13,4	0,71
186 179	5	x	2,5	RE	120	353	14,5	0,81
186 184	5	x	4	RE	192	456	15,8	0,93
186 188	5	x	6	RE	288	589	17,2	1,05
186 191	5	x	10	RE	480	832	19,3	1,25
186 162	5	x	16	RM	768	1361	24,8	1,86
186 163	5	x	25	RM	1200	1960	28,8	2,42
186 164	5	x	35	RM	1680	2547	32,0	2,86
186 165	5	x	50	RM	2400	3392	36,5	3,68
187 277	5	x	70	RM	3360	4667	41,5	4,51
185 271	7	x	1,5	RE	101	331	14,4	0,81
186 180	7	x	2,5	RE	168	426	15,6	0,92
186 185	7	x	4	RE	269	563	17,1	1,05
172 260	10	x	1,5	RE	144	457	17,8	1,09
187 253	10	x	2,5	RE	240	593	19,4	1,24
185 272	12	x	1,5	RE	173	513	18,3	1,20
186 181	12	x	2,5	RE	288	675	20,0	1,37
185 273	24	x	1,5	RE	346	901	24,6	1,99

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