ASCABLE-RECAEL	**PIR SZ1-K (AS+) 1kV CPR** **AENOR reg. Nº 042/000970 / 0099/CPR/B85/0368** **Construction Products Regulation (EU) No**	CPR RoHS COMPLIANT	**ETP-68** Ed. 09/2024 Rev. 02

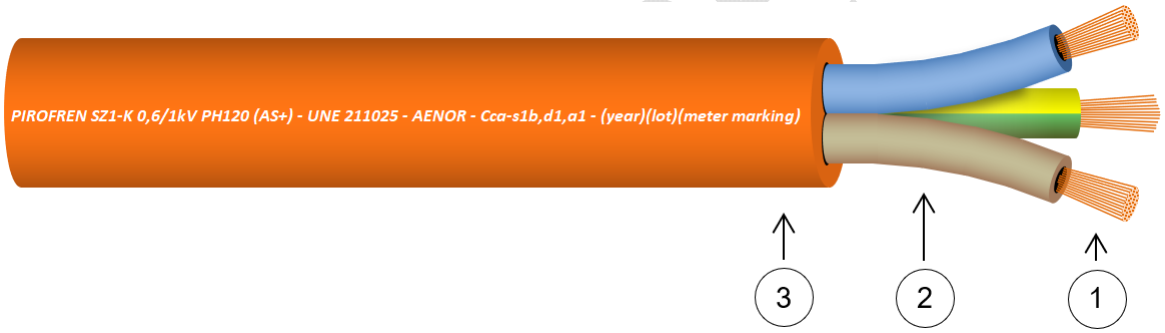
Fire resistant and halogen free power cables

DESCRIPTION

Power cables with cross linked elastomer insulation and halogen free polyolefin outer sheath. These cables have intrinsic resistance to fire and are intended for use in emergency circuits where the cable should be kept in service for a while even in the middle of fire. These cables are suitable for transport and distribution of electric power for indoor or outdoor fixed installations and for industrial use. These cables are suitable for air, buried or in conduit installations.
Construction is according to IEC-60502-1 and UNE 211025.

CONSTRUCTION

1 - Conductor:	Flexible bare copper class 5	a/EN 60228
2 - Insulation:	Silicone type EI2	a/EN 50363-1
	Identification 1x: black	
	· Identification (up to 5c): brown, black, grey, blue and green/yellow	
	· Assembly of cores: concentric stranded	
3 – Outer sheath:	Halogen free compound type ST8	a/IEC 60502-1
	· Standard colour: orange RAL 2003	
	· Other colours are possible on request	



TECHNICAL SPECIFICATIONS

Rated voltage:	0,6 / 1 kV AC	
Test voltage:	3.500 Vac	
Operating temperature:	-15 ^{o}C to +90 ^{o}C (Fixed installation, Occasional movements)	
	-40 ^{o}C to +90 ^{o}C (Fixed installation, no movement)	
Maxi. short-circuit temperature:	250 ^{o}C (max. 5 s)	a/IEC 60724
Bending radius:	5Ø	
Water resistant:	AD7	a/IEC 60364-3
Oil and fuel resistant:	O.K.	a/ICEA S-73-532
UV resistant:	O.K.	a/UNE 21123-4
CPR classification (class)	Cca-s1b,d1,a1	a/EN 50575

FEATURES FRONT FIRE (AS+)

TEST	STANDARDS	VALUES
Fire resistant PH120 (120' at 840ºC with impacts)	IEC 60331-1 and -2 EN 50200, EN 50362	O.K.
Fire resistant	NF C-32-070	Category CR1-C1
Resistance 2 h at 400 ºC	EN 12101-3	Complies, class F400
Flame retardant	EN 60332-1-2 / IEC 60332-1-2	OK
Fire retardant (Cca-s1b, d1, a1)	EN 50399	OK
Low smoke emission (transmitance > 60%)	EN 61034-2, IEC 61034-1-2	OK
Halogen free (HCl) (<0,5%)	EN 60754-1, IEC 60754-1	OK
Corrosivity test	EN 60754-2, IEC 60754-2	pH ≥ 4,3/Conductiv. ≤ 100 µS/cm

DATA AND DIMENSIONS

Dimensions and weights are approximate, subject to small variations due to process.

Cross section mm²	Resistance Ω/km at 20 ºC	Voltage Drop V/Axkm		Intensity maximum, A		Insulation thickness, mm	Sheath		Pulling force (**) max., N	Weight Kg/km
		Cos ϕ 0,8	Cos ϕ 1	In air	buried		thickness, mm	Ø outer, mm		
1x1,5	13,3	23,647	29,374	21	21	0,8	1,40	6,00	75	50
1x2,5	7,98	14,236	17,624	30	27	0,8	1,40	6,40	125	60
1x4	4,95	8,877	10,933	40	35	1,0	1,40	7,30	200	80
1x6	3,30	5,954	7,288	52	44	1,0	1,40	7,90	300	100
1x10	1,91	3,486	4,218	72	58	1,0	1,40	8,80	500	145
1x16	1,21	2,229	2,673	97	75	1,0	1,40	9,90	800	205
1x25	0,780	1,48	1,723	122	96	1,2	1,40	11,50	1.250	295
1x35	0,554	1,075	1,223	153	117	1,2	1,40	12,70	1.750	395
1x50	0,386	0,777	0,852	188	138	1,4	1,60	14,90	2.500	550
1x70	0,272	0,571	0,601	243	170	1,4	1,60	16,90	3.500	770
1x95	0,206	0,454	0,456	298	202	1,6	1,60	18,80	4.750	975
1x120	0,191	0,369	0,355	350	230	1,6	1,50	20,20	6.000	1.215
1x150	0,129	0,314	0,284	401	260	1,8	1,80	22,80	7.500	1.525
1x185	0,106	0,272	0,234	460	291	2,0	1,80	24,80	9.250	1.830
1x240	0,0801	0,224	0,177	545	336	2,2	1,80	28,50	12.000	2.390
1x300	0,0641	0,202	0,142	630	380	2,2	3,00	34,5	15.000	3.200
2x1,5	13,3	13,3	27,371	33,918	23	24	1,25	8,90	150	105
2x2,5	7,98	7,98	16,502	20,35	32	32	1,25	9,70	250	135
2x4	4,95	4,95	10,308	12,624	44	42	1,25	11,50	400	190
2x6	3,30	3,30	6,931	8,416	57	53	1,25	12,60	600	240
2x10	1,91	1,91	4,082	4,87	78	70	1,25	14,50	1.000	355
2x16	1,21	1,21	2,614	3,086	104	91	1,40	16,90	1.600	510
2x25	0,780	0,780	1,772	1,99	135	116	1,40	20,10	2.500	755
2x35	0,554	0,554	1,304	1,412	168	140	1,50	22,70	3.500	1.015
2x50	0,386	0,386	0,96	0,984	204	166	1,60	26,60	5.000	1.410
2x70	0,272	0,272	0,724	0,694	262	204	1,70	30,80	7.000	1.985
3G1,5	13,3	27,371	33,918	23	24	0,8	1,25	9,40	225	120
3G2,5	7,98	16,502	20,35	32	32	0,8	1,25	10,30	375	160
3G4	4,95	10,308	12,624	44	42	1,0	1,25	12,20	600	225

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		Cos ϕ 0,8	Cos ϕ 1	In air	buried		thickness, mm	Ø outer, mm		
3G6	3,30	6,931	8,416	57	53	1,0	1,25	13,40	900	295
3G10	1,91	4,082	4,87	78	70	1,0	1,25	15,50	1.500	440
3x16	1,21	2,201	2,673	91	75	1,0	1,40	18,00	2.400	640
3x25	0,780	1,457	1,723	115	96	1,2	1,50	21,70	3.750	970
3x35	0,554	1,054	1,223	143	117	1,2	1,50	24,30	5.250	1.305
3x50	0,386	0,757	0,852	174	138	1,4	1,60	28,50	7.500	1.810
3x70	0,272	0,555	0,601	223	170	1,4	1,70	33,00	10.500	2.575
3x95	0,206	0,436	0,456	271	202	1,6	3,00	40,00	14.250	3.500
4G1,5	13,3	23,602	29,374	20	21	0,8	1,25	10,20	300	140
4G2,5	7,98	14,196	17,624	28	27	0,8	1,25	11,20	500	190
4G4	4,95	8,837	10,933	38	35	1,0	1,25	13,40	800	270
4G6	3,30	5,917	7,288	49	44	1,0	1,25	14,70	1.200	355
4G10	1,91	3,455	4,218	68	58	1,0	1,40	17,30	2.000	555
4x16	1,21	2,201	2,673	91	75	1,0	1,40	19,90	3.200	800
4x25	0,780	1,457	1,723	115	96	1,2	1,50	23,90	5.000	1.210
4x35	0,554	1,054	1,223	143	117	1,2	1,60	27,00	7.000	1.645
4x50	0,386	0,757	0,852	174	138	1,4	1,70	31,70	10.000	2.285
4x70	0,272	0,555	0,601	223	170	1,4	1,80	36,80	14.000	3.270
5G1,5	13,3	23,602	29,374	20	21	0,8	1,25	11,10	375	165
5G2,5	7,98	14,196	17,624	28	27	0,8	1,25	12,20	625	225
5G4	4,95	8,837	10,933	38	35	1,0	1,25	14,70	1.000	320
5G6	3,30	5,917	7,288	49	44	1,0	1,30	16,20	1.500	425
5G10	1,91	3,455	4,218	68	58	1,0	1,40	19,00	2.500	660
5G16	1,21	2,201	2,673	91	75	1,0	1,50	22,00	4.000	965
5G25	0,780	1,457	1,723	115	96	1,2	1,60	26,60	6.250	1.475
5G35	0,554	1,054	1,223	143	117	1,2	1,70	30,00	8.750	2.005
5G50	0,386	0,757	0,852	174	138	1,4	1,80	35,20	12.500	2.785

(**) CALCULATION FOR PULLING FORCE

By means of a pulling head on the conductors or by means of a pulling sleeve with a friction connection between the pulling sleeve and the cable conductors, a maximum tensile load value of 50 N/mm² is allowed.

This maximum pulling force takes into account the permitted elongation of 0,2 % for the conductor.

REFERENCE CONDITIONS FOR THE CALCULATION OF INTENSITY

(Other conditions are possible, consult standards HD 60364-5-52 and IEC 60364-5-52)

According EN 60364-5-52 and IEC 60364-5-52

Maximum intensity to air in tray, temperature ambient 40 ºC:

Installation type F	XLPE3	column 11 (1x triphasic)
Installation type E	XLPE2	column 12 (2x, 3G monophasic)
Installation type E	XLPE2	column 10b (3x, 4x, 4G, 5G triphasic)

Maximum intensity directly buried (method D2) or under conduit (method D1), thermal resistivity of soil de 2,5 K.m/W and ambient temperature on the ground of 25 ºC:

Installation type D1/D2	XLPE2	2x, 3G monophasic
Installation type D1/D2	XLPE3	1x, 3x, 4x, 4G, 5G triphasic

VOLTAGE DROP:

Monophasic method	2x, 3G.
Triphasic method	1x, 3x, 4x, 4G, 5G.