FLEXIBLE RUBBER CABLES

TFKable

H07RN-F 450/750 V SUB

Minimum and maximum exploitation temperature

Suitable for water

Oil resistant

UV resistant

Cable complies with requirements of RoHS directive

Flexible rubber insulated and sheathed cables

Standards: EN 50525-2-21

CONSTRUCTION	
Conductors	Annealed flexible stranded tin coated class 5 to EN 60228
Separator	A suitable tape separator between the conductor and insulation
Insulation	Ethylene-propylene rubber (EPR) type EI4 in acc. to EN 50363-1
Circuit identification Twin 3-core 4-core 5-core Above 5-core	Colour coding of power conductors comply to HD 308, DIN VDE 0293-308 Blue and brown Green-yellow, blue, brown Green-yellow, brown, black, grey Green-yellow, blue, brown black, grey Green-yellow, other cores black with white numbering
Internal jacket	A synthetic thermosetting compound type EM3 in acc. to EN 50363-2-1 (above 2, 3, 4, 5 x 6 mm^2 and 1x 50 mm^2)
Outer jacket	A synthetic thermosetting compound type EM2 in acc. to EN 50363-2-1
Colour of outer jacket	Black or other colours can be provided
Flame propagation	EN 60332-1-2:2004, IEC 60332-1-2:2004
Standard marking	TF KABLE 3 CE BBJ <HAR> H07RN-F (Size) (Year)
CHARACTERISTICS	
Excellent flexibility	
Flame retardant	
Temperature range: -25°C to +60°C. For fixed protected installation -40°C to +90°C	
UV, sunlight, ozone and oil resistant	
Ink jet printed for easy identification	
Application	The cables may be rated 0.6/1 kV where the installation has been built in protection and for motors in lifting appliances –machine tools etc. Also designed for use as submersible pump cables to a water depth of about 100 m Heavy-duty flexible cables for medium mechanical stress in dry and wet, suitable for large boiling installations, heating plates Inspections lamps, electrical tools such as drills circular saws Domestic electric tools, transportable motors etc. Other industrial applications
Standard length cable packing	1000 m on drums. Other forms of packing and delivery are available on request
Approvals	BBJ HAR

Size	Number x maximum diameter of wire	Nominal thickness of insulation	Nominal thickness of jacket			Approximate O.D. of cable	Voltage drop	Approximate weight of cable	Maximum conductor resistance at 20°C
			Single	Double layer					
				Internal	Outer				
n x mm^2	mm	mm	mm	mm	mm	mm	V/A/km	kg/km	Ω/km
1x1.5	28x0.26	0.8	1.4	—	—	5.7	23.73	49	13.7
1x2.5	45x0.26	0.9	1.4	—	—	6.4	14.22	65	8.21
1x4	51x0.31	1.0	1.5	—	—	7.3	8.82	89	5.09
1x6	76x0.31	1.0	1.6	—	—	7.9	5.88	114	3.39

Size	Number x maximum diameter of wire	Nominal thickness of insulation	Nominal thickness of jacket			Approximate O.D. of cable	Voltage drop	Approximate weight of cable	Maximum conductor resistance at 20°C
			Single	Double layer					
				Internal	Outer				
n x mm²	mm	mm	mm	mm	mm	mm	V/A/km	kg/km	Ω/km
1x10	74x0.41	1.2	1.8	—	—	9.8	3.38	178	1.95
1x16	116x0.41	1.2	1.9	—	—	11.1	2.16	248	1.24
1x25	180x0.41	1.4	2.0	—	—	12.9	1.39	356	0.795
1x35	254x0.41	1.4	2.2	—	—	14.3	0.99	476	0.565
1x50	364x0.41	1.6	2.4	—	—	16.8	0.70	657	0.393
1x70	514x0.51	1.6	—	1.0	1.6	19.0	0.51	884	0.277
1x95	684x0.51	1.8	—	1.1	1.7	21.9	0.40	1156	0.210
1x120	870x0.51	1.8	—	1.2	1.8	23.4	0.33	1420	0.164
1x150	1092x0.51	2.0	—	1,3	1.9	26.0	0.28	1762	0.132
1x185	1325x0.51	2.2	—	1.4	2.0	29.1	0.24	2145	0.108
1x240	1752x0.51	2.4	—	1.4	2.1	31.2	0.20	2720	0.0817
1x300	2203x0.51	2.6	—	1.4	2.2	35.4	0.19	3385	0.0654
1x400	2904x0.51	2.8	—	1.5	2.3	38.4	0.17	4196	0.0495
1x500	3679x0.61	3.0	—	1.6	2.4	43.5	0.16	5431	0.0391
1x630	4880x0.61	3.0	—	1.6	2.5	48.4	0.15	6300	0.0292
2x1	29x0.21	0.8	1.3	—	—	7.9	40.00	89	20.0
2x1.5	28x0.26	0.8	1.5	—	—	8.9	27.40	116	13.7
2x2.5	45x0.26	0.9	1.7	—	—	10.6	16.42	167	8.21
2x0.75*	22x0.20	0.8	1.3	—	—	7.9	—	80	26.7
2x4	51x0.31	1.0	1.8	—	—	12.8	10.18	227	5.09
2x6	76x0.31	1.0	2.0	—	—	13.7	6.78	301	3.39
2x10	74x0.41	1.2	—	1.2	1.9	18.9	3.90	559	1.95
2x16	116x0.41	1.2	—	1.3	2.0	21.6	2.49	765	1.24
2x25	180x0.41	1.4	—	1.4	2.2	25.3	1.60	1092	0.795
3x1	29x0.21	0.8	1.4	—	—	8.5	34.64	107	20.0
3x1.5	28x0.26	0.8	1.6	—	—	9.5	23.73	137	13.7
3x2.5	45x0.26	0.9	1.8	—	—	11.3	14.22	202	8.21
3x4	51x0.31	1.0	1.9	—	—	13.8	8.82	292	5.09
3x6	76x0.31	1.0	2.1	—	—	15.0	5.87	390	3.39
3x10	74x0.41	1.2	—	1.3	2.0	20.2	3.38	684	1.95
3x16	116x0.41	1.2	—	1.4	2.1	23.1	2.15	944	1.24
3x25	180x0.41	1.4	—	1.5	2.3	27.1	1.38	1355	0.795
3x35	254x0.41	1.4	—	1.6	2.5	29.3	0.99	1726	0.565
3x50	364x0.41	1.6	—	1.8	2.7	35.2	0.69	2452	0.393
3x70	514x0.51	1.6	—	1.9	2.9	39.7	0.50	3253	0.277
3x95	684x0.51	1.8	—	2.1	3.2	46.1	0.39	4303	0.210
3x120	870x0.51	1.8	—	2.2	3.4	49.0	0.31	5191	0.164
3x150	1092x0.51	2.0	—	2.4	3.6	54.7	0.26	6455	0.132
3x185	1325x0.51	2.2	—	2.5	3.9	61.1	0.23	7906	0.108
3x240	1752x0.51	2.4	—	2.8	4.3	66.6	0.18	10027	0.0817
3x300	2203x0.51	2.6	7.7	3.1	4.6	77.0	0.16	12300	0.0654
4x1	29x0.21	0.8	1.5	—	—	9.4	34.64	131	20.0
4x1.5	28x0.26	0.8	1.7	—	—	10.4	23.73	167	13.7

Size	Number x maximum diameter of wire	Nominal thickness of insulation	Nominal thickness of jacket			Approximate O.D. of cable	Voltage drop	Approximate weight of cable	Maximum conductor resistance at 20°C
			Single	Double layer					
				Internal	Outer				
n x mm²	mm	mm	mm	mm	mm	mm	V/A/km	kg/km	Ω/km
4x2.5	45x0.26	0.9	1.9	—	—	12.5	14.22	247	8.21
4x4	51x0.31	1.0	2.0	—	—	14.3	8.82	340	5.09
4x6	76x0.31	1.0	2.3	—	—	16.3	5.87	463	3.39
4x10	74x0.41	1.2	—	1.4	2.0	22.1	3.38	831	1.95
4x16	116x0.41	1.2	—	1.4	2.2	25.3	2.15	1166	1.24
4x25	180x0.41	1.4	—	1.6	2.5	30.1	1.38	1711	0.795
4x35	254x0.41	1.4	—	1.7	2.7	32.5	0.99	2190	0.565
4x50	364x0.41	1.6	—	1.9	2.9	37.8	0.69	3101	0.393
4x70	514x0.51	1.6	—	2.0	3.2	44.2	0.50	4143	0.277
4x95	684x0.51	1.8	—	2.3	3.6	49.6	0.39	5517	0.210
4x120	870x0.51	1.8	—	2.4	3.6	54.4	0.31	6611	0.164
4x150	1092x0.51	2.0	—	2.6	3.9	60.9	0.26	8244	0.132
4x185	1325x0.51	2.2	—	2.8	4.2	68.2	0.23	10113	0.108
4x240	1752x0.51	2.4	—	3.1	4.6	74.1	0.18	12838	0.0817
5x1	29x0.21	0.8	1.6	—	—	10.3	34.64	159	20.0
5x1.5	28x0.26	0.8	1.8	—	—	11.5	23.73	206	13.7

Current rating in free air temperature of 30°C and conductor temperature of 90°C						
Cross section	Single core	Two cores	Three cores	Four cores	Five cores	Seven cores
mm²	A					
1.5	24	23	23	21	21	15
2.5	32	32	32	29	29	23
4	42	42	42	38	38	28
6	55	55	55	50	50	55
10	77	77	77	67	67	74
16	101	101	101	91	91	-
25	133	133	133	121	121	-
35	165	-	165	149	-	-
50	202	-	202	183	-	-
70	250	-	260	231	-	-
95	300	-	310	280	-	-
120	360	-	370	324	-	-
150	412	-	430	372	-	-
185	465	-	490	423	-	-
240	550	-	580	501	-	-
300	630	-	680	-	-	-
500	831	-	-	-	-	-

Correction factor for ambient temperature:

Temperature of air, °C	35	40	45	50	55	60	65	70	75	80
Correct factor	0.95	0.90	0.85	0.82	0.76	0.70	0.64	0.57	0.50	0.40

H01N2-D 100/100 V

Minimum and maximum exploitation temperature

High flexibility tolerance

Oil resistant

UV resistant

Cable complies with requirements of RoHS directive

CPE insulated welding cables

Standards: EN-50525-2-81

CONSTRUCTION	
Conductor	Bare copper stranded conductors in accordance Tab.1, 2 EN-50525-81*
Separator	Paper or polyester separator longitudinally over conductor
Insulation	Flame retardant oil resistant thermosetting compound
Colour of insulation	Black
Flame propagation	IEC 60332-1-2:2004, EN 60332-1-2:2004
Test voltage 50Hz	1000 V
Standard marking	TF KABLE 3 CE BBJ <HAR> H01N2-D (Size) (Year)

*Conductors are Class 5 ,6 or exceed parameters for Class 5,6 in accordance EN 60 228

CHARACTERISTICS	
Excellent flexibility	
Flame retardant	
Temperature range: -25°C to +85°C, for fixed installation lowest temperature is -40°C	
Maximum short-circuit conductor temperature: +250°C	
The maximum static pulling strength may not exceed 15 N/mm²	
Minimum bending radius: 6 x D; D – overall diameter of cable	
Ink jet printed for easy identification	
Application	Designed for welding equipment and accessories Suitable for use in dry and damp conditions, outdoors and indoors Retain their high flexibility even under influence of ozone, light, oxygen, protective gases, oil and petrol; resistant to flame propagation Other industrial applications
Standard length cable packing	1000 m on drums. Other forms of packing and delivery are available on request
Approvals	BBJ HAR

Number and cross-sectional area of conductor	Maximum diameter of wires in conductor	Nominal thickness of insulation	Approximate overall diameter	Approximate weight	Maximum conductor resistance at 20°C
mm²	mm	mm	mm	kg/km	Ω/km
10	0.21	2.0	8.0	141	1.91
16	0.21	2.0	8.9	197	1.21
25	0.21	2.0	10.1	281	0.780
35	0.21	2.0	11.4	379	0.554
50	0.21	2.2	13.5	524	0.386
70	0.21	2.4	15.3	735	0.272
95	0.21	2.6	17.5	955	0.206
120	0.51	2.8	19.7	1213	0.161
150	0.51	3.0	21.8	1500	0.129
185	0.51	3.2	24.3	1821	0.106
240	0.51	3.4	28.3	2404	0.0801

TQ 0361 450 V

Minimum and maximum exploitation temperature

Flame retardant

Oil resistant

UV resistant

Cable complies with requirements of RoHS directive

EPR/CPE insulated welding cables

Standards: Based on BS 638.4, BS 6360, BS 7655

CONSTRUCTION	
Conductors	Fully annealed flexible stranded bare copper Class 6 or 5 (above 120 mm^2) per BS 6360
Separator	A suitable tape separator between the conductor and insulation
Internal layer	Ethylene-propylene rubber (EPR) Type EI7 to BS 7655
Outer jacket	CPE compound exceed Type EM5 to BS 7655
Colour of jacket	Black or orange
CHARACTERISTICS	
Heat resistance	
Excellent flexibility	
Ozone, sun and weather resistant	
Temperature range -40°C to +90°C	
Oil resistant and flame retardant	
Ink jet printed for easy identification	
Application	Secondary voltage resistance welding leads Leads for motors, generators, batteries For use in underground and open mines Other industrial applications
Standard length cable packing	1000 m on drums. Other forms of packing and delivery are available on request

Size	Conductor stranding	Nominal thickness EPR/CPE layer	Approximate weight	Approximate overall diameter	Current Currying Capacity in air at 85°C
mm^2	Nxmm	mm	kg/km	mm	A
10	301x0.2	0.7/1.3	137	8.1	130
16	462x0.2	0.7/1.3	199	9.4	175
25	723x0.2	0.7/1.3	276	10.2	215
35	1035x0.2	0.7/1.3	380	11.6	270
50	1480x0.2	0.9/1.3	519	13.2	340
95	2738x0.2	1.1/1.5	942	17.5	410
120	1548x0.3	1.2/1.6	1190	19.2	475
185	1319x0.4	1.3/1.9	1797	24.4	610
240	1752x0.4	1.2/2.2	2330	26.5	710

ARC-WELDING EP 600 V

Minimum and maximum exploitation temperature

UV resistant

Cable complies with requirements of RoHS directive

Zero halogen EP insulated welding cable 105°C

Standards: In line with UL 1581

CONSTRUCTION	
Conductors	Flexible stranded bare copper per ASTM B 172 Class K
Separator	If needed tape separator between conductor and insulation
Insulation	Ethylene-propylene rubber (EPR). Class 45 105°C , Table 50.55 of UL 1581
Jacket	Black 6AWG-500 MCM, Red 6-4/0 AWG
CHARACTERISTICS	
Excellent flexibility	
Ozone, sun and weather resistant	
Water resistant and flame retardant	
Rated and flexible at -50°C	
Heat resistant at 105°C	
Oil resistant	
Application	Secondary voltage resistant welding leads Leads for motors, generators, batteries Other industrial applications
Standard length cable packing	1000 ft on drums. Other forms of packing and delivery are available on request

Size	**Conductor strand**	**Nominal insulation thickness**		**Approximate overall diameter**		**Approximate weight**		**Maximum direct current resistance**	**Ampacity ***
AWG OR MCM	Stranding	Inches	mm	Inches	mm	lbs./1000 ft	kg/km	Ω/km	A
8	161/30	0.06	1.52	0.299	7.6	81	121	2.18	100
6	253/30	0.06	1.52	0.319	8.1	114	169	1.38	133
4	403/30	0.06	1.52	0.366	9.3	168	250	0.865	179
2	636/30	0.06	1.52	0.429	10.9	249	370	0.549	237
1	798/30	0.08	2.03	0.508	12.9	299	445	0.436	284
1/0	1016/30	0.08	2.03	0.555	14.1	387	576	0.345	327
2/0	1261/30	0.08	2.03	0.598	15.2	470	699	0.276	377
3/0	1590/30	0.08	2.03	0.673	17.1	588	875	0.219	449
4/0	2007/30	0.08	2.03	0.716	18.2	722	1075	0.173	514
250	2399/30	0.095	2.41	0.866	22.0	890	1324	0.147	577
350	3327/30	0.095	2.41	0.953	24.2	1193	1775	0.106	719
500	4746/30	0.095	2.41	1.130	28.7	1724	2565	0.0743	908

* Ampacity - free air measured. Based on continuous duty at 90°C conductor temperature