Equipment and solutions

Submersible Electrical Cables

Product technical datasheet

Heavy-duty copper cables designed for Franklin and JOVAL submersible motors.



FT-P035 · Rev. 1

Complete range of electrical cables for submersible applications. Includes heavy-duty sheathed cables for 4", 6" and 8" motors, providing insulation and durability in submerged environments. Available in various cross-sections for different power ratings and lengths.

Applications

- Clean water pumping in 4” boreholes
- Water abstraction from 6" boreholes, reservoirs and water courses.
- Large diameter boreholes

Operating conditions

- Confirm the installation conditions, power supply and duty point before commissioning.

Engineering note	Confirm the installation conditions, power supply and duty point before commissioning.
Complementary equipment	Contact JOVAL for compatible accessories and equipment.
Resources and support	Pump selection guide · JOVAL technical support
Contact	+351 253 490 740 · joval@joval.pt

Technical specifications

Type

4" Super Coated Cable

Material

Annealed copper

Insulation

Special submersible insulation (90°C)

Compatibility

Franklin Electric / Joval

Standards

PSC - 3% voltage drop at 50°C ambient temperature

Applications

- Clean water pumping in 4” boreholes
- Water abstraction from 6" boreholes, reservoirs and water courses.
- Large diameter boreholes

Operating conditions

- Confirm the installation conditions, power supply and duty point before commissioning.

Engineering note Confirm the installation conditions, power supply and duty point before commissioning.

Maximum length · 4" motor

Performance

220 V 50 Hz 3Ø · DOL

Power	Cable section (mm²) 1,5	2,5	4	6	10
0.25 kW / 0.33 HP	120	200	325	485	—
0.37 kW / 0.50 HP	80	140	225	335	—
0.55 kW / 0.75 HP	60	100	160	245	405
0.75 kW / 1.00 HP	40	75	125	190	310
1.10 kW / 1.50 HP	30	50	80	125	200
1.50 kW / 2.00 HP	25	45	70	105	175
2.20 kW / 3.00 HP	20	30	50	75	130
3.70 kW / 5.00 HP	—	20	30	50	80

400 V 50 Hz 3Ø · DOL

Power	Cable section (mm²) 1,5	2,5	4	6	10
0.37 kW / 0.50 HP	520	—	—	—	—
0.55 kW / 0.75 HP	355	—	—	—	—
0.75 kW / 1.00 HP	280	470	—	—	—
1.10 kW / 1.50 HP	200	335	—	—	—
1.50 kW / 2.00 HP	145	240	385	—	—
2.20 kW / 3.00 HP	100	170	270	405	—
3.00 kW / 4.00 HP	70	125	200	295	490
3.70 kW / 5.00 HP	60	100	165	245	410
4.00 kW / 5.50 HP	55	90	150	225	370
5.50 kW / 7.50 HP	40	70	115	175	290
7.50 kW / 10.00 HP	30	50	85	130	215
9.30 kW / 12.50 HP	25	40	65	100	170

Maximum cable length (m).

Maximum Length · Motor 6"-8"-10" (380V · DOL)

Performance

	Cable section (mm²)																		
Power	2,5	4	6	10	16	25	35	50	70	95	120	150	185	240	300	400	500	630	800
4 kW / 5.5 HP	95	155	230	325	385	605	915	—	—	—	—	—	—	—	—	—	—	—	—
5.5 kW / 7.5 HP	70	110	170	235	280	440	670	915	—	—	—	—	—	—	—	—	—	—	—
7.5 kW / 10 HP	50	80	126	175	205	325	500	685	935	—	—	—	—	—	—	—	—	—	—
9.3 kW / 12.5 HP	40	65	100	145	170	270	410	565	770	1030	—	—	—	—	—	—	—	—	—
11 kW / 15 HP	—	55	85	120	140	225	345	470	645	865	1110	—	—	—	—	—	—	—	—
15 kW / 20 HP	—	40	65	90	105	170	265	360	495	665	855	1030	—	—	—	—	—	—	—
13 kW / 17.5 HP	—	50	75	105	125	195	300	410	560	750	965	—	—	—	—	—	—	—	—
18.5 kW / 25 HP	—	—	50	75	85	140	210	290	400	530	680	810	950	—	—	—	—	—	—
22 kW / 30 HP	—	—	—	64	75	120	180	250	340	455	585	700	815	945	—	—	—	—	—
26 kW / 35 HP	—	—	—	—	60	100	150	210	290	385	500	600	705	815	945	—	—	—	—
30 kW / 40 HP	—	—	—	—	—	85	135	185	250	335	430	515	600	695	820	935	—	—	—
37 kW / 50 HP	—	—	—	—	—	—	105	150	205	270	350	420	485	565	665	760	875	—	—
45 kW / 60 HP	—	—	—	—	—	—	90	125	175	235	310	375	445	520	630	730	860	—	—
52 kW / 70 HP	—	—	—	—	—	—	80	110	155	210	270	325	385	450	540	625	735	—	—
55 kW / 75 HP	—	—	—	—	—	—	—	105	145	195	255	305	360	420	505	580	685	—	—
60 kW / 80 HP	—	—	—	—	—	—	—	95	135	185	240	290	345	400	485	560	660	—	—
67 kW / 90 HP	—	—	—	—	—	—	—	—	120	160	210	255	300	350	415	480	565	—	—
75 kW / 100 HP	—	—	—	—	—	—	—	—	—	145	185	225	270	315	375	435	510	—	—
83 kW / 111 HP	—	—	—	—	—	—	—	—	—	—	120	145	170	200	235	270	310	—	—
85 kW / 114 HP	—	—	—	—	—	—	—	—	—	—	—	125	160	195	230	265	315	365	425
93 kW / 125 HP	—	—	—	—	—	—	—	—	—	—	—	115	150	185	215	255	300	350	410
110 kW / 150 HP	—	—	—	—	—	—	—	—	—	—	—	—	120	145	170	200	235	270	310
130 kW / 175 HP	—	—	—	—	—	—	—	—	—	—	—	—	—	130	155	180	215	250	290
150 kW / 200 HP	—	—	—	—	—	—	—	—	—	—	—	—	—	—	145	170	205	235	275
185 kW / 250 HP	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	140	160	185	—
220 kW / 300 HP	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	130	150	175
250 kW / 335 HP	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	125	145

Maximum cable length (m).

Maximum Length · Motor 6"-8"-10" (380V · Star-Delta)

Performance

	Cable section (mm²)																		
Power	2,5	4	6	10	16	25	35	50	70	95	120	150	185	240	300	400	500	630	800
4 kW / 5.5 HP	145	230	350	485	575	900	—	—	—	—	—	—	—	—	—	—	—	—	—
5.5 kW / 7.5 HP	106	170	250	350	420	660	1010	—	—	—	—	—	—	—	—	—	—	—	—
7.5 kW / 10 HP	75	125	185	260	310	490	750	1025	—	—	—	—	—	—	—	—	—	—	—
9.3 kW / 12.5 HP	60	100	155	215	255	405	620	845	1160	—	—	—	—	—	—	—	—	—	—
11 kW / 15 HP	50	85	130	180	210	340	520	715	980	—	—	—	—	—	—	—	—	—	—
13 kW / 17.5 HP	45	75	110	155	185	295	450	615	845	1125	—	—	—	—	—	—	—	—	—
15 kW / 20 HP	40	65	95	135	160	260	395	540	740	995	—	—	—	—	—	—	—	—	—
18.5 kW / 25 HP	30	50	80	110	130	210	320	435	600	800	1025	—	—	—	—	—	—	—	—
22 kW / 30 HP	—	—	45	65	95	110	180	275	375	510	685	875	1050	—	—	—	—	—	—
26 kW / 35 HP	—	—	35	55	80	95	150	230	315	435	580	750	900	1055	—	—	—	—	—
30 kW / 40 HP	—	—	—	50	70	80	130	200	275	375	500	645	775	905	1045	—	—	—	—
37 kW / 50 HP	—	—	—	—	55	65	105	160	220	305	410	525	625	730	845	1000	—	—	—
45 kW / 60 HP	—	—	—	—	—	55	90	135	190	260	355	460	560	665	780	945	1095	—	—
52 kW / 70 HP	—	—	—	—	—	50	80	120	165	230	310	405	490	580	680	815	940	—	—
55 kW / 75 HP	—	—	—	—	—	—	75	115	155	220	295	380	460	545	635	760	875	—	—
60 kW / 80 HP	—	—	—	—	—	—	70	105	145	205	275	360	435	510	605	725	840	—	—
67 kW / 90 HP	—	—	—	—	—	—	60	95	130	180	240	315	380	450	525	625	720	—	—
75 kW / 100 HP	—	—	—	—	—	—	—	85	115	160	215	280	340	405	470	565	655	765	—
83 kW / 111 HP	—	—	—	—	—	—	—	75	105	145	200	260	315	375	435	525	610	715	—
85 kW / 114 HP	—	—	—	—	—	—	—	70	100	135	185	240	290	345	400	475	550	640	—
93 kW / 125 HP	—	—	—	—	—	—	—	—	65	95	130	175	230	275	325	380	455	525	615
110 kW / 150 HP	—	—	—	—	—	—	—	—	—	105	140	180	220	255	300	355	405	465	—
130 kW / 175 HP	—	—	—	—	—	—	—	—	—	95	125	160	195	230	270	325	375	435	—
150 kW / 200 HP	—	—	—	—	—	—	—	—	—	—	105	140	170	200	230	275	320	400	—
185 kW / 250 HP	—	—	—	—	—	—	—	—	—	—	—	110	130	155	180	210	240	280	—
220 kW / 300 HP	—	—	—	—	—	—	—	—	—	—	—	—	115	140	160	195	225	260	—
250 kW / 335 HP	—	—	—	—	—	—	—	—	—	—	—	—	—	105	125	140	170	190	220
300 kW / 400 HP	—	—	—	—	—	—	—	—	—	—	—	—	—	110	125	150	175	205	—
350 kW / 470 HP	—	—	—	—	—	—	—	—	—	—	—	—	—	—	125	145	170	—	—
400 kW / 540 HP	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	110	130	—	—

Maximum cable length (m).

Dimensions and models · 1/2

Dimensions and models

Franklin 4" Motor Inox 304

Code	Model	Designation
2054196750	310 113 401	4-core cable
2054206750	310 113 402	4-core cable
2054216750	310 113 405	4-core cable

Franklin 4" Motor Inox 316

Code	Model	Designation
2054196751	310 113 501	4-core cable
2054206751	310 113 502	4-core cable

Franklin 6" Encapsulated Motor

Code	Model	Designation
2032025004	310 125 004	4-core cable
2032045004	310 145 004	4-core cable

Dimensions and models · 2/2

Dimensions and models

Franklin 8" Encapsulated Motor

Code	Model	Designation
2032062901	305 243 901	3-core cable
2032061901	305 310 901	3-core cable
2032085901	305 309 901	3-core cable

JOVAL Rewindable PT-100 Probe

Code	Designation
2036000601	PT-100 probe