



Flexible Single Core

105 °C

RJ1701

Product Description:

HR PVC insulated, flexible tinned copper conductor, glass braided, Nylon Braided and overall Lacquered

Application:

- UPS battery cables
- UPS wiring, Inverter wiring
- Battery bank interconnections
- Air craft wiring
- Military applications
- Panel Board wiring
- Electric Motors, Transformers, Solar Power Equipments, HVAC, Diesel Generators
- And many more.....

Product Features:

- Suitable for use in continuous service
- Ambient temperature – 30° C to 65° C
- Good Moisture & Abrasion Resistance
- Good Resistance to fuels, oils and alkalis

Rated Voltage:

- 600 volt rms and frequency upto 1600 Hz

Note: 1. You can use less copper cross section against your regular PVC Cables. (size ratio#1:3)
 2. We have complete setup for bulk production for cable forms, cable kits and wire forms with end connectors i.e. cutting, stripping, crimping, testing with automatic machines like cable cutting & stripping machine, crimping machines.

Make up:

- Fine strands of electrolytic grade tinned copper conductor
- Heat resistant, PVC insulated 105 °C HR-PVC
- Glass braided
- Nylon Braided and Lacquered/ Nylon sheathed

Test Requirements:

- Voltage Proof - 1.5 KVac 50Hz for 15 mins
- Insulation Resistance - 13.5 Mega ohms-km min at 20°C

Reference Standard:

- BSG-177/DTD-1085C
- Test requirements as per BSG-177
- Fine wires in accordance to VDE 0295 class 5 / IEC 60228 Class 5

Minimum Bending Radius:

- Oscillating flexing: 20X Cable Diameter
- Fixed installed : 6 X Cable Diameter

Availability

Part Number	Uninyvin Cable	Size (mm)	Conductor Diameter 'Max'	Cable Dia mm		Conductor Resistance	Max Current Rating*
RJ Part No.	Type	Sq. mm	mm	Max	Min	Ohm/900 Meter Max at 20 °C	Single Core in Free Air
1701 00 22	22	0.347	0.838	2.0	1.8	49.66	11
1701 00 20	20	0.566	1.04	2.3	2.0	30.95	14
1701 00 18	18	0.966	1.32	2.5	2.3	17.82	18
1701 00 16	16	1.170	1.55	2.8	2.5	14.70	21
1701 00 14	14	2.050	1.95	3.4	3.0	8.41	31
1701 00 12	12	3.220	2.43	3.8	3.5	5.35	43
1701 00 10	10	5.330	3.15	5.0	4.6	3.23	61
1701 00 08	8	8.760	4.24	6.3	5.9	1.97	87
1701 00 06	6	13.300	5.54	7.5	7.3	1.30	115
1701 00 04	4	21.500	6.90	9.3	8.8	0.802	160
1701 00 02	2	33.300	8.76	11.0	10.5	0.517	200
1701 00 01	1	40.700	9.75	12.2	11.7	0.423	220
1701 11 10	0	53.000	11.0	13.7	13.0	0.325	240
1701 11 00	00	68.300	12.4	15.4	14.6	0.252	270
1701 10 00	000	84.200	13.9	16.9	16.1	0.204	300
1701 00 00	0000	109.000	15.6	18.7	17.9	0.158	350



Features

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Uninyvin Cables, has superior properties, if compared with PVC cables, it has-

1. Low weight ratio, for a given current, nearly 1:3 is cross section used for similar current capacity.
2. High temperature range, from -30 °C to 105 °C, compared to conventional PVC cable, and from -20 °C to 70 °C.
3. Cost effective, due to less size may be used.
4. Abrasion Resistance - Good
5. Mechanical Strength - High
6. Resistance to Oils, Fluids, Alkalies, and Fungus growth
7. High Fire Retardancy

The conductor is tin plated so, solderability is good and oxidation of conductor is protected.

General consideration between use of PVC Cable & Uninyvin cable

Type	PVC Cable 1 Sq mm IS-694	Uninyvin Cable, to BS-G-177 Size - 22
Cross section area	1.0 sq. mm	0.347 sq mm
Cable weight	15 kg / km	6.5 kg / km approx. ratio 3:1
Current rating	12 Amps	14 Amps at 20 °C
Conductor	Bare Copper	Flexible Tinned Copper (ATC) as per IEC 60228-5
Primary insulation	PVC -20 °C to 70 °C, Types A	HR-PVC-30 °C to 105 °C
Secondary Insulation	NIL	Fibre Glass Brading
Third Insulation	NIL	Nylon Sheathing upto U-10; Nylon braiding & Lacquering upto U0000
Heat Resistance	Not Applicable	Class F, 105 °C, fire retardant
Abrasive strength	Normal	Good
Mechanical Strength	12.5 N/sq mm	16.00 N/sq mm
Flexibility	Normal	No signs of damage

Note - The comparison chart is based on values given in standards and our experience, but depend on many factors, in different condition of use, so, we do not take any responsibility for damage or warranty claim for above



Current Capacity for Bundled Cables

Maximum current ratings in Amps in free air [Ref. BSG-177]

Cable Size	Single Cable	3 Bundled Cable	7 Bundled Cable	12 Bundled Cable
22	11	7	5	4
20	14	9	7	5
18	18	13	10	6
16	21	15	11	7
14	31	24	17	12
12	43	30	22	15
10	61	47	36	25
8	87	65	49	36
6	115	87	65	-
4	160	120	92	-
2	200	155	120	-
1	220	165	130	-
0	240	185	168**	-
00	270	210/240*	190**	-
000	300	235/265*	210**	-
0000	350	270/305*	245**	-

*for 2 cables; **for 5 cables

Based on 40 °C Ambient

De-rating factors based on ambient temperatures for

Ambient Temp. °C	40	45	50	55	60	65	70	75	80	85	90	95	100
De-Rating Factor	1.0	0.96	0.92	0.88	0.83	0.78	0.75	0.73	0.68	0.62	0.53	0.48	0.30

Test performed – Routine Test

1. Proof Voltage Test
2. Insulation Resistance Test
3. Cable Dimensions
4. Conductor Resistance Test
5. Visual Examination

Type Test to be performed for each new lot of PVC Resin, Fibre Glass & Nylon

1. Heat Ageing Test
2. Flexibility Test
3. Surface Creepage Test
4. Curve Test