DATA SHEET BATTERY CABLE

First Issued: 2012-06-04

Cable	:	**Very flexible PVC-insulated cable.**
Applications	:	**Low voltage supply lines for battery operated equipment. E.g. power supply lines for bow and stern thrusters on board of pleasure craft.**
Conductor	:	Flexible annealed red copper
Insulation	:	Flexible PVC
Rated voltage	:	U0/U: 450/750 V
Mark	:	HI-FLEX CE
Max. operating temperature	:	70°C on conductor if installed in ordinary environments.
Max. temperature in case of short circuit	:	160°C on the conductor (max. duration 5 seconds)
Min. temperature of conductor during installation	:	+5°C
Min. bending radius	:	6 times the max. outer diameter
Certification	:	IMQ - CE

Code	Nominal cross sectional area of conductor	Max. diameter of wires in conductor	Nominal diameter of conductor	Outer diameter of insulation	Insulation thickness		Colour	Max. conductor resistance at 20°C	Min. insulation resistance at 70°C	Weight
					average. min.	minimum				
	[mm2]	[mm]	[mm]	[mm] (±0.15 mm)	[mm]	[mm]		[Ω/km]	[MΩ·km]	[kg/km]
BATC35	**35**	0.31	7.80	12.00	1.70	1.53	Black	0.58	0.0038	410
BATC35R							Red			
BATC50	**50**	0.31	8.80	13.80	1.70	1.43	Black	0.41	0.0037	565
BATC50R							Red			
BATC70	**70**	0.31	10.80	15.90	1.90	1.61	Black	0.28	0.0032	780
BATC70R							Red			
BATC95	**95**	0.31	12.30	18.20	2.00	1.70	Black	0.21	0.0032	1050
BATC95R							Red			
BATC120	**120**	0.31	14.20	20.10	2.00	1.70	Black	0.17	0.0029	1300
BAT120							Red			

Current ratings

Nominal cross sectional area of conductor	Current rating at a maximum duty cycle of:			
	100%	**30%**	**20%**	**10%**
[mm2]	[A]	[A]	[A]	[A]
35	106	193	237	335
50	129	235	288	407
70	164	299	366	518
95	201	366	449	635
120	229	418	512	724

Current rating evaluation is based on a theoretical and simplified calculation, in the following conditions:
- Max conductor operating temperature: 70°C
- Environmental temperature: 30°C
- Single cable in pipe conductor
- Current rating for repeat cycle operation based on a 1 minute repeat period:
  Repeat cycle operation used above is defined as a periodically switched constant load with an onload period followed by an off-load period, which is repeated. The on-load time period is expressed as a percentage of the repeat period, and is called the percentage duty cycle.
- For on-load percentage greater than 50%, consider the 100% current rating, caused by low heat dissipation between cycles

Derating factors for higher ambient temperatures:

Ambient temperature	35 °C	40 °C	45 °C	50 °C
Factor	0.96	0.91	0.87	0.82