

GUARANTEED TECHNICAL PARTICULARS

CABLE TYPE : - ATC Conductor Single Core UV resistant, silane crosslinkable, halogen free, flame-retardant insulated and sheathed Cable
As per EN 50618:2015 --Suitable for 1/1 (1.2) KV AC; 1.5/1.5 (1.8) KV DC Unearthed System--(TUV CERTIFIED, H12222-K)



SQ.MM		4.0		6.0		10		16	
SR.NO	PARAMETER	UNIT	SPECIFICATIONS						
1	CONDUCTOR AT DRAWING								
	a) Type of Conductor		Annealed Tinned Copper (Elongation of wire 25 to 30 % at drawing)						
	b) Class of Conductor		Class-5 Flexible Bunch Conductor as per EN 60228						
	c) No of Wires	Nos	56	84	140	126			
	d) Conductor Resistance @ 20°C (Max)	Ω/KM	5.09	3.39	1.95	1.24			
	Conductor Resistance @ 90°C (Max)		Ω/KM	6.52	4.34	2.50	1.59		
	e) Max. Conductor Temp For -Continuous	°c	90 / 120 based on 60216-1(20000 Hrs , 50 % Residual Elongation)						
	f) Max. Conductor Temp For -Short Circuit to a period of 5 sec	°c	250						
	g) Temperature Range	°c	-40 to 90 Deg Max Ambient(120 Deg max conductor temperature)						
	h) Minimum Bending Radius for flexible installation	mm	6 x Cable Diameter						
	i) Minimum Bending Radius for fixed installation	mm	4 x Cable Diameter						
j) Maximum Safe pulling force when pulled by pulling eye	Kg/mm2	5 kg/sq.mm of Copper area							
2	BUNCHER / STRANDING								
	a) Lay direction		Right hand						
	b) Lay Length (Max)	mm	51	64	76	89			
	c) Conductor diameter	mm	2.39	2.93	3.87	4.92			
3	INSULATION								
	a) Material		UV resistant ,Silane crosslinkable , halogen free,flame retardant compound						
	b) Insulation Colour		Black , Natural						
	c) Overall Approx diameter of cable (± 0.05)	mm	3.89	4.43	5.37	6.42			
	d) Thickness (Nom)	mm	0.75	0.75	0.75	0.75			
	e) Thickness minimum at a point		Smallest value measured shall not fall below 90 % of the specified value by more than 0.1 mm						
4	SHEATHING								
	a) Material		UV resistant ,Silane crosslinkable , halogen free,flame retardant compound						
	b) Sheath Colour		Black, Red, Red stripe on black sheath						
	c) Overall Approx diameter of cable (± 0.05)	mm	5.59	6.13	7.07	8.32			
	d) Thickness (Nom)	mm	0.85	0.85	0.85	0.95			
	e) Thickness minimum at a point		Smallest value measured shall not fall below 85 % of the specified value by more than 0.1 mm						
5	PRINT MESSAGE ON THE CABLE (UP to 16 sq.mm)		RR KABEL H12222-K SQ.MM AC U0/U 1 / 1 KV SOLAR CABLE DC 1.5 KV EN 50618 R 60117788 CE						
	a) Printing Distance (Max)	mm	550 mm (Max) measurement as per EN 50618:2015						
6	ELECTRICAL PROPERTIES								
	Current carrying capacity		Ambient temperature: 60 °C (see below table for other ambient temperatures) max. conductor temperature: 120 °C.						
	Single cable free in air		Amps.	55	70	98	132		
	Single cable on a surface		Amps.	52	67	97	125		
	Two loaded cable touching on a surface		Amps.	44	57	79	107		
7	ADDITIONAL PROPERTIES								
	a) Flammability Test		as per IEC 60332-1-2						
	b) Smoke emission		as per IEC 61034						
	c) HCL Acid gas evaluation test		as per IEC 60754-1						
8	Recommended use		<p>General use:- Intended for use in PV installations e.g.acc. to HD 60364-7-712. They are intended for permanent use outdoor and indoor, for free movable, free hanging and fixed installation. Installation also in conduits and trunkings on, in or under plaster as well as in appliances. Suitable for the application in/at equipment with protective insulation (protection class II). They are inherently short-circuit and earth fault proof acc. to HD 60364-5-52.</p> <p>Direct Burial :-These cables are suitable for the installation in underground (Direct Burial) if the cable is laid in a trench.</p> <p>Instructions for direct burial-</p> <ul style="list-style-type: none">- Preferred maximum pulling force is 15 N/mm² x Diameter of cable.- Bottom of trench must be free of stones and covered by smooth layer of sand.-The cable must be protected from barred access of any external party.- Rodent proof arrangement must be in place- Spical care shall be taken to avoid mechanical damages to the cable during laying. <p>-In addition to above we suggest to follow guideline given in VDE 0100 part 520 or similar standard</p>						
9	Protection against water		Protection class AD7 (Designed to withstand short-term immersion in water)						

Current rating conversion factors for different ambient temperatures

Ambient temperature °C	Conversion factor
up to 60	1.00
70	0.92
80	0.84
90	0.75

For installation in groups the reduction factors for current rating according to HD 60364-5-52:2011, Table B.52.17 shall apply.

Cable Life: This Cable is Suitable for Max. 25 years from the date of manufacturing.

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