

**INSTRUMENTATION CABLE**  
**Cu, PVC insulated, individual and overall screen, PVC bedding, SWB, PVC outer sheath**  
**IEC60332.3, CEI20-22/3**

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<b>Type</b>	<b>F-Cu/PVC/IS/OS/PVC/SWB/PVC 450/750V FR2XHOHRAR 450/750V</b>	<b>5X2X 0,5sqmm</b>
<b>Conductor :</b>	Flexible plain copper conductor according to IEC60228 cl.5 size 0,5sqmm ( 16x0,20 ) Diam. 0,9 mm	
<b>Insulation :</b>	PVC extruded compound Thickness : 0,6 mm	- Temperature range -15 + 70°C - Temperature laying -5 + 70°C
<b>Laying up :</b>	Twisted to pair, color Blue - Black numbered ( or to be agreed )	
<b>Pair/Triad screen</b>	Applied over the single pair/triad will be wrapped with polyester tape and shielded with Aluminum / Mylar tape 100% coverage and 25% overlap with metal side in contact with a tinned copper drain wire 7x0,30 size 0,5sqmm, over the screen will be placed a further Mylar tape.	
<b>Overall screen</b>	Applied over total assembly will be wrapped with polyester tape and shielded with Aluminum/Mylar tape 100% coverage and 25% overlap with metal side in contact with a tinned copper drain wire 7x0,30 size 0,5sqmm.	
<b>Bedding :</b>	PVC, Polyvinylchloride Low Smoke and Fume extruded compound Thickness : 1,0 mm	
<b>Armour :</b>	SWB, Galvanized steel braid wires Thickness : 0,3 mm	
<b>Outer sheath :</b>	PVC, Polyvinylchloride Low Smoke and Fume extruded compound Color : Black ( or to be agreed ) Thickness : 1,8 mm Overall diameter : 18,5 mm Total weight : 550 Kg/Km	

**Marking :**

On the outer sheath " manufacturer's name year &amp; description cable " with ink-jet printer.

<b>Performance :</b>	- Conductor resistance	39 ohm/Km	( + 5% for multipair )
	- Test voltage core to core	3 Kv	
	- Flame retardant according to IEC60332-3-24, CEI20-22/3		
	- Low smoke and fume as per IEC60754-1, CEI20-37		
	- HCL emission $\leq$ 22%		
	- Minimum bending radius	12 V. D.	
	- Hydrocarbon resistant		
	- Inductance $\leq$	0,90 mH/Km	
	- Capacitance $\leq$	0,250 microF/Km	

**Weight and diameter are theoretical + / - 10%**



<b>1</b>	0,5sqmm	4sqmm ( 16x0,20 )	( 56x0,30 )	( 16x0,20 )
<b>1</b>	0,75sqmm	6sqmm ( 24x0,20 )	( 80x0,30 )	
	1sqmm	10sqmm ( 32x0,20 )	( 77x0,40 )	( 7x0,30 )
	1,5sqmm	16sqmm ( 28x0,25 )	( 7X18X0,40 )	
	2,5sqmm	25sqmm ( 48x0,25 )	( 4x80x0,30 )	
<b>1</b>	PVC extruded compound			- Temperature range -15 + 70°C
	Polyethylene extruded compound			- Temperature laying -5 + 70°C
	Cross-linked XLPE extruded compound			- Temperature range -20 + 70°C
	Cross-linked XLPE extruded compound			- Temperature laying -5 + 70°C
	Cross-linked HEPR extruded compound			- Temperature range -20 + 90°C
	Cross-linked HEPR extruded compound			- Temperature laying -5 + 90°C
	Cross-linked G10 extruded compound			- Temperature range -20 + 90°C
	Cross-linked G10 extruded compound			- Temperature laying -5 + 90°C
<b>1</b>	Applied over the single pair/triad will be wrapped with polyester tape and shielded with Alumin Mylar tape 100% coverage and 25% overlap with metal side in contact with a tinned copper drai 7x0,30 size 0,5sqmm, over the screen will be placed a further Mylar tape.			
<b>1</b>	Applied over total assembly will be wrapped with polyester tape and shielded with Aluminum/M tape 100% coverage and 25% overlap with metal side in contact with a tinned copper drain wire 7x0,30 size 0,5sqmm.			
	Mylar tape			
	PE, Polyethylene extruded compound			
<b>1</b>	PVC, Polyvinylchloride Low Smoke and Fume extruded compound			
	M1, Low Smoke Zero Halogen emission extruded compound			
<b>1</b>	SWB, Galvanized steel braid wires			
	SWA Galvanized steel round wires with an open helix of galvanized steel tape over the wire			
	SWA, Galvanized steel round wires			
	STA, Double galvanized steel tape			
<b>1</b>	PVC, Polyvinylchloride Low Smoke and Fume extruded compound			
	M1, Low Smoke Zero Halogen emission extruded compound			
	PE, Polyethylene extruded compound			
	CWB plain copper wire braid			
	<b>Armour :</b>	<b>Pair/Triad screen</b>	<b>Wrapping :</b>	<b>Outer sheath :</b>
	<b>Screen :</b>	<b>Overall screen</b>	<b>Bedding :</b>	
	- Low smoke and fume as per IEC60754-1, CEI20-37			
	- Low smoke and halogen free as per IEC60754-2, CEI20-37/2			
	CTS Red copper tape			
<b>4</b>	- Flame retardant according to IEC60332-3-22, CEI20-22/2			
	- Flame retardant according to IEC60332.1, CEI20-35			
	- Flame retardant according to IEC60332.3, CEI20-22/2, Fire resistant IEC60331			
	- Flame retardant according to IEC60332-3-24, CEI20-22/3			
	- HCL emission <= 22%			
	- Low smoke density emission IEC61034-1/2			
	SHF1 , Low Smoke Zero Halogen emission extruded compound			
	- Cable for intrinsically safe application			
	Thickness :			
	mm			
	- This cable is suitable to be used in ATEX area following the EN60079-14 prescription			
	Thickness : mm			



( 7x0,30 ) ( 7x0,85 )  
 ( 7x0,37 ) ( 7x1,05 )  
 ( 7x0,43 ) Solid plain copper conductor according to IEC60228 cl.1 size  
 ( 7x0,53 ) Flexible plain copper conductor according to IEC60228 cl.5 size  
 ( 7x0,67 ) Strandrd plain copper conductor according to IEC60228 cl.2 size  
 Flexible tinned copper conductor acc. to IEC60228 cl.5 size

0,9	39	39	36,7	40,1
1,12	26	26	24,5	26,7
1,3	19,5	19,5	18,1	20
1,55	13,3	13,3	12,1	13,7
2	7,98	7,98	7,41	8,21
2,5	4,95	4,95	4,61	5,09
3	3,3	3,3	3,08	3,39
4,1	1,91			
5,2	1,21			
6,3				
1,13				

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 n wire

#### Pair screen

Each pair will be shielded with copper/mylar tape, with tinned copper drain wire 7x0,30 placed between the copper/mylar tape and further myler tape.

Mylar

Stranded tinned copper conductor acc. to IEC60228 cl.2 size

Applied over the single pair/triad will be wrapped with polyester tape and shielded with Copper Mylar tape 100% coverage and 25% overlap with metal side in contact with a tinned copper drain wire 7x0,30 size 0,5sqmm, over the screen will be placed a further Mylar tape.

Applied over the single pair/triad will be wrapped with polyester tape and shielded with plain C braid wire coverage 60%

Applied over total assembly will be wrapped with polyester tape and shielded with plain Copper braid wire coverage 60%

Applied over total assembly will be wrapped with polyester tape and shielded with tinned Copper braid wire coverage 60%



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