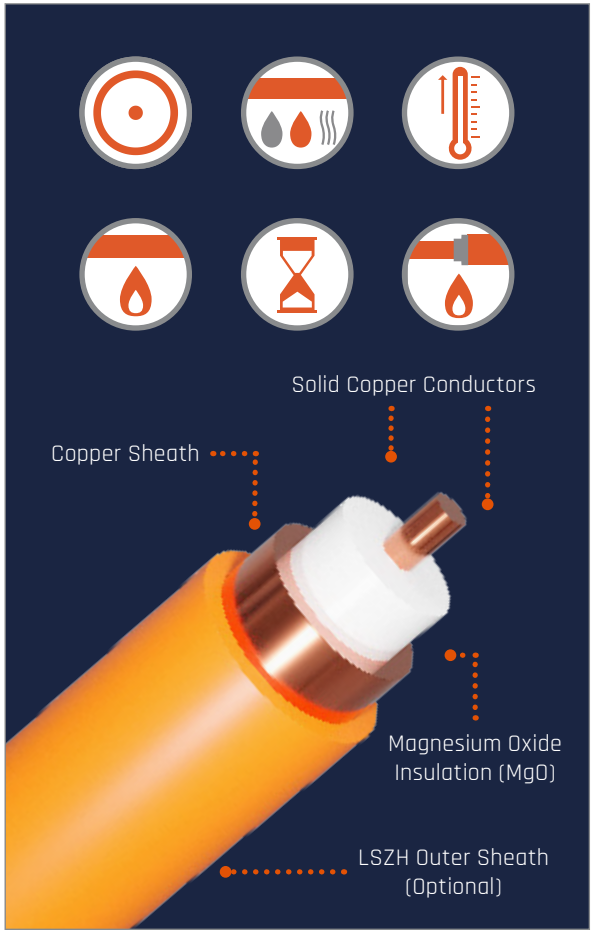
WREXHAM MINERAL CABLES
NTCCables

1 CORE HEAVY DUTY
Fire Resistant MICC Cable
750V

Country of Origin, Construction, Approvals & Fire Performance

Manufacturer	Place of Manufacture
Wrexham Cables KSA	Saudi Arabia
Cables Manufactured to	**Cable Type – Known as "Fire Survival Cable"**
BSEN 60702-1:2002+A1:2015	Fire Resistant exceeding 3 hours @ 950°C
Continuous Operating Temperature	**LPCB Product Approval Number**
-40°C up to 250°C	333a/01*[1]
Applicable Standards	
BS5839-1:2017 Enhanced to Clause 26.2, BS EN 50200:2015, BS 8434-2:2003 + A2:2009, *BS6387:2013 C,W & Z, BS 8519 & BS 8491 CAT C, BS 60331	
LPCB Approved Marking on Cables	**Insulation**
WMC KSA "Made in Saudi"	Highly compressed magnesium oxide (MgO)
Hazardous area cable system ATEX / IEC Ex APPROVED UNDER SIRA LICENCE 1305X & IEC Ex SIR 19.0051X	
Apparatus (type of protection 'd') Zones 1 & 2, Groups IIA, IIB and IIC. Zones 20, 21 & 22, groups IIIA, IIIB & IIIC. In compliance with EN 60079	
Copper Conductor Plain Annealed to IEC 60228 Type 1 Solid	**Seamed Copper Sheath Construction**
Cu - ETP or Cu – FRHC	C12200 grade, Cu – DHP
Number of Cores	
1	



*Only cables up to 20mm *
[1]*Under Process

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CDS008 One Core Heavy Duty (750v) Datasheet Issue E Approved by S. Williams 22.07.21

50 YEAR WARRANTY
SAUDI MADE

Electrical Properties

One Core Heavy Duty MICC Cables	Voltage Rating (V)	Test Voltage (Factory Internal D.C Test) (V)	Current Rating Bare or Served Cables Exposed to Touch		Voltage Drop Cables Exposed to Touch (Per Amp/Per m)	Max Conductor Resistance Ohms per 1000m @ 20°C	Copper Sheath Resistance @ 20°C Ohms/Km	Earth Fault Loop Impedance Resistance @ 70°C (R1+R2) Ohms/Km
			Bare	Served				
1H2.5	750	3750	39	43	13.5	7.41	3.71	3.71
1H4	750	3750	51	56	8.3	4.61	3.09	3.09
1H6	750	3750	47	52	6	3.08	2.67	5.318
1H10	750	3750	63	70	3.6	1.83	2.23	3.545
1H16	750	3750	83	92	2.3	1.15	1.81	2.471
1H25	750	3750	108	120	1.45	0.727	1.40	1.715
1H35	750	3750	132	147	1.05	0.524	1.17	1.329
1H50	750	3750	163	181	0.79	0.387	0.959	1.040
1H70	750	3750	199	221	0.55	0.268	0.767	0.781
1H95	750	3750	237.5	264	0.41	0.193	0.646	0.819
1H120	750	3750	272.5	303	0.33	0.153	0.556	0.516
1H150	750	3750	311	446	0.29	0.124	0.479	0.435
1H185	750	3750	353	392	0.25	0.101	0.412	0.368
1H240	750	3750	411	457	0.21	0.0775	0.341	0.297

MICC Resistance, Reactance & Impedance

Single-core cables laid side by side:

Cable Type	Resistance R (Ω/Km)									Reactance R (Ω/Km)			Impedance R (Ω/Km)								
	30c			70c			105c						30c			70c			105c		
	*U	*V	*W	*U	*V	*W	*U	*V	*W	*U	*V	*W	*U	*V	*W	*U	*V	*W	*U	*V	*W
1H2.5	7.740	7.702	7.665	8.905	8.886	8.829	9.924	9.885	9.848	0.149	0.128	0.150	7.742	7.703	7.667	8.906	8.867	8.831	9.925	9.886	9.850
1H4	4.831	4.792	4.755	5.555	5.516	5.480	6.189	6.150	6.113	0.140	0.120	0.142	4.833	4.793	4.757	5.557	5.517	5.482	6.190	6.151	6.115
1H6	3.241	3.202	3.166	3.725	3.686	3.649	4.418	4.109	4.073	0.132	0.112	0.135	3.244	3.204	3.168	3.727	3.687	3.652	4.150	4.111	4.075
1H10	1.942	1.903	1.867	2.229	2.190	2.154	2.481	2.442	2.406	0.124	0.104	0.127	1.946	1.905	1.871	2.233	2.198	2.158	2.484	2.444	2.409
1H16	1.236	1.196	1.161	1.416	1.377	1.341	1.574	1.535	1.499	0.117	0.098	0.121	1.242	1.200	1.167	1.421	1.380	1.347	1.579	1.538	1.504
1H25	0.797	0.757	0.722	0.911	0.871	0.836	1.011	0.971	0.935	0.112	0.093	0.117	0.805	0.762	0.731	0.918	0.876	0.844	1.017	0.975	0.943
1H35	0.587	0.546	0.512	0.669	0.628	0.594	0.74	0.700	0.665	0.107	0.089	0.113	0.597	0.553	0.524	0.677	0.634	0.604	0.748	0.706	0.643
1H50	0.446	0.404	0.371	0.506	0.464	0.431	0.558	0.517	0.483	0.103	0.085	0.110	0.457	0.413	0.387	0.516	0.472	0.445	0.568	0.524	0.496
1H70	0.323	0.280	0.249	0.364	0.322	0.290	0.401	0.359	0.326	0.099	0.083	0.108	0.338	0.292	0.271	0.378	0.333	0.309	0.413	0.368	0.343
1H95	0.246	0.203	0.172	0.276	0.233	0.201	0.302	0.259	0.227	0.096	0.080	0.106	0.264	0.218	0.202	0.292	0.246	0.227	0.317	0.271	0.250
1H120	0.206	0.161	0.132	0.229	0.185	0.155	0.249	0.206	0.175	0.093	0.078	0.105	0.226	0.179	0.169	0.248	0.201	0.187	0.267	0.220	0.203
1H150	0.177	0.132	0.104	0.195	0.151	0.122	0.212	0.168	0.138	0.090	0.077	0.104	0.199	0.153	0.147	0.216	0.169	0.160	0.231	0.185	0.172
1H185	0.154	0.107	0.083	0.168	0.122	0.096	0.181	0.135	0.108	0.086	0.077	0.104	0.177	0.132	0.133	0.190	0.144	0.141	0.202	0.156	0.150
1H240	0.132	0.083	0.063	0.142	0.095	0.072	0.152	0.104	0.081	0.082	0.077	0.104	0.155	0.113	0.122	0.166	0.122	0.127	0.175	1.130	0.132
1H300	0.122	0.073	0.056	0.130	0.082	0.062	0.137	0.090	0.068	0.078	0.076	0.103	0.145	0.105	0.117	0.153	0.112	0.121	0.161	1.118	0.124
1H400	0.104	0.054	0.038	0.110	0.061	0.042	0.115	0.0067	0.046	0.077	0.076	0.103	0.129	0.094	0.110	0.136	0.098	0.112	0.142	0.102	0.114

U,V,W - *Current ratings are for 3 phase operation, single conductor cables installed horizontally spaced.

MICC Resistance, Reactance & Impedance

Single-core triplet cables:

Cable Type	Resistance R (Ω/Km)			Reactance X (Ω/Km)	Impedance Z (Ω/Km)		
	30c	70c	105c		30c	70c	105c
1H2.5	7.702	8.866	9.855	0.139	7.703	8.867	9.886
1H4	4.792	5.516	6.15	0.128	4.793	5.518	8.650
1H6	3.202	3.686	4.109	0.120	3.204	3.687	4.111
1H10	1.903	2.190	2.442	0.112	1.906	2.193	2.444
1H16	1.196	1.377	1.535	0.104	1.200	1.380	1.538
1H25	0.757	0.871	0.971	0.098	0.763	0.876	0.975
1H35	0.546	0.628	0.700	0.093	0.554	0.635	0.706
1H50	0.404	0.465	0.518	0.079	0.413	0.473	0.525
1H70	0.281	0.323	0.360	0.085	0.293	0.333	0.369
1H95	0.204	0.234	0.260	0.083	0.219	0.247	0.272
1H120	0.163	0.186	0.207	0.080	0.180	0.202	0.221
1H150	0.133	0.152	0.169	0.078	0.154	0.170	0.185
1H185	0.109	0.123	0.137	0.077	0.133	0.145	0.157
1H240	0.086	0.096	0.106	0.076	0.155	0.123	0.131
1H300	0.076	0.084	0.092	0.076	0.107	0.113	0.119
1H400	0.075	0.063	0.069	0.075	0.095	0.099	0.103

U,V,W - *Current ratings are for 3 phase operation, single conductor cables installed horizontally spaced.

MICC Resistance, Reactance & Impedance

Single-core cables laid at the distance of a diameter:

Cable Type	Resistance R (Ω/Km)									Reactance R (Ω/Km)			Impedance R (Ω/Km)								
	30c			70c			105c						30c			70c			105c		
	*U	*V	*W	*U	*V	*W	*U	*V	*W	*U	*V	*W	*U	*V	*W	*U	*V	*W	*U	*V	*W
1H2.5	7.743	7.703	7.767	8.907	8.867	8.831	9.925	9.886	9.850	0.192	0.171	0.194	7.745	7.705	7.670	8.907	8.867	8.831	9.927	9.888	9.852
1H4	4.833	4.793	4.728	5.557	5.518	5.482	6.191	6.151	6.115	0.183	0.163	0.186	4.837	4.796	4.762	5.560	5.520	5.485	6.194	6.154	6.118
1H6	3.244	3.203	3.169	3.727	3.687	3.652	4.150	4.111	4.075	0.175	0.156	0.179	3.248	3.207	3.174	3.731	3.691	3.656	4.154	4.114	4.079
1H10	1.946	1.905	1.870	2.232	2.192	2.157	2.484	2.443	2.408	0.167	0.148	0.171	1.953	1.911	1.878	2.239	2.197	2.164	2.489	2.448	2.414
1H16	1.24	1.199	1.165	1.420	1.379	1.345	1.578	1.537	1.502	0.160	0.141	0.165	1.250	1.207	1.177	1.429	1.386	1.355	1.586	1.543	1.511
1H25	0.803	0.760	0.728	0.916	0.874	0.841	1.015	0.973	0.940	0.154	0.136	0.161	0.817	0.772	0.746	0.928	0.884	0.856	1.026	0.983	0.954
1H35	0.593	0.550	0.519	0.674	0.632	0.600	0.745	0.703	0.671	0.150	0.132	0.157	0.611	0.566	0.543	0.690	0.645	0.620	0.760	0.716	0.689
1H50	0.453	0.409	0.379	0.512	0.469	0.438	0.564	0.521	0.490	0.145	0.129	0.154	0.475	0.429	0.410	0.532	0.486	0.465	0.583	0.537	0.514
1H70	0.332	0.287	0.259	0.372	0.328	0.299	0.408	0.364	0.334	0.140	0.126	0.152	0.360	0.313	0.301	0.398	0.351	0.336	0.431	0.385	0.367
1H95	0.257	0.210	0.185	0.285	0.239	0.212	0.310	0.265	0.237	0.136	0.123	0.150	0.289	0.244	0.239	0.315	0.269	0.260	0.339	0.292	0.281
1H120	0.217	0.170	0.147	0.239	0.193	0.168	0.259	0.213	0.186	0.133	0.121	0.149	0.253	0.209	0.209	0.273	0.228	0.224	0.291	0.245	0.238
1H150	0.190	0.142	0.121	0.207	0.160	0.137	0.222	0.176	0.151	0.129	0.120	0.147	0.227	0.185	0.190	0.243	0.199	0.201	0.257	0.213	0.211
1H185	0.169	0.120	0.105	0.182	0.134	0.116	0.194	0.146	0.126	0.123	0.199	0.147	0.205	0.168	0.179	0.218	0.178	0.187	0.194	0.146	0.126
1H240	0.148	0.100	0.141	0.158	0.110	0.097	0.167	0.118	0.103	0.116	0.117	0.145	0.183	0.153	0.168	0.194	0.160	0.178	0.203	0.166	0.178
1H300	0.139	0.093	0.085	0.147	0.099	0.088	0.154	0.105	0.092	0.112	0.115	0.143	0.172	0.146	0.162	0.182	0.151	0.166	0.190	0.156	0.170
1H400	0.120	0.075	0.069	0.126	0.079	0.071	0.131	0.83	0.073	0.108	0.115	0.142	0.155	0.135	0.152	0.163	0.139	0.160	0.170	0.142	0.159

U,V,W - *Current ratings are for 3 phase operation, single conductor cables installed horizontally spaced.

Current Carrying Capacity LSZH or Bare and Exposed to Touch

One Core Heavy Duty MICC Cables	single phase A,C or D.C - 2 single Core Cables touching		Three Phase a.c				3 single core cables flat & spaced by one cable diameter (AMPS)	
	Ref C * (Amps)	Ref E, F & G **	Ref C* ***	Ref C* ****	Ref E,F & G ***	Ref E,F & G *****	Vertical	Horizontal
1H2.5	34	28	31	36	30	34	37	43
1H4	45	37	41	47	40	45	49	56
1H6	57	48	52	60	51	57	62	71
1H10	77	65	70	82	69	77	84	95
1H16	102	86	92	109	92	102	110	125
1H25	133	112	120	142	120	132	142	162
1H35	163	137	147	174	147	161	173	197
1H50	202	169	181	215	182	198	213	242
1H70	247	207	221	264	223	241	259	294
1H95	296	249	264	317	267	289	309	351
1H120	340	286	303	364	308	331	353	402
1H150	388	372	346	416	352	377	400	454
1H185	440	371	392	472	399	426	446	507
1H240	514	434	457	552	466	496	497	565

* Clipped direct ** In free air, perforated cable tray horizontal or vertical *** 3 single core cables in trefoil **** 3 single core cables flat and touching, horizontal or vertical ***** 3 Single core cables flat & touching

NOTES:

Ambient Temp 30°C Sheath operating temperature 70°C For single – core cables, the sheaths of the circuit are assumed to be connected together at both ends. For bare cables exposed to touch, the tabulated values should be multiplied by 0.9

* Clipped direct ** In free air, perforated cable tray horizontal or vertical

Mechanical Properties

One Core Heavy Duty MICC Cables	Cable Diameter (mm)		Conductor Diameter (mm^2)	Copper Sheath Mean Thickness (mm)	Nominal Insulation Thickness (MgO) (mm)	Mean Serving Thickness (LSZH Optional Outer Covering) (mm)	Approx Weight per 1000m (Kg)		Minimum Bend Radius (6 Times Diameter of Cable) (mm)
	Bare	Served					Bare	Served	
1H2.5	5.3	6.6	2.5	0.42	1.3	0.65	111	128	31.8
1H4	5.9	7.2	4	0.45	1.3	0.65	143	166	35.4
1H6	6.4	7.7	6	0.48	1.3	0.65	173	213	38.4
1H10	7.3	9.0	10	0.50	1.3	0.75	241	274	43.8
1H16	8.3	10.0	16	0.54	1.3	0.75	327	364	49.8
1H25	9.6	11.3	25	0.60	1.3	0.75	458	500	57.6
1H35	10.7	12.4	35	0.64	1.3	0.75	600	650	64.2
1H50	12.1	13.8	50	0.69	1.3	0.75	760	812	72.6
1H70	13.7	15.4	70	0.76	1.3	0.75	1019	1080	82.2
1H95	15.4	17.7	95	0.80	1.3	1.00	1326	1416	92.4
1H120	16.8	19.1	120	0.85	1.3	1.00	1615	1713	100.8
1H150	18.4	20.7	150	0.90	1.3	1.00	1952	2059	110.4
1H185	20.4	23.2	185	0.94	1.4	1.25	2425	2570	122.4
1H240	23.3	26.1	240	0.99	1.6	1.25	3146	3312	139.8

Product Part Codes

One Core Heavy Duty MICC Cables	WMC Cable Part Code for Bare or CC MICC Cable Size Followed By	WMC Cable Part Code for LSZH Served or CCM MICC Cable Size Followed By	IEC Ex & ATEX Approved Cable Gland WRGM		Seal Kits WRPS Plain or WRPSL E/T WRPS/ WRPSL	Shrouds (PVC) WRHG		Shrouds (LSZH) WRHGMM		Lockwasher WRLM or WRLWS Serrated Washer WRLM/ WRLWS		Bare Single Clips (P Clips) 1 Clip every 0.4m WRC	LSZH Single Clips (P Clips) 1 Clip every 0.4m WRCHL	Bare Two Way Clips (Saddles) 1 Clip every 0.4m WRS	LSZH Two Way Clips (Saddles) 1 Clip every 0.4m WRSFL
			***	****		***	****	***	****	***	****				
1H2.5	BARE/*	LSF/**/*	1H2.5/20	1H2.5/20	1H2.5	20/**	20/**	20/**	20/**	20	20	20	26/**	202	272/**
1H4	BARE/*	LSF/**/*	1H4/20	1H4/20	1H4	20/**	20/**	20/**	20/**	20	20	22	28/**	222	272/**
1H6	BARE/*	LSF/**/*	1H6/20	1H6/20	1H6	20/**	20/**	20/**	20/**	20	20	24	30/**	272	342/**
1H10	BARE/*	LSF/**/*	1H10/20	1H10/25	1H10	20/**	!	20/**	25/**	20	25	28	34/**	302	342/**
1H16	BARE/*	LSF/**/*	1H16/20	1H16/25	1H16	20/**	!	20/**	25/**	20	25	32	37/**	342	422/**
1H25	BARE/*	LSF/**/*	1H25/20	1H25/32	1H25	20/**	!	20/**	32/**	20	32	37	43/**	382	462/**
1H35	BARE/*	LSF/**/*	1H35/20	1H35/32	1H35	20/**	!	20/**	32/**	20	32	40	47/**	422	502/**
1H50	BARE/*	LSF/**/*	1H50/25	1H50/40	1H50	!	!	25/**	40/**	25	40	47	54/**	502	542/**
1H70	BARE/*	LSF/**/*	1H70/25	-	1H70	!	!	25/**	N/A	25	N/A	54	59/**	542	632/**
1H95	BARE/*	LSF/**/*	1H95/25	-	1H95	!	!	25/**	N/A	25	N/A	59	67/**	632	702/**
1H120	BARE/*	LSF/**/*	1H120/32	-	1H120	!	!	32/**	N/A	32	N/A	63	75/**	702	752/**
1H150	BARE/*	LSF/**/*	1H150/32	-	1H150	!	!	32/**	N/A	32	N/A	71	79/**	752	812/**
1H185	BARE/*	LSF/**/*	1H185/32	-	1H185	!	!	32/**	N/A	32	N/A	79	88/**	812	932/**
1H240	BARE/*	LSF/**/*	1H240/40	-	1H240	!	!	40/**	N/A	40	N/A	88	101/**	932	1042/**

D or C depending on drum or coil I ** Cable colour e.g. RD = RED, OE = ORANGE, BK = BLACK, WE = WHITE
Seal choice: *** Represents Standard seal (WRPS) requirements **** Represents E/T seal (WRPSL) requirements (Only available up to 50mm2)