

## FM2XCH FE180



### Areas of Use

Used for communication and instrumentation purpose in electronic systems of marine vehicles. Screening layer protects the transmitting signal against electromagnetic interferences. Halogen-Free and Flame Retardant construction ensure non-corrosive and highly visible environment during a fire. Also, min.180 minutes of circuit integrity under fire conditions is achieved by its special design.

### Cable Construction

<b>Conductor</b>	Stranded Annealed Copper (IEC/EN 60228, Class 2) (tinned copper and/or Class 5 versions are available upon request)
<b>Flame Barrier</b>	Mica Tape
<b>Insulation</b>	XLPE (IEC 60092-360)
<b>Core Colors</b>	Pair: Black / White, Numbered Quad: Black / White / Red / Blue, Numbered
<b>Lay-up</b>	Cores are stranded in layers
<b>Separator</b>	PET Foil (HFFR filler upon request)
<b>Overall Screen</b>	Annealed Copper Wire Braiding (90% Coverage)
<b>Outer Sheath</b>	HFFR (IEC 60092-360 SHF1), RAL 6018 - Green
<b>Reference Standards</b>	IEC 60092-376

### Technical Properties

<b>Operating Voltage</b>	150/250 (300) V
<b>Test Voltage</b>	1.5 kV (a.c) 3.6 kV (d.c)
<b>Conductor Resistance</b>	IEC/EN 60228
<b>Insulation Resistance</b>	>5000 M.Ωxkm
<b>Temperature Range</b>	-40 °C.....+90 °C
<b>Flame Retardancy</b>	IEC/EN 60332-1-2, IEC/EN 60332-3-22 (CAT A)
<b>Fire Resistance</b>	IEC 60331-21
<b>Smoke Density</b>	IEC/EN 61034-1+2
<b>Amount of Halogen Acid Gas</b>	IEC/EN 60754-1
<b>Corrosive Gases Measurement</b>	IEC/EN 60754-2
<b>Min. Bending Radius (Fixed)</b>	8 x Cable Diameter

### Cross Section

Configuration / Cross-Section (mm/mm <sup>2</sup> )	Cable Diameter (mm) (± 5%)	Copper Weight (kg / km)	~ Cable Weight (kg / km)
1x2x0.5	7.4	34	76
1x2x0.5	7.4	34	76
1x3x0.5	7.7	42	90

1x3x0.5	7,7	42	90
1x4x0.5	8.3	49	105
1x4x0.5	8,3	49	105
2x2x0.5	10.4	59	129
2x2x0.5	10,4	59	129
2x3x0.5	11.4	73	160
2x3x0.5	11,4	73	160
2x4x0.5	14.5	129	248
2x4x0.5	14,5	129	248
3x2x0.5	10.9	72	154
3x2x0.5	10,9	72	154
3x3x0.5	12.2	92	195
3x3x0.5	12,2	92	195
3x4x0.5	15.3	154	296
3x4x0.5	15,3	154	296
4x2x0.5	12.0	86	184
4x2x0.5	12,0	86	184
4x3x0.5	13.3	112	235
4x3x0.5	13,3	112	235
4x4x0.5	16.8	181	352
4x4x0.5	16,8	181	352
5x2x0.5	13.0	100	214
5x2x0.5	13,0	100	214
5x3x0.5	15.0	165	315
5x3x0.5	15,0	165	315
5x4x0.5	18.4	211	413
5x4x0.5	18,4	211	413
7x2x0.5	14.6	159	302
7x2x0.5	14,6	159	302
7x3x0.5	16.3	204	389
7x3x0.5	16,3	204	389
7x4x0.5	20.0	267	517
7x4x0.5	20,0	267	517
10x2x0.5	18.4	211	414
10x2x0.5	18,4	211	414
10x3x0.5	20.7	276	540
10x3x0.5	20,7	276	540
12x2x0.5	19.1	238	463
12x2x0.5	19,1	238	463
16x2x0.5	21.1	287	563
16x2x0.5	21,1	287	563
19x2x0.5	22.3	325	637
19x2x0.5	22,3	325	637
24x2x0.5	26.2	400	798
24x2x0.5	26,2	400	798
27x2x0.5	26.7	432	859

27x2x0.5	26,7	432	859
37x2x0.5	29,9	550	1097
37x2x0.5	29,9	550	1097
1x2x0.75	8.2	43	93
1x2x0.75	8,2	43	93
1x3x0.75	8.6	53	111
1x3x0.75	8,6	53	111
1x4x0.75	9.4	64	132
1x4x0.75	9,4	64	132
2x2x0.75	11.8	75	162
2x2x0.75	11,8	75	162
2x3x0.75	13.1	98	205
2x3x0.75	13,1	98	205
2x4x0.75	16.6	162	311
2x4x0.75	16,6	162	311
3x2x0.75	12.5	94	197
3x2x0.75	12,5	94	197
3x3x0.75	14.3	154	289
3x3x0.75	14,3	154	289
3x4x0.75	17.7	198	378
3x4x0.75	17,7	198	378
4x2x0.75	14.1	143	270
4x2x0.75	14,1	143	270
4x3x0.75	15.7	184	347
4x3x0.75	15,7	184	347
4x4x0.75	19.4	238	456
4x4x0.75	19,4	238	456
5x2x0.75	15.4	169	318
5x2x0.75	15,4	169	318
5x3x0.75	17.2	214	405
5x3x0.75	17,2	214	405
5x4x0.75	21.2	280	539
5x4x0.75	21,2	280	539
7x2x0.75	16.8	206	388
7x2x0.75	16,8	206	388
7x3x0.75	18.7	269	507
7x3x0.75	18,7	269	507
7x4x0.75	23.2	352	676
7x4x0.75	23,2	352	676
10x2x0.75	21.3	280	540
10x2x0.75	21,3	280	540
10x3x0.75	24.0	371	715
10x3x0.75	24,0	371	715
12x2x0.75	22.1	317	606
12x2x0.75	22,1	317	606
16x2x0.75	24.5	389	748

16x2x0.75	24,5	389	748
19x2x0.75	25.9	443	851
19x2x0.75	25,9	443	851
24x2x0.75	30.4	548	1069
24x2x0.75	30,4	548	1069
27x2x0.75	31.1	600	1162
27x2x0.75	31,1	600	1162
37x2x0.75	35.0	766	1490
37x2x0.75	35,0	766	1490
1x2x1	8.6	51	104
1x2x1	8,6	51	104
1x3x1	9.1	62	124
1x3x1	9,1	62	124
1x4x1	9.8	76	150
1x4x1	9,8	76	150
2x2x1	12.4	88	182
2x2x1	12,4	88	182
2x3x1	14.2	146	266
2x3x1	14,2	146	266
2x4x1	17.4	185	346
2x4x1	17,4	185	346
3x2x1	13.1	111	222
3x2x1	13,1	111	222
3x3x1	15.2	181	327
3x3x1	15,2	181	327
3x4x1	18.6	233	429
3x4x1	18,6	233	429
4x2x1	14.9	167	305
4x2x1	14,9	167	305
4x3x1	16.6	221	397
4x3x1	16,6	221	397
4x4x1	20.5	286	526
4x4x1	20,5	286	526
5x2x1	16.3	196	358
5x2x1	16,3	196	358
5x3x1	18.2	258	467
5x3x1	18,2	258	467
5x4x1	22.5	339	623
5x4x1	22,5	339	623
7x2x1	17.8	249	446
7x2x1	17,8	249	446
7x3x1	19.8	330	589
7x3x1	19,8	330	589
7x4x1	24.6	432	787
7x4x1	24,6	432	787
10x2x1	22.6	339	623

10x2x1	22,6	339	623
10x3x1	25,4	456	832
10x3x1	25,4	456	832
12x2x1	23,3	384	700
12x2x1	23,3	384	700
16x2x1	26,0	481	874
16x2x1	26,0	481	874
19x2x1	27,4	551	998
19x2x1	27,4	551	998
24x2x1	32,3	681	1253
24x2x1	32,3	681	1253
27x2x1	33,1	746	1363
27x2x1	33,1	746	1363
37x2x1	37,6	1064	1868
37x2x1	37,6	1064	1868
1x2x1.5	9,6	65	130
1x2x1.5	9,6	65	130
1x3x1.5	10,2	82	158
1x3x1.5	10,2	82	158
1x4x1.5	11,1	101	192
1x4x1.5	11,1	101	192
2x2x1.5	14,5	148	267
2x2x1.5	14,5	148	267
2x3x1.5	16,2	189	339
2x3x1.5	16,2	189	339
2x4x1.5	19,9	245	448
2x4x1.5	19,9	245	448
3x2x1.5	15,4	185	328
3x2x1.5	15,4	185	328
3x3x1.5	17,3	241	424
3x3x1.5	17,3	241	424
3x4x1.5	21,3	308	557
3x4x1.5	21,3	308	557
4x2x1.5	16,9	220	392
4x2x1.5	16,9	220	392
4x3x1.5	19,0	292	514
4x3x1.5	19,0	292	514
4x4x1.5	23,5	382	685
4x4x1.5	23,5	382	685
5x2x1.5	18,5	260	463
5x2x1.5	18,5	260	463
5x3x1.5	20,8	349	613
5x3x1.5	20,8	349	613
5x4x1.5	25,8	456	818
5x4x1.5	25,8	456	818
7x2x1.5	20,3	333	584

7x2x1.5	20,3	333	584
7x3x1.5	22,7	448	779
7x3x1.5	22,7	448	779
7x4x1.5	28,3	589	1045
7x4x1.5	28,3	589	1045
10x2x1.5	26,0	457	822
10x2x1.5	26,0	457	822
10x3x1.5	29,3	628	1111
10x3x1.5	29,3	628	1111
12x2x1.5	26,8	521	927
12x2x1.5	26,8	521	927
16x2x1.5	29,9	658	1166
16x2x1.5	29,9	658	1166
19x2x1.5	31,6	754	1332
19x2x1.5	31,6	754	1332
24x2x1.5	37,8	1025	1776
24x2x1.5	37,8	1025	1776
27x2x1.5	38,6	1124	1935
27x2x1.5	38,6	1124	1935
37x2x1.5	43,5	1448	2497
37x2x1.5	43,5	1448	2497
1x2x2.5	10,5	87	161
1x2x2.5	10,5	87	161
1x3x2.5	11,1	113	201
1x3x2.5	11,1	113	201
1x4x2.5	12,2	140	245
1x4x2.5	12,2	140	245
2x2x2.5	16,0	191	330
2x2x2.5	16,0	191	330
2x3x2.5	17,9	254	429
2x3x2.5	17,9	254	429
2x4x2.5	22,1	329	568
2x4x2.5	22,1	329	568
3x2x2.5	17,0	250	416
3x2x2.5	17,0	250	416
3x3x2.5	19,1	329	542
3x3x2.5	19,1	329	542
3x4x2.5	23,7	431	724
3x4x2.5	23,7	431	724
4x2x2.5	18,7	303	504
4x2x2.5	18,7	303	504
4x3x2.5	21,0	411	673
4x3x2.5	21,0	411	673
4x4x2.5	26,2	541	899
4x4x2.5	26,2	541	899
5x2x2.5	20,5	364	602

5x2x2.5	20,5	364	602
5x3x2.5	23.1	496	807
5x3x2.5	23,1	496	807
5x4x2.5	28.8	652	1083
5x4x2.5	28,8	652	1083
7x2x2.5	22.4	468	763
7x2x2.5	22,4	468	763
7x3x2.5	25.3	649	1041
7x3x2.5	25,3	649	1041
7x4x2.5	31.7	860	1402
7x4x2.5	31,7	860	1402
10x2x2.5	28.9	654	1085
10x2x2.5	28,9	654	1085
10x3x2.5	32.6	910	1484
10x3x2.5	32,6	910	1484
12x2x2.5	29.9	753	1234
12x2x2.5	29,9	753	1234
16x2x2.5	33.4	963	1567
16x2x2.5	33,4	963	1567
19x2x2.5	35.7	1196	1890
19x2x2.5	35,7	1196	1890
24x2x2.5	42.2	1487	2384
24x2x2.5	42,2	1487	2384
27x2x2.5	43.2	1634	2601
27x2x2.5	43,2	1634	2601
37x2x2.5	48.6	2153	3407
37x2x2.5	48,6	2153	3407

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