

## 6491F SINGLE CORE FIRE ALARM AND SECURITY CABLE



### APPLICATION

FP100 Equivalent Standard fire alarm and security cable. Soft Skin Standard Fire Resistant Cables for general use in fire detection, fire alarm, voice alarm, and emergency lighting circuits.

These cables are designed to carry on working for a specific length of time under fire conditions.

### CABLE STANDARDS

IEC 331  
BS 6387 C, W, Z,  
BS EN 50267  
BS EN 50265-2-1  
BS 7211  
LPCB certified

### CONSTRUCTION

**Conductor:** Stranded Plain Annealed Compacted Circular Copper Conductor

**Fire Protection:** MICA Glass Fibre Tape

**Sheath:** Low Smoke and Zero Halogen (LSZH)

**Sheath Colour:** Various

### CHARACTERISTICS

**Voltage Rating:** 600/1000 Volts

**Temperature Limits:** 25°C to +90°C

**Minimum Bending Radius:** As per cable manufacturer datasheet

### SHEATH COLOURS

 Brown	 Black	 Green/Yellow
 Grey	 Blue	 Yellow
 Red	 Orange	

Should not be installed at temperatures below 0°C or above +40°C

## 6491F SINGLE CORE FIRE ALARM AND SECURITY CABLE-DIMENSIONS

CCC CODE	CONDUCTOR SIZE (MM <sup>2</sup> )	STRANDING (MM)	WEIGHT (KG/KM)	OVERALL DIAMETER (MM)	BRASS A2	NYLON A2
6491F15	1.5	7/0.53	22	3.30	20/16	16
6491F25	2.5	7/0.67	33	3.95	20/16	16
6491F4	4	7/0.85	49	4.260	20/16	16
6491F6	6	7/1.04	69	5.00	20/16	16
6491F10	10	7/1.35	116	6.75	20/16	16
6491F16	16	7/1.70	175	7.80	20/16	16
6491F25	25	7/2.14	273	9.5	20s	20
6491F35	35	7/2.52	367	11.00	20s	20
6491F50	50	19/1.78	510	12.50	20	20
6491F70	70	19/2.14	715	14.20	20	25
6491F95	95	19/2.52	990	16.70	25	25
6491F120	120	37/2.03	1230	18.20	25	25
6491F150	150	37/2.25	1510	20.40	25	32
6491F185	185	37/2.52	1900	21.30	32	32
6491F240	240	61/2.25	2490	26.36	32	32
6491F300	300	61/2.52	3050	28.05	40	40
6491F400	400	61/2.85	3842	33.35	40	40
6491F500	500	61/3.20	4900	37.80	50S	50
6491F630	630	127/2.50	6334	42.50	50S	50

## 6491F / H07Z-R CURRENT – CARRYING CAPACITY (AMPERES)

CONDUCTOR CROSS – SECTIONAL AREA	REFERENCE METHOD A (ENCLOSED IN CONDUIT THERMALLY INSULATING WALL ETC)		REFERENCE METHOD B (ENCLOSED IN CONDUIT ON A WALL OR IN TRUNKING ETC)		REFERENCE METHOD C (CLIPPED DIRECT)		REFERENCE METHOD F (IN FREE AIR ON A PERFORATED CABLE TRAY HORIZONTAL OR VERTICAL)				
	2 CABLES, SINGLE - PHASE AC OR DC	3 OR 4 CABLES, SINGLE - PHASE AC	2 CABLES, SINGLE - PHASE AC OR DC	3 OR 4 CABLES, THREE PHASE AC	2 CABLES, SINGLE - PHASE AC OR DC FLAT AND TOUCHING	3 OR 4 CABLES, THREE - PHASE AC FLAT AND TOUCHING OR TREFOIL	TOUCHING			SPACED BY ONE DIAMETER	
							2 CABLES, SINGLE - PHASE AC OR DC FLAT	3 CABLES, THREE - PHASE AC FLAT	3 CABLES, THREE - PHASE AC TREFOIL	2 CABLES, SINGLE PHASE AC OR DC OR 3 CABLES THREE-PHASE AC FLAT	HORIZONTAL
1	2	3	4	5	6	7	8	9	10	11	12
(MM <sup>2</sup> )	(A)	(A)	(A)	(A)	(A)	(A)	(A)	(A)	(A)	(A)	(A)
1.5	19	17	23	20	25	23	-	-	-	-	-
2.5	26	23	31	28	34	31	-	-	-	-	-
4	35	31	42	37	46	41	-	-	-	-	-
6	45	40	54	48	59	54	-	-	-	-	-
10	61	54	75	66	81	74	-	-	-	-	-
16	81	73	100	88	109	99	-	-	-	-	-
25	106	95	133	117	143	130	161	141	135	182	161
35	131	117	164	144	176	161	200	176	169	226	201
50	158	141	198	175	228	209	242	216	207	275	246
70	200	179	253	222	293	268	310	279	268	353	318
95	241	216	306	269	355	326	377	342	328	430	389
120	278	249	354	312	413	379	437	400	383	500	454
150	318	285	393	342	476	436	504	464	444	577	527
185	362	324	449	384	545	500	575	533	510	661	605
240	424	380	528	450	644	590	679	634	607	781	719
300	486	435	603	514	743	681	783	736	703	902	833
400	-	-	683	584	868	793	940	868	823	1085	1008
500	-	-	783	666	990	904	1083	998	946	1253	1169
630	-	-	900	764	1130	1033	1254	1151	1088	1454	1362

THE ABOVE IS IN ACCORDANCE WITH 18TH EDITION OF IET WIRING REGULATIONS.

## 6491F / H07Z-R - VOLTAGE DROP

CROSS SECTIONAL AREA MM <sup>2</sup>	2 CABLES DC MV/A/M	2 CABLES SINGLE-PHASE AC MV/A/M									3 OR 4 CABLES THREE-PHASE AC MV/A/M														
		REFERENCE METHODS A AND B (ENCLOSED IN CONDUIT OR TRUNKING)	REFERENCE METHODS C, F AND G (CLIPPED DIRECT, ON TRAY OR IN FREE AIR)						REFERENCE METHODS A AND B (ENCLOSED IN CONDUIT OR TRUNKING)	REFERENCE METHODS C, F AND G (CLIPPED DIRECT, ON TRAY OR IN FREE AIR)															
			CABLES TOUCHING			CABLES SPACED*				CABLES TOUCHING, TREFOIL			CABLES TOUCHING, FLAT			CABLES SPACED*, FLAT									
1	2	3			4			5			6	7			8			9							
(MM <sup>2</sup> )	(mV/A/m)	(mV/A/m)			(mV/A/m)			(mV/A/m)			(mV/A/m)	(mV/A/m)			(mV/A/m)			(mV/A/m)							
1.5	31	31			31			31			27	27			27			27							
2.5	19	19			19			19			16	16			16			16							
4	12	12			12			12			10	10			10			10							
6	7.9	7.9			7.9			7.9			6.8	6.8			6.8			6.8							
10	4.7	4.7			4.7			4.7			4	4			4			4							
16	2.9	2.9			2.9			2.9			2.5	2.5			2.5			2.5							
		r	x	z	r	x	z	r	x	z	r	x	z	r	x	z	r	x	z	r	x	z	r	x	z
25	1.85	1.85	0.31	1.90	1.85	0.19	1.85	1.85	0.28	1.85	1.60	0.27	1.65	1.60	0.165	1.60	1.60	0.19	1.60	1.60	0.27	1.65			
35	1.35	1.35	0.29	1.35	1.35	0.18	1.35	1.35	0.27	1.35	1.15	0.25	1.15	1.15	0.155	1.15	1.15	0.18	1.15	1.15	0.26	1.20			
50	0.99	1.00	0.29	1.05	0.99	0.18	1.00	0.99	0.27	1.00	0.87	0.25	0.90	0.86	0.155	0.87	0.86	0.18	0.87	0.86	0.26	0.89			
70	0.68	0.70	0.28	0.75	0.68	0.175	0.71	0.68	0.26	0.73	0.60	0.24	0.65	0.59	0.15	0.61	0.59	0.175	0.62	0.59	0.25	0.65			
95	0.49	0.51	0.27	0.58	0.49	0.17	0.52	0.49	0.26	0.56	0.44	0.23	0.50	0.43	0.145	0.45	0.43	0.17	0.46	0.43	0.25	0.49			
120	0.39	0.41	0.26	0.48	0.39	0.165	0.43	0.39	0.25	0.47	0.35	0.23	0.42	0.34	0.14	0.37	0.34	0.165	0.38	0.34	0.24	0.42			
150	0.32	0.33	0.26	0.43	0.32	0.165	0.36	0.32	0.25	0.41	0.29	0.23	0.37	0.28	0.14	0.31	0.28	0.165	0.32	0.28	0.24	0.37			
185	0.25	0.27	0.26	0.37	0.26	0.165	0.30	0.25	0.25	0.36	0.23	0.23	0.32	0.22	0.14	0.26	0.22	0.165	0.28	0.22	0.24	0.33			
240	0.19	0.21	0.26	0.33	0.20	0.16	0.25	0.195	0.25	0.31	0.185	0.22	0.29	0.17	0.14	0.22	0.17	0.165	0.24	0.17	0.24	0.29			
300	0.155	0.175	0.25	0.31	0.16	0.16	0.22	0.155	0.25	0.29	0.15	0.22	0.27	0.14	0.14	0.195	0.135	0.16	0.21	0.135	0.24	0.27			
400	0.12	0.14	0.25	0.29	0.13	0.155	0.20	0.125	0.24	0.27	0.125	0.22	0.25	0.11	0.135	0.175	0.11	0.16	0.195	0.11	0.24	0.26			
500	0.093	0.12	0.25	0.28	0.105	0.155	0.185	0.098	0.24	0.26	0.10	0.22	0.24	0.09	0.135	0.16	0.088	0.16	0.18	0.085	0.24	0.25			
630	0.072	0.10	0.25	0.27	0.086	0.155	0.175	0.078	0.24	0.25	0.088	0.21	0.23	0.074	0.135	0.15	0.071	0.16	0.17	0.068	0.23	0.24			

THE ABOVE IS IN ACCORDANCE WITH 18TH EDITION OF IET WIRING REGULATIONS

CONDUCTOR OPERATING TEMPERATURE: 90°C

R = RESISTIVE COMPONENT  
 X = REACTIVE COMPONENT  
 Z = IMPEDANCE VALUE

\* SPACINGS LARGER THAN THOSE SPECIFIED IN METHOD 12 WILL RESULT IN LARGER VOLT DROP.

THE INFORMATION CONTAINED WITHIN THIS DATASHEET IS FOR GUIDANCE ONLY AND IS SUBJECT TO CHANGE WITHOUT NOTICE OR LIABILITY. WE BELIEVE THE INFORMATION IS CORRECT AT THE TIME OF PUBLICATION. PLEASE NOTE WHEN SELECTING CABLE ACCESSORIES THAT ACTUAL CABLE DIMENSIONS MAY VARY DUE TO MANUFACTURING TOLERANCES.