

HIROSE Connector Selector Contents

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FFC/FPC



Series	FH29B	FH58	FH43B	FH53
Product image				
Contact pitch (mm)	0.2	0.2	0.2	0.2
Height (mm)	1.2	0.9	0.9	0.65
Cable type	FPC	FPC	FPC	FPC
Technology	ZIF	ZIF	ZIF	ZIF
Solder technology	SMT	SMT	SMT	SMT
Number of contacts	22, 24, 34, 40, 44, 50, 60, 67, 70, 80, 90, 100, 120	31, 41	21, 25, 29, 31, 35, 41, 45, 51, 61, 71	41
Rated voltage	AC/DC40V	AC/DC30V	AC/DC30V	AC/DC30V
Current rating (Amps)	0.25	0.2	0.2	0.2
Notes	Fine pitch Low profile Side catcher	Supports USB 3.0, Embedded Display Port ver 1.3, MIPI D-PHY ver 1.1	Fine pitch High density Bottom contact Side catcher	Back flip Low height 0.65mm, Narrow depth 3.2mm, Top contact

FFC/FPC



Series	FH54	FH26	FH30	FH35C
Product image				
Contact pitch (mm)	0.2	0.3	0.3, 0.4	0.3
Height (mm)	0.9	1	3	0.9
Cable type	FPC	FPC	FPC	FPC
Technology	ZIF	ZIF	ZIF	ZIF
Solder technology	SMT	SMT	SMT	SMT
Number of contacts	41	13, 15, 17, 19, 21, 23, 25, 27, 29, 31, 33, 35, 37, 39, 41, 45, 51, 55, 57, 61, 71	Pitch 0.3mm - 60, 80, 90 Pitch 0.4mm - 80, 96	9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 31, 33, 35, 37, 39, 41, 45, 49, 51, 61
Rated voltage	AC/DC30V	AC30V	AC/DC30V	AC/DC30V
Current rating (Amps)	0.2	0.2	0.15	0.2
Notes	Back flip Low height 0.9mm, Narrow depth 3.2mm, Top contact	Flip lock actuator Bottom contact Easy FPC insertion and click sensation	FPC side catcher design Bottom contact Click sensation confirms FPC is locked	Top & bottom contact Shares same land pattern as FH26

PCB to PCB



Series	DF59S/SN	BM22	BM24	BM15F/FR
Product image				
Contact pitch (mm)	-	-	0.35	0.35
Stacking height (mm)	-	0.9	0.8	0.7, 0.8, 1
Application	Coplanar PCB	Micro hybrid PCB to FPC	Small hybrid PCB to FPC	FPC to PCB
PCB mounting	SMT	SMT	SMT	SMT
Variation	1	4 (2x signal / 2x power) 6 (4x signal / 2x power)	10, 20, 24, 30	10, 20, 22, 24, 30,
Rated voltage	AC350V	AC50V	AC30V	AC30V
Current rating (Amps)	3	0.3 (signal) 4 max (power)	0.25 / 0.3 (signal) 4 max (power)	0.3
Notes	Mono-pole connector Misalignment absorption, DF59S = 2.7mm depth DF59SN = 1.7mm depth	Hybrid connector (power/signal)	Hybrid connector (power/signal)	FPC to board option

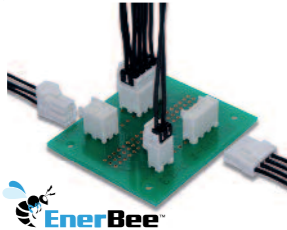

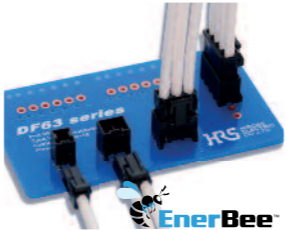

PCB to PCB



Series	BM23	BM30	BM25	BM10
Product image				
Contact pitch (mm)	0.35	0.35	0.4	0.4
Stacking height (mm)	0.6	0.8	0.7	0.6, 0.8
Application	FPC to PCB	FPC to PCB	Small hybrid PCB to FPC	Parallel
PCB mounting	SMT	SMT	SMT	SMT
Variation	10, 24, 34	24, 54	4	10, 16, 20, 24, 30, 34, 40, 44, 50, 60
Rated voltage	AC30V	AC30V	AC30V	AC30V
Current rating (Amps)	0.3	0.3	1 (signal) 9 max (power)	0.3
Notes	FPC to board option	Short depth 2.3mm	Hybrid connector (power/signal)	FPC to board option

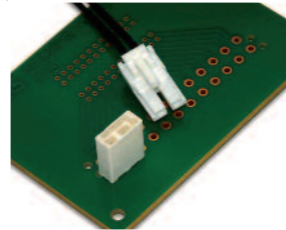
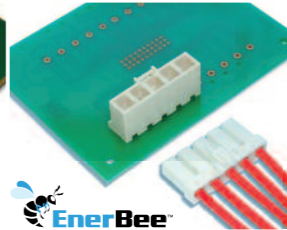
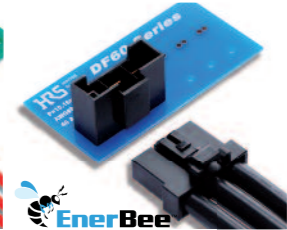
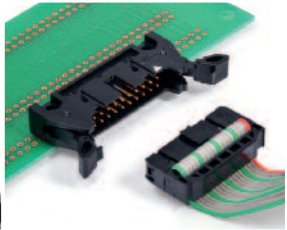
Wire to PCB

discrete wire **HRS**

Series	DF33C	DF6	DF63	DF64
Product image				
Contact pitch (mm)	3.3	3.96	3.96	4.5
Termination AWG	20-22	18-22	16-18	18-22
Contact style	Crimp	Crimp	Crimp	Crimp
PCB mounting style	THT	THT	THT	SMT
Number of rows	Single row Double row	Single row	Single row	Single row
Number of contacts	2-6 (single row) 4-12 (double row)	1-8, 10	1-6	2, 3
Rated voltage	AC/DC 500V	AC 300V	AC/DC 630V	AC/DC 350V
Current rating (Amps) up to / depend by AWG	4 - 5	3 - 5	15	3 -5
Notes	Positive center lock Polarization key Potting possible	Direct mount connector	Positive center lock Polarization key Potting possible (combine with DF63W)	Horizontal mating 2-piece system Common receptacle for board and wire connection

Wire to PCB

discrete wire **HRS**

Series	DF5	DF22	DF60	HIF3MW IDC termination
Product image				
Contact pitch (mm)	5	7.92	10.16	2.54
Termination AWG	18-22	10-12 / 14-16	8-12	Ribbon Flat Cable
Contact style	Crimp	Crimp	Crimp	IDC
PCB mounting style	THT	THT	THT	THT
Number of rows	Single row Double row	Single row (PCB type)	Single row	Double row
Number of contacts	2-10 (single row) 4, 6, 8, 10, 12, 14, 16 (double row)	1-5	1-6	10-64 (depend by version)
Rated voltage	AC 500V	AC/DC 1000V	AC/DC 1000V	AC 200 V
Current rating (Amps) up to / depend by AWG	4 - 8	13 - 30	40 (2-6 pin) 45 (1 pin only)	1
Notes	Potting socket connector	Positive center lock Polarization key Potting possible In-line version available	Positive center lock Polarization key 5-point contact Other versions: straight, right angle, in-line with flange	Many variation available Straight / right angled MIL-STD standard

AWG Conductor size table



AWG	Diameter Inches	mm	Area mm ²	Max Current A	AWG	Diameter Inches	mm	Area mm ²	Max Current A
0000 (4/0)	0.4600	11.680	107.2000	302	24	0.0201	0.5110	0.2050	0.577
000 (3/0)	0.4100	10.400	85.0100	239	25	0.0179	0.4550	0.1620	0.457
00 (2/0)	0.3650	9.2660	67.4300	190	26	0.0159	0.4050	0.1290	0.361
0 (1/0)	0.3250	8.2500	53.4900	150	27	0.0142	0.3610	0.1020	0.288
1	0.2890	7.3500	42.4000	119	28	0.0126	0.3210	0.0810	0.226
2	0.2580	6.5400	33.6200	94	29	0.0113	0.2860	0.0642	0.182
3	0.2290	5.8300	26.6700	75	30	0.0100	0.2550	0.0510	0.142
4	0.2040	5.1900	21.1500	60	31	0.0089	0.2270	0.0404	0.113
5	0.1820	4.6200	16.7500	47	32	0.0080	0.2020	0.0320	0.091
6	0.1620	4.1100	13.3000	37	33	0.0071	0.1800	0.0254	0.072
7	0.1440	3.6700	10.5500	30	34	0.0063	0.1600	0.0201	0.056
8	0.1280	3.2600	8.3700	24	35	0.0056	0.1430	0.0160	0.044
9	0.1140	2.9100	6.6300	19	36	0.0050	0.1270	0.0127	0.035
10	0.1020	2.5900	5.2600	15	37	0.0044	0.1130	0.0100	0.0289
11	0.0907	2.3000	4.1700	12	38	0.0040	0.1010	0.0080	0.0228
12	0.0808	2.0500	3.3100	9.3	39	0.0035	0.0897	0.0063	0.0175
13	0.0720	1.8300	2.6200	7.4	40	0.0032	0.0799	0.0050	0.0137
14	0.0641	1.6300	2.0800	5.9	41	0.0028	0.0711	0.0040	
15	0.0571	1.4500	1.6500	4.7	42	0.0025	0.0632	0.0031	
16	0.0508	1.2900	1.3100	3.7	43	0.0022	0.0564	0.0025	
17	0.0453	1.1500	1.0380	2.9	44	0.0020	0.0500	0.0020	
18	0.0403	1.0240	0.8230	2.3	45	0.0018	0.0447	0.0016	
19	0.0359	0.9120	0.6530	1.8	46	0.0016	0.0399	0.0013	
20	0.0320	0.8120	0.5180	1.5	47	0.0014	0.0355	0.0010	
21	0.0285	0.7230	0.4100	1.2	48	0.0012	0.0316	0.0008	
22	0.0254	0.6440	0.3260	0.92	49	0.0011	0.0281	0.0006	
23	0.0226	0.5730	0.2580	0.729	50	0.0010	0.0250	0.0005	

* errors and omissions excepted

FPC/FFC connector chart



Pitch	Series	Pin Counts	height	Depth	FFC/FFC	contact	flip
0.2	FH29B	22, 24, 34, 40, 44, 50, 60, 70, 80, 90, 100, 120	1.2	4.55	FPC	Bottom	Front
0.2	FH43B	21, 25, 29, 31, 35, 41, 45, 51, 61, 71	0.9	2.75	FPC	Bottom	Front
0.2	FH53	41	0.65	3.20	FPC	Top	Back
0.2	FH54	41	0.9	3.20	FPC	Top	Back
0.3	FH26	13, 15, 17, 19, 21, 23, 25, 27, 29, 31, 33, 35, 37, 39, 41, 45, 51, 55, 57, 61, 71	1.0	4.80	FPC	Bottom	Front
0.3	FH30	60, 80, 90	3.0	6.55	FPC/FFC	Bottom	Front
0.3	FH35C	9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 31, 33, 35, 37, 39, 41, 45, 49, 51, 55, 61	0.9	3.20	FPC	Top & Bottom	Back
0.3	FH36	15, 17, 19, 23, 25, 27, 29, 31, 33, 35, 39, 45, 51, 61	1.0	2.70	FPC	Bottom	Front
0.3	FH36W(Halogen Free)	11, 15, 17, 19, 23, 25, 27, 29, 31, 33, 35, 39, 45, 51, 61	1.0	2.70	FPC	Bottom	Front
0.3	FH39	23, 25, 27, 29, 33, 39, 45, 51, 61, 67	1.1	3.45	FPC	Top & Bottom	Back
0.3	FH42	11, 15, 19, 23, 31	0.65	3.08	FPC	Top	Back
0.4	FH30M	80, 96	3.0	6.55	FPC/FFC	Bottom	Front
0.4	FH33M	16, 65	1.2	2.35	FPC/FFC	Bottom	Front
0.4	FH55M	40	1.5	4.2	FPC	Bottom	Front
0.4	FH37	15 (3-30 On Request)	0.48	3.25	FPC	Bottom	Front
0.5	FH12	5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 22, 24, 25, 26, 28, 30, 32, 33, 34, 36, 40, 45, 49, 50, 53, 60	2.0	5.40	FPC/FFC	Bottom	Front
0.5	FH12A	10, 12, 15, 16, 18, 20, 22, 24, 26, 28, 29, 30, 32, 33, 34, 36, 40, 42, 45, 50	2.0	5.40	FPC/FFC	Top	Front
0.5	FH12E	45	2.0	5.40	FPC/FFC	Bottom	Front
0.5	FH12S	26, 30, 40, 45, 50, 53	2.4	5.40	FPC/FFC	Bottom	Front
0.5	FH12-xS-0.5SV	10, 12, 13, 15, 16, 17, 18, 20, 22, 24, 26, 30, 32, 33, 34, 36, 40, 45, 49, 50, 60	5.5	5.40	FPC/FFC	vertical	-
0.5	FH19C	4, 5, 6, 7, 8, 9, 10, 12, 13, 15, 17, 20, 21, 24, 27, 30, 34, 40, 50	0.9	3.00	FPC t=0.2	Bottom	Front
0.5	FH19SC	4, 5, 6, 8, 9, 10, 12, 13, 14, 15, 16, 17, 18, 20, 21, 22, 24, 26, 27, 28, 30, 32, 40, 45, 50	0.9	3.00	FPC t=0.3	Bottom	Front
0.5	FH28	10, 15, 20, 28, 30, 40, 45, 50, 55, 60, 64, 68, 74, 80	2.55	4.15	FPC/FFC	Bottom	Front
0.5	FH28D	20, 28, 30, 50, 55, 64, 68, 74	2.55	4.15	FPC/FFC	Bottom	Front
0.5	FH28E	20, 30, 40, 50, 60, 68	2.55	4.15	FPC/FFC	Bottom	Front
0.5	FH28H	80	2.55	4.15	FPC/FFC	Bottom	Front
0.5	FH33	4, 6, 9, 10, 12, 14, 16, 19, 20, 26, 28, 30, 32, 36, 40, 45	1.2	2.35	FPC/FFC	Bottom	Front
0.5	FH33J (Halogen Free)	4, 10, 12, 16, 18, 19, 40	1.2	2.35	FPC/FFC	Bottom	Front
0.5	FH34S	4, 6, 7, 8, 10, 11, 12, 14, 16, 18, 20, 22, 23, 24, 26, 30, 34, 40	1.0	3.20	FPC/FFC	Top or Bottom	Back
0.5	FH40	10, 20, 24, 30, 40, 45, 50, 60, 64, 80	5.8	3.55	FFC/FPC	Bottom	Front
0.5	FH41	15, 28, 30, 31, 40, 50, 68	2.5	6.2	Shielded FFC	Bottom	Front
0.5	FH48	20, 21, 30, 31, 40, 50, 68	6.18	4.7	FFC/FPC	Vertical	Front
0.5	FH50	28, 40	3.7		FPC	Bottom	Front
0.5	FH52	6, 8, 10, 11, 12, 15, 18, 20, 24, 25, 28, 30, 32, 40, 42, 45, 50, 60, 64, 68	2.0	5.7	FPC/FFC	Bottom	Front
0.5	FH55	22, 31, 40	1.5	4.2	FPC	Bottom	Front
1.0	FH12-xS-1SH	5, 6, 7, 8, 9, 11, 12, 16, 17, 22, 26,	2.0	5.40	FPC/FFC	Bottom	Front
1.0	FH12-xS-1SV	6, 7, 8, 16, 20, 22, 24,	5.5	5.40	FPC/FFC	vertical	-
1.0	FH33J (Halogen Free)	4, 10, 12, 16, 18, 40	1.2	2.35	FPC/FFC	Bottom	Front