

Dimension Tables

CMM 100/200 SERIES in male & female styles for LF contacts

CMM SERIES 100 & 200 Male	LF contacts number series 100	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
	LF contacts number series 200	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	
	Length in mm	A	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48
	Length in mm (Strap)	B	6,7	8,7	10,7	12,7	14,7	16,7	18,7	20,7	22,7	24,7	26,7	28,7	30,7	32,7	34,7	36,7	38,7	40,7	42,7	44,7	46,7	48,7	50,7	52,7
	Length in mm	C	7,4	9,4	11,4	13,4	15,4	17,4	19,4	21,4	23,4	25,4	27,4	29,4	31,4	33,4	35,4	37,4	39,4	41,4	43,4	45,4	47,4	49,4	51,4	53,4
	Length C with Latches fitted		7,8	9,8	11,8	13,8	15,8	17,8	19,8	21,8	23,8	25,8	27,8	29,8	31,8	33,8	35,8	37,8	39,8	41,8	43,8	45,8	47,8	49,8	51,8	53,8

CMM SERIES 100 & 200 Female	LF contacts number series 100	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
	LF contacts number series 200	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	
	Length in mm	A	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48
	Length in mm	B	7	9	11	13	15	17	19	21	23	25	27	29	31	33	35	37	39	41	43	45	47	49	51	53

LF CONTACTS REFERENCE MARK NUMBER FOR CMM SERIES 200 Male & Female	D	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	E	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
	F	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
	G	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50

CMM 220 SERIES in male & female styles for LF contacts

CMM SERIES 220 Male & Female	LF contacts number	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52	54	56	58	60	
	Distance between axis	A	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52	54	56	58
		B	9	11	13	15	17	19	21	23	25	27	29	31	33	35	37	39	41	43	45	47	49	51	53	55	57	59	61	63	65
	Length in mm	C	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52	54	56	58	60	62	64	66	68	70
	LF contacts reference mark number	D	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		E	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
F		3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
G		4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52	54	56	58	60	
H		4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52	54	56	58	60	

CMM 220 SERIES in male & female styles for HF/HP contacts

CMM 220 Male & Female Special contacts only	Special contacts number	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
	Distance between axis	A	4	8	12	16	20	24	28	32	36	40	44	48	52	56
		B	13	17	21	25	29	33	37	41	45	49	53	57	61	65
	Length in mm	C	18	22	26	30	34	38	42	46	50	54	58	62	66	70

CMM 320 SERIES in male & female styles for LF contacts

CMM SERIES 320 Male & Female	LF contacts number	6	9	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60	63	66	69	72	75	78	81	84	87	90	93	96	99	102	105	108	111	114	117	120			
	Distance between axis	A	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52	54	56	58	60	62	64	66	68	70	72	74	76	78		
		B	11	13	15	17	19	21	23	25	27	29	31	33	35	37	39	41	43	45	47	49	51	53	55	57	59	61	63	65	67	69	71	73	75	77	79	81	83	85	87		
	Length in mm	C	17	19	21	23	25	27	29	31	33	35	37	39	41	43	45	47	49	51	53	55	57	59	61	63	65	67	69	71	73	75	77	79	81	83	85	87	89	91	93		
	LF contacts reference mark number	D	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		E	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40		
		F	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41		
		G	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52	54	56	58	60	62	64	66	68	70	72	74	76	78	80		
		H	5	7	9	11	13	15	17	19	21	23	25	27	29	31	33	35	37	39	41	43	45	47	49	51	53	55	57	59	61	63	65	67	69	71	73	75	77	79	81		
		J	6	9	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60	63	66	69	72	75	78	81	84	87	90	93	96	99	102	105	108	111	114	117	120		

CMM 340 SERIES in male & female styles for HF/HP contacts

CMM 340 Male & Female Special contacts only	Special contacts number	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52	54	56	58	60	62	64					
	Distance between axis	A	2,5	5	7,5	10	12,5	15	17,5	20	22,5	25	27,5	30	32,5	35	37,5	40	42,5	45	47,5	50	52,5	55	57,5	60	62,5	65	67,5	70	72,5	75	77,5	80	82,5	85	87,5
		B	12,5	15	17,5	20	22,5	25	27,5	30	32,5	35	37,5	40	42,5	45	47,5	50	52,5	55	57,5	60	62,5	65	67,5	70	72,5	75	77,5	80	82,5	85	87,5				
	Length in mm	C	18,5	21	23,5	26	28,5	31	33,5	36	38,5	41	43,5	46	48,5	51	53,5	56	58,5	61	63,5	66	68,5	71	73,5	76	78,5	81	83,5	86	88,5	91	93,5				

CMM Specifications (with LF contacts)

MATERIALS

INSULATOR: Special PPS (Polyphenylene Sulfide Fiberglass filled thermoplastic) UL 94-V0

- Radiation resistance
- No humidity absorption
- Oxygen free

Note : PPS characteristics are recognized for space applications

P.C. LF CONTACTS :

Male:

Tail : copper alloy / Ni + Au flash 0,1 μ
Contact area : copper alloy / Ni + Au > 1 μ

Female:

Body : copper alloy / Ni + Au 0,2 μ
Socket : beryllium copper / Ni + Au > 1,25 μ

CRIMP LF CONTACTS :

Male:

Body : copper alloy / Ni + Au > 1 μ

Female:

Body : copper alloy / Ni + Au > 0,2 μ
Socket : beryllium copper / Ni + Au > 1,25 μ

FIXING HARDWARE:

- Jackscrew: Stainless steel.
- Latch : Beryllium copper/plated nickel (CMM 100/200 series only)

ELECTRICAL

- | | |
|----------------------------------|--------------------------------------|
| • All contacts | 3 A max. @ 25°C
2.2 A max. @ 85°C |
| • Working voltage (sea level) | Tested at 800 V DC |
| • Proof voltage | Tested at 1 200 V DC |
| • Contact resistance (initially) | max. 10 m Ω |
| • Insulation resistance | 1 000 M Ω min. |

MECHANICAL

- | | |
|--|-----------------------------------|
| • Mechanical operations | Up to 2500 cycles |
| • Contact insertion and withdrawal force | 2 N max. / 0.2 N min. per contact |
| • Contact retention in insulator | 10 N min. |
| • Contact replacement in insulator | 1-3 cycles (Crimp contacts only) |

ENVIRONMENTAL

- | | |
|-----------------------|---|
| • Temperature cycling | From - 60°C to + 260°C
Reflow solder process compatible (+260°C) |
| • Vibration severity | 0.75 mm, 10 g RMS 6 hours long random with superimposed sinusoid. No intermittencies measured when using an H.S.L.I (High Speed Logic Interrupt) detector with a trip threshold of 2 ns.
MIL-DTL-55302F Test Condition III [147.1 m/s ² (15 gn) peak] |
| • Shock severity | 100 g for 6 ms |
| • Solvent resistance | |

Note :

The CMM micro-connectors are designed to meet or exceed the relevant electrical and environmental performances described in MIL-DTL-55302F & BS-9525-F0033 standards.

HF / HP contacts specifications

MATERIALS

• Spring loaded parts	Be/Cu gold plated
• Other metal parts	Copper alloy
• Insulator	PTFE (HF)
• Retaining clip	Be/Cu Ni plated

MECHANICAL

• Mechanical operations	Up to 500 cycles
• Insertion force	From 0.60 to 5 N per contact
• Withdrawal force	From 0.50 to 2 N per contact
• Secure overlapping	1.30 mm
• Contact replacement in insulator	50 cycles for HF / HP 30 series (5 cycles for HF / HP 22 series)

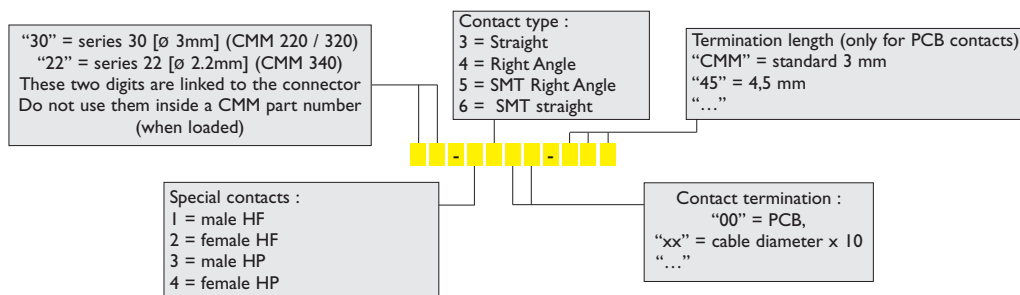
ELECTRICAL

High Power (HP) Contact	Series 30	Series 22	High Frequency (HF) Contact		
Intensity per contact	35A	20A	Impedance 50 Ω / 75Ω		
Intensity per connector	20A	10A	Insulation resistance 10 ⁶ MΩ		
Dielectric Voltage (seal level)			Insulation between 2 contacts -75 dB (depending on cable)		
Withstanding voltage Rated voltage	1500VRMS 500 VRMS	900VRMS 300 VRMS	Withstanding voltage (sea level) 1000 VRMS		
High Altitude 70000ft :			Rated voltage 80 v AC / 500 mA		
Withstanding voltage	360 VRMS	300 VRMS	Contacts HF on cable	Series 30	Serie 22
Rated voltage	120 VRMS	100 VRMS	Frequency range up to	20 GHz	6 GHz
Contact resistance max. 3 mΩ					

ENVIRONMENTAL

• Temperature cycling	From -60°C to +260°C
• Salt spray test	96 hrs *
• Humidity test	56 days @ 90% humidity

HF / HP CONTACTS PART NUMBERING



Important notice:

According to the routines test other than MIL our technical features for CMM Micro-connectors reach a higher result. For more information, please feel in the contact form on the website.

For example:

- Mechanical operations: up to 5 000 cycles
- High temperature test: 1 000H at 250°C
- Application with LVDS signal @ 400 MHz, impedance 100 Ohm
- High speed: USB, 1Gb/s Ethernet...

* without fixings

LF : low frequency contacts

PRESENTATION

Male						
Female						
	Straight PCB Type Y	90° PCB Type V	Straight SMT Type T	90° SMT Type R	Crimp Type S - C	Straight PCB Type PF Press fit

INFORMATION TABLE

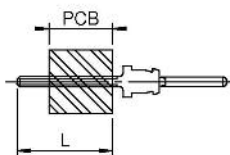
CMM RANGE		USE												
		STRAIGHT ON PCB				90° ON PCB		STRAIGHT SMT		90° SMT	CRIMP			
100/200	Male	Y L=3,0	YL L=4,5	YM L=5,1	YX L=9,1			V L=3,0	VL L=4,5	T L=2,25	TL L=3,35	R L=0,9	C Gauge 22	S Gauge 24-28
	Female	Y L=3,0	YL L=4,5			YC L=1,2	PF Press fit	V L=3,0	VL L=4,5	T L=2,25	TL L=3,35	R L=0,9	C Gauge 22	S Gauge 24-28
220	Male	Y L=3,0	YL L=4,5	YM L=5,1	YX L=9,1			V L=3,0	VL L=4,5	T L=2,25	TL L=3,35	R L=0,9	C Gauge 22	S Gauge 24-28
	Female	Y L=3,0	YL L=4,5			YC L=1,2	PF Press fit	V L=3,0	VL L=4,5	T L=2,25	TL L=3,35	R L=0,9	C Gauge 22	S Gauge 24-28
320	Male	Y L=3,0	YL L=4,5	YM L=5,1	YX L=9,1			V L=3,0	VL L=4,5			R L=0,9	C Gauge 22	S Gauge 24-28
	Female	Y L=3,0	YL L=4,5				PF Press fit	V L=3,0	VL L=4,5				C Gauge 22	S Gauge 24-28
340	Male	Y L=3,0	YL L=4,5	YM L=5,1	YX L=9,1			V L=3,0	VL L=4,5				C Gauge 22	S Gauge 24-28
	Female	Y L=3,0	YL L=4,5				PF Press fit	V L=3,0	VL L=4,5				C Gauge 22	S Gauge 24-28

L=6,50 / 8,00 / 10,50 / 12,00 / 14,50 / 16,00 mm upon request (only for straight on PCB male contacts)

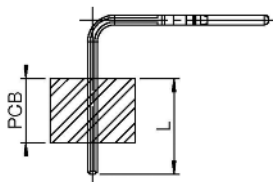
Standard contact

Any other type of contact upon request only

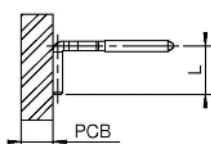
Straight on PCB



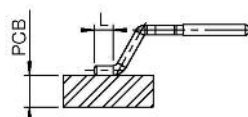
90° on PCB



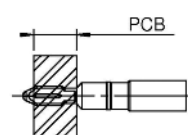
SMT straight on PCB



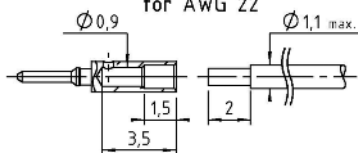
SMT 90° on PCB



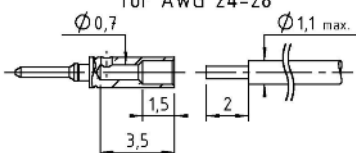
Pressfit
Straight on PCB



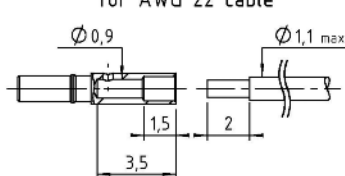
Ref : 12960
Male crimp contact "C"
for AWG 22



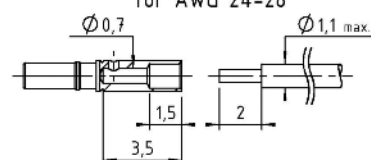
Ref : 12969
Male crimp contact "S"
for AWG 24-28



Ref : C13064-P
Female crimp contact "C"
for AWG 22 cable



Ref : C12468
Female crimp contact "S"
for AWG 24-28



HF : high frequency contacts (series 30)

PRESENTATION

Male								
Female								
	Straight PCB	90° PCB	Straight SMT	90° SMT Card edge	Straight Crimp	90° Crimp	Straight solder	90° solder
	Type D				Type E			

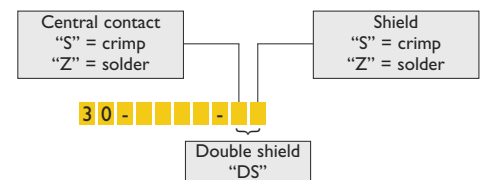
INFORMATION TABLE

CMM RANGE		TYPICAL USE										
		TYPE OF CONTACTS TO BE USED IN THE CMM CONNECTOR WITH CAVITIES FOR HF/HP CONTACTS ONLY										
		TYPE D FOR SPECIAL CONTACTS ON PCB (Eg.221D00F22-00 nbr of special contact-1300CMM)					TYPE E FOR SPECIAL CONTACTS ON CABLE					
		Straight on PCB		90° on PCB		Straight SMT	90° SMT Card edge	Straight Crimp	90° Crimp	Straight solder	90° solder	
100/200	Male											
	Female											
220	Male	30-1300-CMM L=3,0	30-1300-45 L=4,5	30-1400-CMM L=3,0	30-1400-45 L=4,5	30-1600	30-1500-CMM no LF contact	30-1500-12	30-13XX-SS 30-13XX-DS xx=cable type	30-14XX-ZS 30-14XX-DS xx=cable type	30-13XX-ZZ xx=cable type	30-14XX-ZZ xx=cable type
	Female	30-2300-CMM L=3,0	30-2300-45 L=4,5	30-2400-CMM L=3,0	30-2400-45 L=4,5	30-2600			30-23XX-SS 30-23XX-DS xx=cable type	30-24XX-ZS 30-24XX-DS xx=cable type	30-23XX-ZZ xx=cable type	30-24XX-ZZ xx=cable type
320	Male	30-1300-CMM L=3,0	30-1300-45 L=4,5	30-1400-CMM L=3,0	30-1400-45 L=4,5			30-1500-12	30-13XX-SS 30-13XX-DS xx=cable type	30-14XX-ZS 30-14XX-DS xx=cable type	30-13XX-ZZ xx=cable type	30-14XX-ZZ xx=cable type
	Female	30-2300-12 L=3,0	30-2300-14 L=4,5	30-2400-CMM L=3,0	30-2400-45 L=4,5				30-23XX-SS 30-23XX-DS xx=cable type	30-24XX-ZS 30-24XX-DS xx=cable type	30-23XX-ZZ xx=cable type	30-24XX-ZZ xx=cable type
340	Male											
	Female											

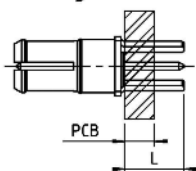
Standard contact
Any other type of contact upon request only

XX = 12, 20, 24, 26
Eg. 24 = cable Ø 2,4
XX = 20 or 26 for DS cable

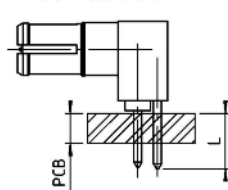
XX = 47, 85
Eg. 47 for UT47 cable



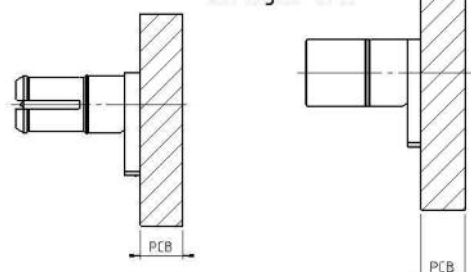
Straight on PCB



90° on PCB



Straight SMT



HP : high power contacts (series 30)

PRESENTATION

Male									
Female									
	Straight PCB	90° PCB	Straight SMT	90° SMT	90° SMT Card edge	Straight Crimp	90° Crimp	Straight solder	90° solder
	Type D					Type E			

INFORMATION TABLE

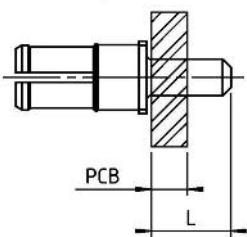
CMM RANGE	TYPICAL USE										
	TYPE OF CONTACTS TO BE USED IN THE CMM CONNECTOR WITH CAVITIES FOR HF/HP CONTACTS ONLY										
	TYPE D FOR SPECIAL CONTACTS ON PCB					TYPE E FOR SPECIAL CONTACTS ON CABLE					
	Straight on PCB		90° on PCB		Straight SMT	90° SMT	90° SMT Card edge	Straight Crimp	90° Crimp	Straight solder	90° solder
100/200	Male										
	Female										
220	Male	30-3300-CMM L=3,0	30-3300-45 L=4,5	30-3400-CMM L=3,0	30-3400-45 L=4,5	30-3600	30-3500	30-3500-CMM no LF contact	30-3500-12	30-33XX	30-33XX
	Female	30-4300-CMM L=3,0	30-4300-45 L=4,5	30-4400-CMM L=3,0	30-4400-45 L=4,5	30-4600	30-4500			30-43XX	30-43XX
320	Male	30-3300-CMM L=3,0	30-3300-45 L=4,5	30-3400-CMM L=3,0	30-3400-45 L=4,5				30-3500-12	30-33XX	30-33XX
	Female	30-4300-12 L=3,0	30-4300-14 L=4,5	30-4400-CMM L=3,0	30-4400-45 L=4,5					30-43XX	30-43XX
340	Male										
	Female										

Standard contact
Any other type of contact upon request only

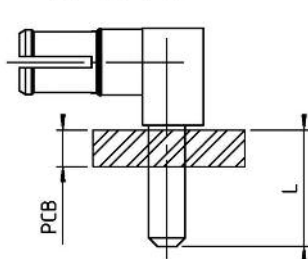
XX = 05, 08...
Eg. 08 for 8A

Please refer
to page 94

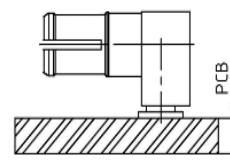
Straight on PCB



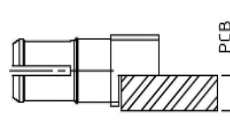
90° on PCB



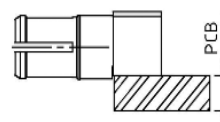
90° SMT



90° SMT Card edge
(without LF contacts)



90° SMT Card edge
(with LF contacts)



HF : high frequency contacts (series 22)

PRESENTATION

Male								
Female								
	Straight PCB	90° PCB	Straight SMT	90° SMT	Straight Crimp	90° Crimp	Straight solder	90° solder
	Type D				Type E			

INFORMATION TABLE

CMM RANGE		TYPICAL USE							
		TYPE OF CONTACTS TO BE USED IN THE CMM CONNECTOR WITH CAVITIES FOR HF/HP CONTACTS ONLY							
		TYPE D FOR SPECIAL CONTACTS ON PCB				TYPE E FOR SPECIAL CONTACTS ON CABLE			
		Straight on PCB	90° on PCB	Straight SMT	90° SMT	Straight Crimp	90° Crimp	Straight solder	90° solder
100/200	Male								
	Female								
220	Male								
	Female								
320	Male								
	Female								
340	Male	22-1300-12 L=3,0	22-1300-14 L=4,5	22-1400-12* 22-1400-22** L=3,0	22-1400-14* 22-1400-24** L=4,5		22-1312-ZS	22-1320-ZZ	
	Female	22-2300-12 L=3,0	22-2300-14 L=4,5	22-2400-12* 22-2400-22** L=3,0	22-2400-14* 22-2400-24** L=4,5		22-2312-ZS	22-2320-ZZ	

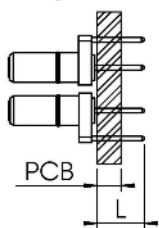
Standard contact
Any other type of contact upon request only

12 = cable Ø
1,2

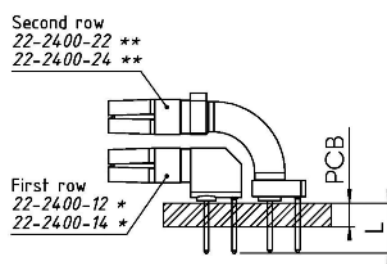
20 = cable
Ø 2,0

* First row : 22-1400-12 / 22-1400-14 / 22-2400-12 / 22-2400-14
** Second row : 22-1400-22 / 22-1400-24 / 22-2400-22 / 22-2400-24

Straight on PCB



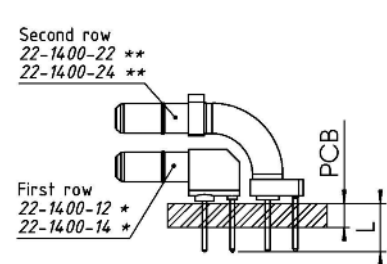
90° on PCB



When a two-row connector mixes a 22-2400-12 and a 22-2400-22 contact, the P/N of the HF contact changes to 2400-02.

When a two-row connector mixes a 22-2400-14 and a 22-2400-24 contact, the P/N of the HF contact changes to 2400-04.

90° on PCB



When a two-row connector mixes a 22-1400-12 and a 22-1400-22 contact, the P/N of the HF contact changes to 1400-02.

When a two-row connector mixes a 22-1400-14 and a 22-1400-24 contact, the P/N of the HF contact changes to 1400-04.

HP : high power contacts (series 22)

PRESENTATION

Male								
Female								
	Straight PCB	90° PCB	Straight SMT	90° SMT	Straight Crimp	90° Crimp	Straight solder	90° solder
	Type D				Type E			

INFORMATION TABLE

CMM RANGE	TYPICAL USE							
	TYPE OF CONTACTS TO BE USED IN THE CMM CONNECTOR WITH CAVITIES FOR HF/HP CONTACTS ONLY							
	TYPE D FOR SPECIAL CONTACTS ON PCB				TYPE E FOR SPECIAL CONTACTS ON CABLE			
	Straight on PCB	90° on PCB	Straight SMT	90° SMT	Straight Crimp	90° Crimp	Straight solder	90° solder
100/200	Male							
	Female							
220	Male							
	Female							
320	Male							
	Female							
340	Male	22-3300-12 L=3,0	22-3300-14 L=4,5	22-3400-12* 22-3400-22** L=3,0	22-3400-14* 22-3400-24** L=4,5		22-33XX	22-33XX
	Female	22-4300-12 L=3,0	22-4300-14 L=4,5	22-4400-12* 22-4400-22** L=3,0	22-4400-14* 22-4400-24** L=4,5		22-43XX	22-43XX

Standard contact

Any other type of contact upon request only

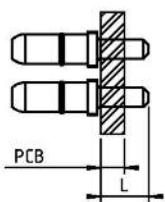
XX = 05, 08, 10
10 = 10A

Please refer
to page 102

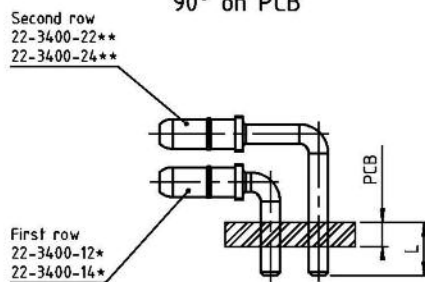
* First row : 22-3400-12 / 22-3400-14 / 22-4400-12 / 22-4400-14

** Second row : 22-3400-22 / 22-3400-24 / 22-4400-22 / 22-4400-24

Straight on PCB



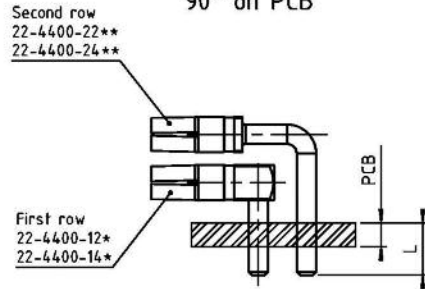
90° on PCB



When a two-row connector mixes a 22-3400-12 and a 22-3400-22 contact, the P/N of the HF contact changes to 3400-02.

When a two-row connector mixes a 22-3400-14 and a 22-3400-24 contact, the P/N of the HF contact changes to 3400-04.

90° on PCB

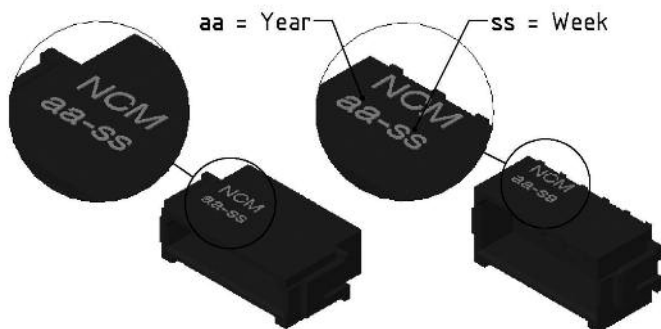


When a two-row connector mixes a 22-4400-12 and a 22-4400-22 contact, the P/N of the HF contact changes to 4400-02.

When a two-row connector mixes a 22-4400-14 and a 22-4400-24 contact, the P/N of the HF contact changes to 4400-04.

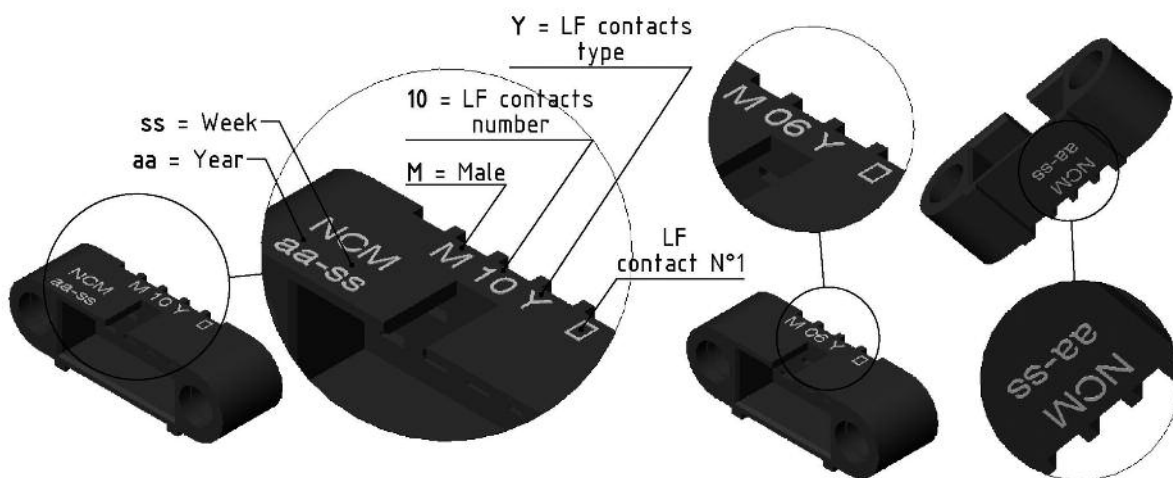
Male housing marking

CMM 100/200



Marking : NCM (Nicomatic) + date code (Lot number)

CMM 220



Marking 1 : NCM (Nicomatic) + date code (Lot number)
(LF contacts only) Connector P/N
LF contact number I

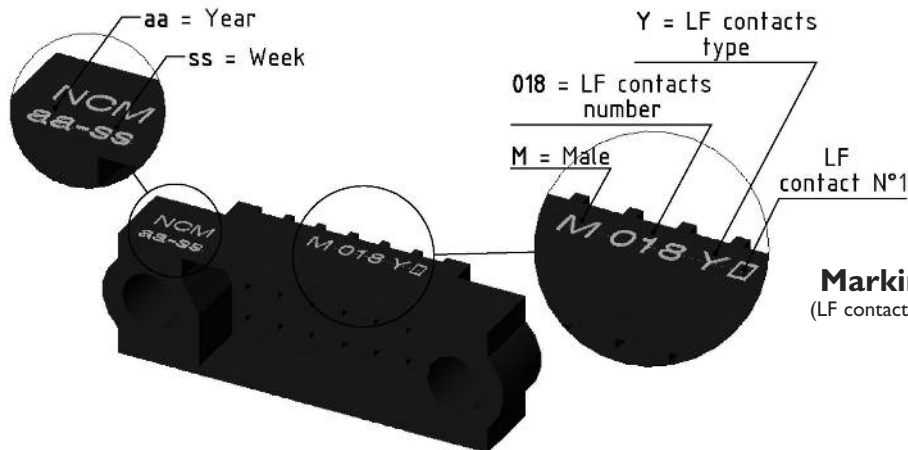
Marking on two faces if the number of LF contacts is < to 10.

Marking 2 : NCM (Nicomatic) + date code (Lot number) : CMM 220 mixed layout (LF + HF/HP)
(as for CMM 100/200)

CMM 220 with HF/HP contacts
CMM 220 with 04 LF contacts

Marking LF contacts type : Y-YL-V-VL-R-T-S-C

CMM 320/340



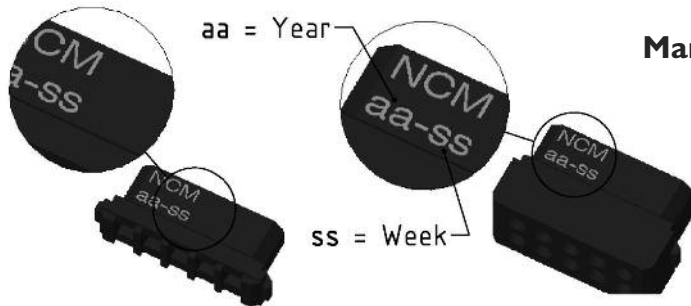
Marking 1 : NCM (Nicomatic)
(LF contacts only) / date code (Lot number)
Connector P/N
LF contact number I

Marking 2 : NCM (Nicomatic) / date code (Lot number) : CMM 320 mixed layout
(as for CMM 100/200)
CMM 320 with HF/HP contacts
CMM 340

Marking LF contacts type : Y-YL-V-VL-S-C

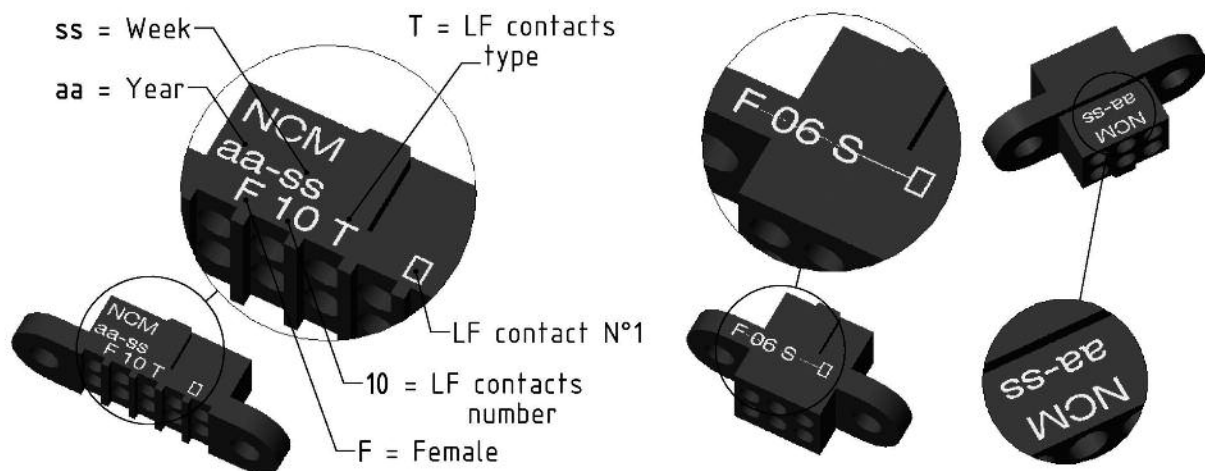
Female housing marking

CMM 100/200



Marking : NCM (Nicomatic) + date code (Lot number)

CMM 220



Marking 1 : NCM (Nicomatic) + date code (Lot number)
(LF contacts only) Connector P/N
LF contact number I

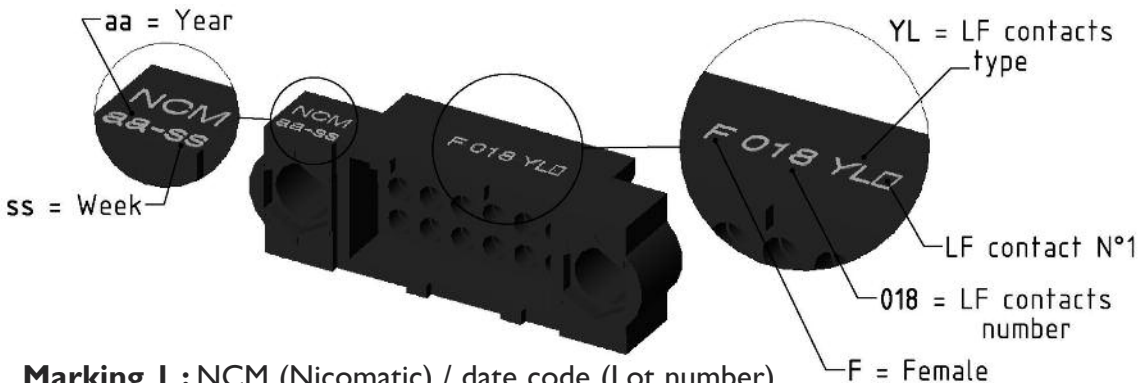
Marking on two faces if the number of LF contacts is < to 10.

Marking 2 : NCM (Nicomatic) + date code (Lot number) : CMM 220 mixed layout (LF + HF/HP)
(as for CMM 100/200)

CMM 220 with HF/HP contacts
CMM 220 with 04 LF contacts

Marking LF contacts type : Y-YL-V-VL-R-T-S-C-PF

CMM 320/340



Marking 1 : NCM (Nicomatic) / date code (Lot number)
(LF contacts only) Connector P/N
LF contact number I

Marking 2 : NCM (Nicomatic) / date code (Lot number) : CMM 320 mixed layout HF/HP contacts
(as for CMM 100/200)

CMM 320 with HF/HP contacts
CMM 340

Marking LF contacts type : Y-YL-V-VL-S-C-PF

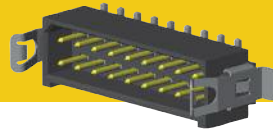
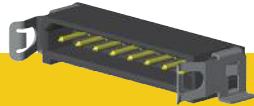
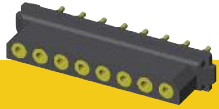
Nicomatic CMM part

Code with Low Frequency contacts only					Additional code for mixed-layout connector (HF/HP)		
Series	Gender	Termination Style	Number of LF contacts	Fixing Hardware	Number of HF/HP contacts pin 1 side (LF contact number 1)	Number of HF/HP contacts opposite to LF contact number 1	HF/HP Contact Type
			n n n		y y	z z	
1 row	10	1 male	Refer to table on page 7	02 to 25 (nn)	With Latch page 22	No HF / HP contacts	
		2 female			Without Latch		
2 rows	20	1 male	Refer to table on page 7	04 to 50 (nn)	With Latch page 22		
		2 female			Without Latch		
2 rows	22	1 male	Refer to table on page 7	04 to 60 (nn)	Refer to pages 43 to 46	Depends upon the number of LF contacts If use with shifted central key, please refer to page 38 HF / HP : 15 contacts max. Type of HF/HP contact : please refer to pages 8-9	Coaxmatic™ 30
		2 female					
3 rows	32	1 male	Refer to table on page 7	006 to 120 (nnn)	Refer to pages 69 to 74	Depends upon the number of LF contacts HF / HP : 20 contacts max. Type of HF/HP contact : please refer to pages 8-9	Coaxmatic™ 30
		2 female					
3 rows	34	1 male	Refer to table on page 7	Refer to the series 320 (nnn)	Refer to pages 69 to 74	Depends upon the number of LF contacts HF / HP : 64 contacts max. Type of HF/HP contact : please refer to pages 10-11	Coaxmatic™ 22
		2 female					



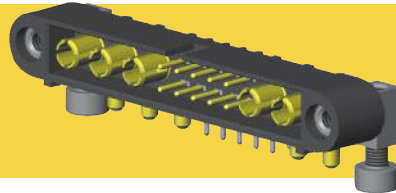
Note :
For any configuration outside of this part numbering system, please contact us.

numbering system



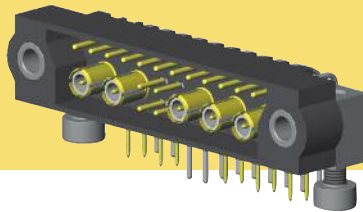
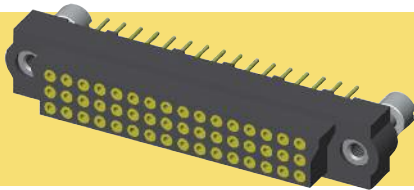
CMM 100/200 Series

p. 17 to 25



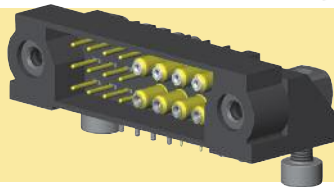
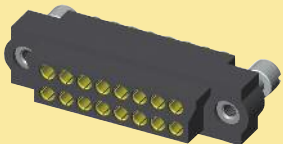
CMM 220 Series

p. 27 to 46



CMM 320 Series

p. 47 to 59



CMM 340 Series

p. 60 to 74

High Frequency and High Power contacts

(HF)

(HP)

p. 75 to 102

Tools and accessories

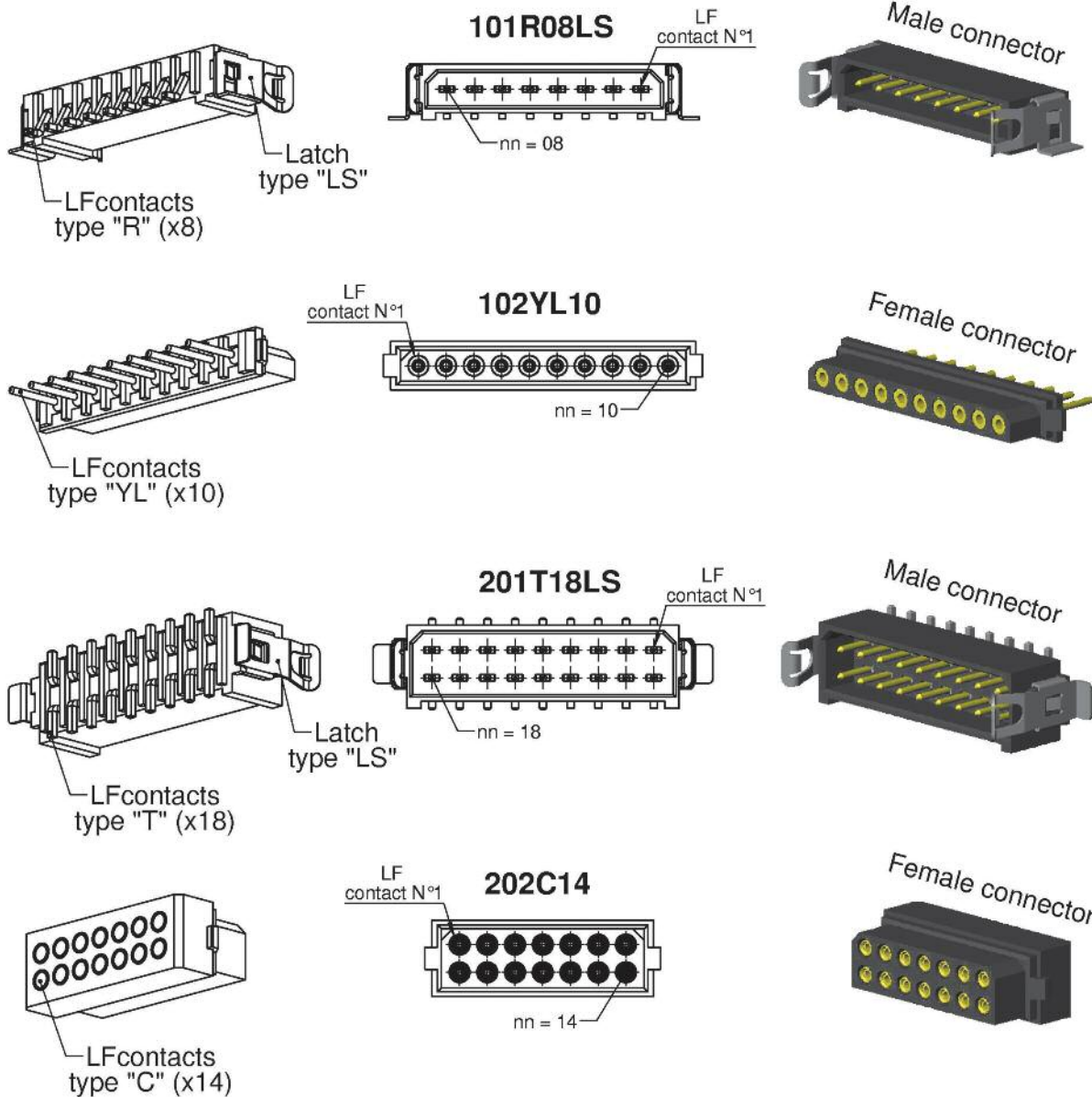
p. 103 to 112

Cable instructions & assembly

p. 113 to 122



CMM 100 / 200



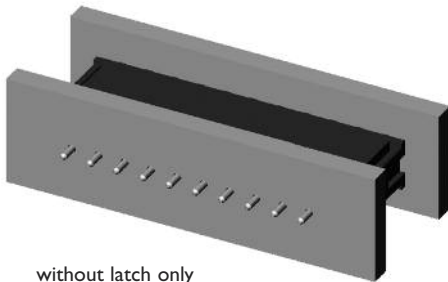
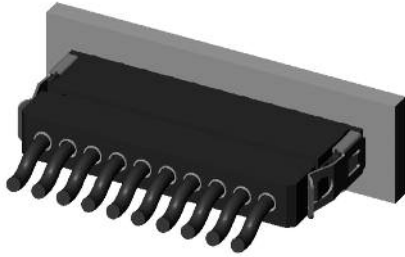
PART NUMBERING REMINDER

Code with Low Frequency contacts only					
	Series	Gender	Termination Style	Number of LF contacts	Fixing Hardware
				n n	
1 row	10	1 male	Refer to table on page 7	02 to 25	With Latch "L", "FL", "LS" page 22
		2 female			Without Latch " "
2 rows	20	1 male	Refer to table on page 7	04 to 50	With Latch "L", "FL", "LS" page 22
		2 female			Without Latch " "

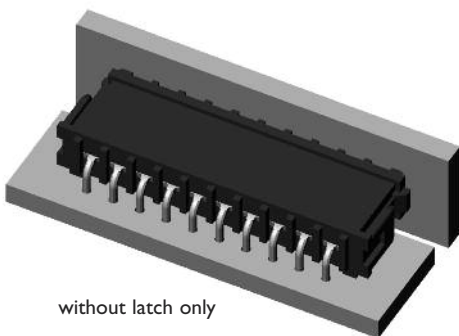
Configuration

CMM 100

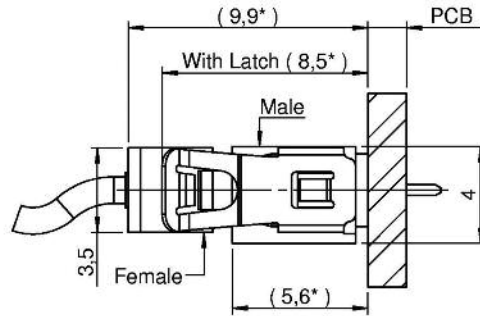
CONNECTOR SPACING



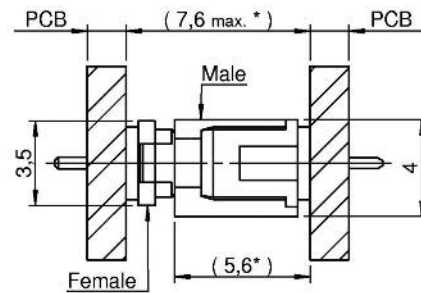
without latch only



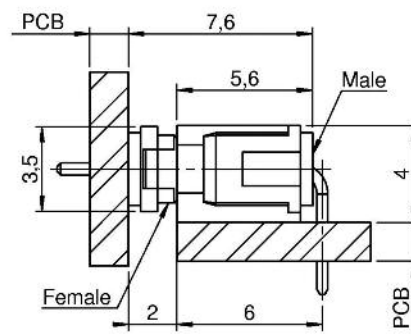
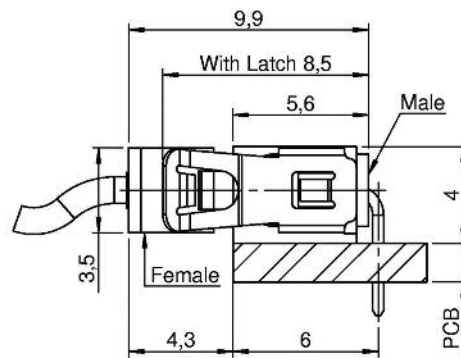
without latch only



* +0,25mm for male version T



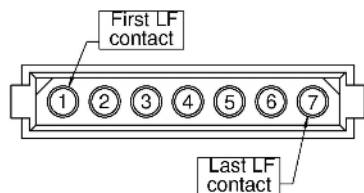
* +0,25mm for male version T



CONTACTS POSITIONS

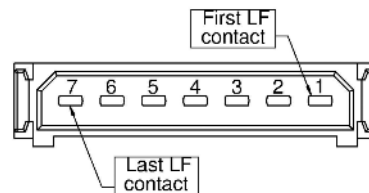


Female connectors
(shown looking onto mating face)



LF contacts min. 02 / max. 25

Male connectors
(shown looking onto mating face)

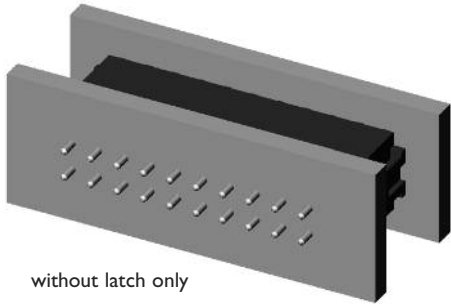


LF contacts min. 02 / max. 25

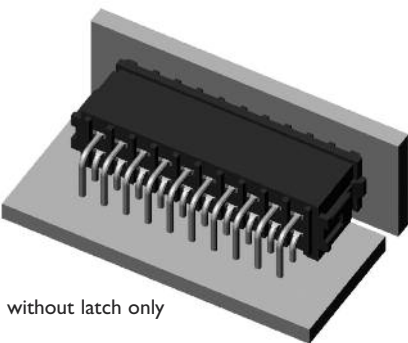
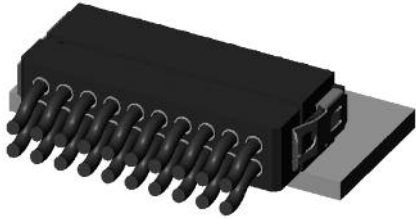


Configuration CMM 200

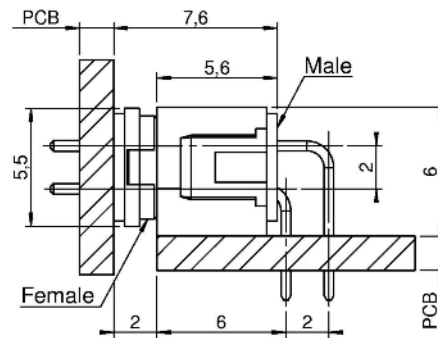
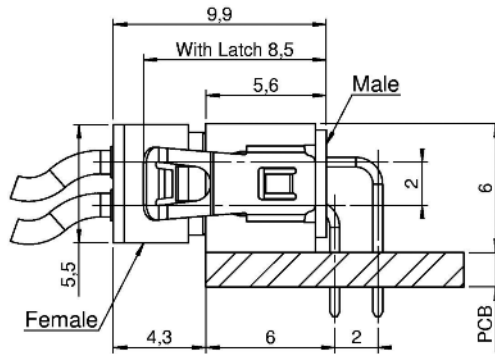
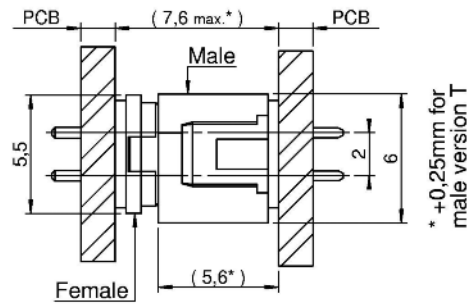
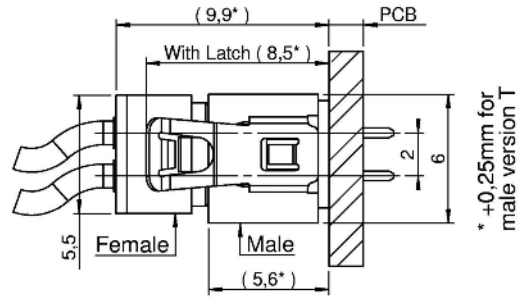
CONNECTOR SPACING



without latch only



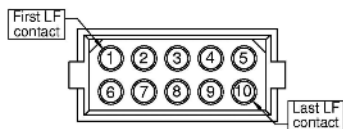
without latch only



CONTACTS POSITIONS

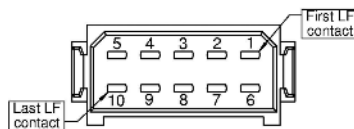


Female connectors
(shown looking onto mating face)



LF contacts min. 04 / max. 50

Male connectors
(shown looking onto mating face)



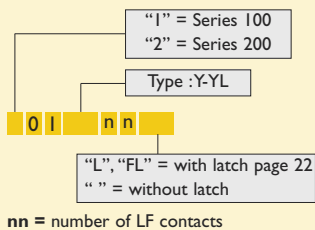
LF contacts min. 04 / max. 50



CMM 100 / 200 male

STRAIGHT PCB

Part numbering :

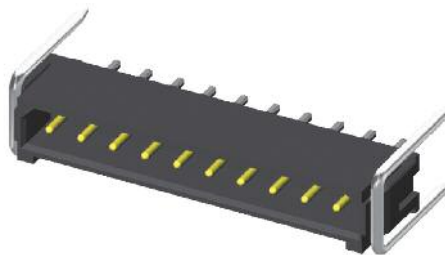
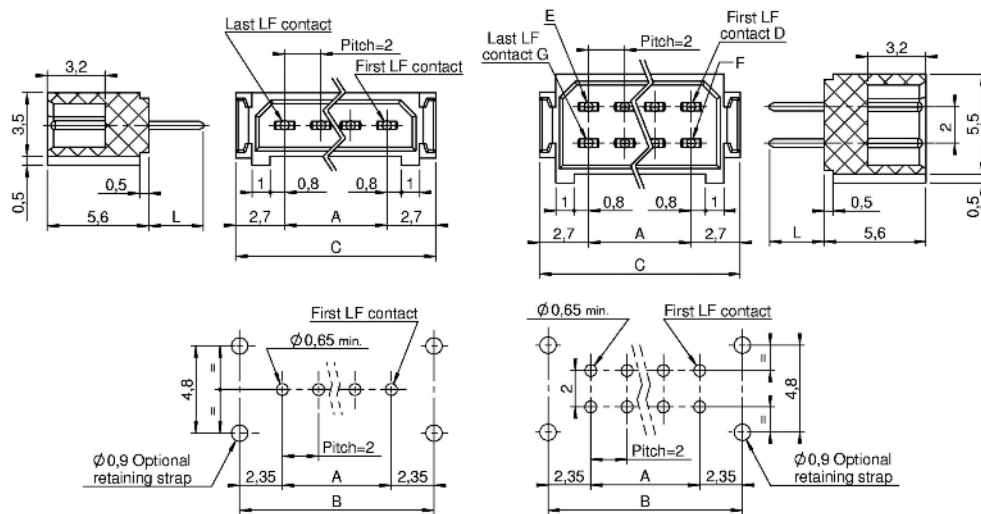


Type	L
Y	3
YL	4,5

Calculation :

CMM 100	CMM 200
$A = (nn \times 2) - 2$	$A = nn - 2$
$B = A + 4,7$	$B = A + 4,7$
$C = A + 5,4$	$C = A + 5,4$

Refer to dimension table on cover page



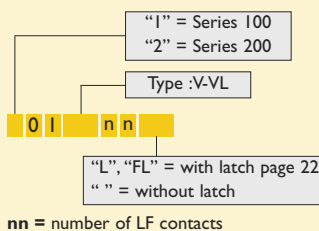
nn min = 02 nn max = 25



nn min = 04 nn max = 50

90° PCB

Part numbering :

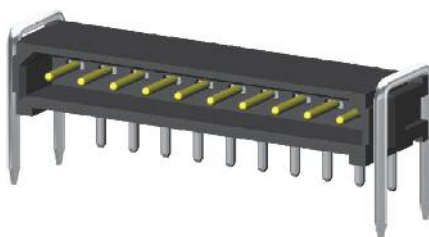
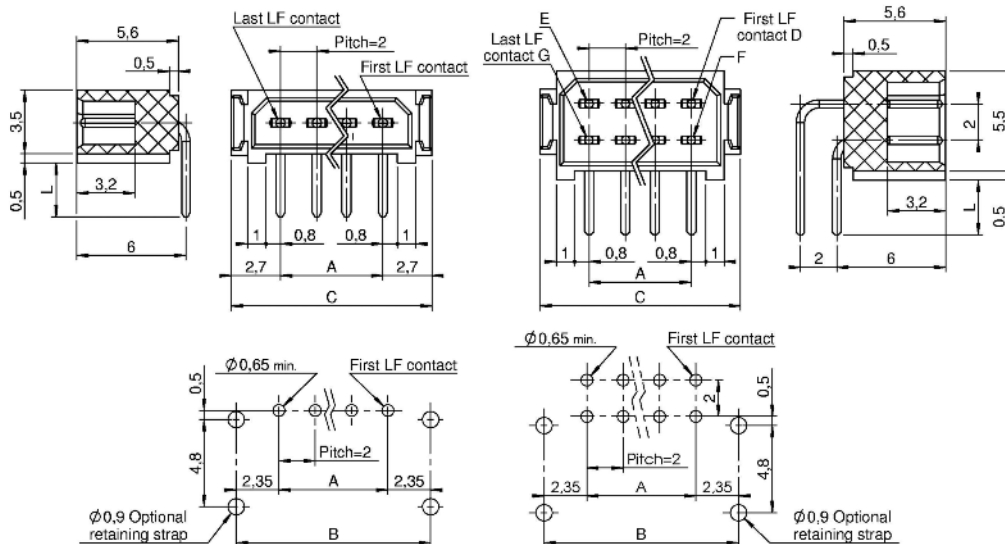


Type	L
V	3
VL	4,5

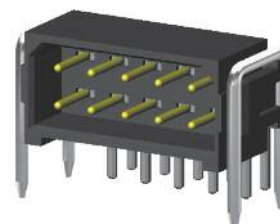
Calculation :

CMM 100	CMM 200
$A = (nn \times 2) - 2$	$A = nn - 2$
$B = A + 4,7$	$B = A + 4,7$
$C = A + 5,4$	$C = A + 5,4$

Refer to dimension table on cover page



nn min = 02 nn max = 25

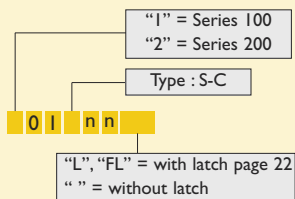


nn min = 04 nn max = 50

CMM 100 / 200 male

CRIMP

Part numbering :



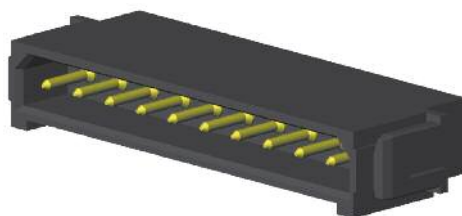
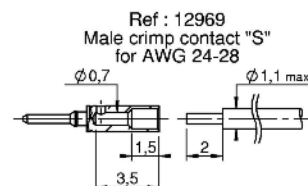
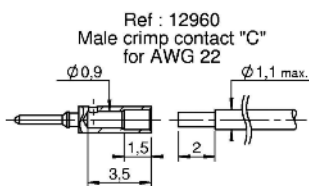
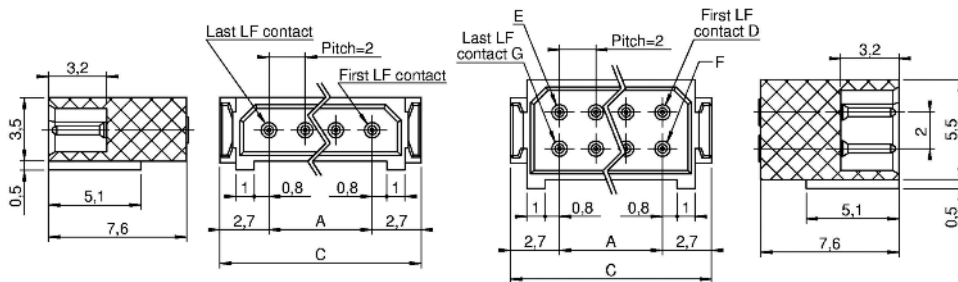
Type	Gauge
S	24-28
C	22

nn = number of LF contacts

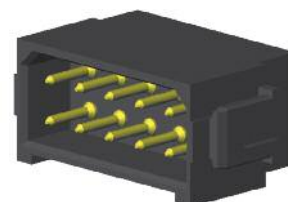
Calculation :

CMM 100	CMM 200
$A = (nn \times 2) - 2$	$A = nn - 2$
$C = A + 5,4$	$C = A + 5,4$

Refer to dimension table on cover page



nn min = 02 nn max = 25



nn min = 04 nn max = 50

RETENTION LATCHES FOR CMM 100 / 200 MALE

Straight latch with locking “L”

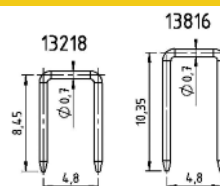
Straight latch without locking “FL”

Latch for CMM connector with T termination style “LS”

Latch for CMM connector with R termination style “LS”

The strain relief straps are supplied with all male CMM 100 / 200 connectors mounted with latches L or FL type except for Y & YL terminations

PCB Thickness	P/N	Termination style			
< 2,5 mm	13218	V	Y	T/TL	R
> 2,5 mm	13816	VL	YL	T/TL	R

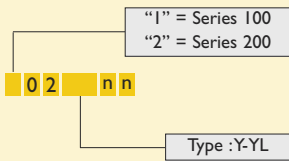


If no strain relief straps with your connector, please order under P/Ns on the left

CMM 100 / 200 female

STRAIGHT PCB

Part numbering :



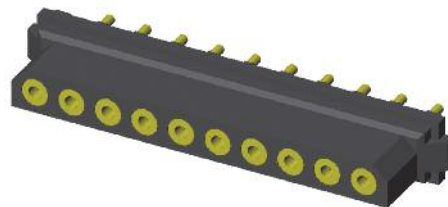
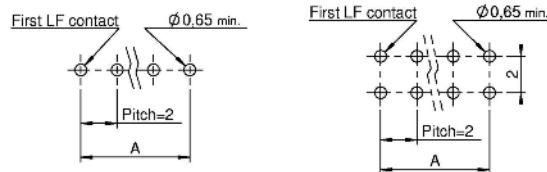
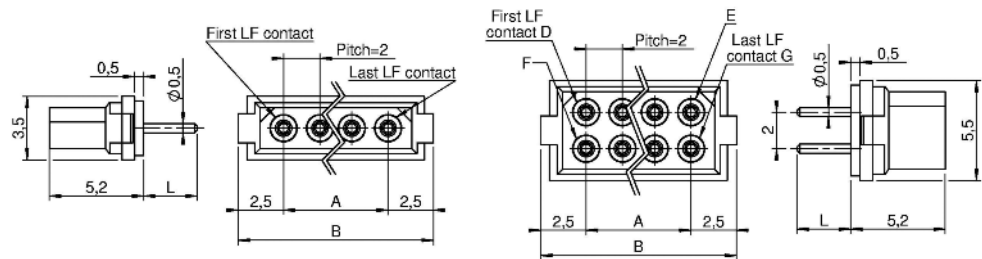
Type	L
Y	3
YL	4,5

nn = number of LF contacts

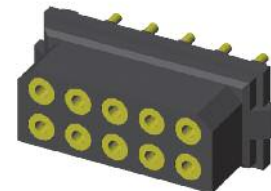
Calculation :

CMM 100	CMM 200
$A = (nn \times 2) - 2$	$A = nn - 2$
$B = A + 5$	$B = A + 5$

Refer to dimension table on cover page



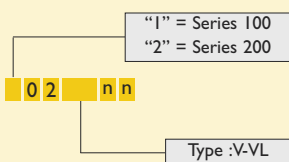
nn min = 02 nn max = 25



nn min = 04 nn max = 50

90° PCB

Part numbering :



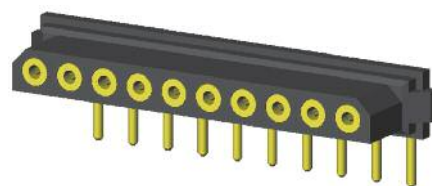
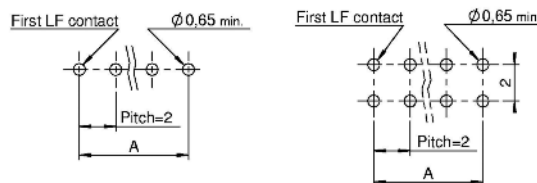
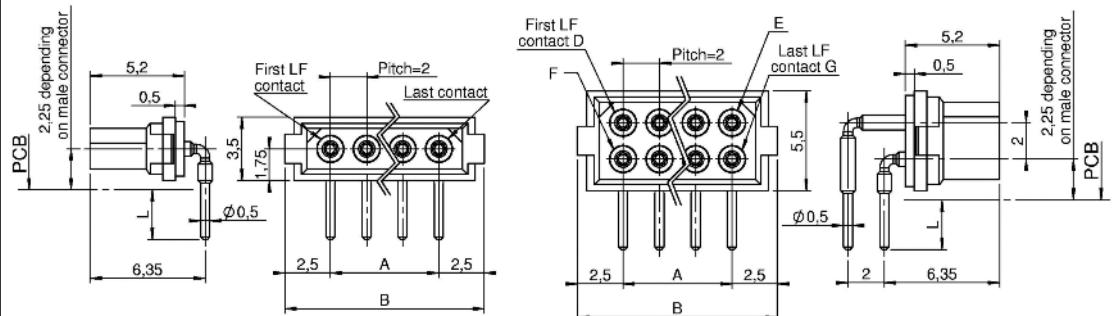
Type	L
V	3
VL	4,5

nn = number of LF contacts

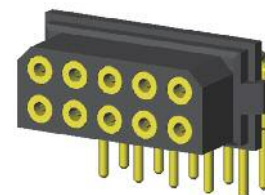
Calculation :

CMM 100	CMM 200
$A = (nn \times 2) - 2$	$A = nn - 2$
$B = A + 5$	$B = A + 5$

Refer to dimension table on cover page



nn min = 02 nn max = 25

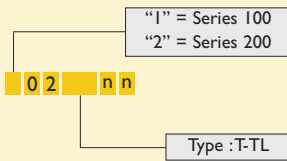


nn min = 04 nn max = 50

CMM 100 / 200 female

STRAIGHT SMT

Part numbering :



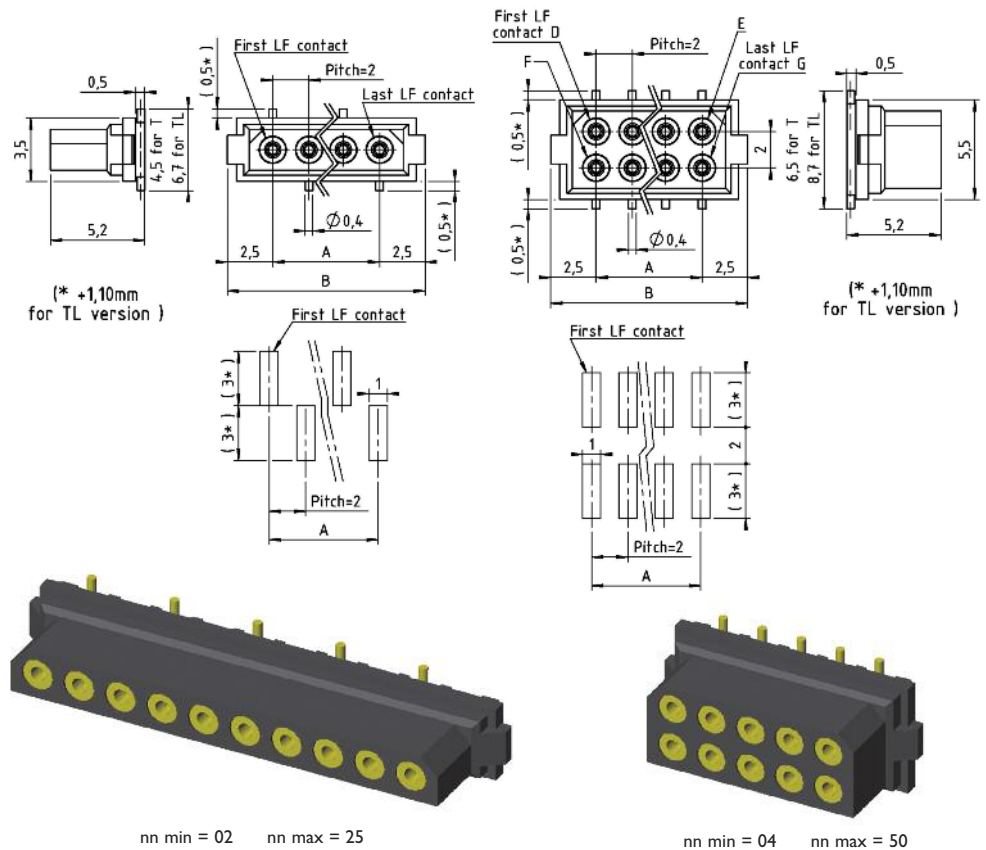
nn = number of LF contacts

Calculation :

CMM 100	CMM 200
$A = (nn \times 2) - 2$	$A = nn - 2$
$B = A + 5$	$B = A + 5$

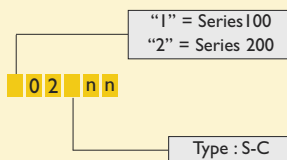
Refer to dimension table on cover page

Optional: Packaging in reel available upon request



CRIMP

Part numbering :



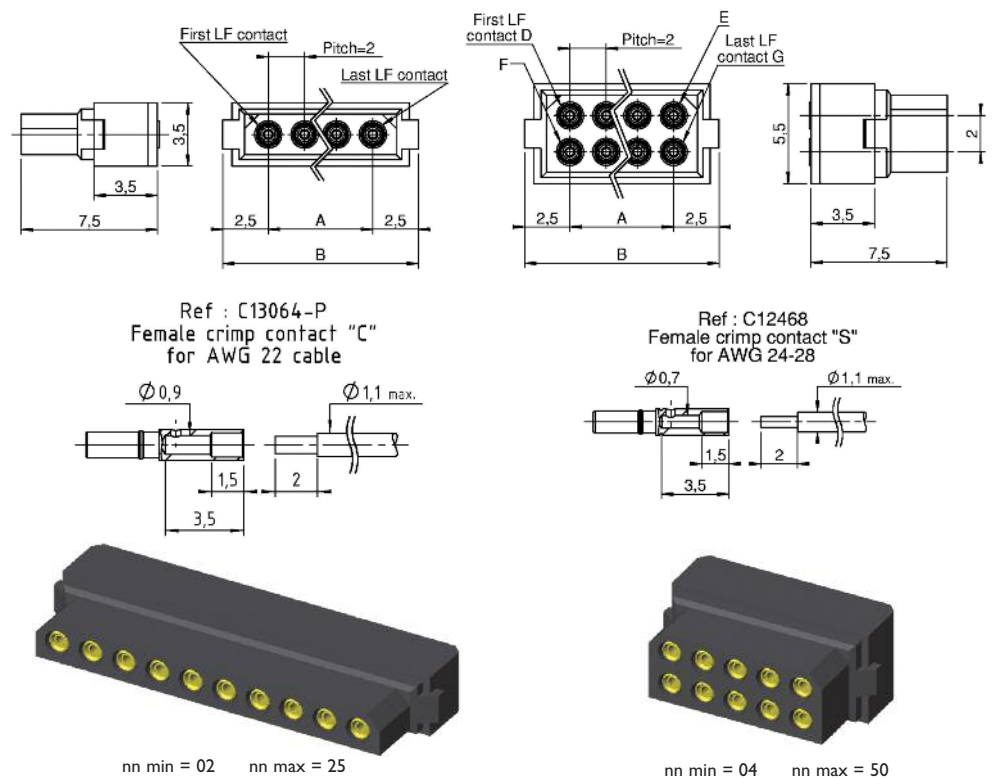
nn = number of LF contacts

Type	Gauge
S	24-28
C	22

Calculation :

CMM 100	CMM 200
$A = (nn \times 2) - 2$	$A = nn - 2$
$B = A + 5$	$B = A + 5$

Refer to dimension table on cover page



CMM 100 / 200 female

STRAIGHT PRESS FIT

Part numbering :

"1" = Series 100
"2" = Series 200

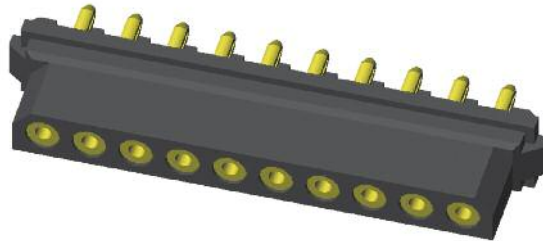
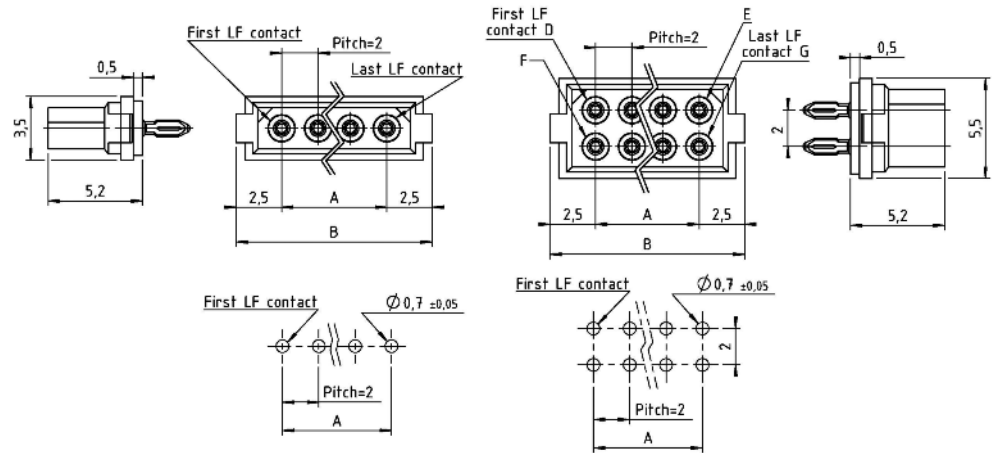
0 2 PF n n

nn = number of LF contacts

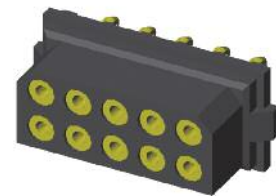
Calculation :

CMM 100	CMM 200
$A = (nn \times 2) - 2$	$A = nn - 2$
$B = A + 5$	$B = A + 5$

Refer to dimension table on cover page



nn min = 02 nn max = 25



nn min = 04 nn max = 50

90° SMT

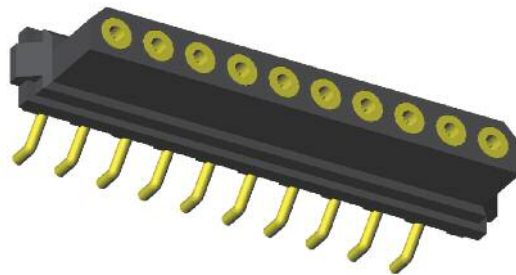
Part numbering :

"1" = Series 100
"2" = Series 200

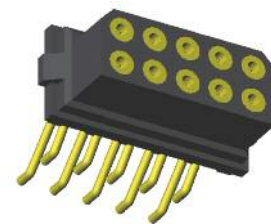
0 2 R n n

nn = number of LF contacts

Optional: Packaging in reel available upon request



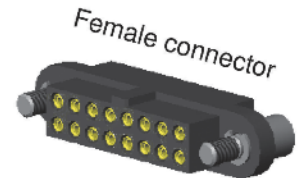
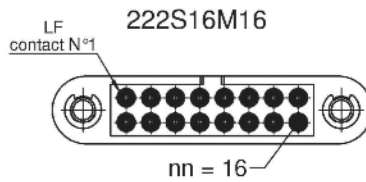
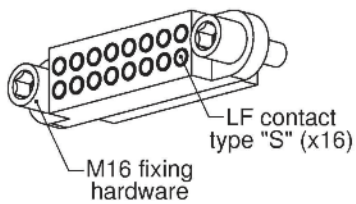
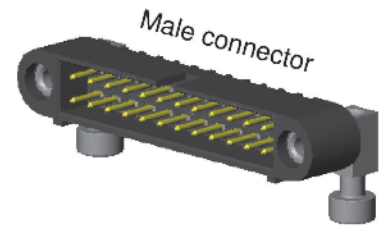
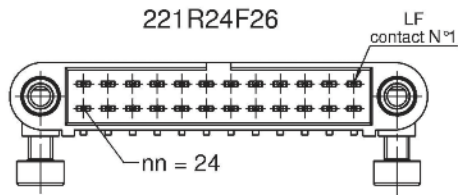
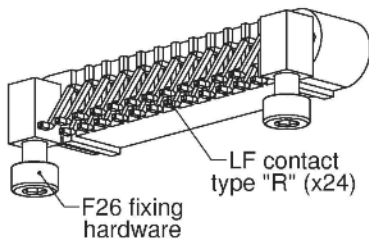
nn min = 02 nn max = 25



nn min = 04 nn max = 50

Upon request only

CMM 220 with LF contacts

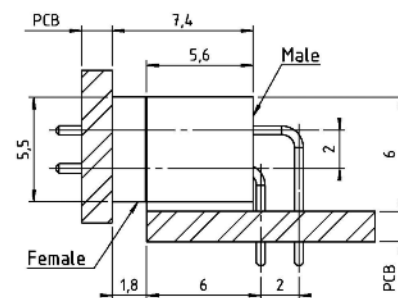
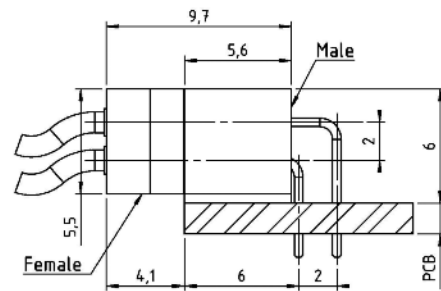
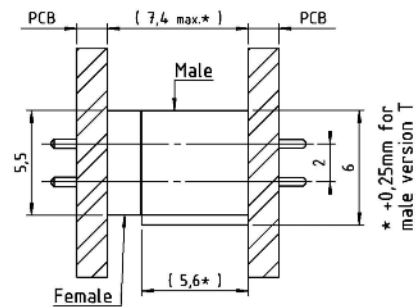
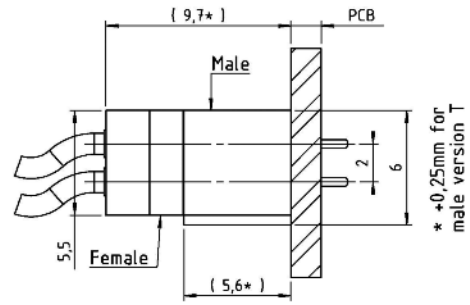
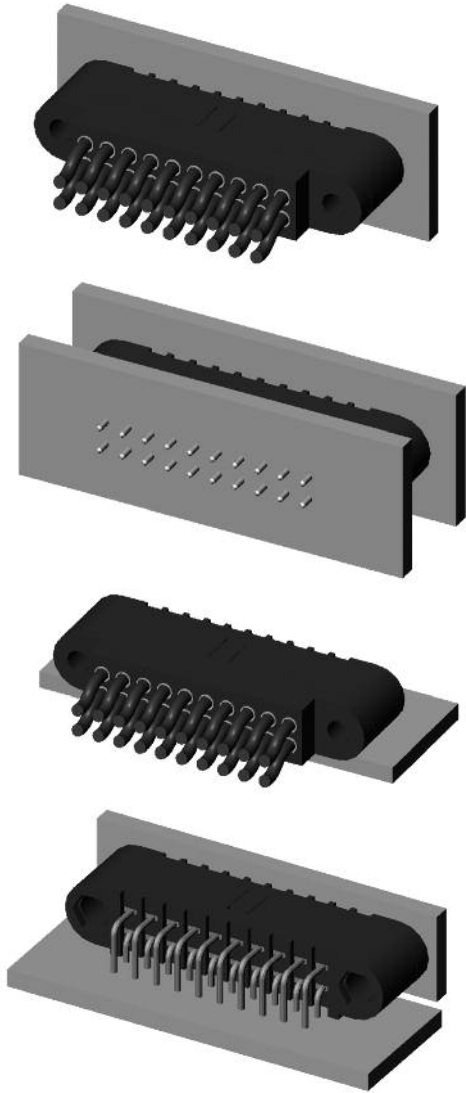


PART NUMBERING REMINDER

Code with Low Frequency contacts only					
Series	Gender	Termination Style	Number of LF contacts	Fixing Hardware	
			n n		
2 rows	22	1 male	Refer to table on page 7	04 to 60	Refer to pages 43 to 46
		2 female			

CMM 220 Configuration

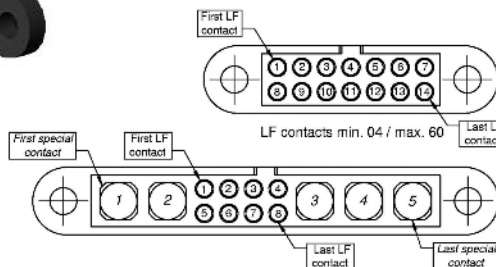
CONNECTOR SPACING



CONTACTS POSITIONS

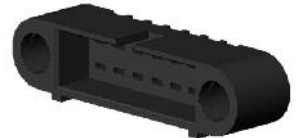


Female connectors
(shown looking onto mating face)

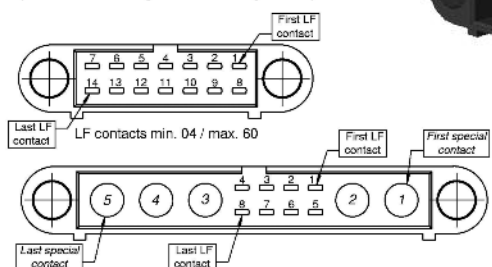


Mixed layout max. configuration depends on the total LF contacts number

Special contacts min. 02 / max. 15



Male connectors
(shown looking onto mating face)

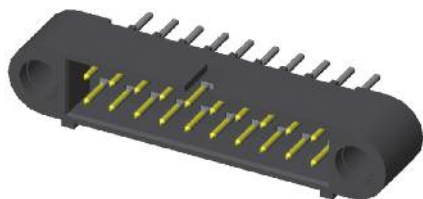


Mixed layout max. configuration depends on the total LF contacts number

Special contacts min. 02 / max. 15

CMM 220 male

STRAIGHT PCB



nn min = 04 nn max = 60

Part numbering :

Type :Y-YL

2 2 | n n

See Fixing on page 43, 44
"Fxx" without fixing

nn = number of LF contacts

Type	L
Y	3
YL	4,5

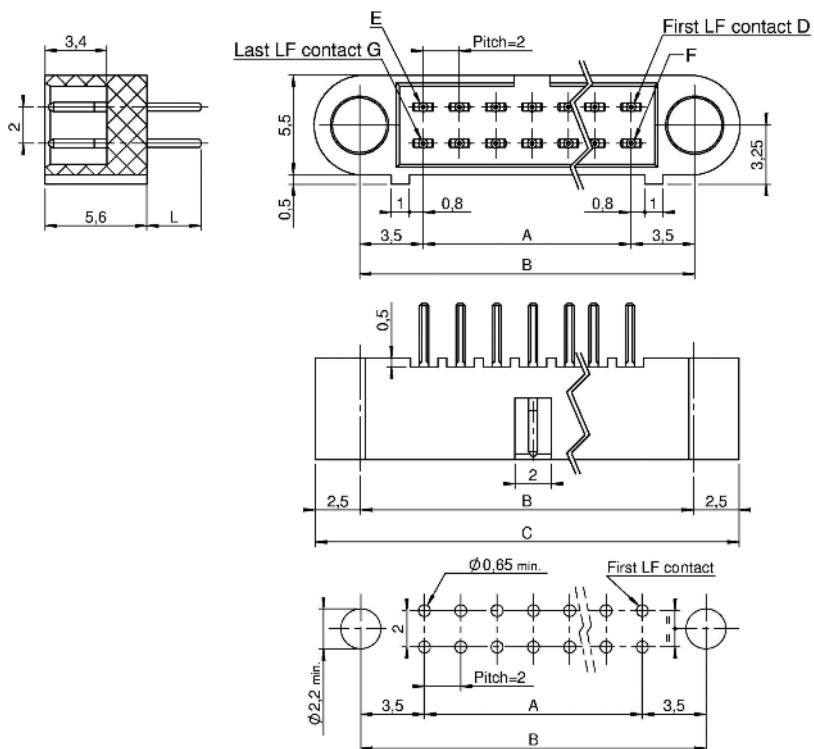
Calculation :

$$A = nn - 2$$

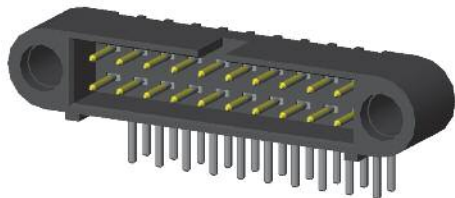
$$B = A + 7$$

$$C = A + 12$$

Refer to dimension table on cover page



90° PCB



nn min = 04 nn max = 60

Part numbering :

Type :V-VL

2 2 | n n

See Fixing on page 43, 44
"Fxx" without fixing

nn = number of LF contacts

Type	L
V	3
VL	4,5

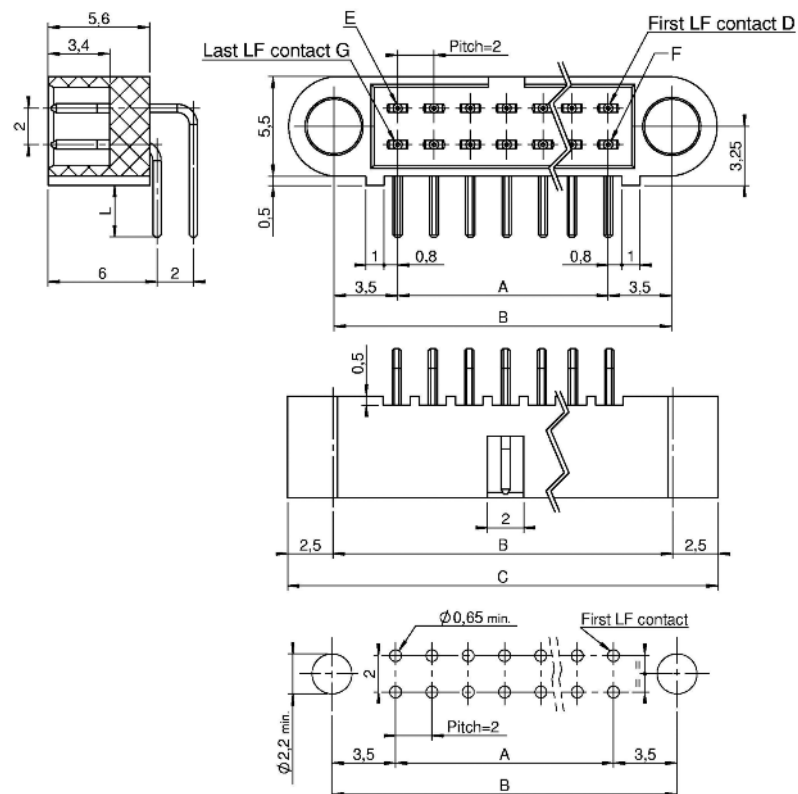
Calculation :

$$A = nn - 2$$

$$B = A + 7$$

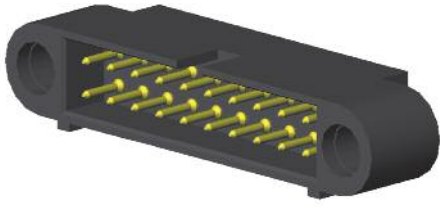
$$C = A + 12$$

Refer to dimension table on cover page



CMM 220 male

CRIMP



nn min = 04 nn max = 60

Part numbering :

Type : S-C

2 2 | l | n n

See Fixing on page 43, 44
"Fxx" without fixing

nn = number of LF contacts

Type	Gauge
S	24-28
C	22

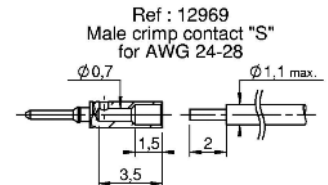
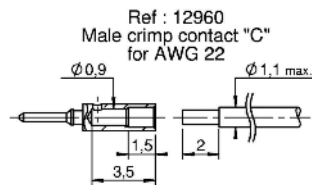
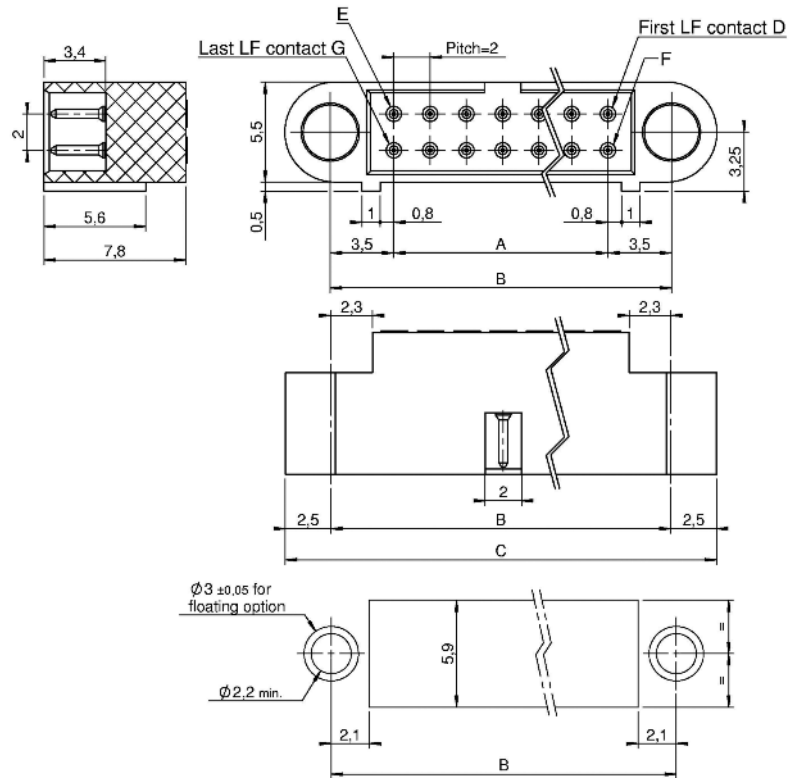
Calculation :

$$A = nn - 2$$

$$B = A + 7$$

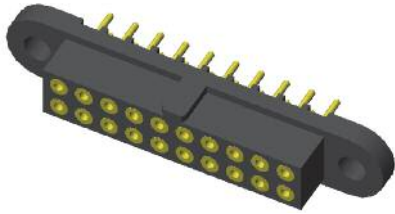
$$C = A + 12$$

Refer to dimension table on cover page



CMM 220 female

STRAIGHT PCB



nn min = 04 nn max = 60

Part numbering :

Type :Y-YL

2 2 2 n n

See Fixing on page 45-46
"Mxx" without fixing

nn = number of LF contacts

Type	L
Y	3
YL	4,5

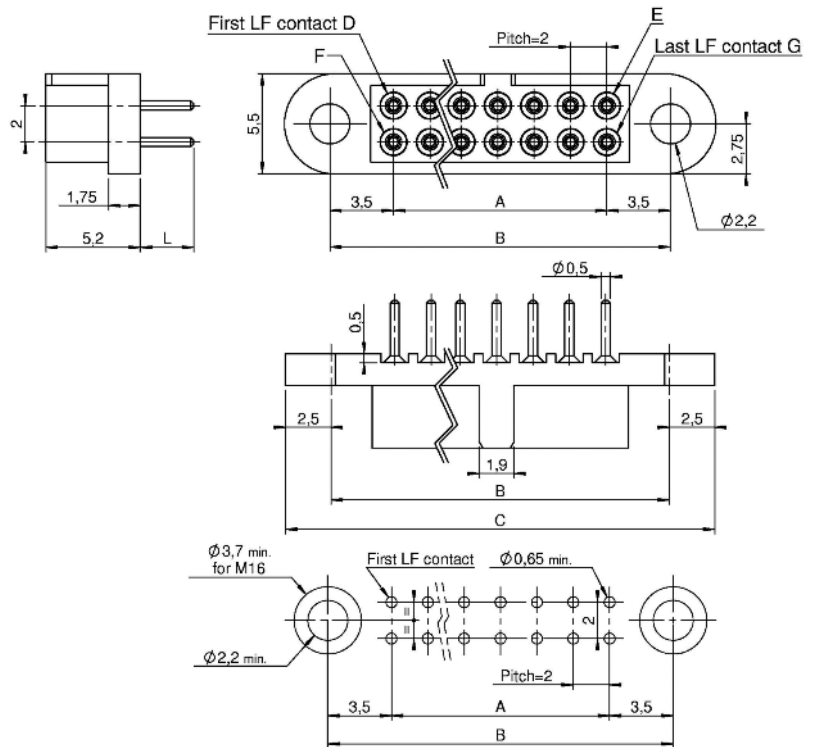
Calculation :

$$A = nn - 2$$

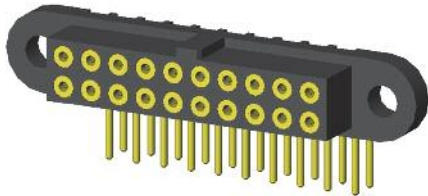
$$B = A + 7$$

$$C = A + 12$$

Refer to dimension table on cover page



90° PCB



nn min = 04 nn max = 60

Part numbering :

Type :V-VL

2 2 2 n n

See Fixing on page 45
"Mxx" without fixing

nn = number of LF contacts

Type	L
V	3
VL	4,5

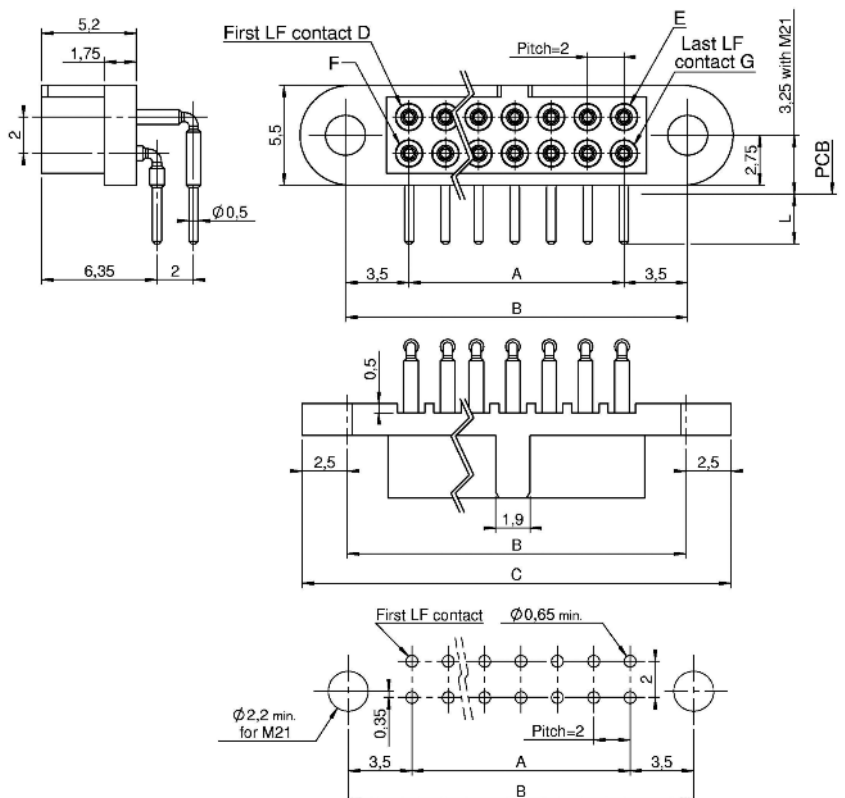
Calculation :

$$A = nn - 2$$

$$B = A + 7$$

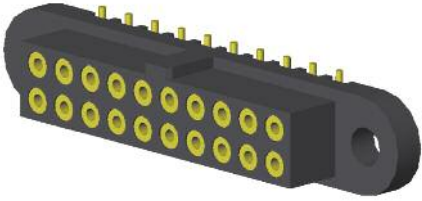
$$C = A + 12$$

Refer to dimension table on cover page



CMM 220 female

STRAIGHT SMT



nn min = 04 nn max = 60

Part numbering :

Type : T-TL

2 2 2 n n

See Fixing on page 45-46
"Mxx" without fixing

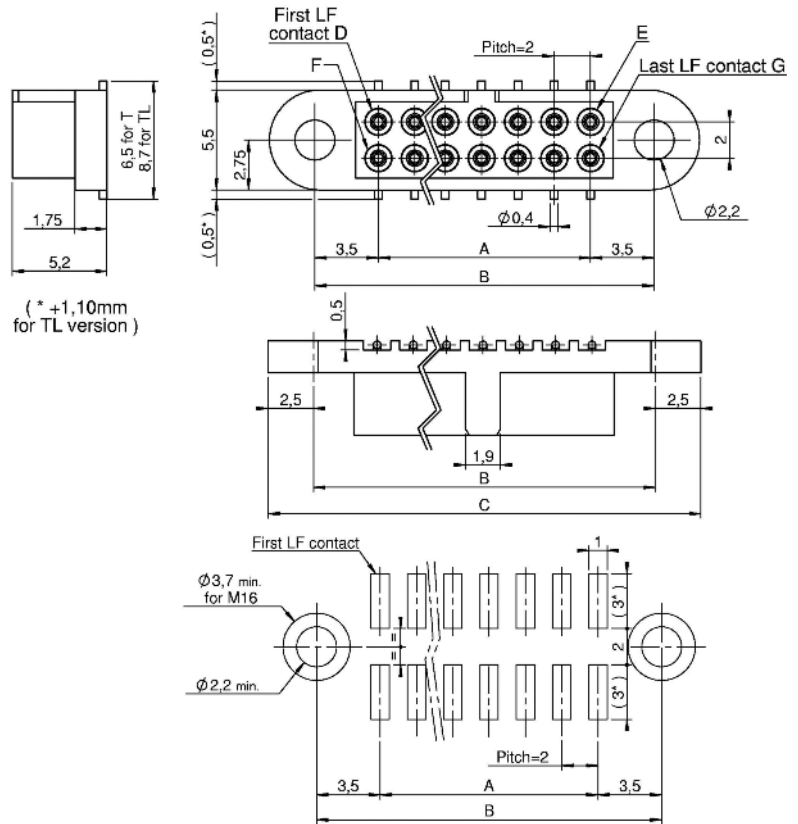
nn = number of LF contacts

Optional: Packaging in reel available upon request

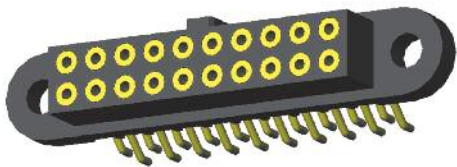
Calculation :

A = nn - 2
B = A + 7
C = A + 12

Refer to dimension table on cover page



90° SMT



nn min = 04 nn max = 60

Part numbering :

2 2 2 R n n

See Fixing on page 45
"Mxx" without fixing

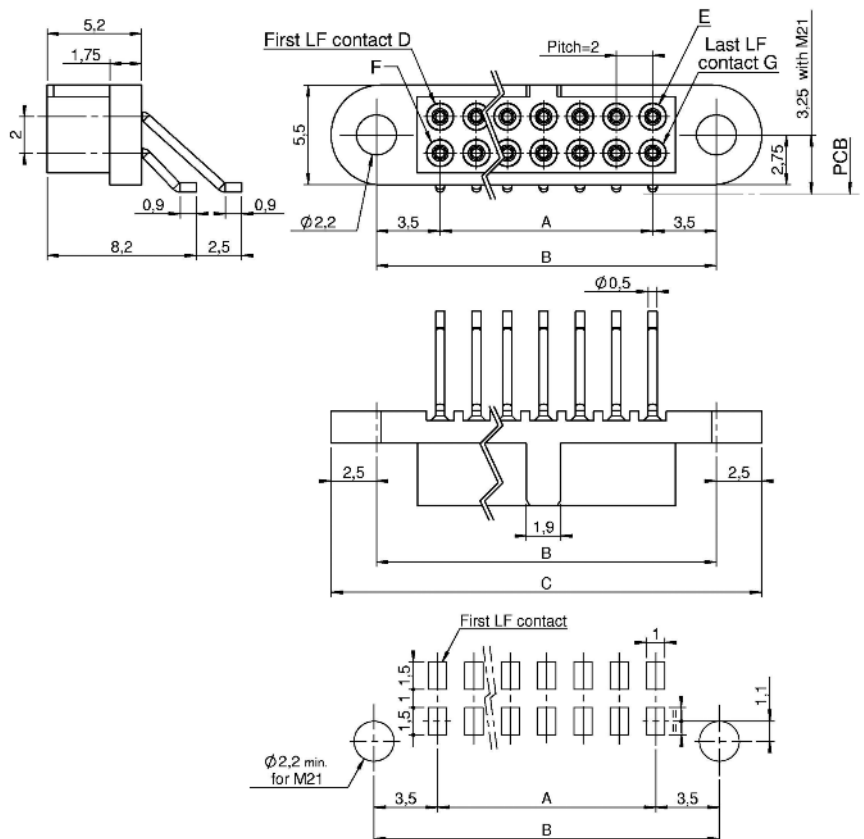
nn = number of LF contacts

Optional: Packaging in reel available upon request

Calculation :

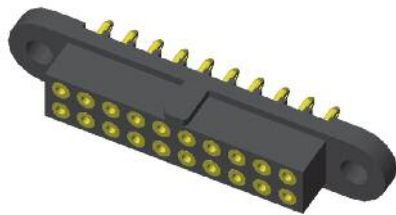
A = nn - 2
B = A + 7
C = A + 12

Refer to dimension table on cover page



CMM 220 female

STRAIGHT PRESS FIT



nn min = 04 nn max = 60

Part numbering :

2 2 2 PF n n

See Fixing on page 45-46
"Mxx" without fixing

nn = number of LF contacts

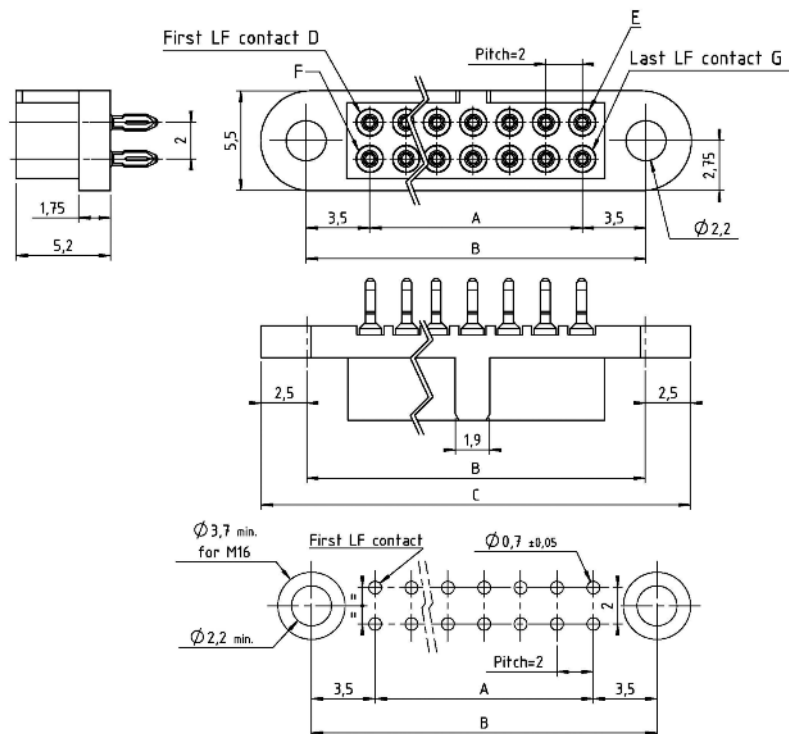
Calculation :

$$A = nn - 2$$

$$B = A + 7$$

$$C = A + 12$$

Refer to dimension table on cover page



CRIMP



nn min = 04 nn max = 60

Part numbering :

2 2 2 n n

Type : S-C

See Fixing on page 45-46
"Mxx" without fixing

nn = number of LF contacts

Type	Gauge
S	24-28
C	22

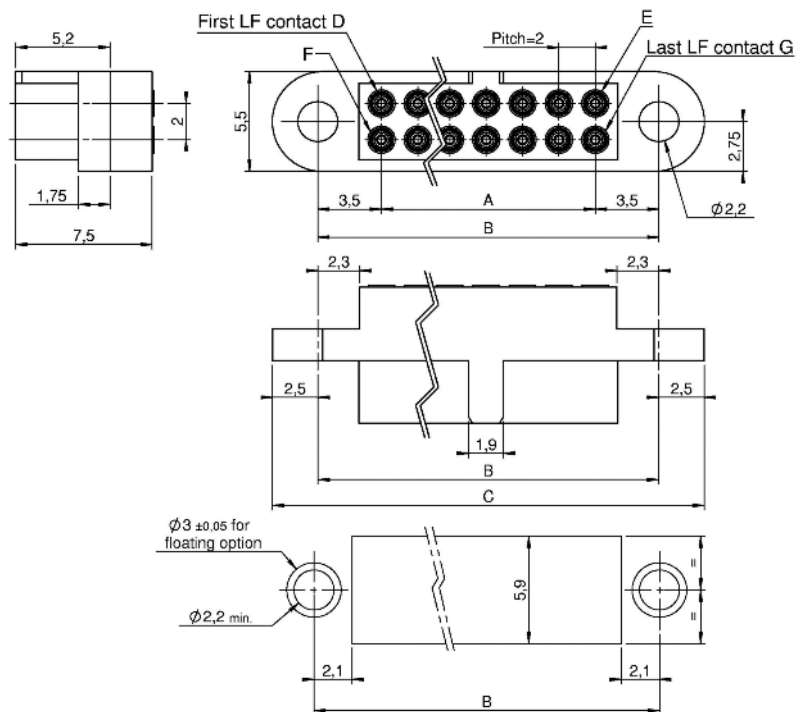
Calculation :

$$A = nn - 2$$

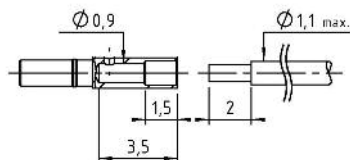
$$B = A + 7$$

$$C = A + 12$$

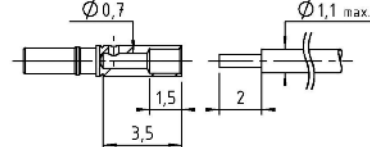
Refer to dimension table on cover page



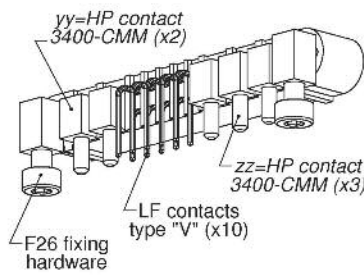
Ref : C13064-P
Female crimp contact "C"
for AWG 22 cable



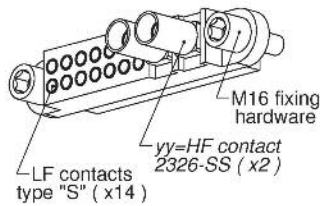
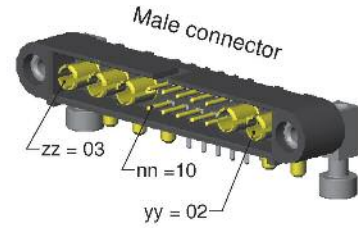
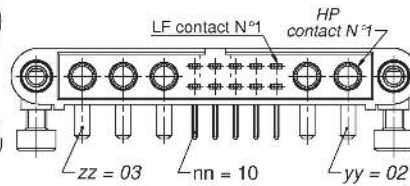
Ref : C12468
Female crimp contact "S"
for AWG 24-28



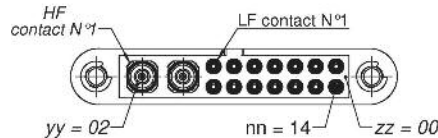
CMM 220 mixed-layout



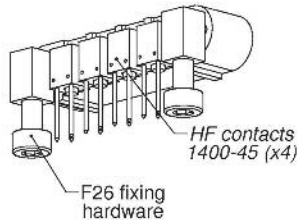
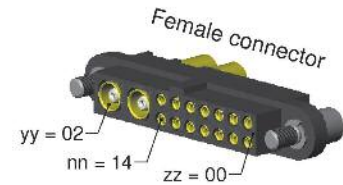
221V10F26-0203-3400CMM



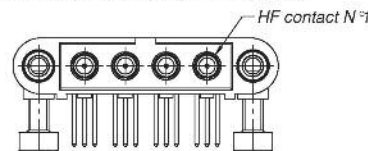
222S14M16-0200-2326SS



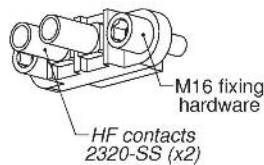
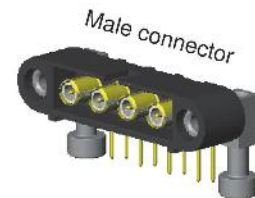
(HF contacts are supplied -not fitted- under P/N 30-2326-SS)



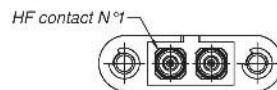
221D00F26-0004-140045



"D" stated in P/N for connectors on PCB with only special contacts.

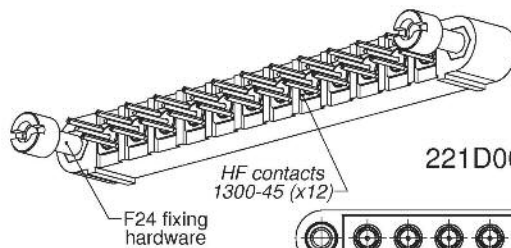


222E00M16-0002-2320SS

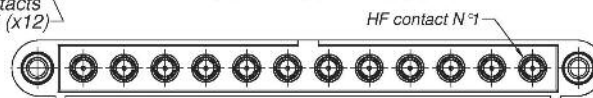


(HF contacts are supplied -not fitted- under P/N 30-2320-SS)

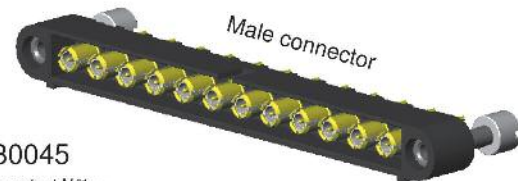
"E" stated in P/N for connectors on cable with only special contacts.



221D00F24-0012-130045



"D" stated in P/N for connectors on PCB with only special contacts.



PART NUMBERING REMINDER

Code with Low Frequency contacts only					Additional code for mixed-layout connector (HF/HP)		
Series	Gender	Termination Style	Number of LF contacts	Fixing Hardware	Number of HF/HP contacts pin I side (LF contact number I)	Number of HF/HP contacts opposite to LF contact number I	HF/HP Contact Type
■ ■	■	■	n n	■ -	y y	z z - ■ ■ ■ ■ ■ ■ ■ ■	
2 rows	22	1 male	Refer to table on page 7	04 to 60	Refer to pages 43 to 46	Depends upon the number of LF contacts If use with shifted central key, please refer to page 42 HF / HP : 15 contacts max. Type of HF/HP contact : please refer to pages 8-9	HP/HP 30 please refer to pages 75 to 94
		2 female					

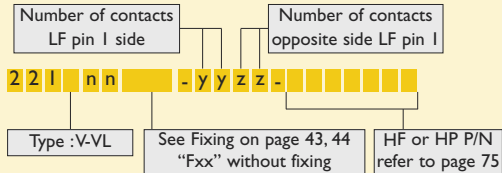
CMM 220

Male mixed-layout

90° PCB



Part numbering :

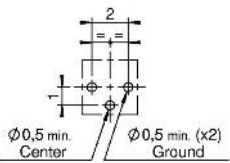


nn = number of LF contacts

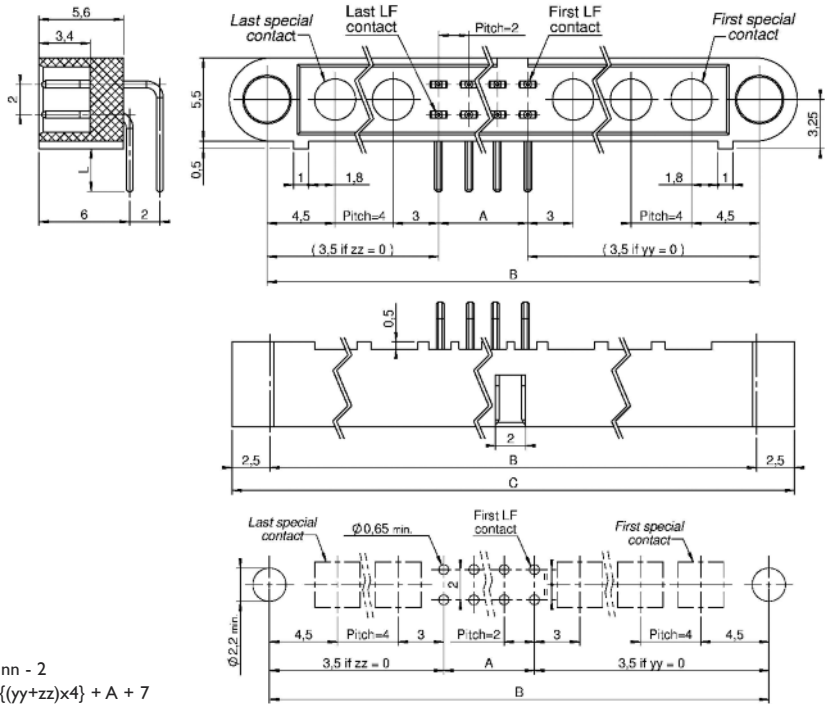
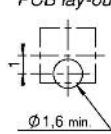
Type	L
V	3
VL	4,5

Pattern for special contact :

HF 30-1400-xx PCB lay-out



HP 30-3400-xx PCB lay-out



$$A = nn - 2$$

$$B = ((yy+zz) \times 4) + A + 7$$

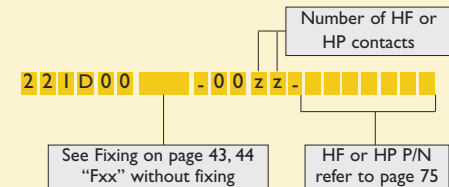
$$B_{max.} = 65 \text{ mm}$$

$$C = B + 5$$

90° PCB FOR HP/HF CONTACTS ONLY

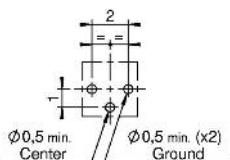


Part numbering :

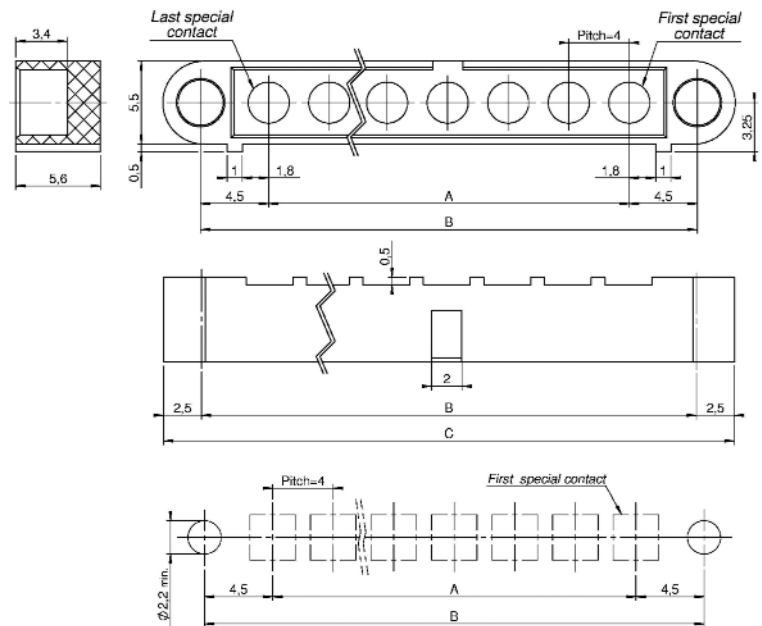
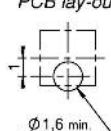


Pattern for special contact :

HF 30-1400-xx PCB lay-out



HP 30-3400-xx PCB lay-out



$$A = (zz \times 4) - 4$$

$$B = A + 9$$

$$C = B + 5$$

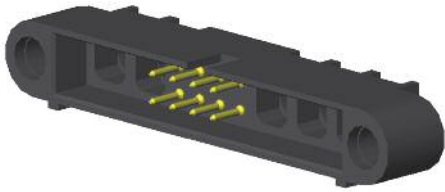
Special contacts min. : 02
max. : 15

Refer to sizes information table on cover page

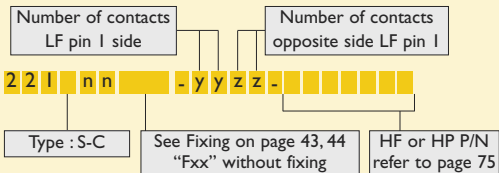
CMM 220

Male mixed-layout

CRIMP

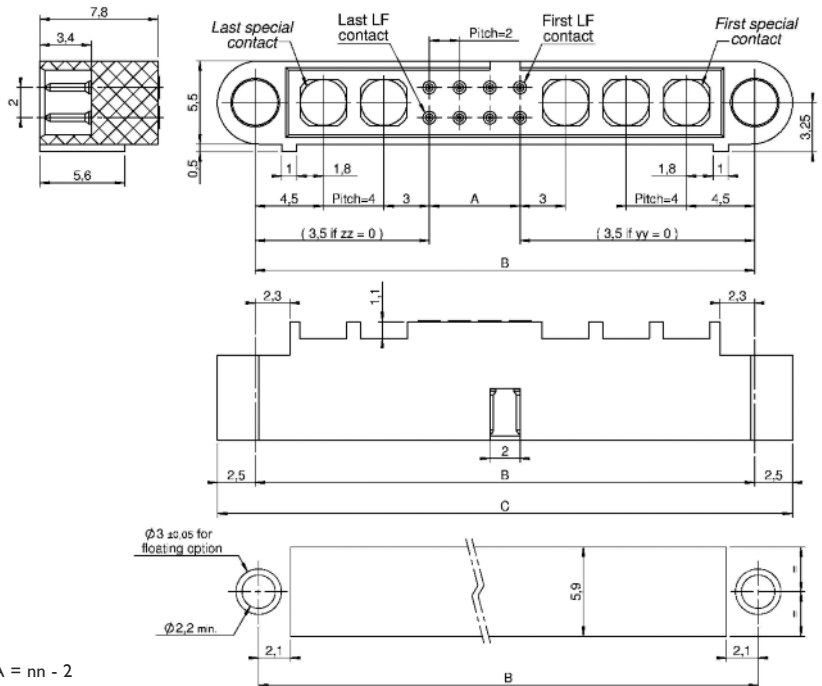
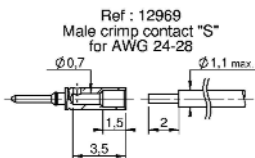
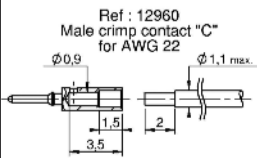


Part numbering :



nn = number of LF contacts

Type	Gauge
S	24-28
C	22



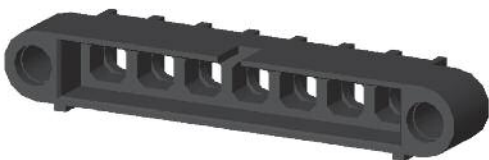
$$A = nn - 2$$

$$B = \{(yy+zz) \times 4\} + A + 7$$

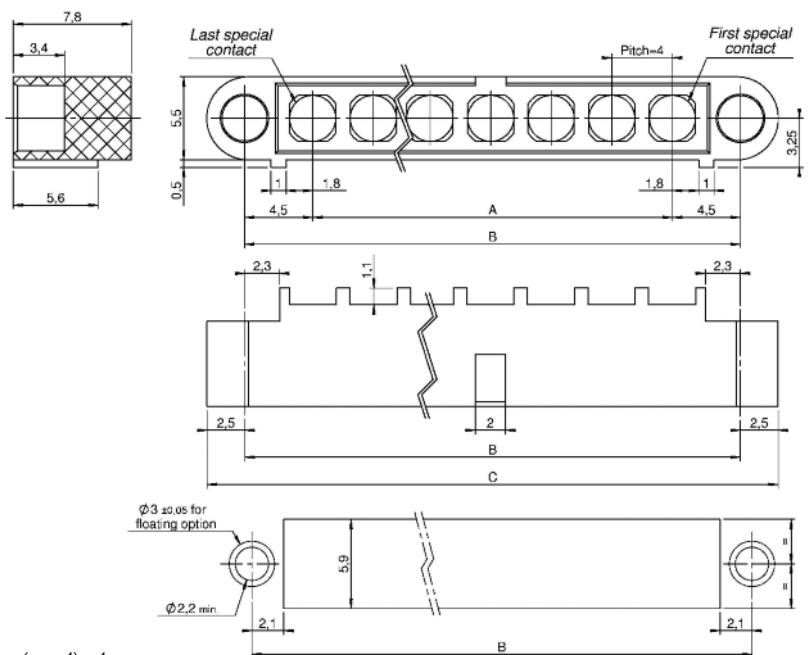
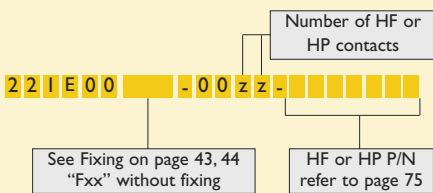
$$B_{max.} = 65 \text{ mm}$$

$$C = B + 5$$

CRIMP FOR HP/HF CONTACTS ONLY



Part numbering :



$$A = (zz \times 4) - 4$$

$$B = A + 9$$

$$C = B + 5$$

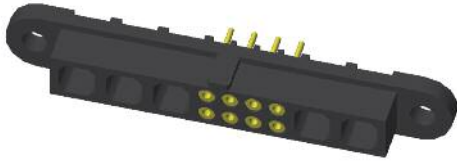
Special contacts min. : 02
max. : 15

Refer to dimension table on cover page

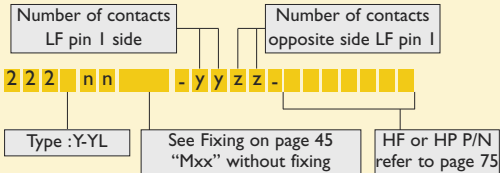
CMM 220

Female mixed-layout

STRAIGHT PCB



Part numbering :

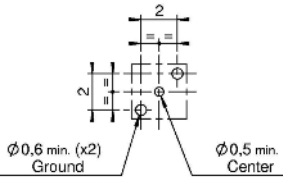


nn = number of LF contacts

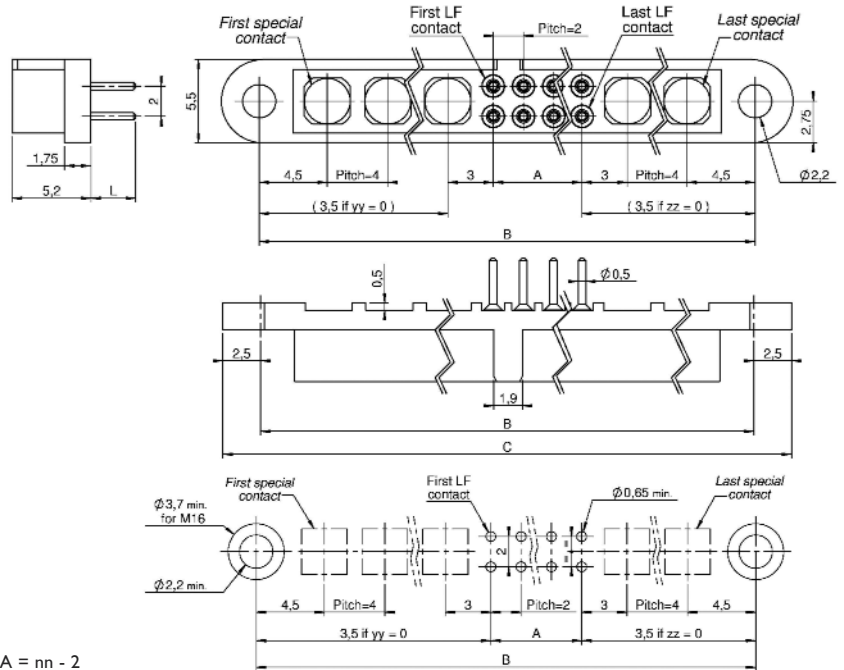
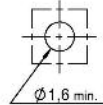
Type	L
Y	3
YL	4,5

Pattern for special contact :

HF 30-2300-xx PCB lay-out



HP 30-4300-xx PCB lay-out



$$A = nn - 2$$

$$B = ((yy+zz) \times 4) + A + 7$$

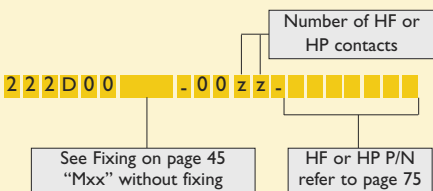
$$B_{max.} = 65 \text{ mm}$$

$$C = B + 5$$

STRAIGHT PCB FOR HP/HF CONTACTS ONLY

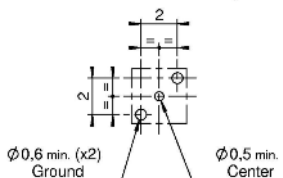


Part numbering :

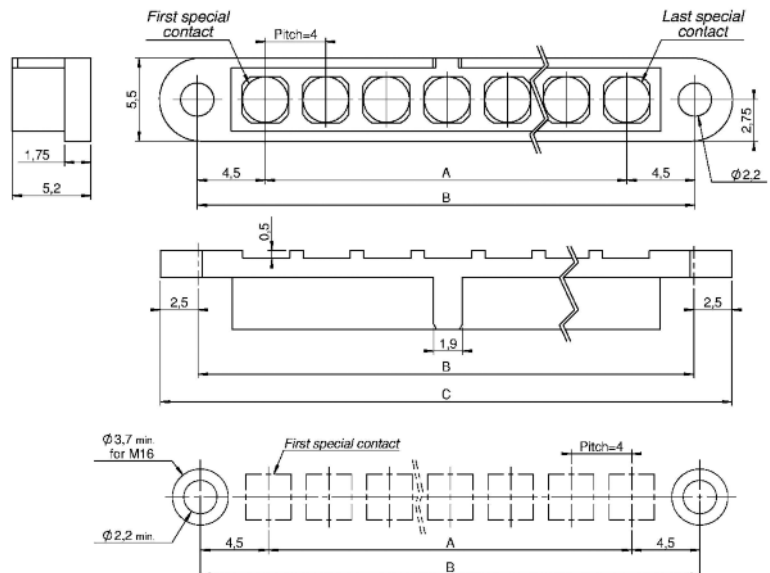
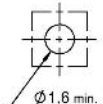


Pattern for special contact :

HF 30-2300-xx PCB lay-out



HP 30-4300-xx PCB lay-out



Special contacts min. : 02
max. : 15

$$A = (zz \times 4) - 4$$

$$B = A + 9$$

$$C = B + 5$$

Refer to dimension table on cover page

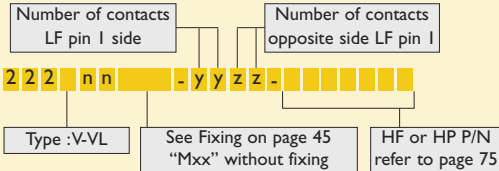
CMM 220

Female mixed-layout

90° PCB



Part numbering :

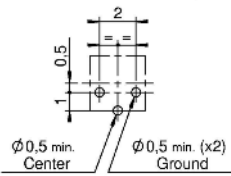


nn = number of LF contacts

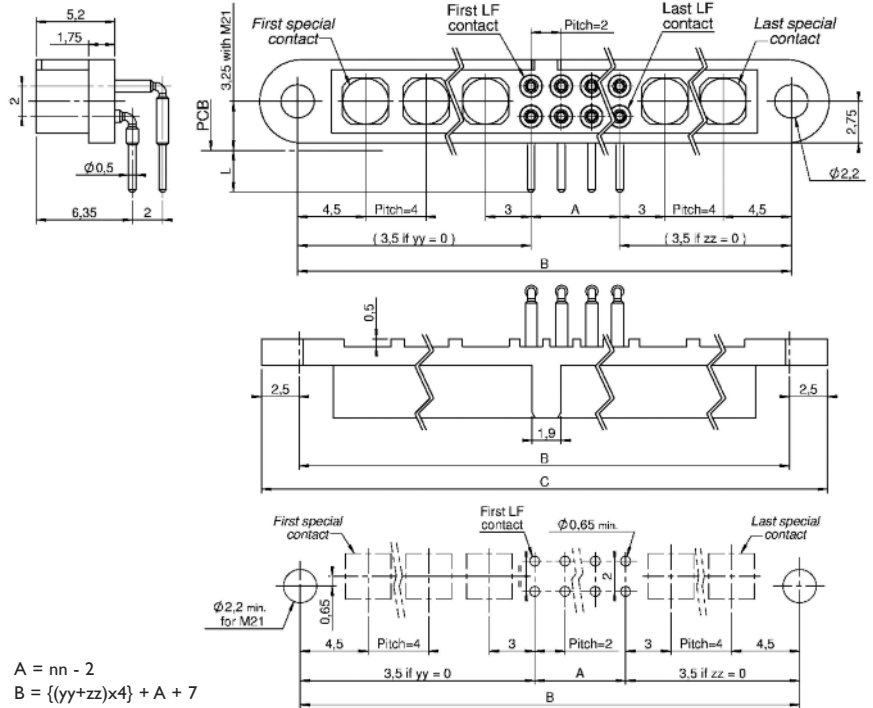
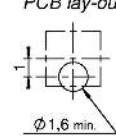
Type	L
V	3
VL	4,5

Pattern for special contact :

HF 30-2400-xx PCB lay-out



HP 30-4400-xx PCB lay-out



$$A = nn - 2$$

$$B = \{(yy+zz) \times 4\} + A + 7$$

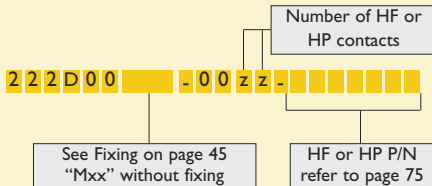
$$B_{max.} = 65 \text{ mm}$$

$$C = B + 5$$

90° PCB FOR HP/HF CONTACTS ONLY

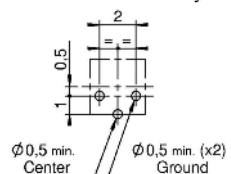


Part numbering :

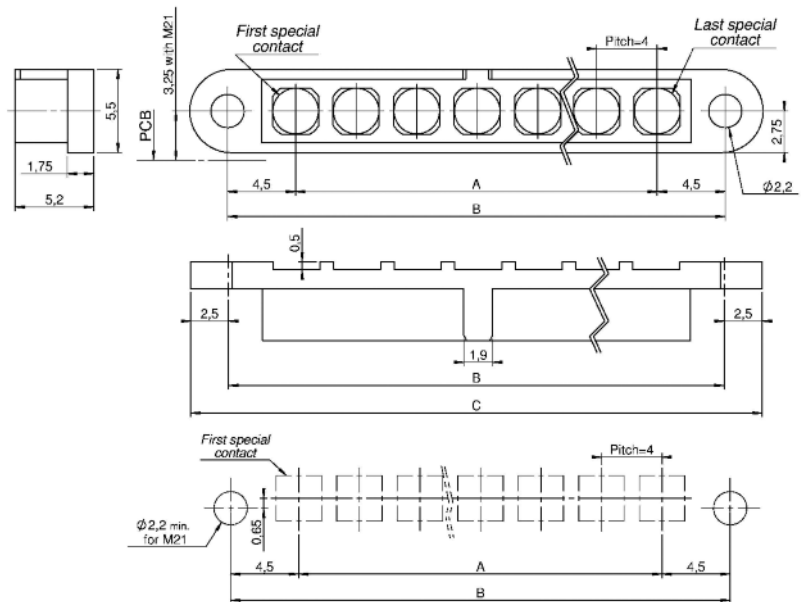
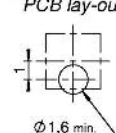


Pattern for special contact :

HF 30-2400-xx PCB lay-out



HP 30-4400-xx PCB lay-out



$$A = (zz \times 4) - 4$$

$$B = A + 9$$

$$C = B + 5$$

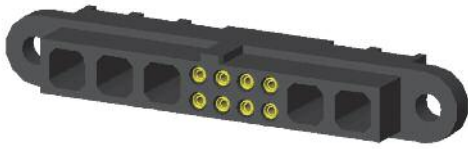
Special contacts min. : 02
max. : 15

Refer to dimension table on cover page

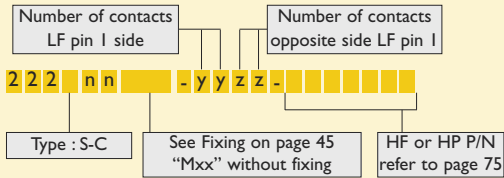
CMM 220

Female mixed-layout

CRIMP

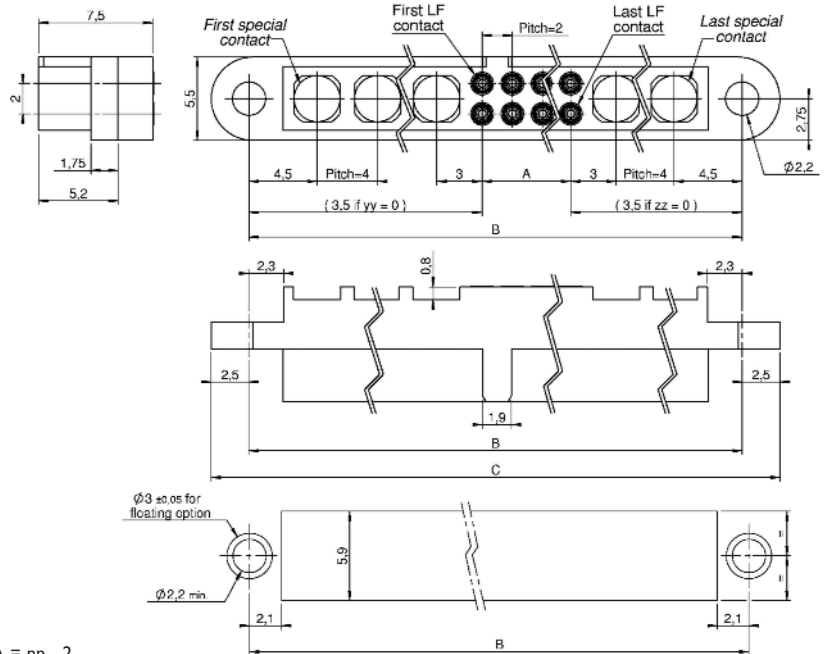
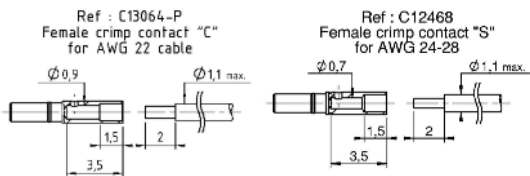


Part numbering :



nn = number of LF contacts

Type	Gauge
S	24-28
C	22



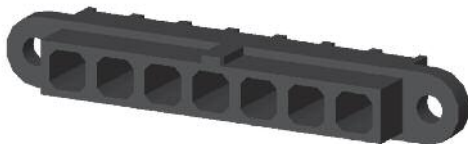
$$A = nn - 2$$

$$B = ((yy+zz) \times 4) + A + 7$$

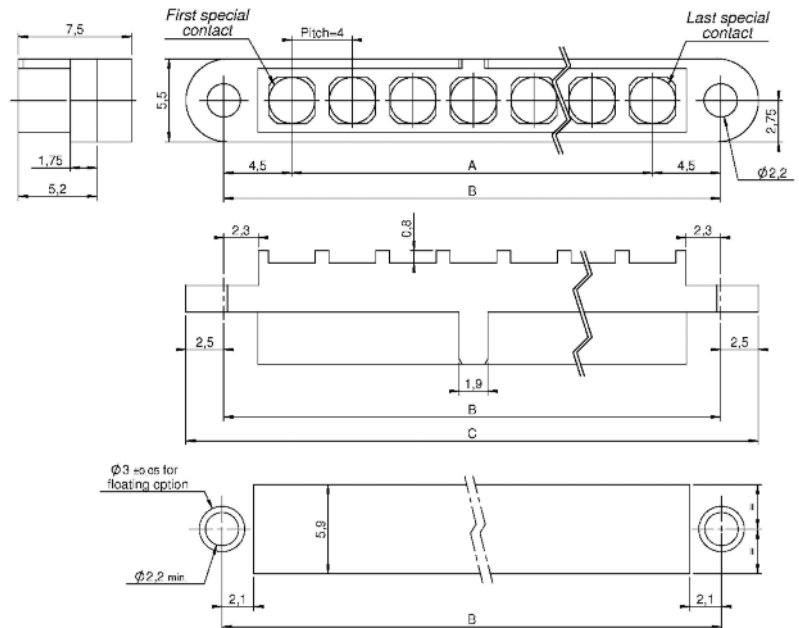
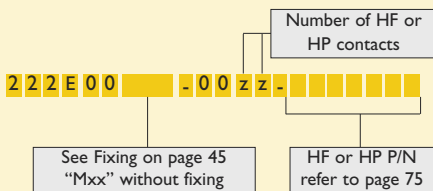
$$B_{max} = 65 \text{ mm}$$

$$C = B + 5$$

CRIMP FOR HP/HF CONTACTS ONLY



Part numbering :



$$A = (zz \times 4) - 4$$

$$B = A + 9$$


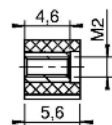

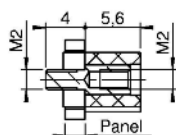

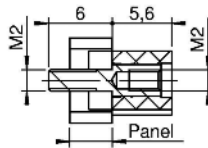
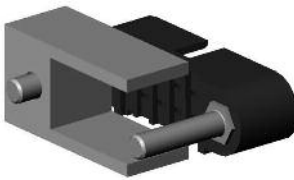
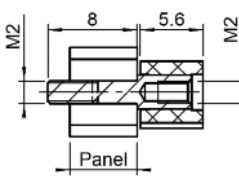
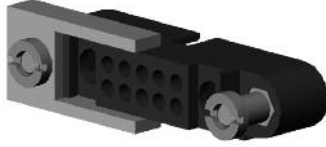
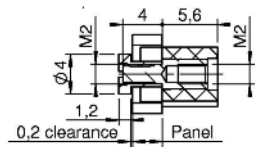
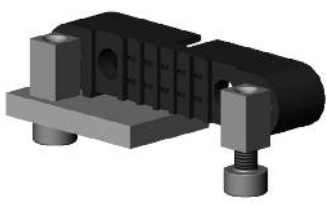
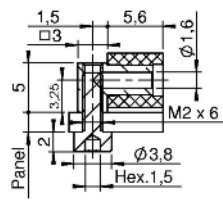
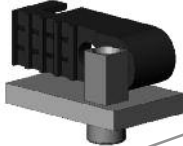
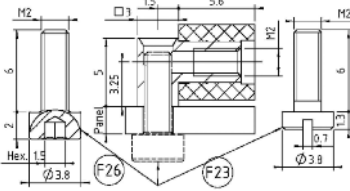

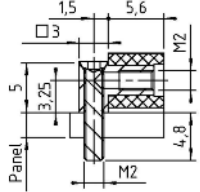
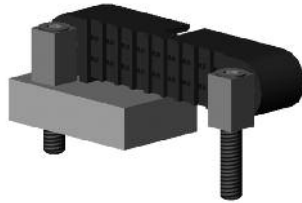
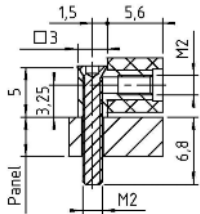
$$C = B + 5$$

Special contacts min. : 02
max. : 15

Refer to dimension table
on cover page

Fixing for CMM 220 male

FIXING HARDWARE FOR CMM 220 MALE

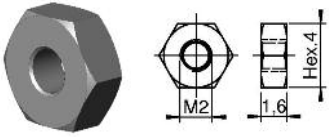
REFERENCE	ASSEMBLY ON PCB	OVERALL DIMENSIONS	RECOMMENDATION
F21	Straight on PCB 		F21 : CMM male : Y-YL-TS-C (D-E : straight)
F22	Straight on PCB 0,8 min / 2 max 		F22 : CMM male : Y-TS-C (D-E : straight) F22H : CMM male : Y-T (D : straight)
F22H			
F24	Straight on PCB 1,5 min / 4 max 		F24 : CMM male : YL-TS-C (D-E : straight) F24H : CMM male : YL-T (D : straight)
F24H			
F24L	Straight on PCB 6 max 		F24L : CMM male : T-TL (D-E : straight)
F2xx xx = (PCB thickness + 0,2 mm) x 10 Example : for 3 mm PCB, the reference is F232 (3 + 0,2) x 10 = 32 xx = 32	Straight on PCB with floating option 		F2xx : CMM male : S-C (E : straight)
F25	90° on PCB 		F25 : CMM male : V-VL-R-S-C-E (D : 90°)
F26	90° on PCB 		F26/F23 : CMM male : V-VL-R-S-C-E (D : 90°)
F23			
F30	90° on PCB 2,5 max. 		F30 & F30H : CMM male : V-R-C-S-E (D : 90°)
F30H			
F31	90° on PCB 4,5 max. 		F31 & F31H : CMM male : VL-R-C-S-E (D : 90°)
F31H			

Please refer to the CMM Catalogue Guidelines for any other fixing not listed here.

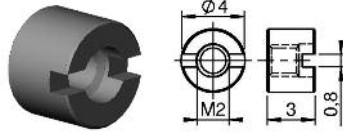
Fixing for CMM 220 female

FIXING HARDWARE FOR CMM 220 FEMALE

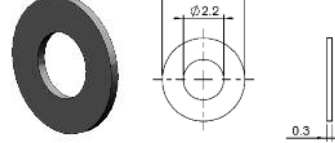
HEXAGONAL NUT



STANDARD NUT



"W" CODE FOR ADDITIONAL WASHER



REFERENCE	ASSEMBLY ON PCB	OVERALL DIMENSIONS	RECOMMENDATION
M16 M11	Straight on PCB 		M16/M11 : CMM Female : Y-YL-TS-C-E (D : straight)
M12 M12H	Straight on PCB 0,8 min / 2 max 		M12 : CMM female : Y-TS-C (D-E : straight) M12H : CMM female : Y-T (D : straight)
M12L M12LH	Straight on PCB 1,5 min / 4 max 		M12L : CMM female : Y-TS-C (D-E : straight) M12LH : CMM female : YL-T (D : straight)
M1xx xx = (PCB thickness + 0,2 mm) x 10 Example : for 3 mm PCB, the reference is M132 (3 + 0,2) x 10 = 32 xx = 32	Straight on PCB with floating option 		M1xx : CMM female : S-C (E : straight)
M21 for PCB 1,6 mm (L = 4 mm) M21L for PCB 3,2 mm (L = 5 mm)	90° on PCB 		M21 : CMM Female : V-R-S-C-E (D : 90°) M21L : CMM Female : VL-R-S-C-E (D : 90°)
M18	Cover option 		M18 : CMM female : S-C (E : straight)

Please refer to the CMM Catalogue Guidelines for any other fixing not listed here.

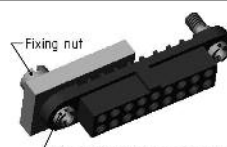
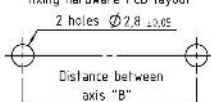
Other fixing hardware for CMM 220

FIXING HARDWARE FOR CMM 220 FEMALE/MALE

REFERENCE	ASSEMBLY ON PCB	OVERALL DIMENSIONS	RECOMMENDATION
M46	Straight on PCB 1,5 min. / 2,5 max. 		M46 : CMM female : Y-TS-C (D-E : straight)
M46H			
M47	Straight on PCB 1,5 min. / 4 max. 		M47 : CMM female : YL-TS-C (D-E : straight)
M47H			
M48 for PCB 1,6 mm (L = 3 mm)	90° on PCB 		M48 / M48M / M48L : CMM female : V-VL-R-S-C-E (D : 90°)
M48M for PCB 2 mm (L = 4 mm)			
M48L for PCB 3,2 mm (L = 5 mm)			
M49	Straight on PCB 		M49 : CMM female : Y-TS-C (D-E : straight)
M49H			
F60	Straight on PCB 		F60 : CMM male : Y-YL-TS-C-E (D : straight)
F61	Straight on PCB 		F61 : CMM male : Y-YL-TS-C-E (D : straight)
F62	Racking 		F62 : CMM male : Y-TS-C (D-E : straight)
F62H			
F63 for PCB 1,6 mm	90° on PCB 		F63 : CMM male : V-R-S-C-E (D : 90°)
F63L for PCB 3,2 mm			

M46 M46H M47 M47H

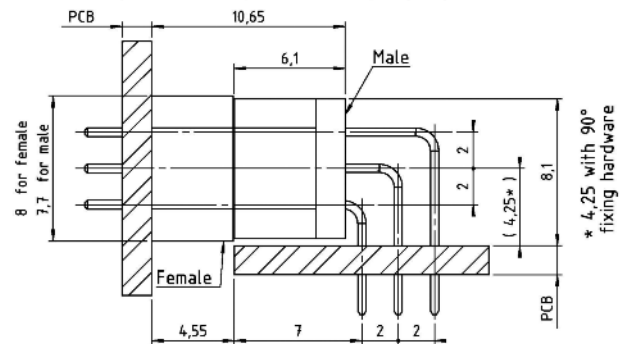
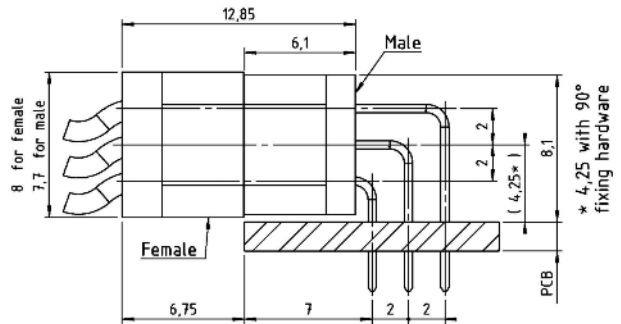
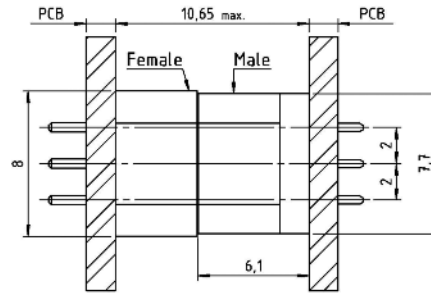
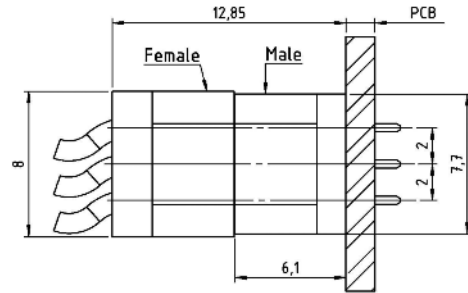
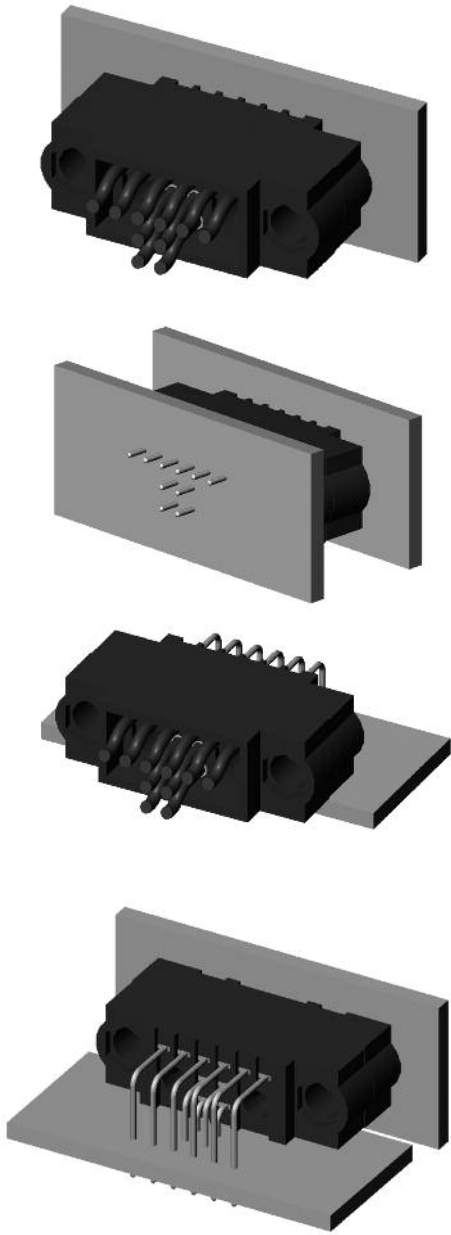
fixing hardware PCB layout



While screwing the fixing nut maintain the insert with screwdriver

CMM 320 Configuration

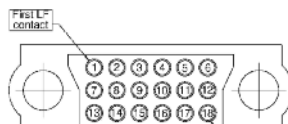
CONNECTOR SPACING



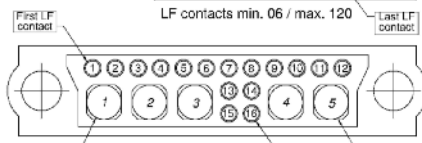
CONTACTS POSITIONS



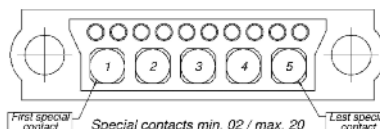
Female connectors
(shown looking onto mating face)



LF contacts min. 06 / max. 120

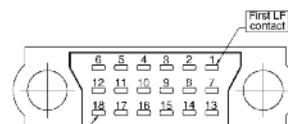


Mixed layout max. configuration depends on the total LF contacts number

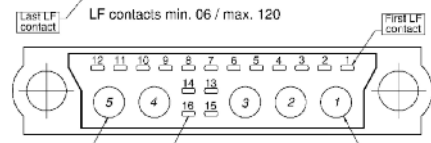


Special contacts min. 02 / max. 20

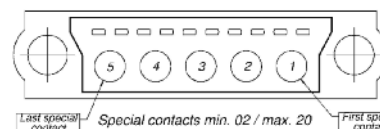
Male connectors
(shown looking onto mating face)



LF contacts min. 06 / max. 120



Mixed layout max. configuration depends on the total LF contacts number

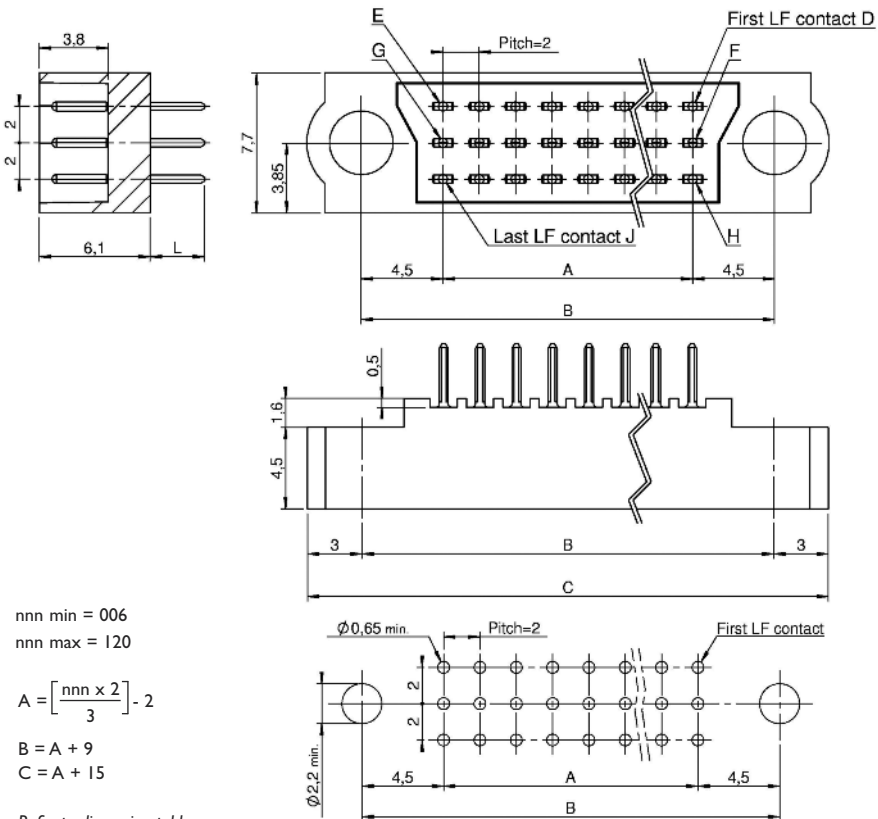
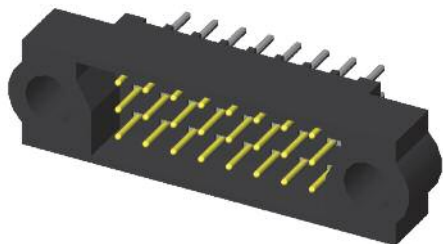


Special contacts min. 02 / max. 20



CMM 320 Male

STRAIGHT PCB FOR LF CONTACTS ONLY



Part numbering :

Type : Y-YL

3 2 | n n n

See Fixing on pages 69 to 74
"Fxx" without fixing

nnn = number of LF contacts

Type	L
Y	3
YL	4,5

nnn min = 006

nnn max = 120

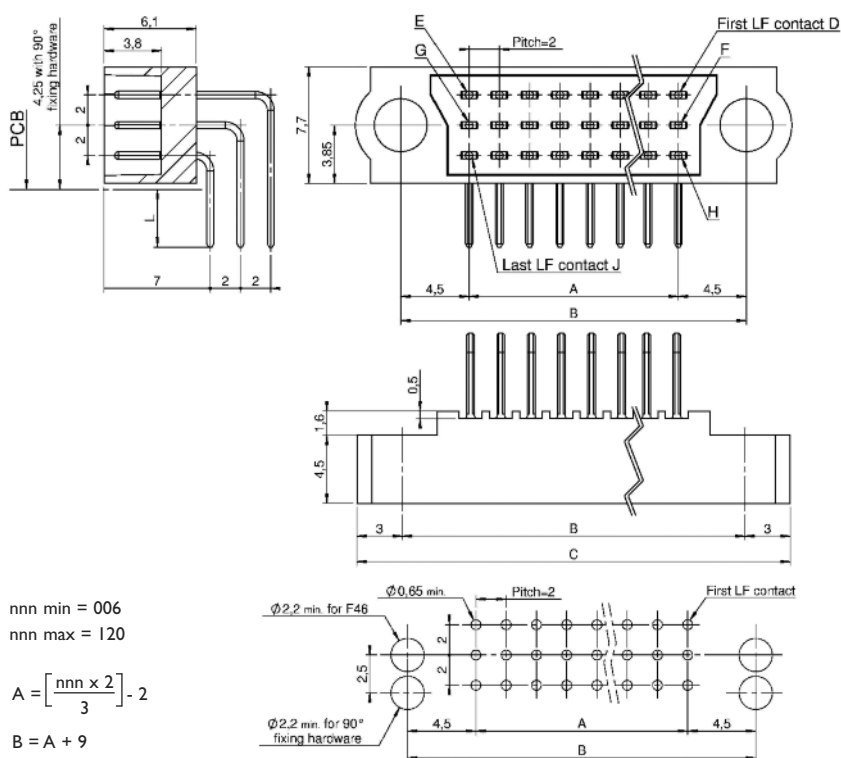
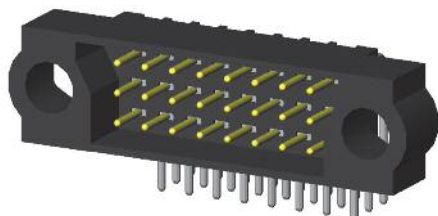
$$A = \left[\frac{nnn \times 2}{3} \right] - 2$$

$$B = A + 9$$

$$C = A + 15$$

Refer to dimension table
on cover page

90° PCB FOR LF CONTACTS ONLY



Part numbering :

Type : V-VL

3 2 | n n n

See Fixing on pages 69 to 74
"Fxx" without fixing

nnn = number of LF contacts

Type	L
V	3
VL	4,5

nnn min = 006

nnn max = 120

$$A = \left[\frac{nnn \times 2}{3} \right] - 2$$

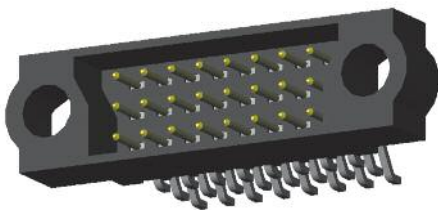
$$B = A + 9$$

$$C = A + 15$$

Refer to dimension table
on cover page

CMM 320 Male

90° SMT FOR LF CONTACTS ONLY



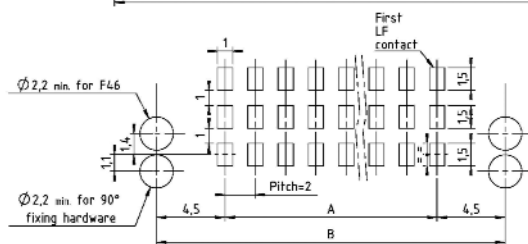
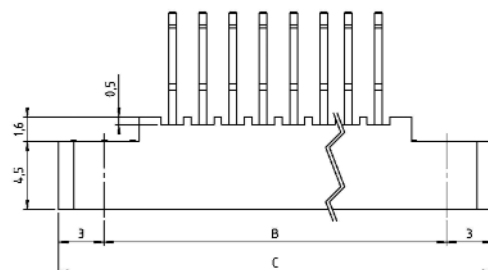
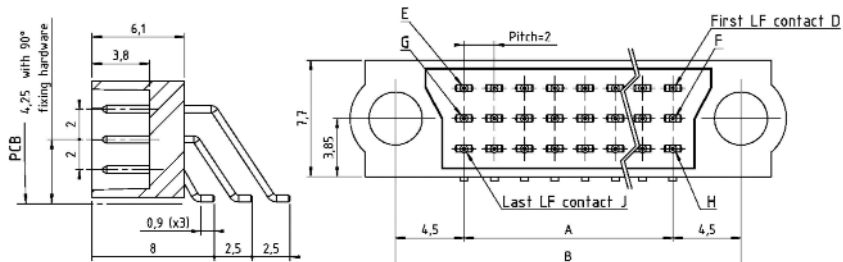
Part numbering :

3 2 | R n n n

See Fixing on pages 69 to 74
"Fxx" without fixing

nnn = number of LF contacts

Optional: Packaging in reel available upon request



nnn min = 006
nnn max = 120

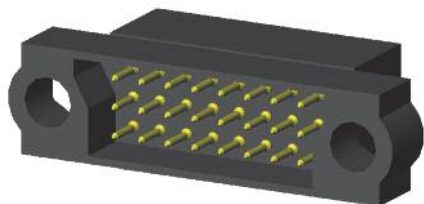
$$A = \left[\frac{nnn \times 2}{3} \right] - 2$$

$$B = A + 9$$

$$C = A + 15$$

Refer to dimension table
on cover page

CRIMP FOR LF CONTACTS ONLY



Part numbering :

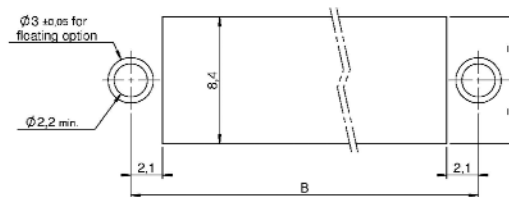
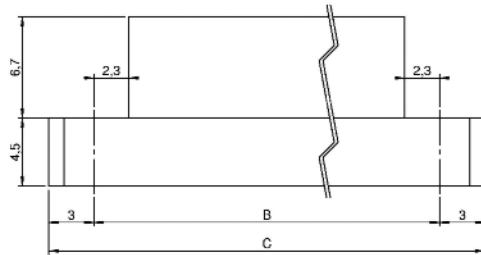
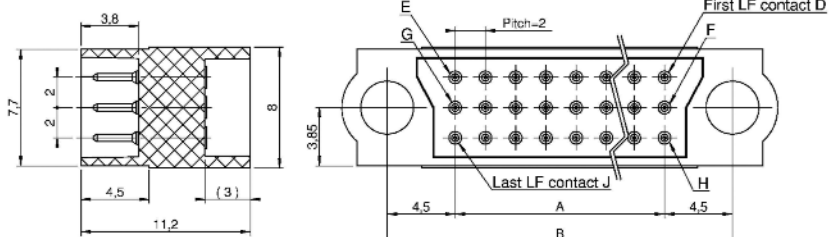
Type : S-C

3 2 | I n n n

See Fixing on pages 69 to 74
"Fxx" without fixing

nnn = number of LF contacts

Type	Gauge
S	24-28
C	22



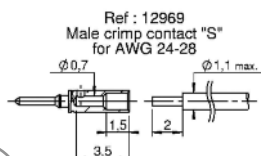
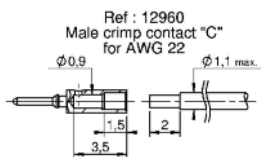
nnn min = 006
nnn max = 120

$$A = \left[\frac{nnn \times 2}{3} \right] - 2$$

$$B = A + 9$$

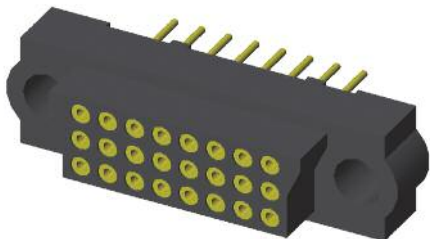
$$C = A + 15$$

Refer to dimension table
on cover page



CMM 320 Female

STRAIGHT PCB FOR LF CONTACTS ONLY



Part numbering :

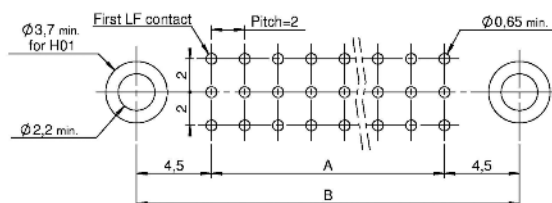
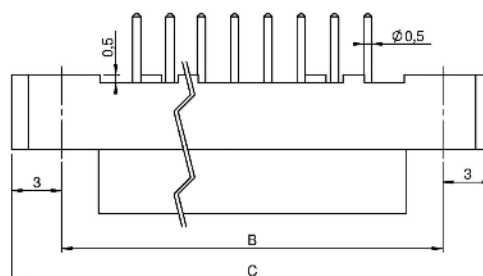
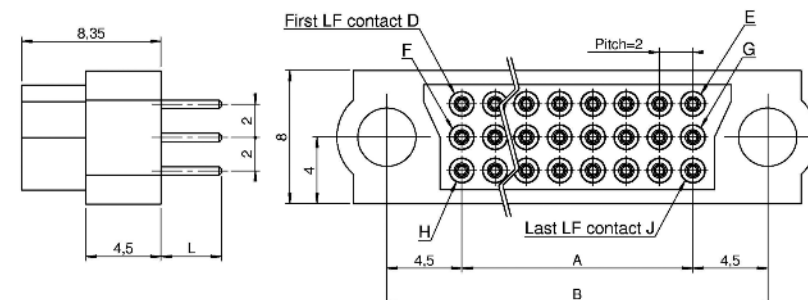
Type : Y-YL

3 2 2 n n n

See Fixing on pages 69 to 74
"Mxx" without fixing

nnn = number of LF contacts

Type	L
Y	3
YL	4,5



nnn min = 006
nnn max = 120

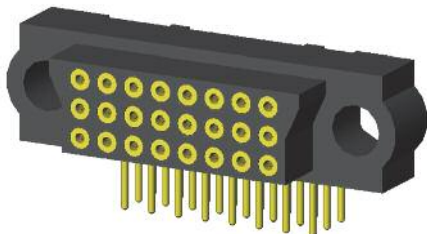
$$A = \left[\frac{nnn \times 2}{3} \right] - 2$$

$$B = A + 9$$

$$C = A + 15$$

Refer to dimension table
on cover page

90° PCB FOR LF CONTACTS ONLY



Part numbering :

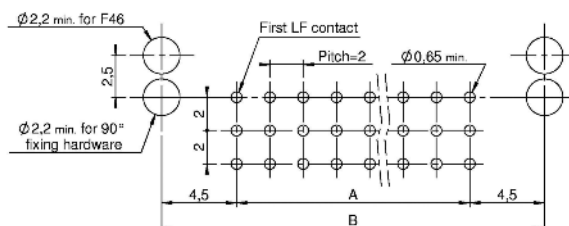
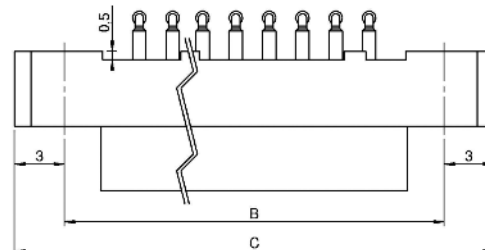
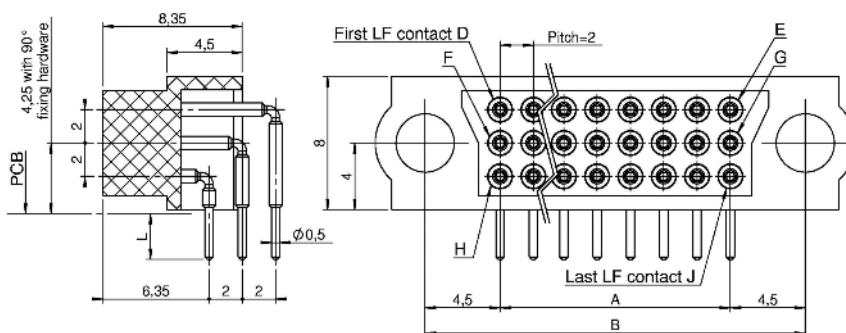
Type : V-VL

3 2 2 n n n

See Fixing on pages 69 to 74
"Mxx" without fixing

nnn = number of LF contacts

Type	L
V	3
VL	4,5



nnn min = 006
nnn max = 120

$$A = \left[\frac{nnn \times 2}{3} \right] - 2$$

$$B = A + 9$$

$$C = A + 15$$

Refer to dimension table
on cover page

CMM 320 Female

CRIMP FOR LF CONTACTS ONLY



Part numbering :

Type : S-C

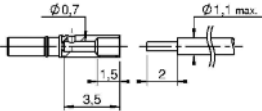
3 2 2 n n n

See Fixing on pages 69 to 74
"Mxx" without fixing

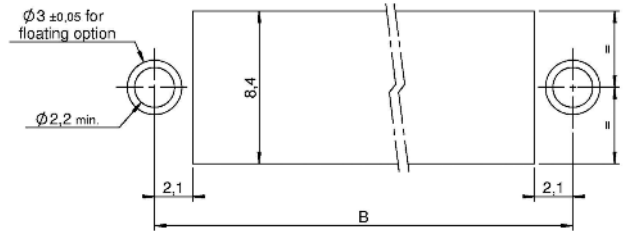
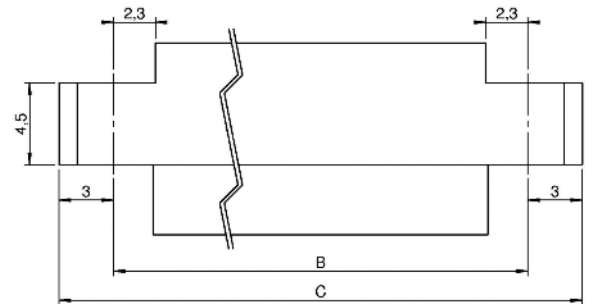
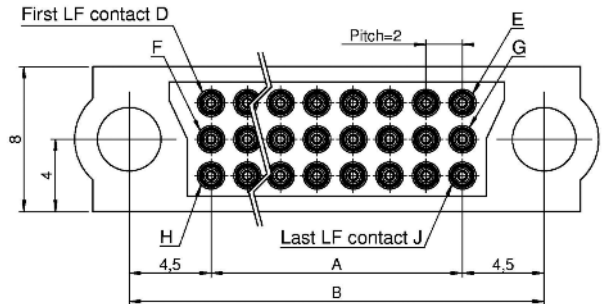
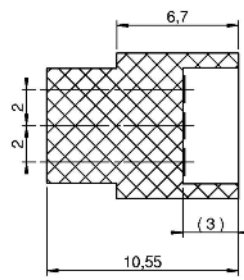
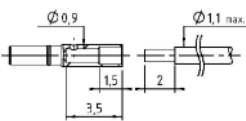
nnn = number of LF contacts

Type	Gauge
S	24-28
C	22

Ref : C12468
Female crimp contact "S"
for AWG 24-28



Ref : C13064-P
Female crimp contact "C"
for AWG 22 cable



nnn min = 006
nnn max = 120

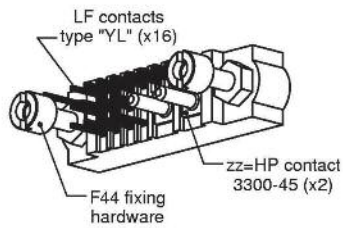
$$A = \left[\frac{nnn \times 2}{3} \right] - 2$$

$$B = A + 9$$

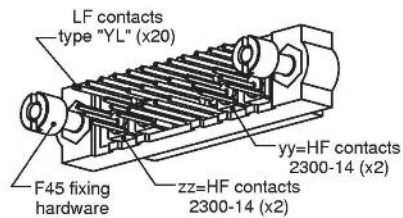
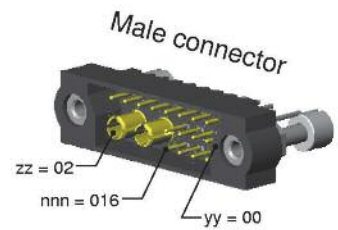
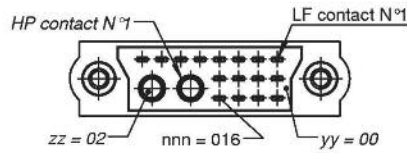
$$C = A + 15$$

Refer to dimension table
on cover page

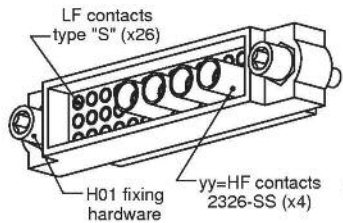
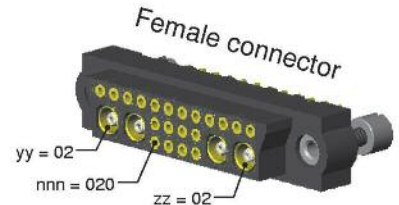
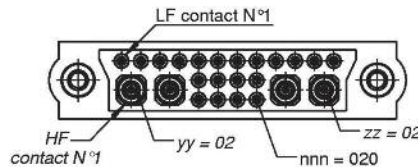
CMM 320 with mixed-layout



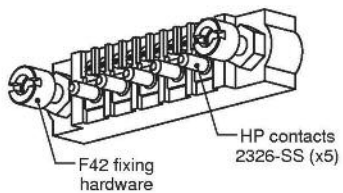
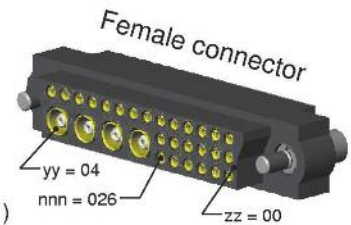
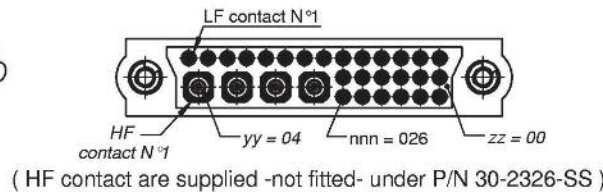
321YL016F44-0002-330045



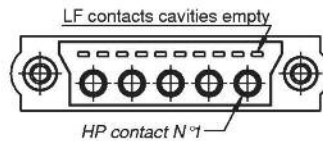
322YL020F45-0202-230014



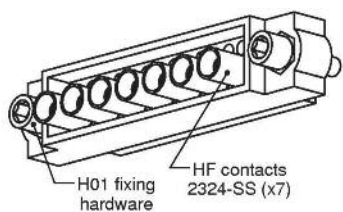
322S026H01-0400-2326SS



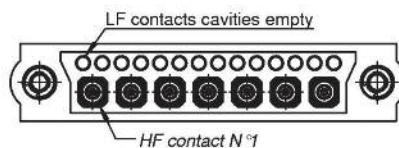
321D000F42-0005-3300CMM



"D" stated in P/N for connectors on PCB with only special contacts.

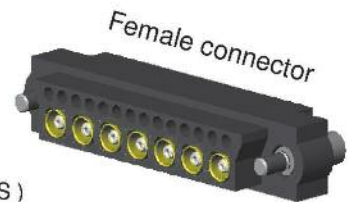


322E000H01-0007-2324SS



(HF contact are supplied -not fitted- under P/N 30-2324-SS)

"E" stated in P/N for connectors on cable with only special contacts.



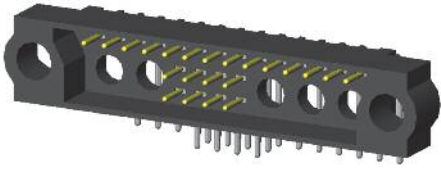
PART NUMBERING REMINDER

Code with Low Frequency contacts only					Additional code for mixed-layout connector (HF/HP)		
Series	Gender	Termination Style	Number of LF contacts	Fixing Hardware	Number of HF/HP contacts pin 1 side (LF contact number 1)	Number of HF/HP contacts opposite to LF contact number 1	HF/HP Contact Type
32	1 male 2 female	Refer to table on page 7	nnn 006 to 120	Refer to pages 69 to 74	yy	zz -	HF/HP 30 please refer to pages 75 to 94
					Depends upon the number of LF contacts HF / HP : 20 contacts max. Type of HF/HP contact : please refer to pages 8-9		

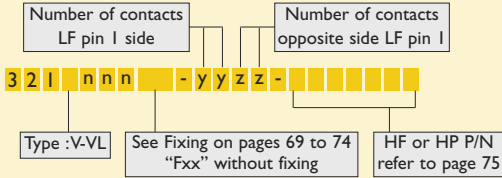
CMM 320

Male mixed-layout

90° PCB



Part numbering :

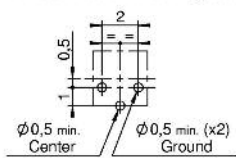


nnn = number of LF contacts

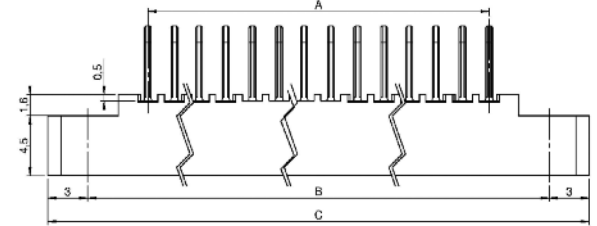
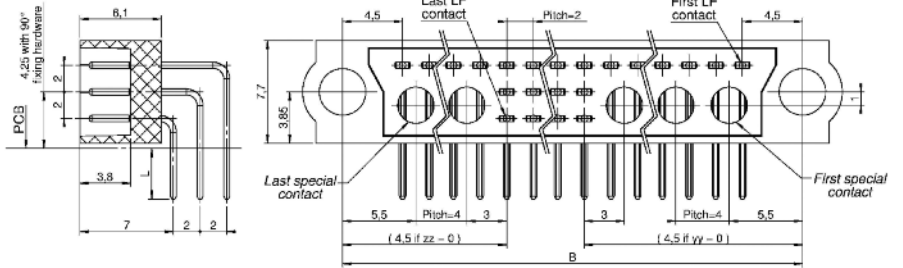
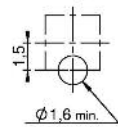
Type	L
V	3
VL	4,5

Pattern for special contact :

HF 30-1400-xx PCB lay-out



HP 30-3400-xx PCB lay-out

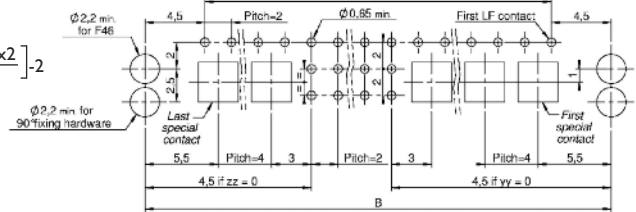


$$A = \left[\frac{((yy+zz) \times 4 + nnn) \times 2}{3} \right] - 2$$

$$B = A + 9$$

$$B \text{ max.} = 87$$

$$C = A + 15$$

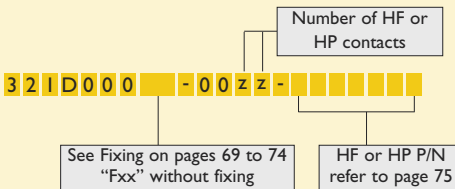


Special contacts mounted

90° PCB FOR HP/HF CONTACTS ONLY

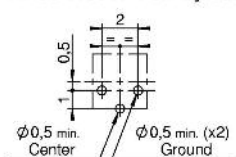


Part numbering :

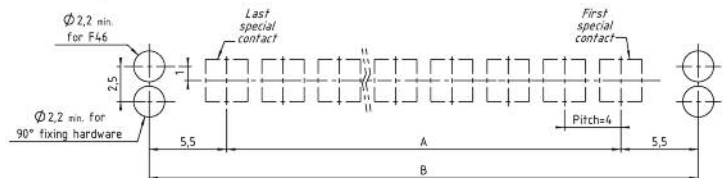
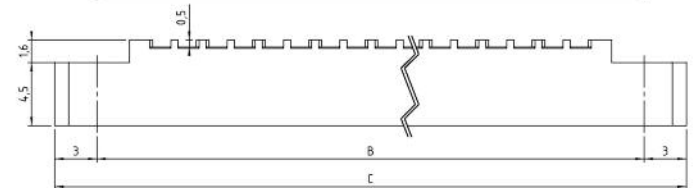
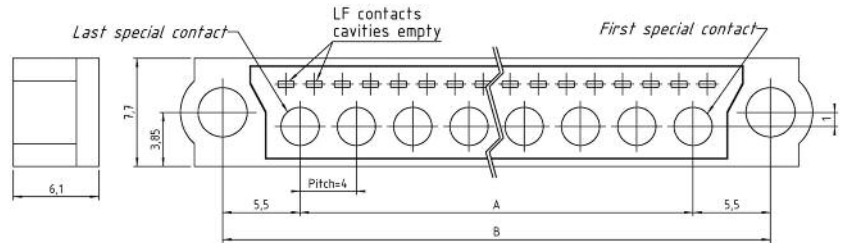
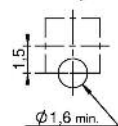


Pattern for special contact :

HF 30-1400-xx PCB lay-out



HP 30-3400-xx PCB lay-out



$$A = (zz \times 4) - 4$$

$$B = A + 11$$

$$C = A + 17$$

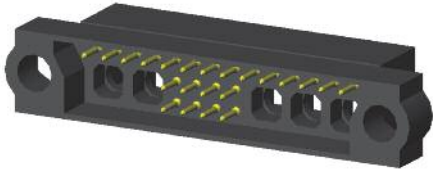
Special contacts min. : 02

max. : 20

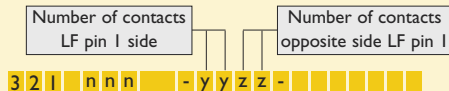
CMM 320

Male mixed-layout

CRIMP

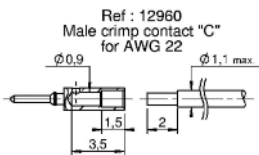


Part numbering :

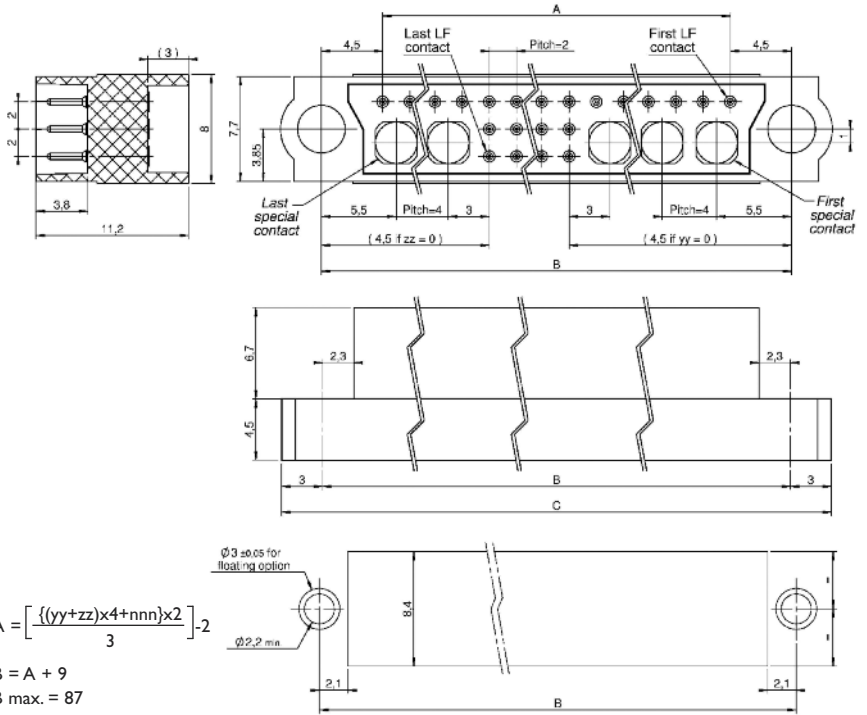
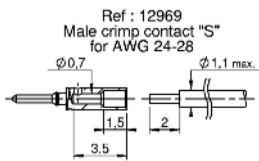


Type : S-C See Fixing on pages 69 to 74 "Fxx" without fixing HF or HP P/N refer to page 75

nnn = number of LF contacts



Type	Gauge
S	24-28
C	22



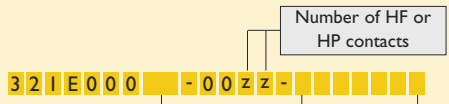
$$A = \left[\frac{((yy+zz) \times 4 + nnn) \times 2}{3} \right] - 2$$

B = A + 9
 B max. = 87
 C = A + 15

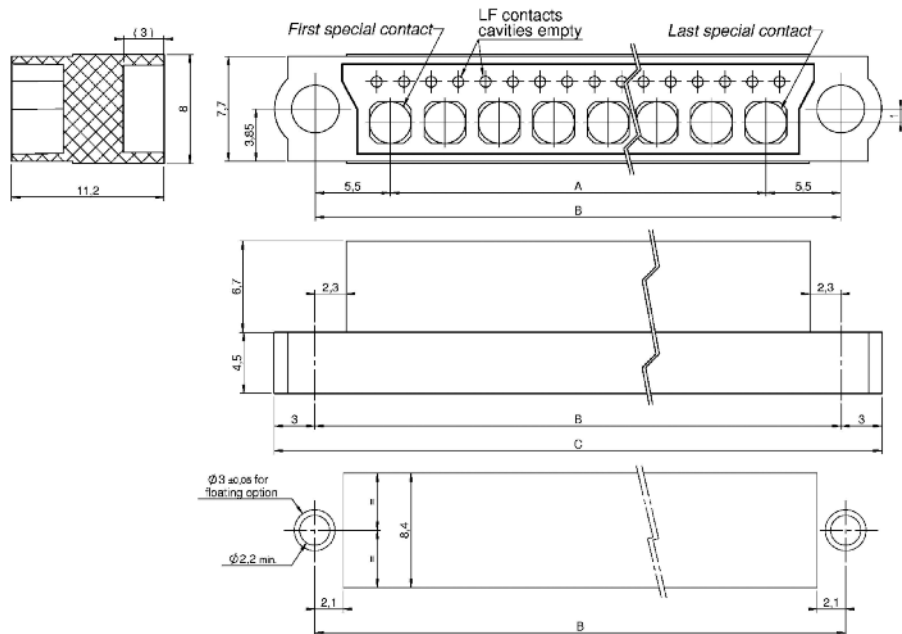
CRIMP FOR HP/HF CONTACTS ONLY



Part numbering :



See Fixing on pages 69 to 74 "Fxx" without fixing HF or HP P/N refer to page 75



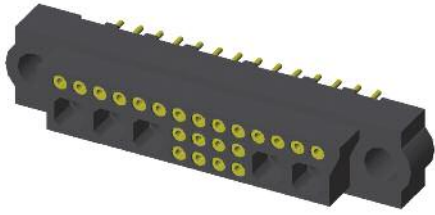
A = (zz x 4) - 4
 B = A + 11
 C = A + 17

Special contacts min. : 02
 max. : 20

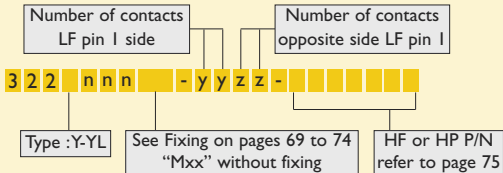
CMM 320

Female mixed-layout

STRAIGHT PCB



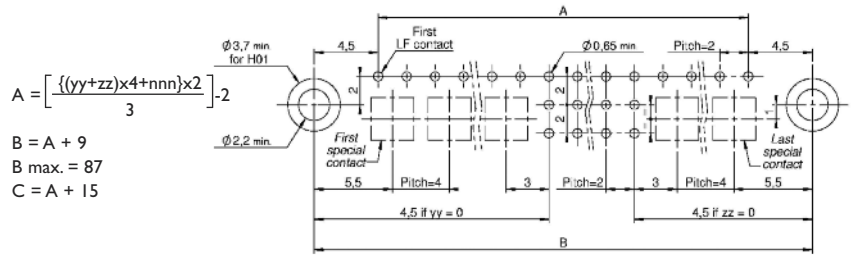
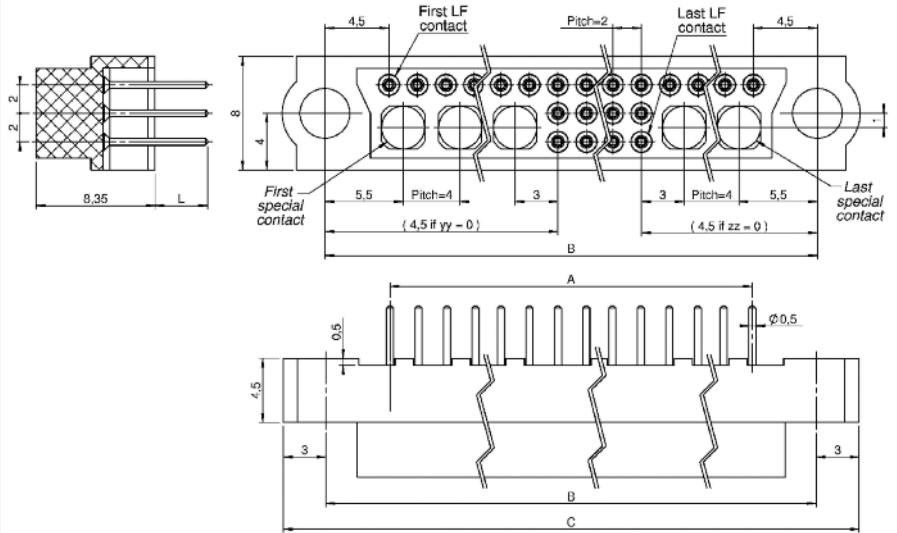
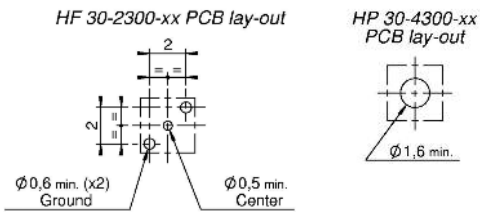
Part numbering :



nnn = number of LF contacts

Type	L
Y	3
YL	4,5

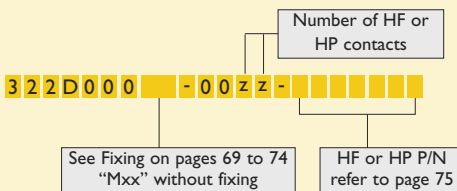
Pattern for special contact :



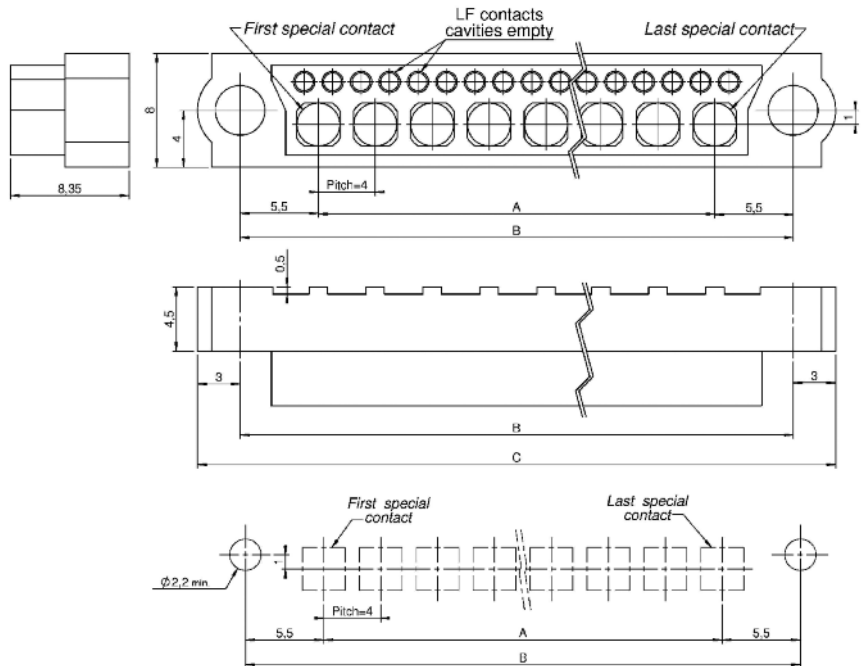
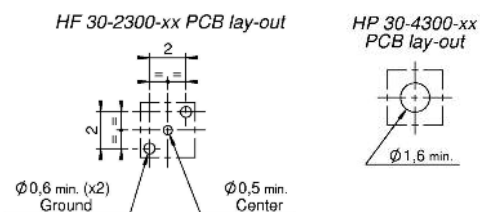
STRAIGHT PCB FOR HP/HF CONTACTS ONLY



Part numbering :



Pattern for special contact :



$A = (zz \times 4) - 4$

$B = A + 11$

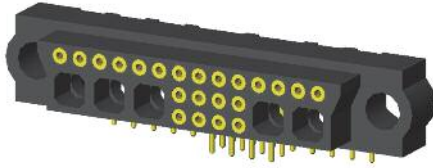
$C = A + 17$

Special contacts min. : 02
max. : 20

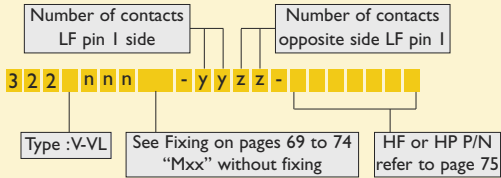
CMM 320

Female mixed-layout

90° PCB



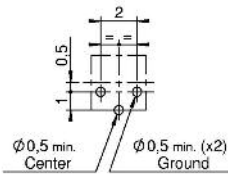
Part numbering :



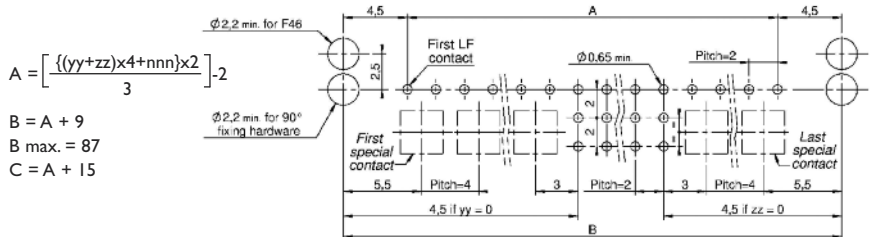
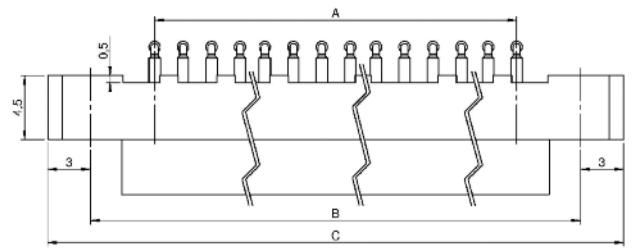
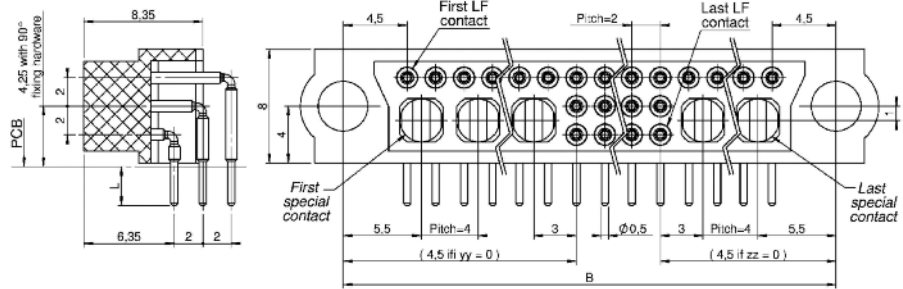
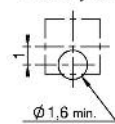
Type	L
V	3
VL	4,5

Pattern for special contact :

HF 30-2400-xx PCB lay-out



HP 30-4400-xx PCB lay-out

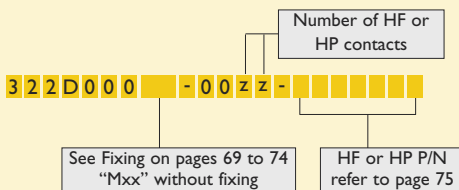


Special contacts mounted

90° PCB FOR HP/HF CONTACTS ONLY

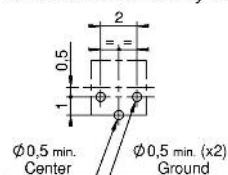


Part numbering :

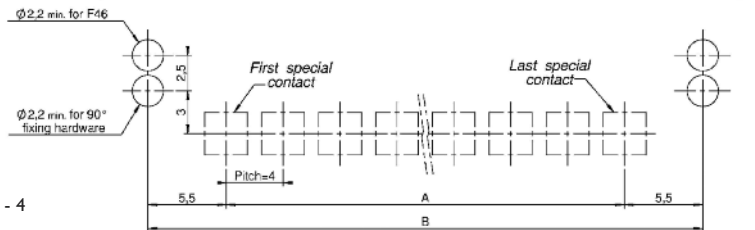
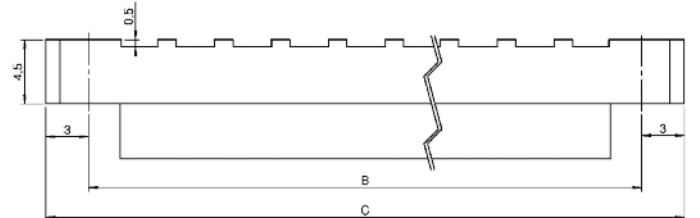
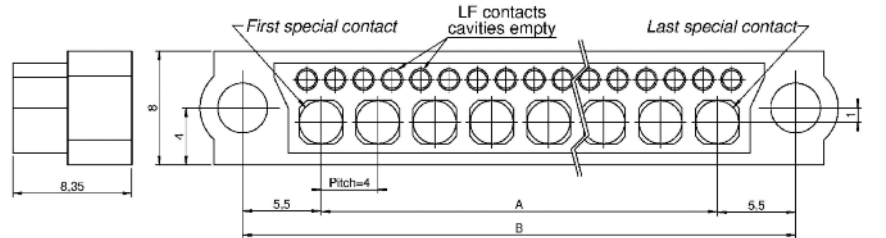
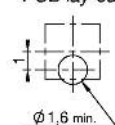


Pattern for special contact :

HF 30-2400-xx PCB lay-out



HP 30-4400-xx PCB lay-out



A = (zz x 4) - 4
 B = A + 11
 C = A + 17

Special contacts min. : 02
 max. : 20

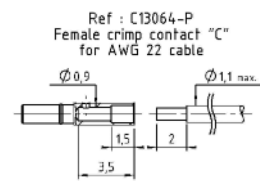
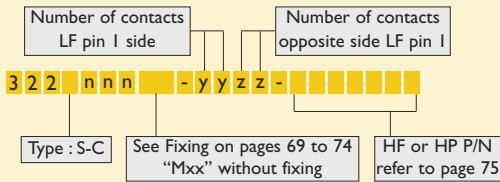
CMM 320

Female mixed-layout

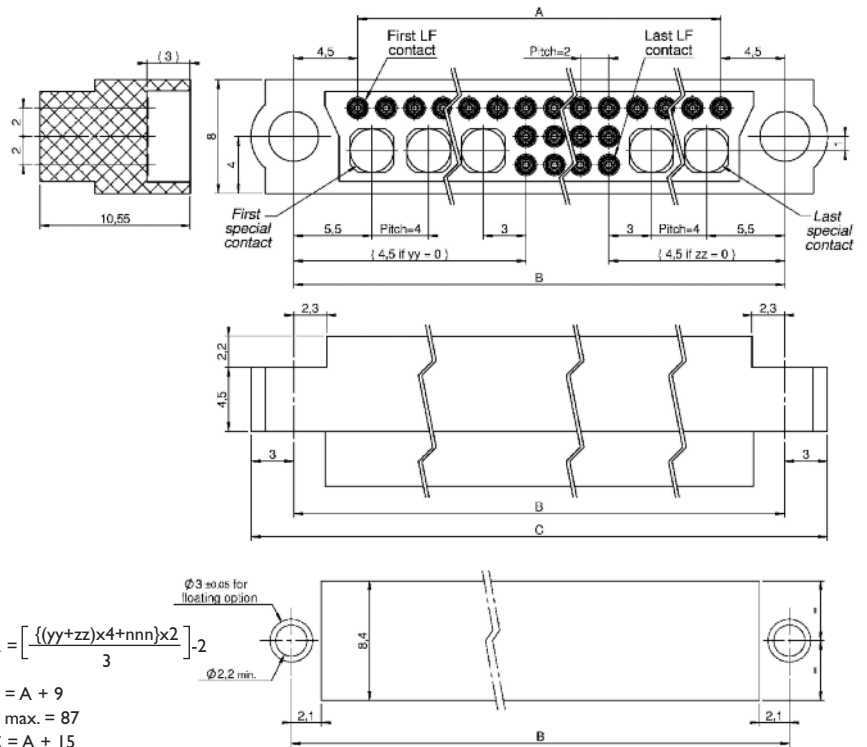
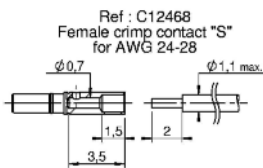
CRIMP



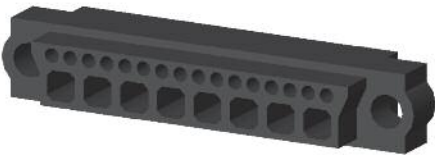
Part numbering :



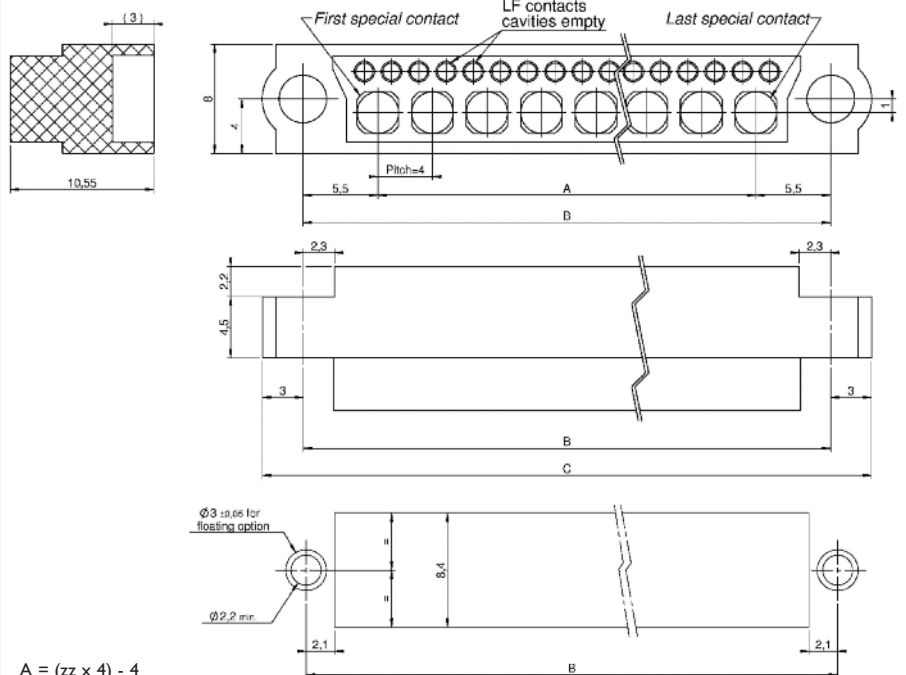
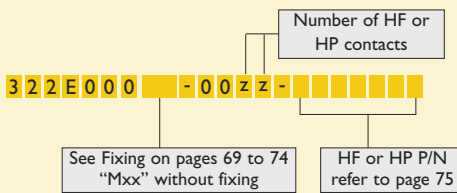
Type	Gauge
S	24-28
C	22



CRIMP FOR HP/HF CONTACTS ONLY



Part numbering :

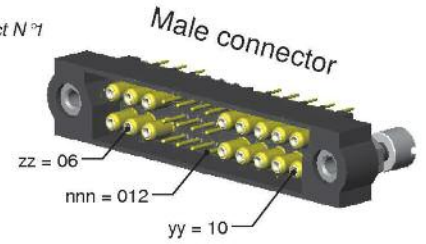
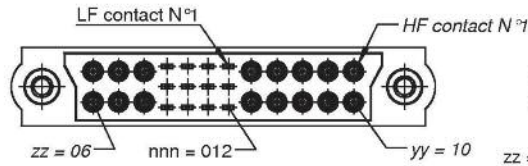
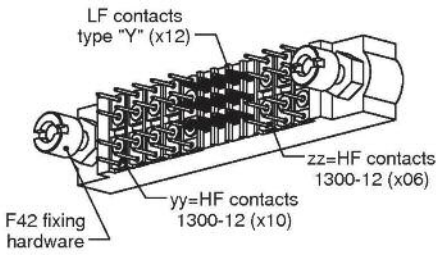


Special contacts min. : 02
max. : 20

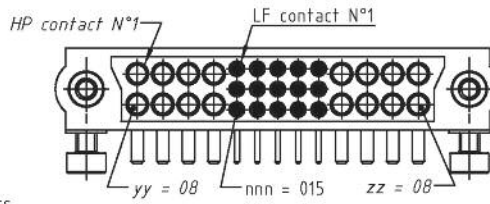
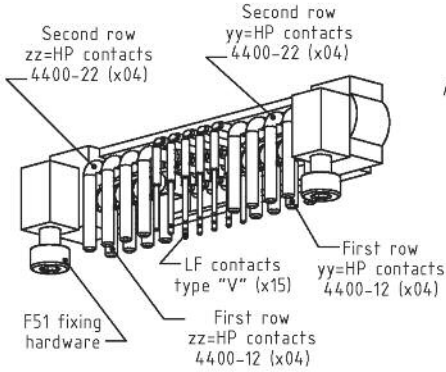


CMM 340

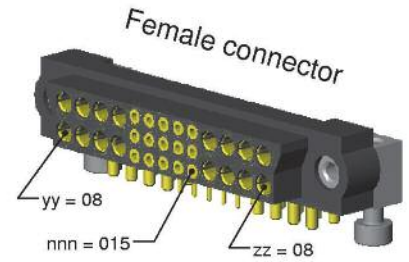
341Y012F42-1006-130012



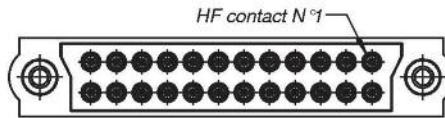
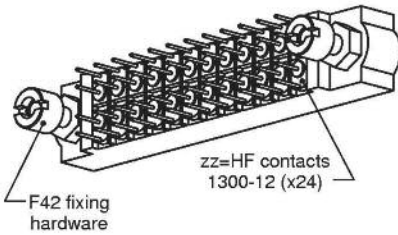
342V015F51-0808-440002



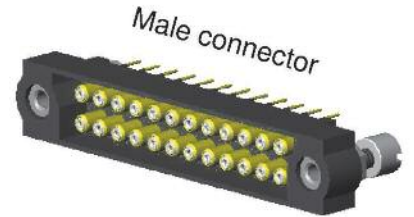
P/N for connector :
HP 4400-12 + HP 4400-22 = 4400-02



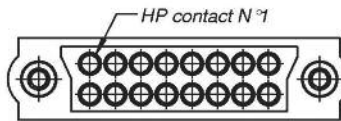
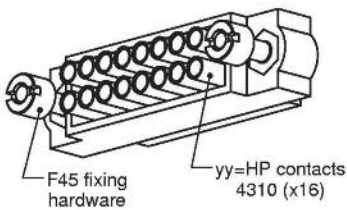
341D000F42-0024-130012



"D" stated in P/N for connectors on PCB with only special contacts.

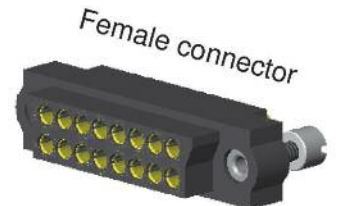


342E000F45-0016-4310



(HP contacts are supplied -not fitted- under P/N 22-4310)

"E" stated in P/N for connectors on cable with only special contacts.

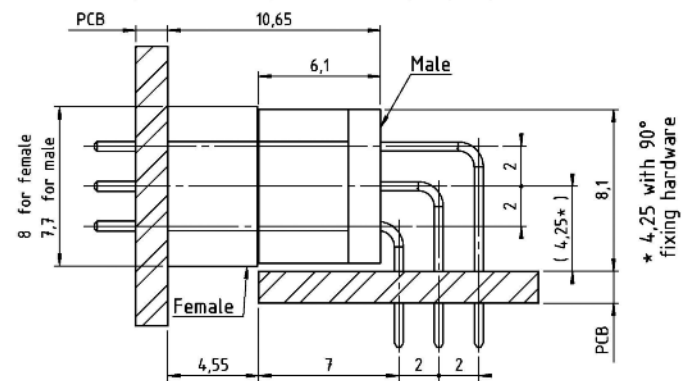
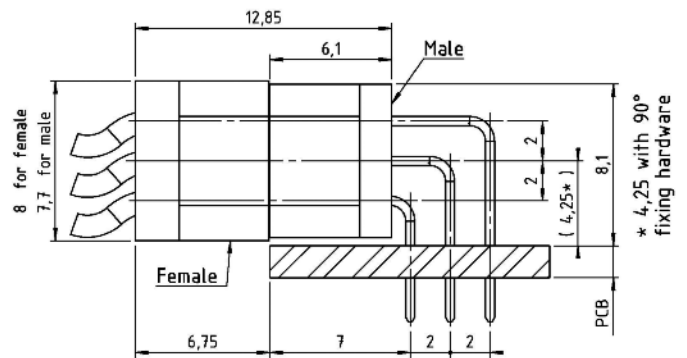
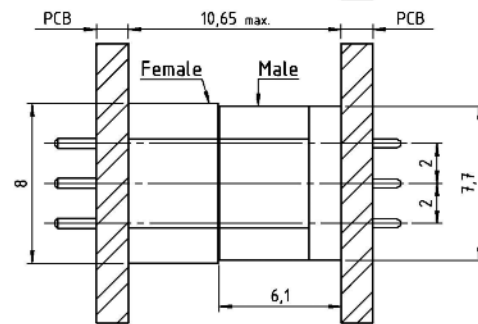
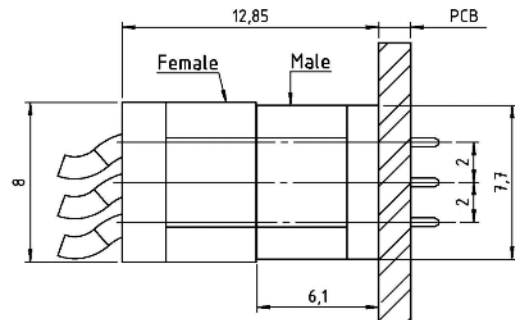
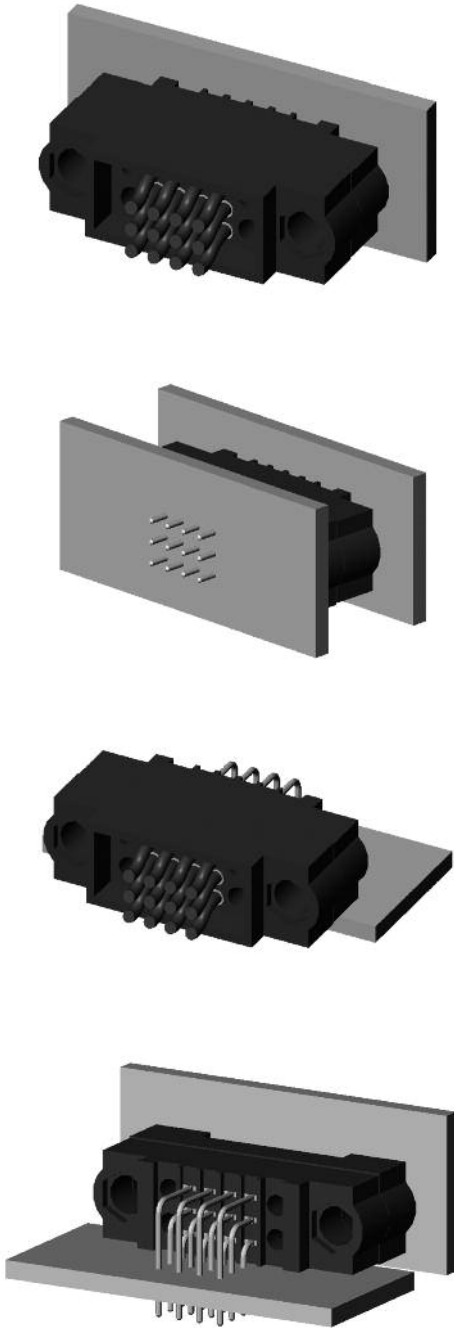


PART NUMBERING REMINDER

Code with Low Frequency contacts only					Additional code for mixed-layout connector (HF/HP)			
Series	Gender	Termination Style	Number of LF contacts	Fixing Hardware	Number of HF/HP contacts pin 1 side (LF contact number 1)	Number of HF/HP contacts opposite to LF contact number 1	HF/HP Contact Type	
■ ■ ■	■	■	■ ■ ■	■	■ ■	■ ■	■ ■	■ ■ ■ ■ ■ ■ ■ ■
3 rows	34	1 male	Refer to table on page 7	Refer to the series 320	Refer to pages 69 to 74	Depends upon the number of LF contacts		HP/HP 22 please refer to pages 95 to 102
		2 female				HF / HP : 64 contacts max. Type of HF/HP contact : please refer to pages 10-11		

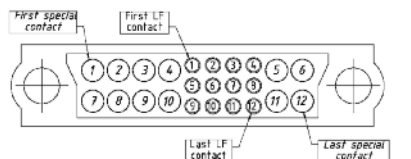
CMM 340 Configuration

CONNECTOR SPACING

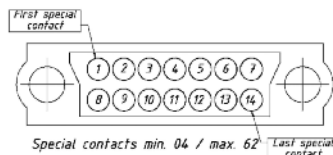


CONTACTS POSITIONS

Female connectors
(shown looking onto mating face)

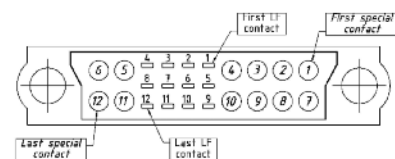


Mixed layout max. configuration depends on the LF contacts number

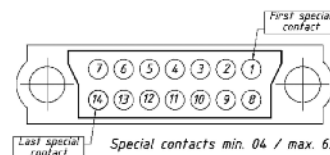


Special contacts min. 04 / max. 62

Male connectors
(shown looking onto mating face)



Mixed layout max. configuration depends on the LF contacts number



Special contacts min. 04 / max. 62



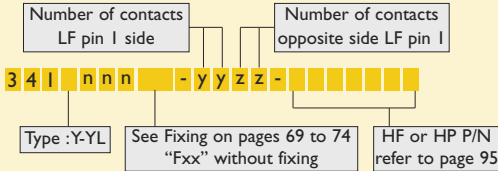
CMM 340

Male mixed-layout

STRAIGHT PCB



Part numbering :

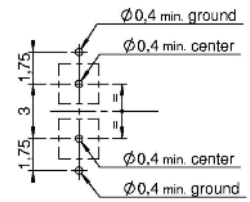


nnn = number of LF contacts

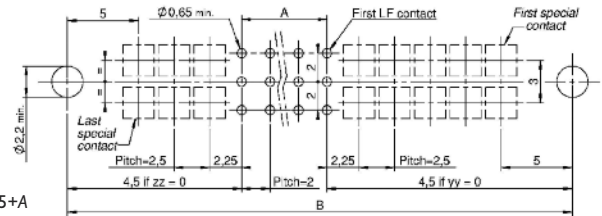
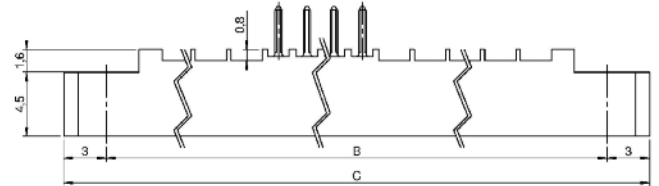
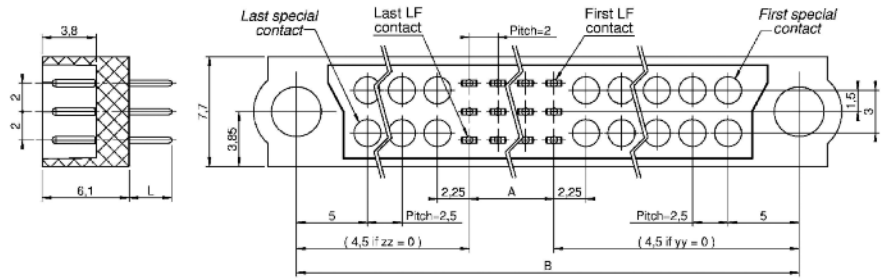
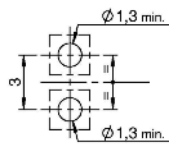
Type	L
Y	3
YL	4,5

Pattern for special contact :

HF 22-1300-xx PCB Lay-out



HP 22-3300-xx PCB Lay-out



$$A = \left(\frac{nnn \times 2}{3} \right) - 2$$

if yy and zz \neq 0 :

$$B = \left(\left(\frac{yy + zz}{2} \right) - 2 \right) \times 2.5 + 14.5 + A$$

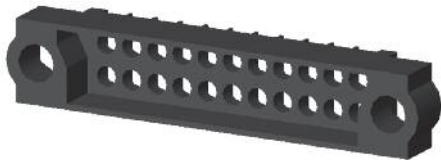
if yy or zz = 0 :

$$B = \left(\left(\frac{yy \text{ or } zz}{2} \right) - 1 \right) \times 2.5 + 11.75 + A$$

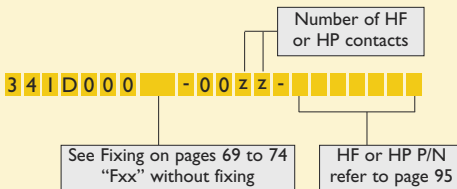
B max. = 87

C = B + 6

STRAIGHT PCB FOR HP/HF CONTACTS ONLY

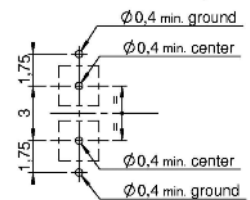


Part numbering :

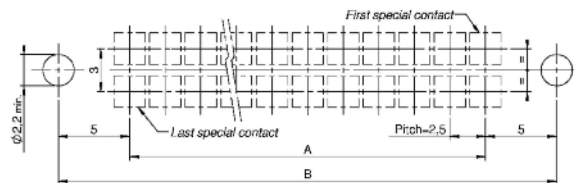
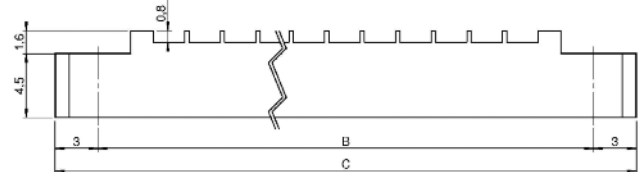
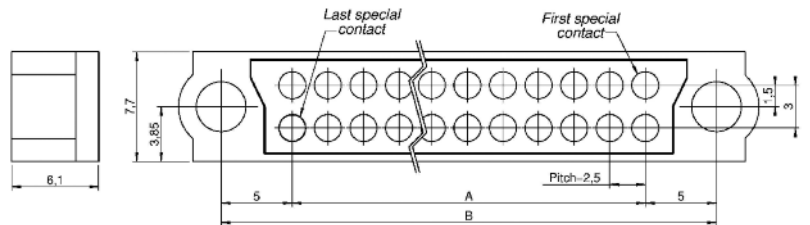
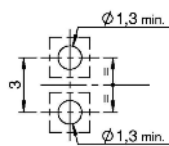


Pattern for special contact :

HF 22-1300-xx PCB Lay-out



HP 22-3300-xx PCB Lay-out



$$A = \left(\frac{zz \times 2.5}{2} \right) - 2.5$$

Special contacts min. : 04

max. : 64

B = A + 10

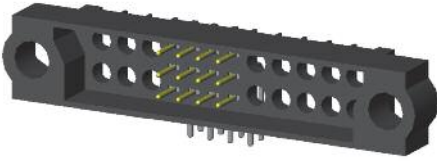
C = B + 6

Refer to dimension table on cover page

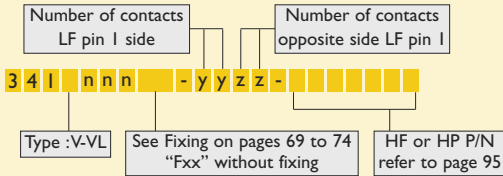
CMM 340

Male mixed-layout

90° PCB



Part numbering :

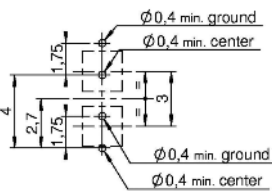


nnn = number of LF contacts

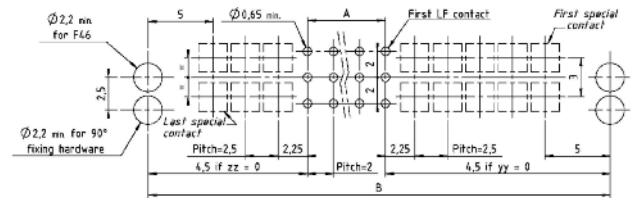
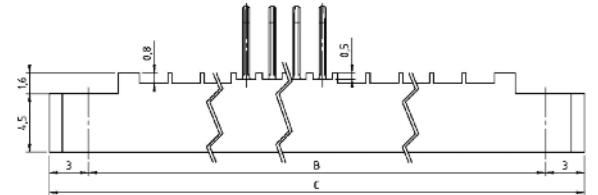
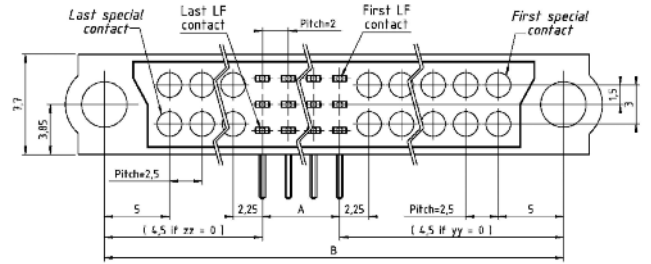
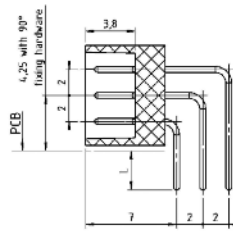
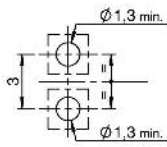
Type	L
V	3
VL	4,5

Pattern for special contact :

HF 22-1400-xx PCB Lay-out



HP 22-3400-xx PCB Lay-out



$$A = \left\{ \frac{(nnn \times 2)}{3} \right\} - 2$$

if yy and zz ≠ 0 :

$$B = \left\{ \frac{(yy) + (zz)}{2} \right\} - 2 \times 2.5 + 14.5 + A$$

if yy or zz = 0 :

$$B = \left\{ \frac{(yy) \text{ or } (zz)}{2} \right\} - 1 \times 2.5 + 11.75 + A$$

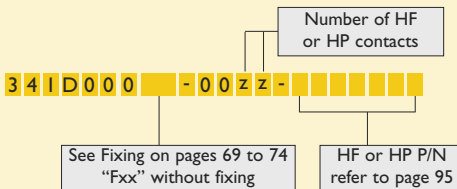
B max. = 87

C = B + 6

90° PCB FOR HP/HF CONTACTS ONLY

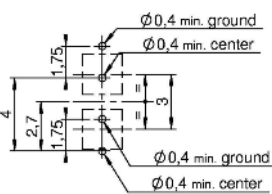


Part numbering :

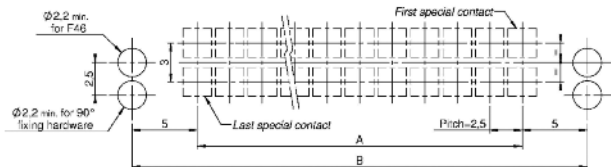
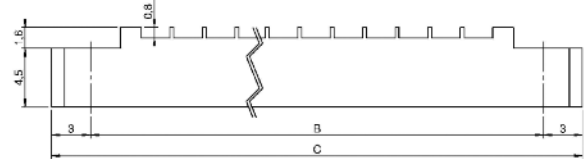
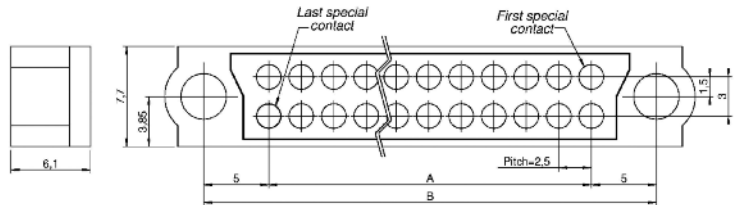
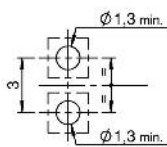


Pattern for special contact :

HF 22-1400-xx PCB Lay-out



HP 22-3400-xx PCB Lay-out



Special contacts min. : 04
max. : 64

$$A = \left(\frac{(zz \times 2.5)}{2} \right) - 2.5$$

B = A + 10

C = B + 6

Refer to dimension table on cover page

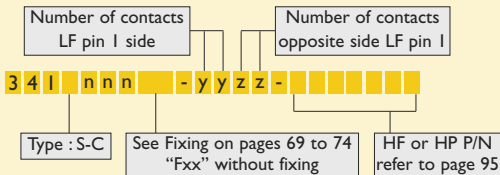
CMM 340

Male mixed-layout

CRIMP

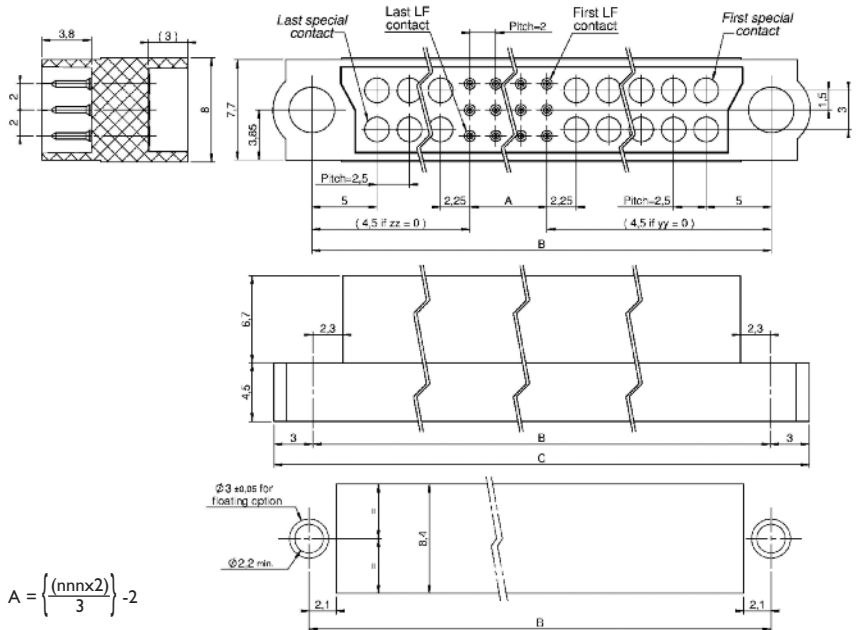
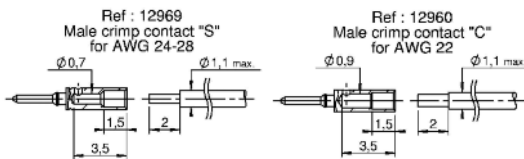


Part numbering :



nnn = number of LF contacts

Type	Gauge
S	24-28
C	22



$$A = \left\{ \frac{(\text{nnn} \times 2)}{3} \right\} - 2$$

if yy and zz ≠ 0 :

$$B = \left\{ \left(\frac{(\text{yy}) + (\text{zz})}{2} \right) - 2 \right\} \times 2,5 + 14,5 + A$$

if yy or zz = 0 :

$$B = \left\{ \left(\frac{(\text{yy}) \text{ or } (\text{zz})}{2} \right) - 1 \right\} \times 2,5 + 11,75 + A$$

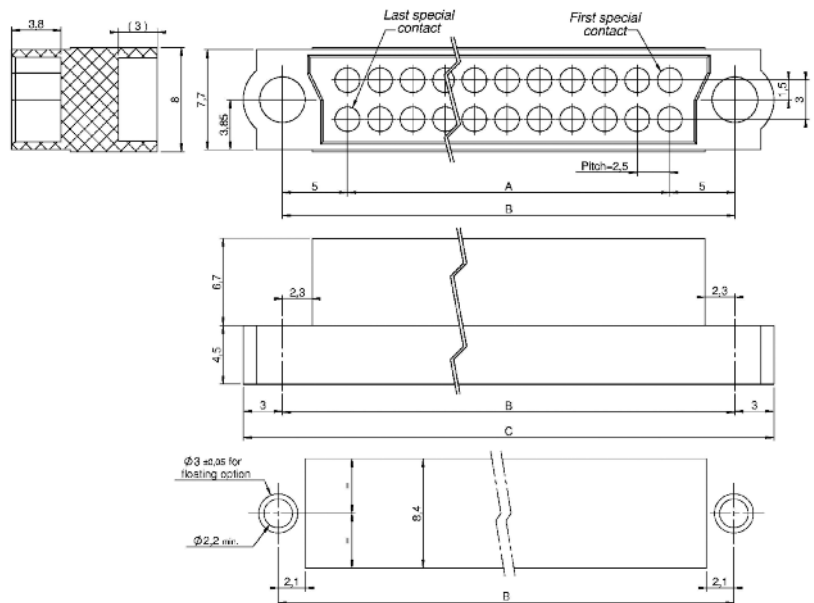
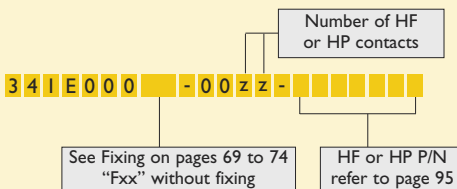
B max. = 87

C = B + 6

CRIMP FOR HP/HF CONTACTS ONLY



Part numbering :



$$A = \left(\frac{(\text{zz} \times 2,5)}{2} \right) - 2,5$$

B = A + 10

C = B + 6

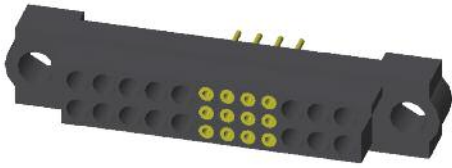
Special contacts min. : 04
max. : 64

Refer to dimension table on cover page

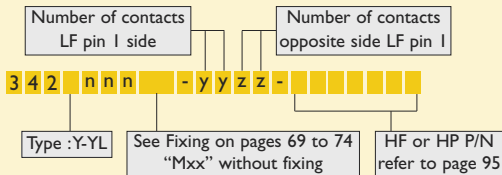
CMM 340

Female mixed-layout

STRAIGHT PCB



Part numbering :

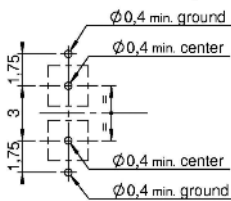


nnn = number of LF contacts

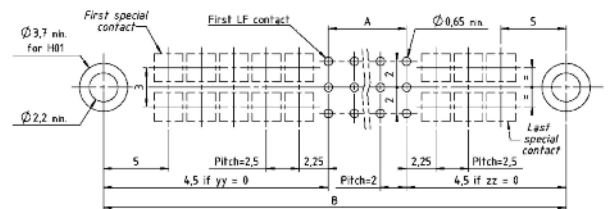
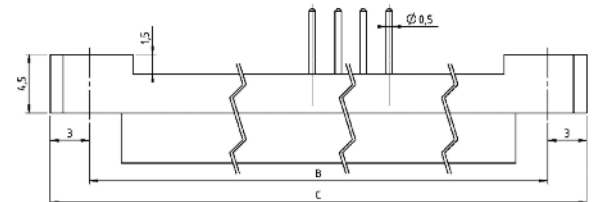
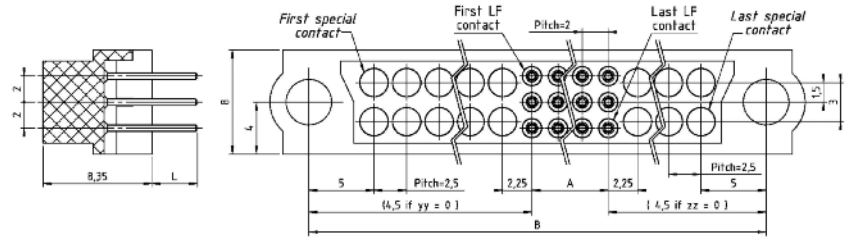
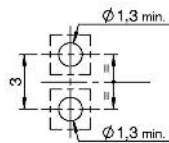
Type	L
Y	3
YL	4,5

Pattern for special contact :

HF 22-2300-xx PCB Lay-out



HP 22-4300-xx PCB Lay-out



$$A = \left\{ \frac{nnn \times 2}{3} \right\} - 2$$

if yy and zz ≠ 0 :

$$B = \left\{ \left(\frac{yy + zz}{2} \right) - 2 \right\} \times 2.5 + 14.5 + A$$

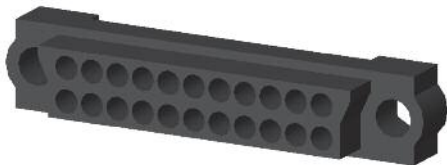
if yy or zz = 0 :

$$B = \left\{ \left(\frac{yy \text{ or } zz}{2} \right) - 1 \right\} \times 2.5 + 11.75 + A$$

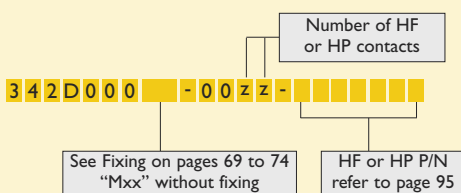
B max. = 87

C = B + 6

STRAIGHT PCB FOR HP/HF CONTACTS ONLY

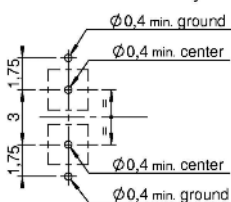


Part numbering :

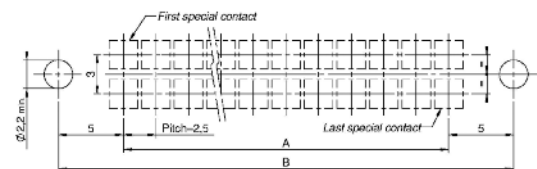
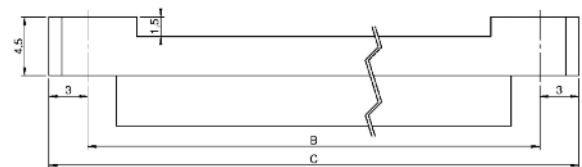
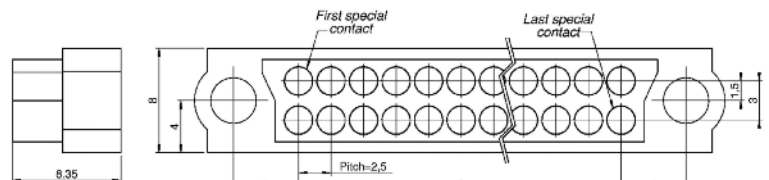
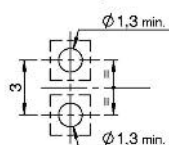


Pattern for special contact :

HF 22-2300-xx PCB Lay-out



HP 22-4300-xx PCB Lay-out



Special contacts min. : 04
max. : 64

$$A = \left(\frac{zz \times 2.5}{2} \right) - 2.5$$

B = A + 10

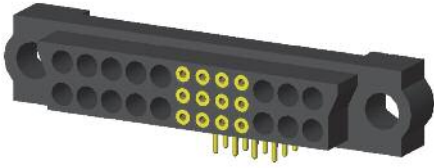
C = B + 6

Refer to dimension table on cover page

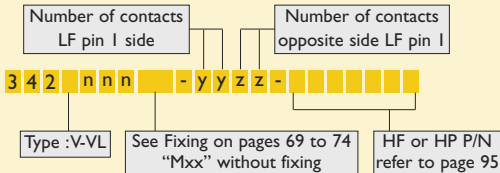
CMM 340

Female mixed-layout

90° PCB



Part numbering :

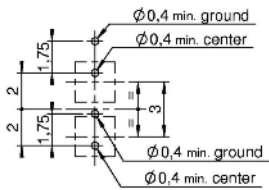


nnn = number of LF contacts

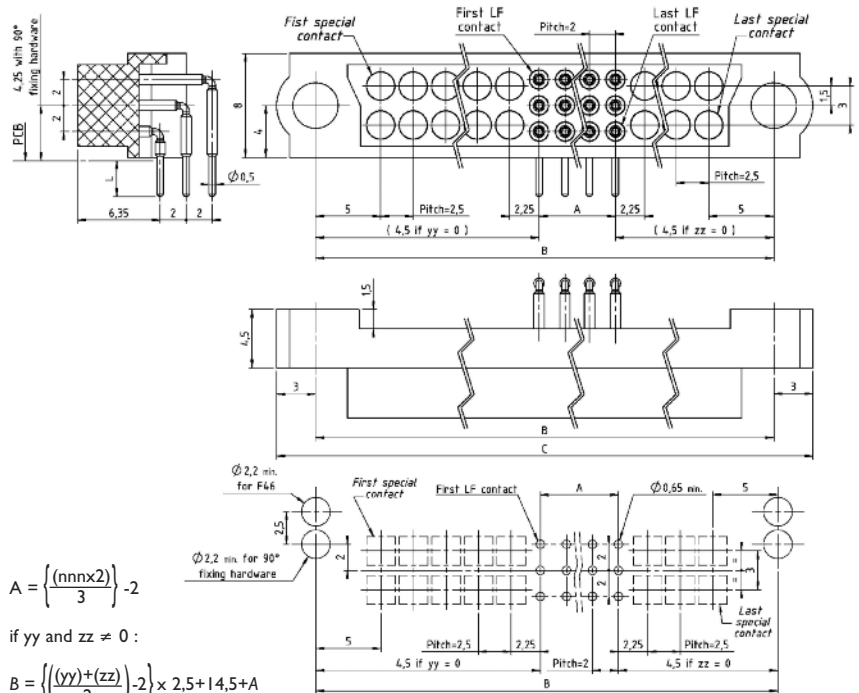
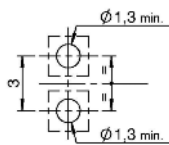
Type	L
V	3
VL	4,5

Pattern for special contact :

HF 22-2400-xx PCB Lay-out



HP 22-4400-xx PCB Lay-out



$$A = \left(\frac{nnn \times 2}{3} \right) - 2$$

if yy and zz \neq 0 :

$$B = \left(\left(\frac{yy + zz}{2} \right) - 2 \right) \times 2.5 + 14.5 + A$$

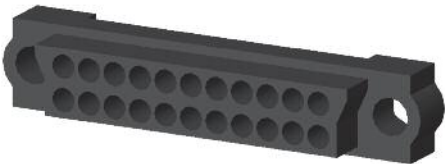
if yy or zz = 0 :

$$B = \left(\left(\frac{yy \text{ or } zz}{2} \right) - 1 \right) \times 2.5 + 11.75 + A$$

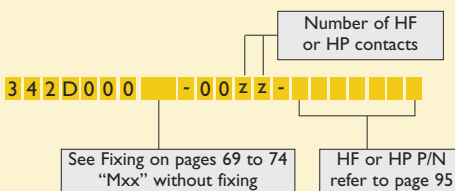
B max. = 87

C = B + 6

90° PCB FOR HP/HF CONTACTS ONLY

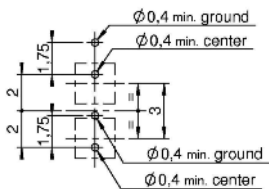


Part numbering :

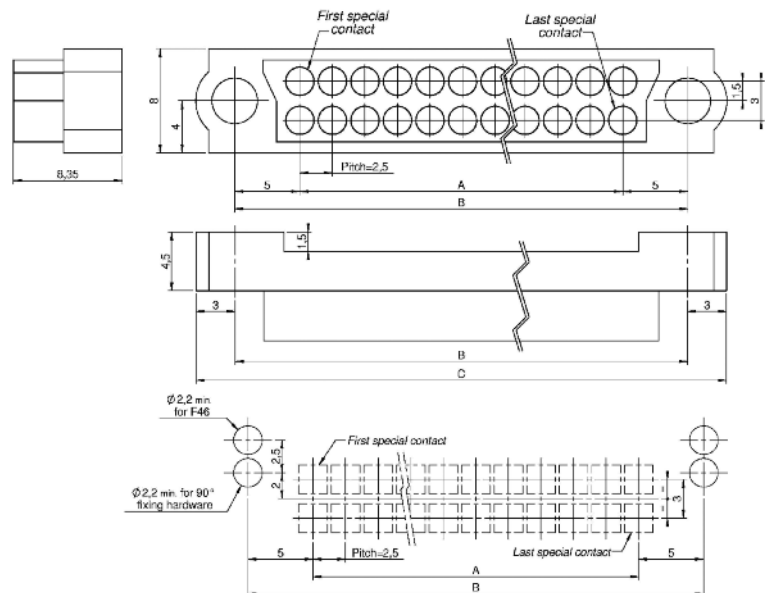
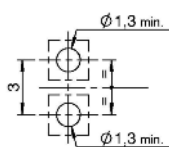


Pattern for special contact :

HF 22-2400-xx PCB Lay-out



HP 22-4400-xx PCB Lay-out



$$A = \left(\frac{zz \times 2.5}{2} \right) - 2.5$$

Special contacts min. : 04
max. : 64

B = A + 10

C = B + 6

Refer to dimension table on cover page

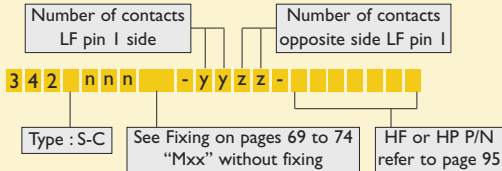
CMM 340

Female mixed-layout

CRIMP

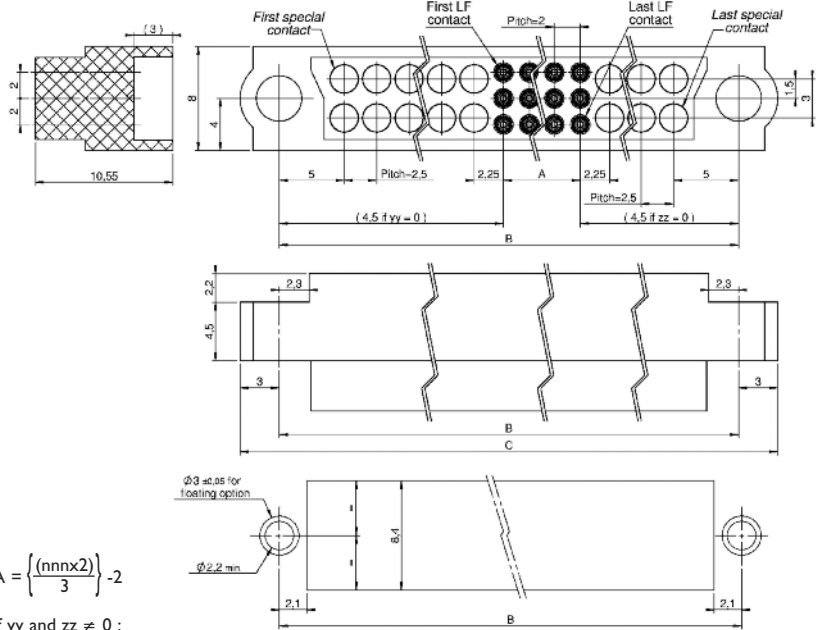
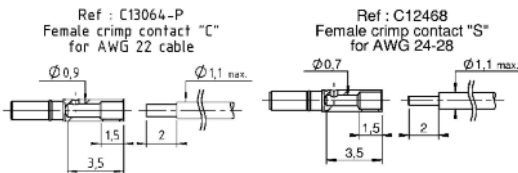


Part numbering :



nnn = number of LF contacts

Type	Gauge
S	24-28
C	22



$$A = \left\{ \frac{(nnn \times 2)}{3} \right\} - 2$$

if yy and zz \neq 0 :

$$B = \left\{ \frac{(yy) + (zz)}{2} \right\} - 2 \times 2.5 + 14.5 + A$$

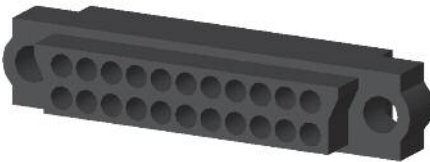
if yy or zz = 0 :

$$B = \left\{ \frac{(yy) \text{ or } (zz)}{2} \right\} - 1 \times 2.5 + 11.75 + A$$

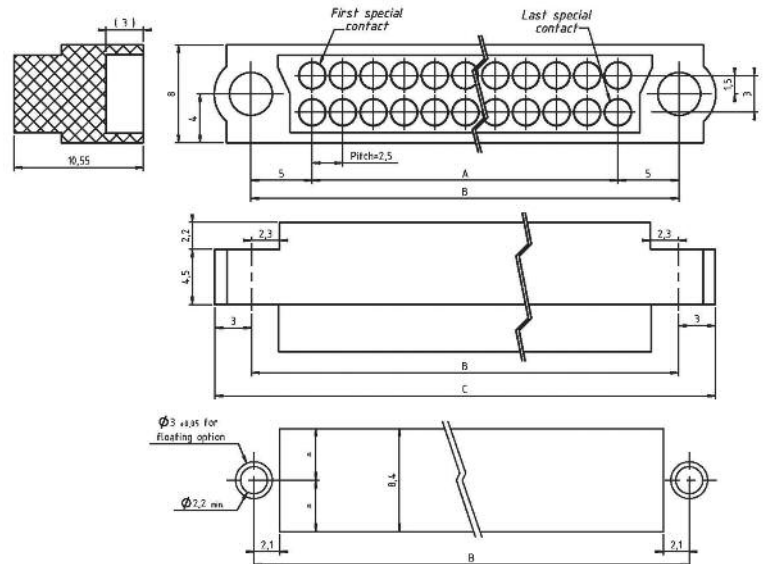
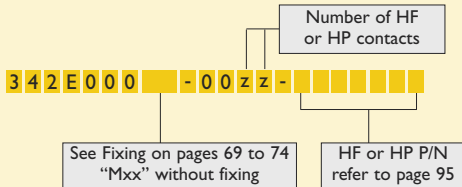
B max. = 87

C = B + 6

CRIMP FOR HP/HF CONTACTS ONLY



Part numbering :



$$A = \left(\frac{zz \times 2.5}{2} \right) - 2.5$$

B = A + 10

C = B + 6

Special contacts min.: 04
max.: 64

Refer to dimension table on cover page

Fixing hardware for CMM SERIES 320/340

P X X X X

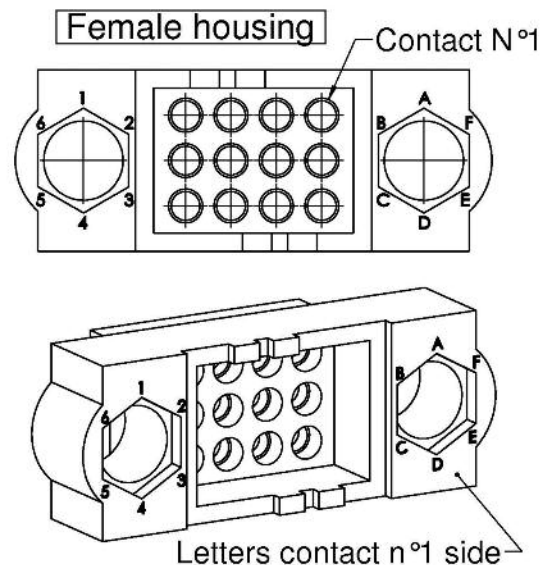
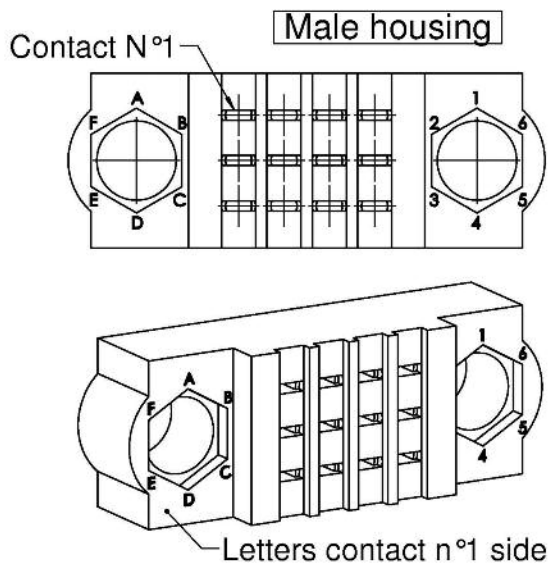
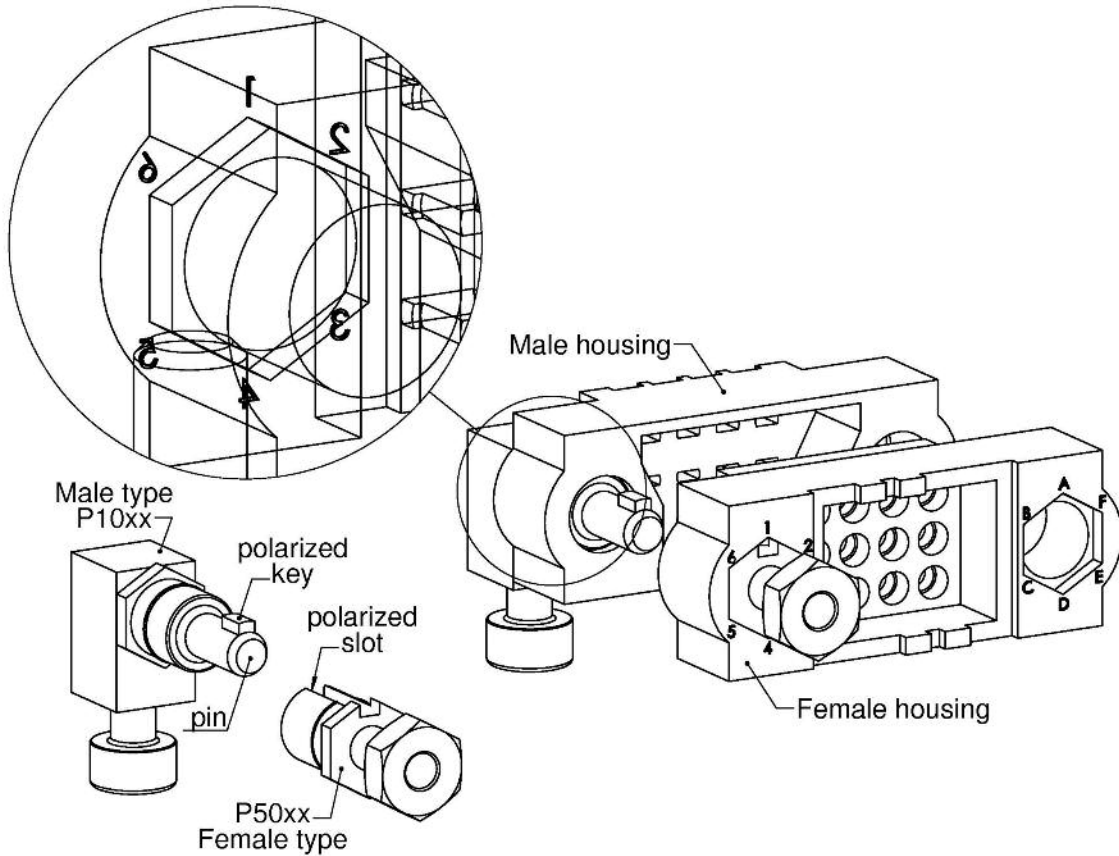
Male : 10 to 49
Female : 50 to 99

Letter code : A to F

Number code : 1 to 6

Letter coding : idem for male and female
Number coding : idem for male and female

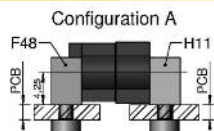
Example : P10A1 mounting with P50A1



Fixing hardware for CMM 320/340

RACK INTERCONNECTION

FEMALE CONNECTORS CMM SERIES 320 & 340 RACK		MALE CONNECTORS CMM SERIES 320 & 340 RACK																		
		Type of contact in connector Type of PCB mount	PCB Contacts										Contacts on cable							
			PCB thickness (mm)	Straight				90°		Straight		90°		Floating	No fixing on PCB					
		0,8 min. 2 max.	0,8 min. 2 max.	1,5 min. 4 max.	0,8 min. 2 max.	1,5 min. 4 max.	0,8 min. 2 max.	1,5 min. 4 max.	4 max.	0,8 min. 2 max.	1,5 min. 4 max.	4 max.								
		Fixing	M38	M38H	M36	M36H	F58	F58H	F59	F59H	F48	H11	M35	M39	F48	H11	M3xx	F40		
PCB Contacts	90° Straight	0,8 min. 2 max.	M35				OK	OK	OK	OK	OK					OK			OK	
			M35H				OK	OK	OK	OK	OK					OK			OK	
		1,5 min. 4 max.	M39				OK	OK	OK	OK	OK					OK			OK	
			M39H				OK	OK	OK	OK	OK					OK			OK	
	4 max.	H11									A					A			OK	
	No fixing on PCB	F40	OK	OK	OK	OK						A	OK	OK			A	OK	OK	
Contacts on cable	Straight	0,8 min. 2 max.	M35				OK	OK	OK	OK	OK								OK	OK
		1,5 min. 4 max.	M39				OK	OK	OK	OK	OK								OK	OK
	90°	4 max.	H11				OK	OK	OK	OK	A								A	OK
			F48	OK	OK	OK	OK						A	OK	OK			A	OK	
	Floating	M3xx					OK	OK	OK	OK	OK								OK	OK
No fixing on PCB	F40	OK	OK	OK	OK							OK	OK	OK				OK	OK	



Recommended Torque : 0,2 N/m



A Card extension

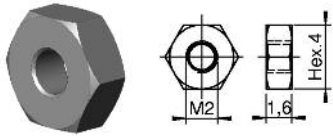
REFERENCE	ASSEMBLY ON PCB	OVERALL DIMENSIONS	RECOMMENDATION
F40	<p>Straight on PCB</p>		<p>F40 : CMM female : Y-YL-S-C-E (D : straight)</p> <p>CMM male : S-C-E</p>
F48	<p>90° on PCB 4 max.</p>		<p>F48 : CMM female : V-VL-S-C-E (D : 90°)</p> <p>CMM male : V-VL-R-S-C-E (D : 90°)</p>
F58	<p>Straight on PCB 0,8 min / 2 max</p>		<p>F58 : CMM male : Y (D : straight)</p>
F58H			<p>F58H : CMM male : Y (D : straight)</p>
F59	<p>Straight on PCB 1,5 min / 4 max</p>		<p>F59 : CMM male : YL (D : straight)</p>
F59H			<p>F59H : CMM male : YL (D : straight)</p>

Make it a habit! Use easy & automatic configurators for CMM micro-connectors single part and mating-half construction

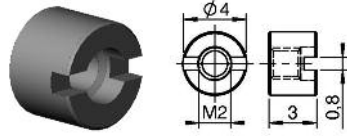
Fixing hardware for CMM 320/340




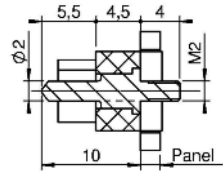


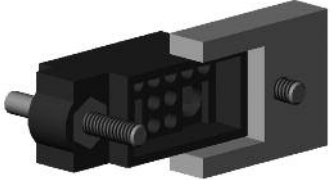
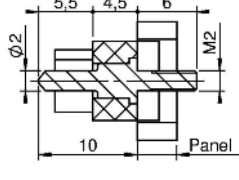


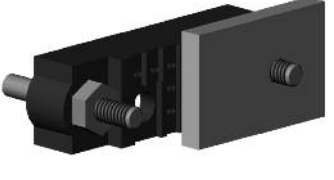
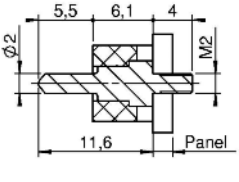



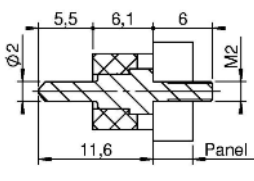

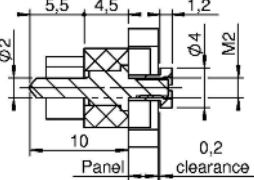
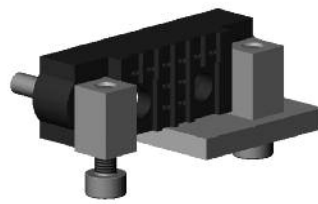
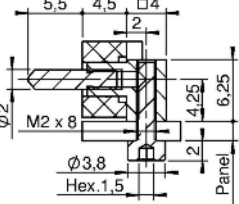
RACK INTERCONNECTION

HEXAGONAL NUT



STANDARD NUT



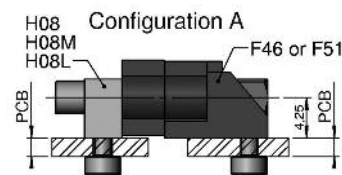
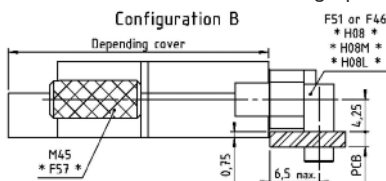
REFERENCE	ASSEMBLY ON PCB	OVERALL DIMENSIONS	RECOMMENDATION
M35  M35H 	Straight on PCB 0,8 min / 2 max 		M35 : CMM female : Y-S-C (D-E : straight) CMM male : S-C (E : straight) M35H : CMM female : Y (D : straight)
M39  M39H 	Straight on PCB 1,5 min / 4 max 		M39 : CMM female : YL-S-C (D-E : straight) CMM male : S-C (E : straight) M39H : CMM female : YL (D : straight)
M38  M38H 	Straight on PCB 0,8 min / 2 max 		M38 : CMM male : Y (D : straight) M38H : CMM male : Y (D : straight)
M36  M36H 	Straight on PCB 1,5 min / 4 max 		M36 : CMM male : YL (D : straight) M36H : CMM male : YL (D : straight)
M3xx xx = (PCB thickness + 0,2 mm) x 10 Example : for 3 mm PCB, the reference is M332 (3 + 0,2) x 10 = 32 xx = 32	Straight on PCB with floating option 		M3xx : CMM female : S-C (E : straight) CMM male : S-C (E : straight)
H11	90° on PCB 4 max. 		H11 : CMM female : V-VL-S-C-E (D : 90°) CMM male : V-VL-R-S-C-E (D : 90°)

Fixing hardware for CMM 320/340

LOCKED INTERCONNECTION

Type of contact in connector		MALE CONNECTORS CMM SERIES 320 & 340 WITH LOCKING																								
		PCB Contacts											Contacts on cable													
		Type of PCB mount		Straight			90°			Card edge with 30 1500-12 HF	No fixing on PCB		Straight			90°			Floating fixing	No fixing on PCB	No fixing on PCB	With cover	With cover			
PCB thickness (mm)	0,8 min. 2 max.	1,5 min. 4 max.	4 max.	1 min. 2 max.	2 min. 3 max.	3 min. 4 max.	0,8 min. 2 max.	1,5 min. 4 max.	4 max.		1 min. 2 max.	2 min. 3 max.	3 min. 4 max.	F4xx	H01	H01C	F41	F57						M45		
Fixing	F42	F42H	F44	F44H	F46	F51	H08	H08M	H08L	F50	H01	H01C	F52	F45	F46	F51	H08	H08M	H08L	F4xx	H01	H01C	F41	F57	M45	
PCB Contacts	Straight	0,8 min. 2 max.	F52					OK	OK	OK			OK	OK				OK	OK	OK		OK	OK			OK
			F52H					OK	OK	OK			OK	OK				OK	OK	OK		OK	OK			OK
		1,5 min. 4 max.	F45					OK	OK	OK			OK	OK				OK	OK	OK		OK	OK			OK
	90°	4 max.	F46					A	A	A			OK	OK				A	A	A		OK	OK			B
			F51						A	A	A			OK	OK				A	A	A		OK	OK		B
		1 min. 2 max.	H08	OK	OK	OK	OK	A	A					OK	OK	A	A				OK			OK	B	
	90°	2 min. 3 max.	H08M	OK	OK	OK	OK	A	A					OK	OK	A	A				OK			OK	B	
			H08L	OK	OK	OK	OK	A	A					OK	OK	A	A				OK			OK	B	
		3 min. 4 max.	H08L	OK	OK	OK	OK	A	A					OK	OK	A	A				OK			OK	B	
	No fixing on PCB	H01	H01	OK	OK	OK	OK	OK	OK		OK			OK	OK	OK	OK				OK			OK	OK	
			H01C	OK	OK	OK	OK	OK	OK		OK			OK	OK	OK	OK				OK			OK	OK	
		F41						OK	OK	OK			OK	OK				OK	OK	OK		OK	OK		OK	
Contacts on cable	Straight	0,8 min. 2 max.	F52					OK	OK	OK			OK	OK				OK	OK	OK		OK	OK			OK
			F45					OK	OK	OK			OK	OK				OK	OK	OK		OK	OK			OK
		4 max.	F46					A	A	A			OK	OK				A	A	A		OK	OK			B
	90°	1 min. 2 max.	H08	OK	OK	OK	OK	A	A					OK	OK	A	A				OK			OK	B	
			H08M	OK	OK	OK	OK	A	A					OK	OK	A	A				OK			OK	B	
		2 min. 3 max.	H08M	OK	OK	OK	OK	A	A					OK	OK	A	A				OK			OK	B	
	90°	3 min. 4 max.	H08L	OK	OK	OK	OK	A	A					OK	OK	A	A				OK			OK	B	
			H08L	OK	OK	OK	OK	A	A					OK	OK	A	A				OK			OK	B	
		Floating fixing	F4xx					OK	OK	OK			OK	OK				OK	OK	OK		OK	OK			OK
	No fixing on PCB	H01	H01	OK	OK	OK	OK	OK	OK		OK			OK	OK	OK	OK				OK			OK	OK	
			H01C	OK	OK	OK	OK	OK	OK		OK			OK	OK	OK	OK				OK			OK	OK	
		F41						OK	OK	OK			OK	OK				OK	OK	OK		OK	OK		OK	
With cover	F57						B	B	B			OK	OK				B	B	B		OK			OK		
With cover	M45	OK	OK	OK	OK	B	B		OK			OK	OK	B	B				OK			OK	OK			

Make it a habit! Use easy & automatic configurators for CMM micro-connectors single part and mating-half construction



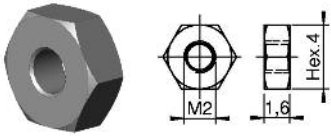
CMM 320/340 MALE AND FEMALE THREADED FIXING HARDWARE

REFERENCE	ASSEMBLY ON PCB	OVERALL DIMENSIONS	RECOMMENDATION
H01 H01C	<p>Straight on PCB</p>		<p>H01/H01C : CMM female : Y-YL-S-C-E (D : straight)</p> <p>CMM male : Y-YL-S-C-E (D : straight)</p>
H08 PCB : 1 min. / 2 max. H08M PCB : 2 min. / 3 max. H08L PCB : 3 min. / 4 max.	<p>90° on PCB</p>		<p>H08/H08M/H08L : CMM female : V-VL-S-C-E (D : 90°)</p> <p>CMM male : V-VL-R-S-C-E (D : 90°)</p>

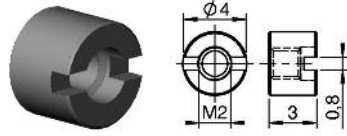
Fixing hardware for CMM 320/340

LOCKED INTERCONNECTION

HEXAGONAL NUT



STANDARD NUT

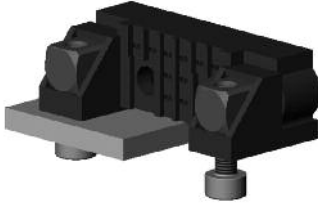
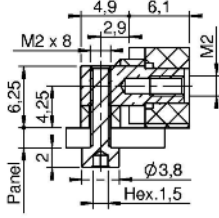
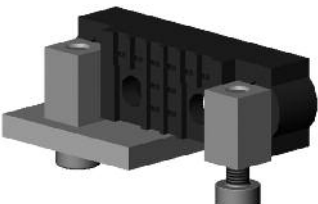
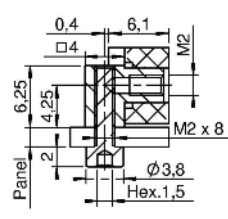

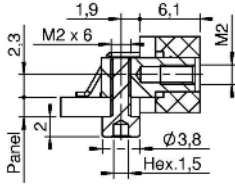

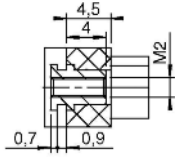


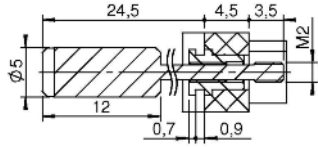



Recommended Torque : 0,2 N/m

REFERENCE	ASSEMBLY ON PCB	OVERALL DIMENSIONS	RECOMMENDATION												
F4XX xx = (PCB thickness + 0,2 mm) x 10 Example : for 3 mm PCB, the reference is F432 (3 + 0,2) x 10 = 32 xx = 32	Straight on PCB floating option 		F4XX : CMM female : S-C (E : straight) CMM male : S-C (E : straight)												
F4I	Straight on PCB 		F4I : CMM female : Y-YL-S-C-E (D : straight) CMM male : S-C-E												
F52 	Straight on PCB 0,8 min / 2 max 		F52 : CMM female : Y-S-C (D-E : straight) CMM male : S-C (E : straight) F52H : CMM female : Y (D : straight)												
F52H 				F45 	Straight on PCB 1,5 min / 4 max 		F45 : CMM female : YL-S-C (D-E : straight) CMM male : S-C (E : straight) F45H : CMM female : YL (D : straight)	F45H 	F42 	Straight on PCB 0,8 min / 2 max 		F42 : CMM male : Y (D : straight) F42H : CMM male : Y (D : straight)	F42H 	F44 	Straight on PCB 1,5 min / 4 max
F45 	Straight on PCB 1,5 min / 4 max 		F45 : CMM female : YL-S-C (D-E : straight) CMM male : S-C (E : straight) F45H : CMM female : YL (D : straight)												
F45H 				F42 	Straight on PCB 0,8 min / 2 max 		F42 : CMM male : Y (D : straight) F42H : CMM male : Y (D : straight)	F42H 	F44 	Straight on PCB 1,5 min / 4 max 		F44 : CMM male : YL (D : straight) F44H : CMM male : YL (D : straight)	F44H 		
F42 	Straight on PCB 0,8 min / 2 max 		F42 : CMM male : Y (D : straight) F42H : CMM male : Y (D : straight)												
F42H 				F44 	Straight on PCB 1,5 min / 4 max 		F44 : CMM male : YL (D : straight) F44H : CMM male : YL (D : straight)	F44H 							
F44 	Straight on PCB 1,5 min / 4 max 		F44 : CMM male : YL (D : straight) F44H : CMM male : YL (D : straight)												
F44H 															

Fixing for CMM 320/340

CMM 320/340 MALE AND FEMALE TAPPED FIXING HARDWARE

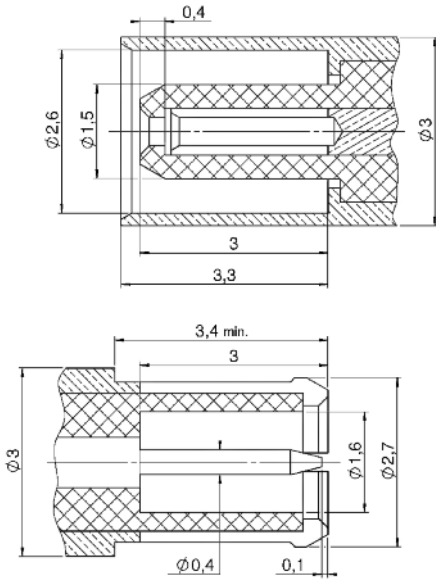
REFERENCE	ASSEMBLY ON PCB	OVERALL DIMENSIONS	RECOMMENDATION
F46	90° on PCB 4 max. 		F46 : CMM female : V-VL-S-C-E (D : 90°) CMM male : V-VL-R-S-C-E (D : 90°)
F51	90° on PCB 4 max. 		F51 : CMM female : V-VL-S-C-E (D : 90°) CMM male : V-VL-R-S-C-E (D : 90°)
F50	90° on PCB 4 max. 		F50 : Card edge LF contact or mixed
F57	Cover option only 		Male and female S-C (E : straight) 
M45	Cover option only 		Male and female S-C (E : straight) 

HF : High Frequency contacts series 30

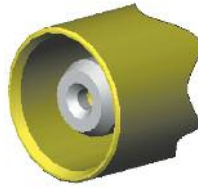
HP : High Power contacts series 30

FOR CMM 220 AND 320

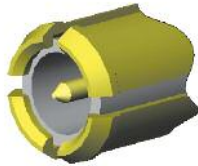
INSERTION



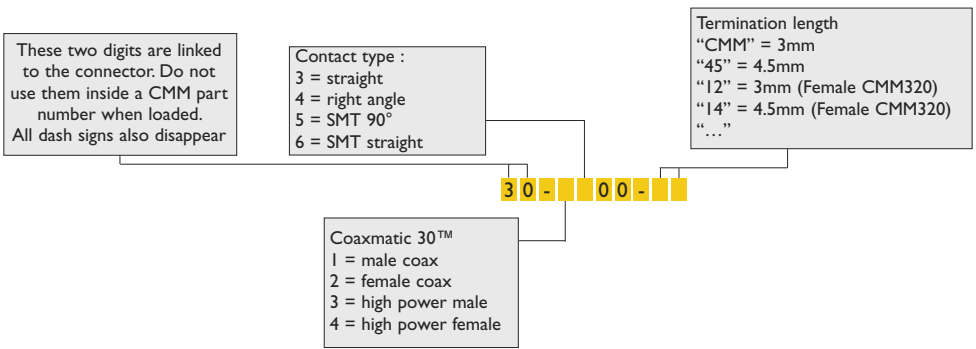
HF female contact insertion



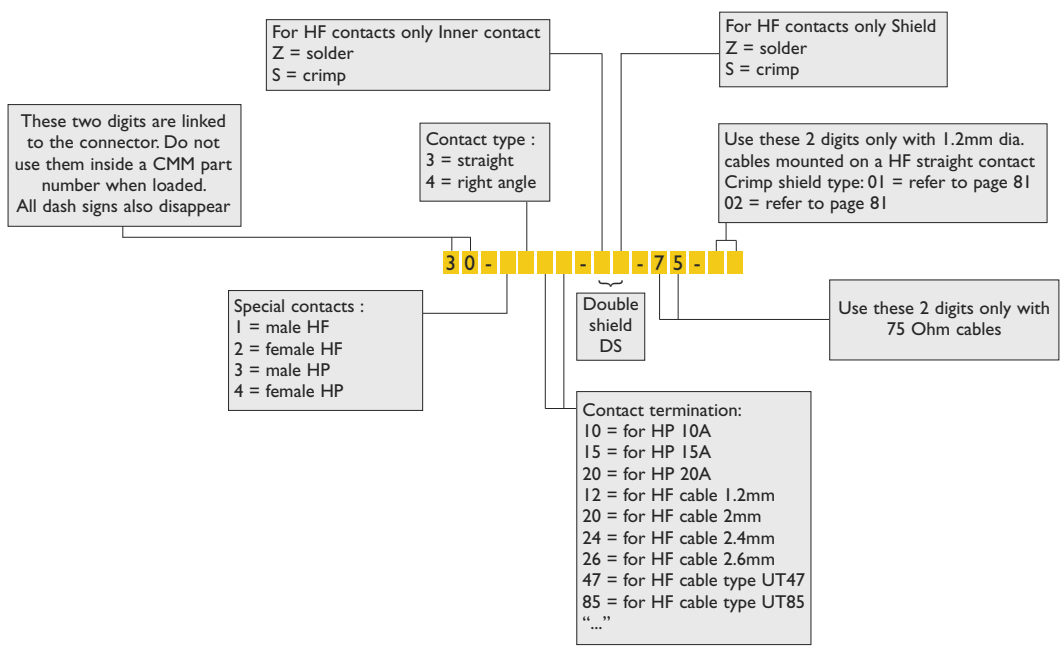
HF male contact insertion



PART NUMBERING FOR PCB HF & HP SPECIAL CONTACTS

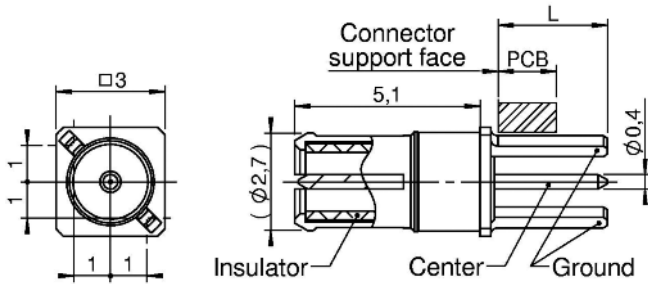


PART NUMBERING FOR HF & HP SPECIAL CONTACTS ON-CABLE

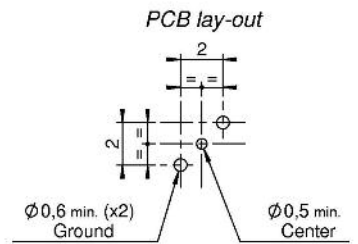
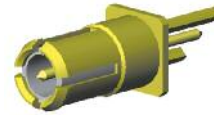


HF : High Frequency contact series 30

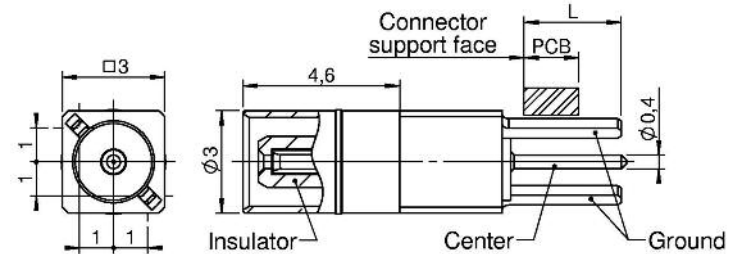
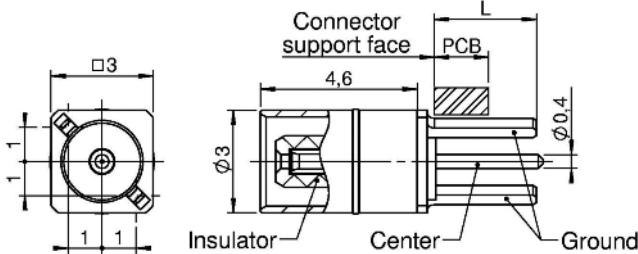
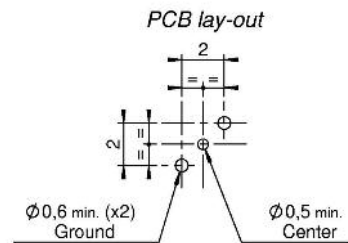
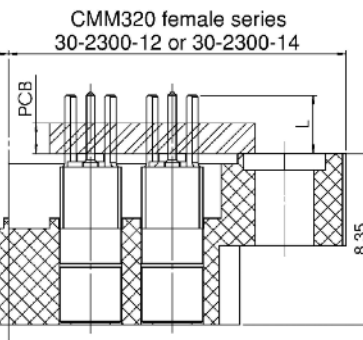
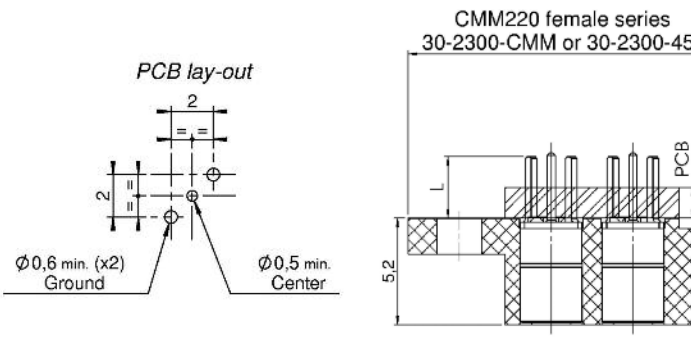
MALE STRAIGHT ON PCB P/N 30-1300-xx



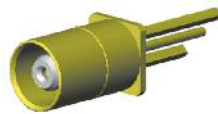
Loaded	Length L
I300CMM	3 mm
I30045	4,5 mm



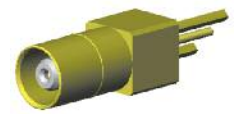
FEMALE STRAIGHT ON PCB P/N 30-2300-xx



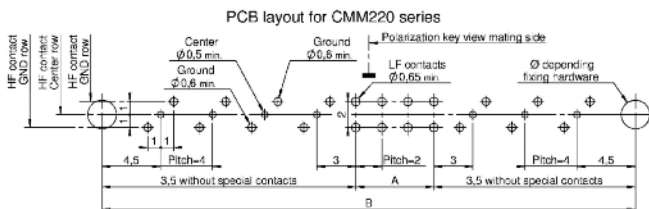
Loaded	Length L
2300CMM	3 mm
230045	4,5 mm



Loaded	Length L
230012	3 mm
230014	4,5 mm



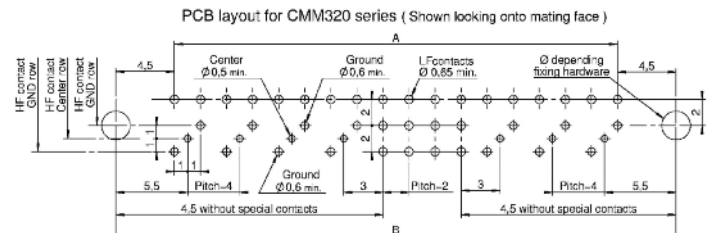
PCB LAYOUT 30-1300-xx & 30-2300-xx



$$A = nn - 2$$

$$B = ((yy + zz) \times 4) + A + 7$$

$$B \text{ max.} = 65 \text{ mm}$$



$$A = \left[\frac{((yy + zz) \times 4 + nn) \times 2}{3} \right] - 2$$

$$B = A + 9$$

$$B \text{ max.} = 87$$

