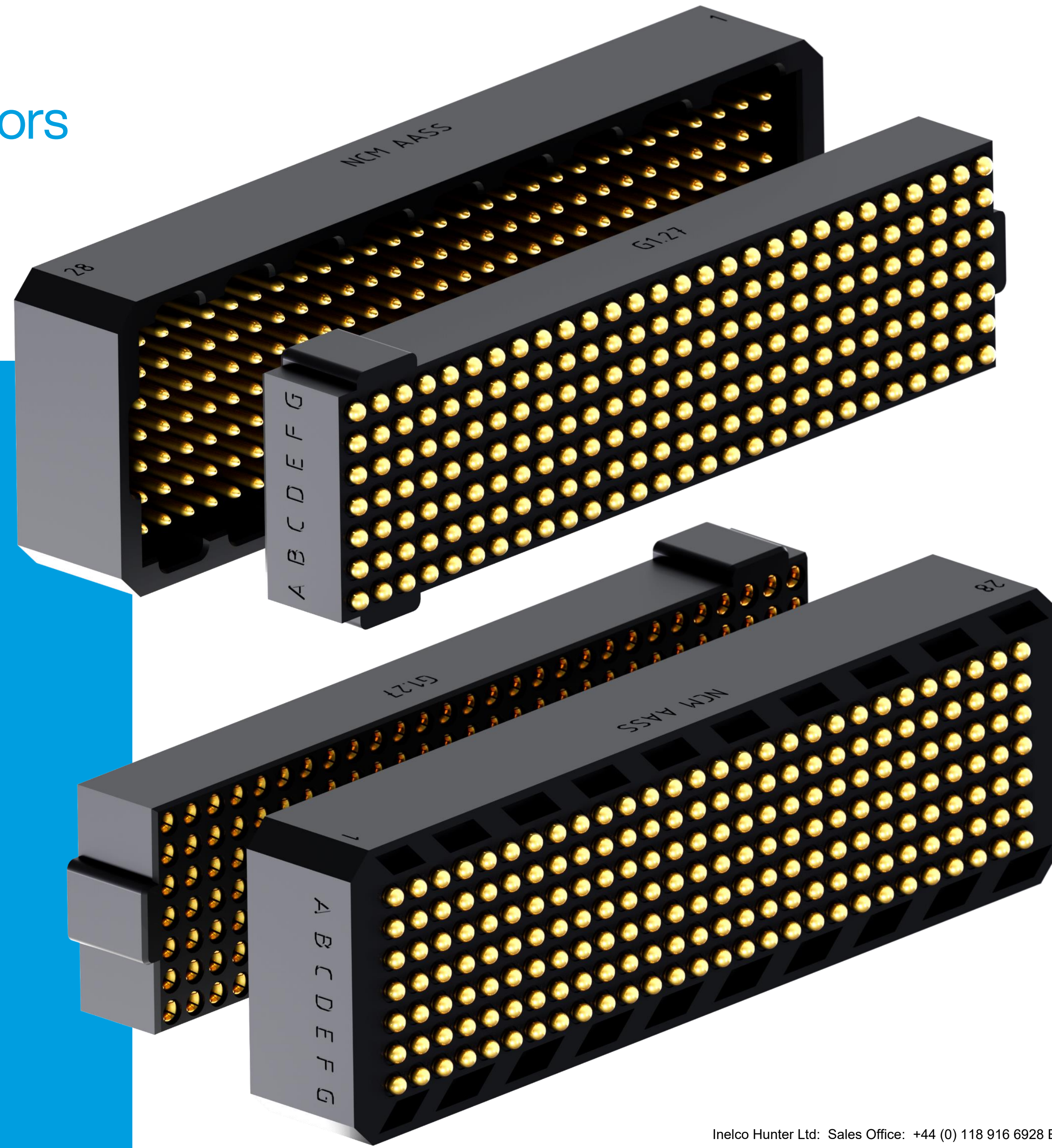


MATR'YX

High density BGA board to board connectors

MATR'YX

Male and female connectors



- Board-to-board connector
- High density - over 70 contacts per cm²
- High speed 10 Gbps / 12.5 GHz - XFI compliance (To be confirmed)
- Stack height: 5mm to 14mm
- Nominal contacts overlapping 1.75mm
- 49 to 301 contacts - every 21 contacts
- Lead free BGA termination - 1mm pitch
- REACH/RoHS compliance
- ITAR free

Technical data

Under qualification



Material

- Insulator: High Temp. Liquid Crystal Polymer (LCP)
- Contact: copper alloy
- Plating: Ni 1.27 μ + Au 0.8 μ mini (options: Au 1.27 μ mini)
- Lead free solder ball $\varnothing$ 600 μ : 96.55n/3.0Ag/0.5Cu (SAC305)

Electrical

- Withstanding voltage: 500 Vrms
- Withstanding voltage at 50 000 ft: 50 Vrms
- Currently capacity 1A at 25°C 0.5A at 85°C
- Contact resistance 10m Ω max. (at 1A)
- Insulation resistance 1G Ω min.

Environmental

- Vibration: 30 gRMS / 5 to 2000Hz (0.46 g2/hz)
- Temperature cycling: -55°C / +125°C
- Rapid temperature variation: 1000 cycles -40°C / +100° C (10°C / min)
- Humidity resistance 10 cycles 24h 65°C / >95% RH

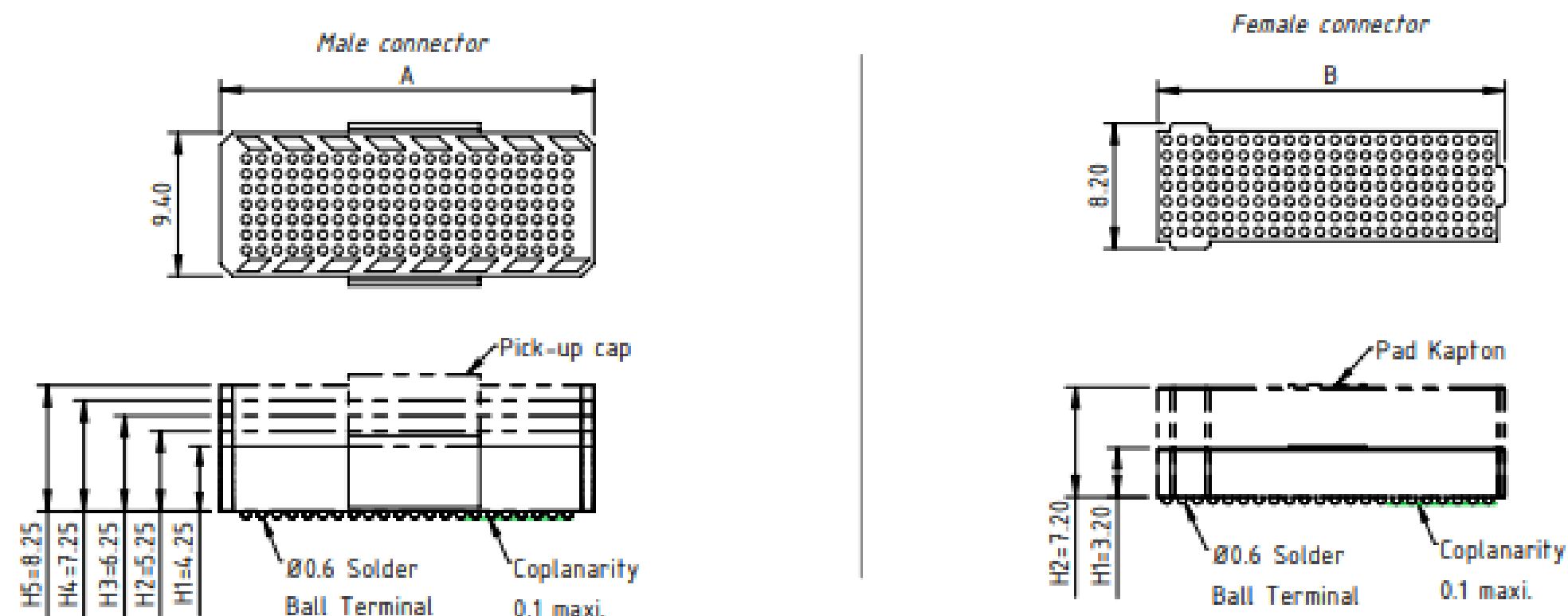
Mechanical

- Connector mating force: 0.6N max per contact
- Connector unmating force: 0.1N max per contact (30N for 300 contacts)
- Durability: 100 cycles

Others

- Underfill process combability

Dimensional information (mm)



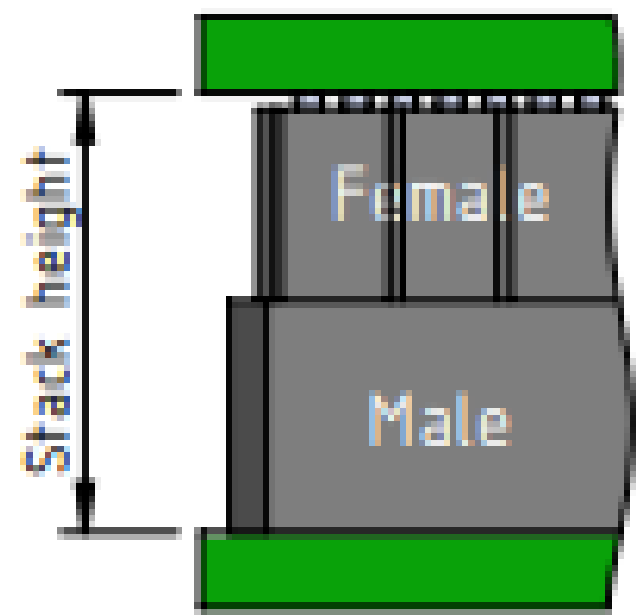
Contact number (mm)	049	070	091	112	133	154	175
A	9.4	12.4	15.4	18.4	21.4	24.4	27.4
B	7.7	10.7	13.7	16.7	19.7	22.4	25.7

Contact number (mm)	196	217	238	259	280	301
A	30.4	33.4	36.4	39.4	42.4	45.4
B	28.7	31.7	34.7	37.7	40.7	43.7

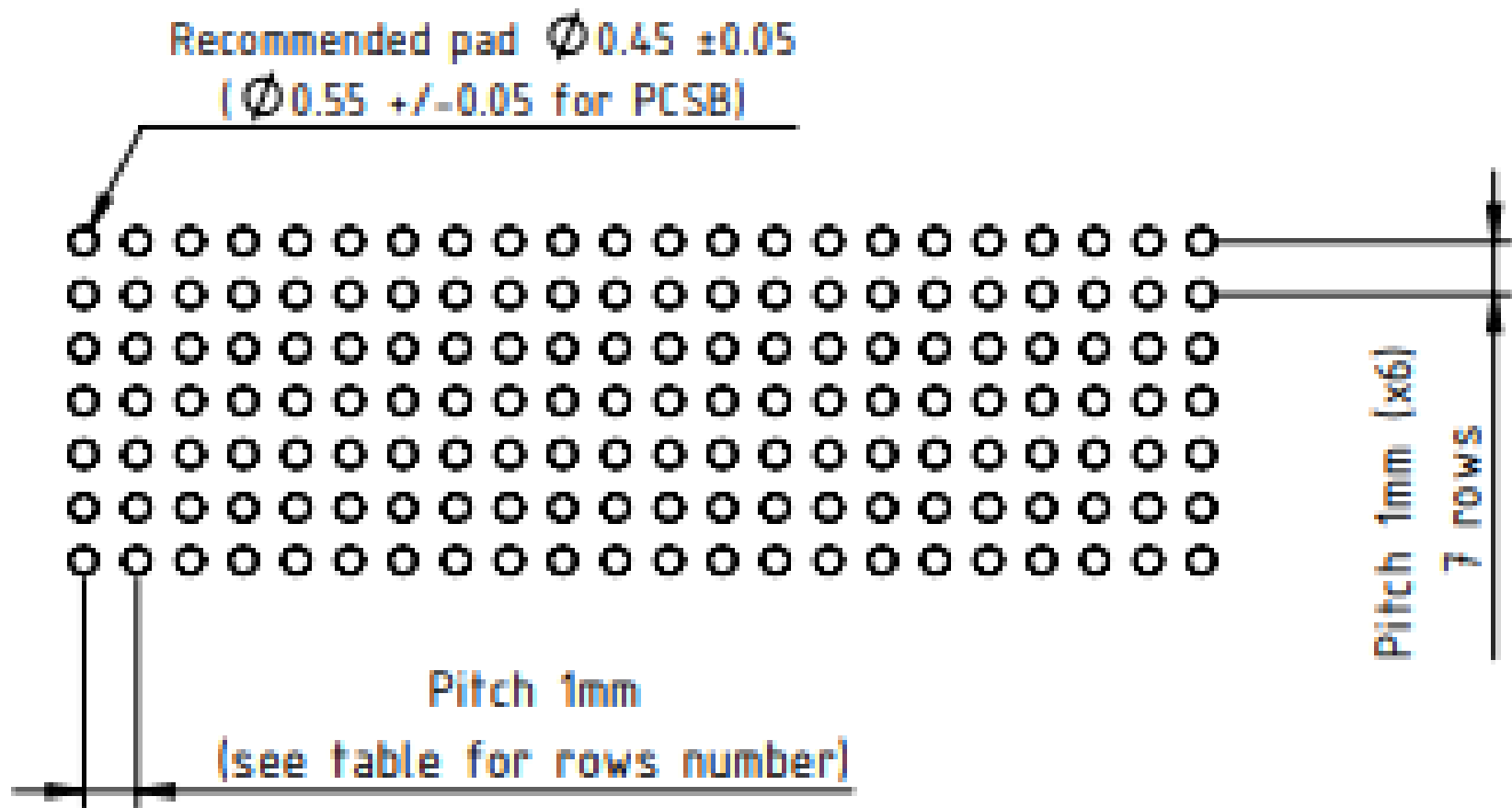
Male/Female height connectors combination

For your stacking height

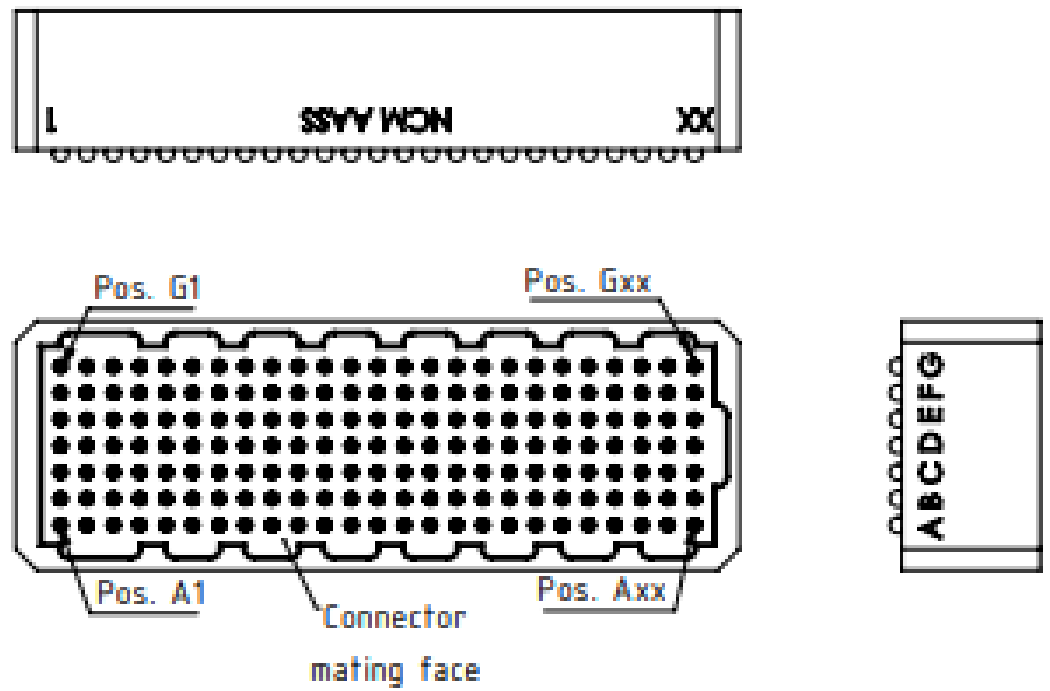
Male / Female Combination	Male connector	H1	H2	H3	H4	H5	H1	H2	H3	H4	H5	Nominal contact overlap
	Female connector	H1					H2					
	Stack height mini (fully mated)	5mm	6mm	7mm	8mm	9mm	10mm	11mm	12mm	13mm		
	Stack height max	6mm	7mm	8mm	9mm	10mm	11mm	12mm	13mm	14mm		



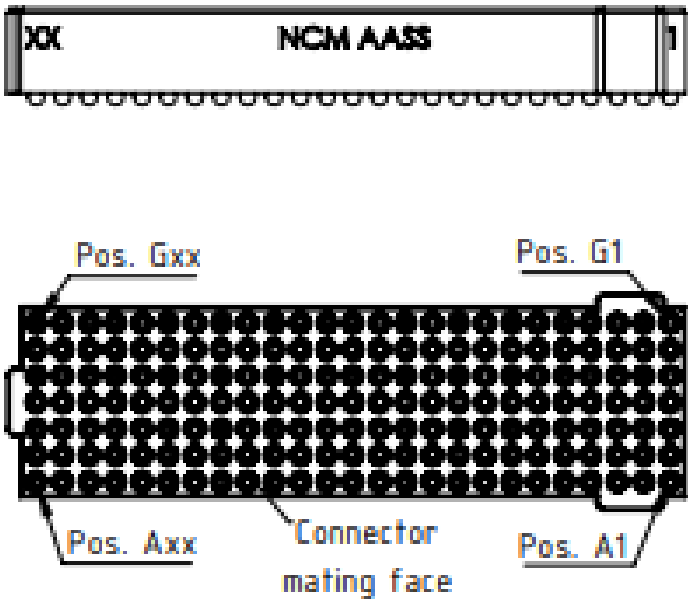
Standard generic footprint & contact position number



Male connector:
C21330-Hx-nnn-Gy.yy



Female connector:
C21331-Hx-nnn-Gy.yy



Contact number(nnn)

Rowsnnumbers-XX

049	070	091	112	133	154	175
7x7	7x10	7x13	7x16	7x19	7x22	7x25
196	217	238	259	280	301	
7x28	7x31	7x34	7x37	7x40	7x43	

Part numbering

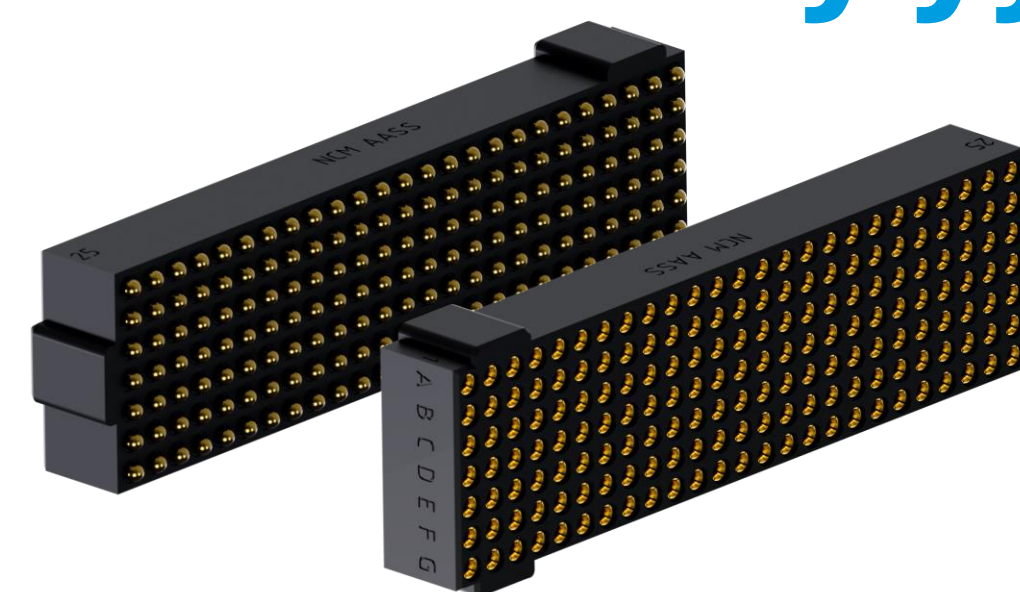
Male connector:

MYX1-Hx-nnn-Gy.yy



Female connector:

MYX2-Hx-nnn-Gy.yy



Part Number

- **Hx** connector height H1/H2/H3/H4/H5 (see previous slide)
- **nnn** number of contact (see previous slide)
- **Gy.yy** gold plating thickness, G0.8 or G1.27

Towards a complete Matr'YX board to board range

Development goal of Nicomatic offer



Current Developments

MYX(x)-H1-301-Gy.yy
MYX1-H5-301-Gy.yy
MYX2-H2-301-Gy.yy

Pre production process
Q1 2024

(x) Plug and Socket

MYX(x)-H1- (49 & 217)-Gy.yy
MYX1-H5- (49 & 217)-Gy.yy
MYX2-H2- (49 & 217)-Gy.yy

Pre production process
Q3 2024

MYX1-H2-(49 & 217 & 301)-Gy.yy
MYX1-H3-(49 & 217 & 301)-Gy.yy
MYX1-H4-(49 & 217 & 301)-Gy.yy

Pre production process
Q4 2024

Full range on request

From 2025
Production process

