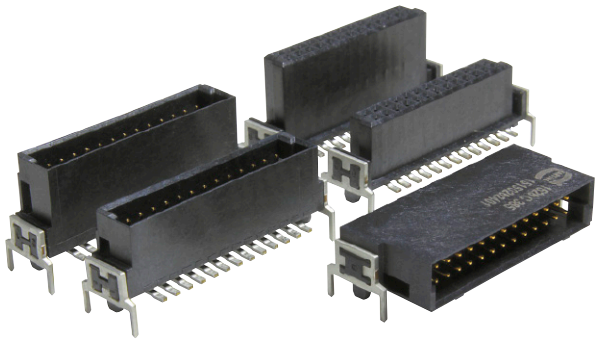


har-flex® THR

Description

- THR stands for Through Hole Reflow and describes the termination technique of the hold downs, positioned on both sides of the connector
- The *har*-flex® THR combines the advantages of robust through hole solder connections with the automated processing features of SMD components
- These connectors are tailored for miniaturised and mechanically stressed applications

Technical characteristics

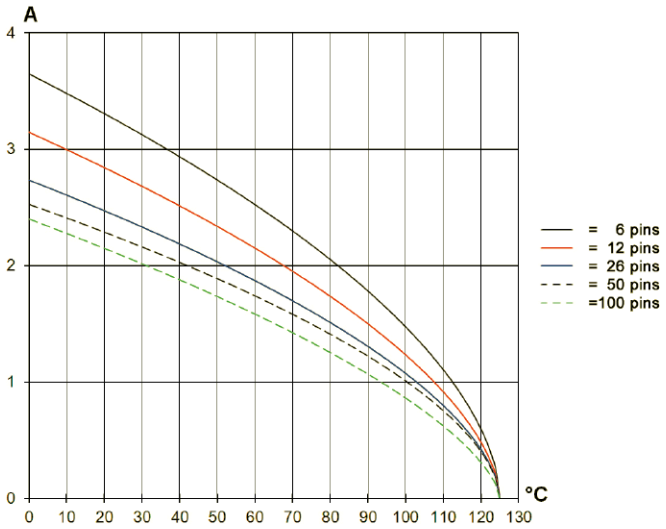
Number of contacts	6 … 100
Connector pitch	1.27 mm x 1.27 mm [0.050'' x 0.050'']
Mating cycles	≥ 500, acc. to performance level 1
Working temperature range	
for connectors:	– 55 °C … + 125 °C
The higher temperature limit includes the local ambient and heating effects of the contacts under load	
Temperature during reflow soldering (acc. to ECA/IPC/JEDEC J-STD-075 Level PSL R0)	min. 150 s > 217 °C min. 30 s > 240 °C
Electrical termination	
Contacts	SMT (Surface Mount Technology)
Hold downs	THR (Through Hole Reflow)
Materials	
Moulding material	LCP
UL approval	UL 94-V0
Contacts base material	Copper alloy
Contact surface	
Mating side Board connectors	Au over PdNi
Termination side Board connectors (SMT)	Sn

Technical characteristics

Current carrying capacity acc. to IEC 60512-5-2

The current carrying capacity is limited by maximum temperature of materials for inserts and contacts including terminals. The current capacity-curve is valid for continuous, not interrupted current-loaded contacts of connectors when simultaneous power on all contacts is given, without exceeding the maximum temperature.

Control and test procedures according to DIN IEC 60512-5-2.



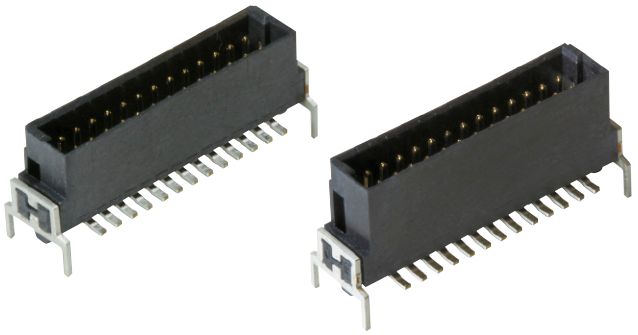
Derating curve at I_{max} * 0.8 (IEC 60512-5-2)

Working voltage acc. to IEC 60664-1

The working voltage depends on user specific operational conditions. Depending on the installation category, the degree of pollution and the entire electrical environment, the working voltage is different. The standard IEC 60664-1 specifies, in general, the minimum insulation distances for equipment. But it can also be used to determine the maximum working voltage with given requirements.

The following table shows the most common conditions applicable for the *har*-flex® connectors and exemplary calculations for the working voltage. For installation category, degree of pollution and other requirements which are not shown in the table we refer to the IEC 60664-1.

Clearance / Creepage distance	0.4 mm			
CTI-Value	< 400			
Isolation group	III a/b			
Electrical field type	Case A (Inhomogeneous field)		Case B (Homogeneous field)	
Installation category	I	II	I	II
Degree of pollution	1	1	1	1
Working voltage max.	**150 V**	**100 V**	**150 V**	**150 V**



Male connectors, straight, with robust THR hold downs

Identification	No. of contacts	Part number
Male connector, straight, with robust THR hold downs, stacking heights 1.75 / 3.25 mm	6	15 1 . 006 2401 . . .
	12	15 1 . 012 2401 . . .
	16	15 1 . 016 2401 . . .
	20	15 1 . 020 2401 . . .
	26	15 1 . 026 2401 . . .
	32	15 1 . 032 2401 . . .
	40	15 1 . 040 2401 . . .
	50	15 1 . 050 2401 . . .
	68	15 1 . 068 2401 . . .
	80	15 1 . 080 2401 . . .
	100	15 1 . 100 2401 . . .

Dimensions in mm

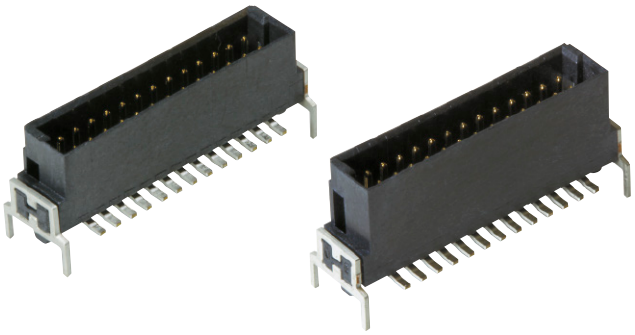
B	C	D	E	F	G	H
6.96	8.89	5.76	4.76	6.56	1.05	8.06
10.77	12.70	9.57	8.57	10.37	2.96	11.87
13.31	15.24	12.11	11.11	12.91	4.23	14.41
15.85	17.78	14.65	13.65	15.45	5.50	16.95
19.66	21.59	18.46	17.46	19.26	7.40	20.76
23.47	25.40	22.27	21.27	23.07	9.31	24.57
28.55	30.48	27.35	26.35	28.15	11.85	29.65
34.90	36.83	33.70	32.70	34.50	15.02	36.00
46.33	48.26	45.13	44.13	45.93	20.74	47.43
53.95	55.88	52.75	51.75	53.55	24.55	55.14
66.65	68.58	65.45	64.45	66.25	30.90	67.75

Please insert digit for stacking height

1.75 mm ▶ 1
3.25 mm ▶ 2

Further number of contacts between 6 and 100 and further performance levels are available on request.

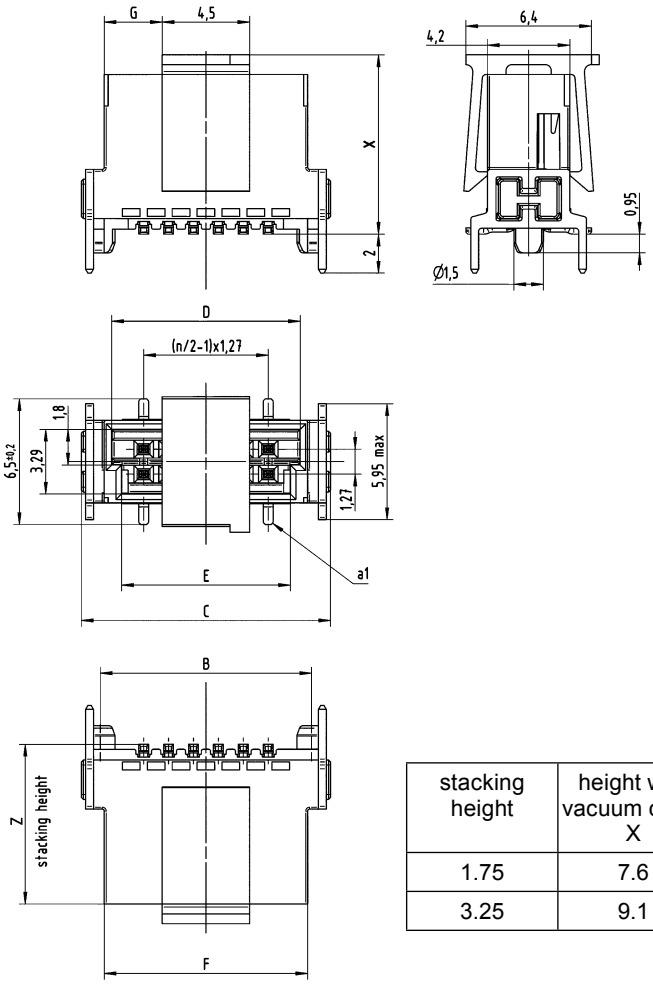
333 000 for samples
for 220 pieces on reel



Male connectors, straight,
with robust THR hold downs

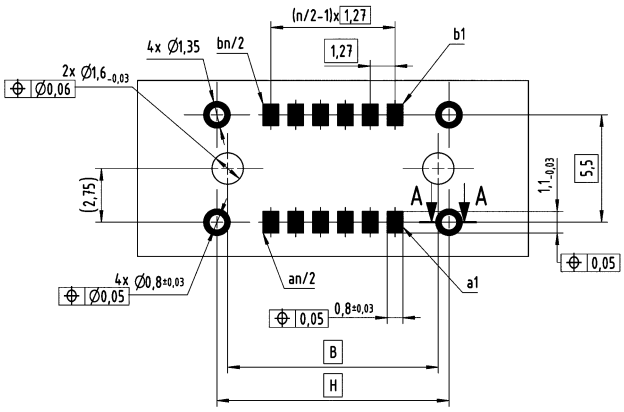
Identification	Drawing	Dimensions in mm

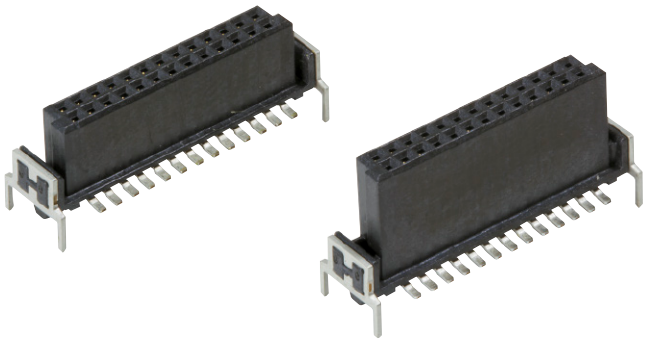
Dimensions



stacking height	height with vacuum cover X	unmated height Z
1.75	7.6	6.6
3.25	9.1	8.1

PCB layout





Female connectors, straight, with robust THR hold downs

Identification	No. of contacts	Part number
Female connector, straight, with robust THR hold downs, stacking heights 6.25 / 9.05 mm	6	15 2 . 006 2401 . . .
	12	15 2 . 012 2401 . . .
	16	15 2 . 016 2401 . . .
	20	15 2 . 020 2401 . . .
	26	15 2 . 026 2401 . . .
	32	15 2 . 032 2401 . . .
	40	15 2 . 040 2401 . . .
	50	15 2 . 050 2401 . . .
	68	15 2 . 068 2401 . . .
	80	15 2 . 080 2401 . . .
	100	15 2 . 100 2401 . . .

Dimensions in mm

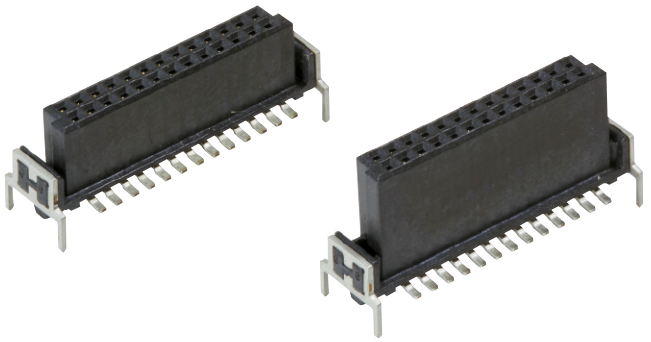
A	B	C	D	E	G	H
2.54	6.96	8.89	5.56	4.56	1.19	8.06
6.35	10.77	12.70	9.37	8.37	2.46	11.87
8.89	13.31	15.24	11.91	10.91	3.73	14.41
11.43	15.85	17.78	14.45	13.45	5.00	16.95
15.24	19.66	21.59	18.26	17.26	7.54	20.76
19.05	23.47	25.40	22.07	21.07	8.81	24.57
24.13	28.55	30.48	27.15	26.15	11.35	29.65
30.48	34.90	36.83	33.50	32.50	15.16	36.00
41.91	46.33	48.26	44.93	43.93	20.24	47.43
49.53	53.95	55.88	52.55	51.55	24.05	55.14
62.23	66.65	68.58	65.25	64.25	30.40	67.75

Please insert digit for stacking height

6.25 mm ▶ 1
9.05 mm ▶ 2

Further number of contacts between 6 and 100 and further performance levels are available on request.

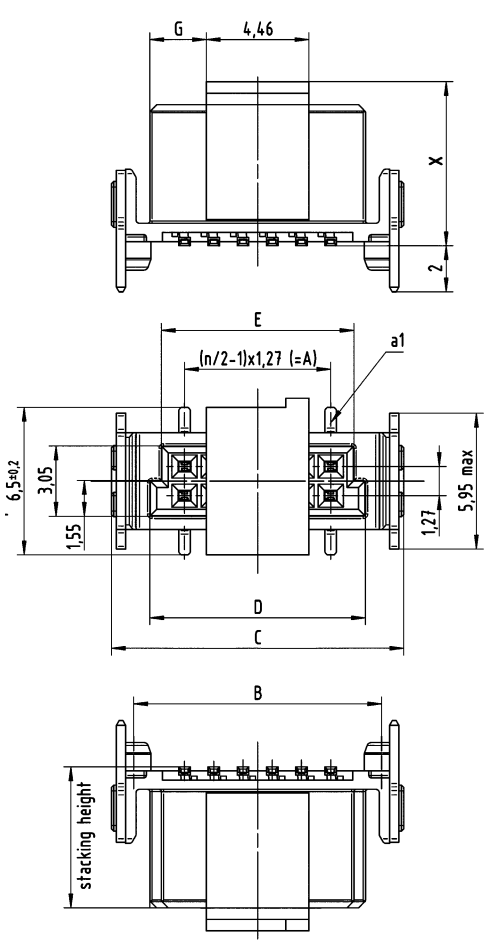
333 000 for samples
for 220 pieces on reel



Female connectors, straight,
with robust THR hold downs

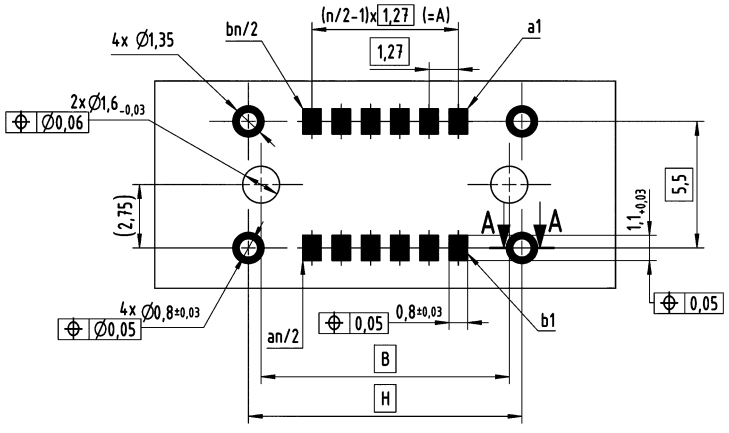
Identification	Drawing	Dimensions in mm

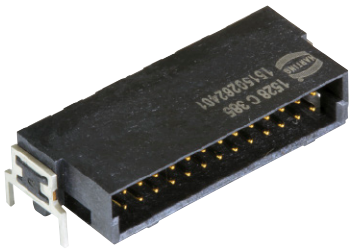
Dimensions



stacking height	height with vacuum cover X
6.25	7.1
9.05	9.9

PCB layout





Male connectors, angled, with robust THR hold downs

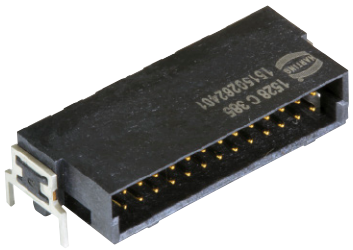
Identification	No. of contacts	Part number
Male connector, angled, with robust THR hold downs	12	15 15 012 2401 . . .
	26	15 15 026 2401 . . .
	80	15 15 080 2401 . . .
	100	15 15 100 2401 . . .

Dimensions in mm

A	B	C	D	E	F
6.35	10.77	12.70	9.57	8.57	12.70
15.24	19.66	21.59	18.46	17.46	21.59
49.53	53.95	55.88	52.75	51.75	55.88
62.23	66.65	68.58	65.45	64.45	68.58

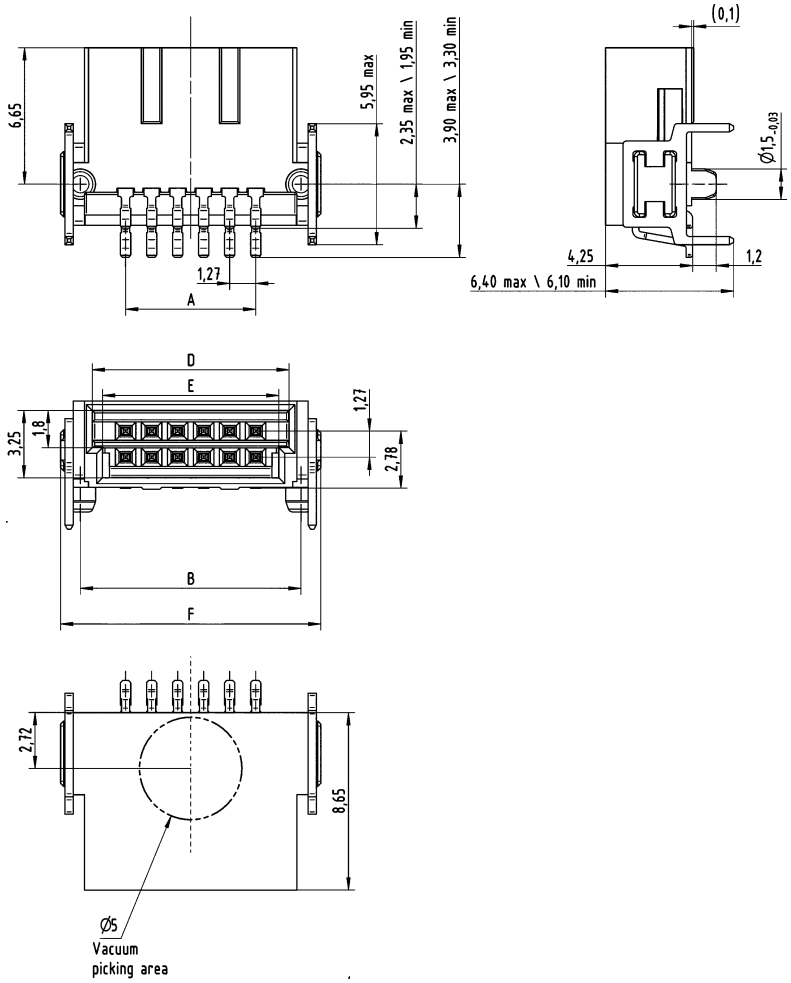
Further number of contacts between 6 and 100 and further performance levels are available on request.

333 000 for samples
for 440 pieces on reel



Male connectors, angled,
with robust THR hold downs

Identification	Drawing	Dimensions in mm
Dimensions		



PCB layout