





# har-flex straight male connector



## General information

Design	Mezzanine connector	
No. of contacts	from 6 to 100poles	
Contact spacing	1,27mm x 1,27mm [0,050"x0,050"]	
Test voltage	500 V	
Contact resistance	< 25 mOhm	
Insulation resistance	> 1x10 <sup>7</sup> Ohm	
Working current acc. to IEC 60512, @70°C, 80% derating	6 poles : 1,2A	68poles : 0,75A
	32 poles : 0,8A	100 poles : 0,7A
Temperature range	-55°C ... +125°C	
Termination technology	SMT	
Reflow processing temperature	2min. @ 220°C	
Clearance & creepage distance	0,4mm min.	
Insertion force (depending on mating PCB)	approximately 0,5N/contact	
Withdrawal force (depending on mating PCB)	approximately 0,5N/contact	
Mating cycles	PL1 : 500 mating cycles	
	PL2 : 250 mating cycles	
RoHS - compliant	Yes	
Leadfree	Yes	

## Insulator material

Material	LCP (liquid crystalline polymer)
Color	black
UL classification	UL 94-V0
Material group acc. IEC 60664-1	IIIa (175 ≤ CTI < 400)

## Contact material

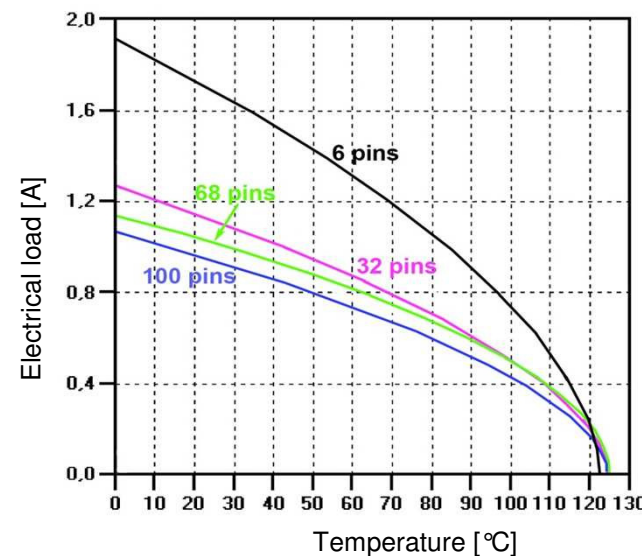
Contact material	Copper alloy
Plating termination zone	Sn
Plating contact zone	Au over PdNi (acc.to Performnce Level)

## Derating diagram acc. to IEC 60512-5 (Current carrying capacity)

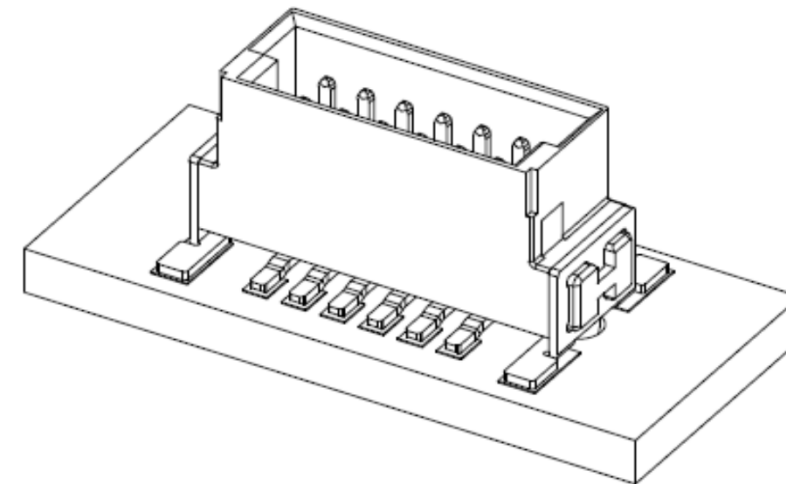
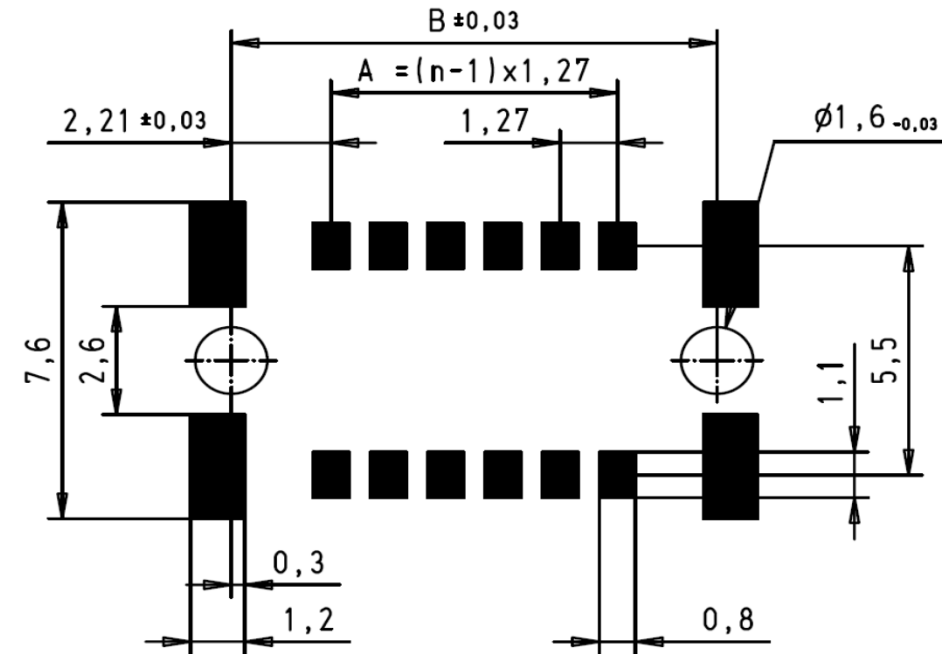
The current carrying capacity is limited by maximum temperature of materials for inserts and contacts including terminals.  
The current capacity curve is valid for continuous, non interrupted current loaded contacts of connectors when simultaneous power on all contacts is given, without exceeding the maximum temperature.

Control and test procedures according to DIN IEC 60512-5

derating curve at I<sub>max</sub>\*0,8 (IEC 60512-5-2)



## Recommended layout



Pole number	A	B
006	2,54	6,96
008	3,81	8,23
010	5,08	9,50
012	6,35	10,77
014	7,62	12,04
016	8,89	13,31
018	10,16	14,58
020	11,43	15,85
022	12,70	17,12
024	13,97	18,39
026	15,24	19,66
028	16,51	20,93
030	17,78	22,20
032	19,05	23,47
034	20,32	24,74
036	21,59	26,01
038	22,86	27,28
040	24,13	28,55
042	25,40	29,82
044	26,67	31,09
046	27,94	32,36
048	29,21	33,63
050	30,48	34,90
052	31,75	36,17
054	33,02	37,44
056	34,29	38,71
058	35,56	39,98
060	36,83	41,25
062	38,10	42,52
064	39,37	43,79
066	40,64	45,06
068	41,91	46,33
070	43,18	47,60
072	44,45	48,87
074	45,72	50,14
076	46,99	51,41
078	48,26	52,68
080	49,53	53,95
082	50,80	55,22
084	52,07	56,49
086	53,34	57,76
088	54,61	59,03
090	55,88	60,30
092	57,15	61,57
094	58,42	62,84
096	59,69	64,11
098	60,96	65,38
100	62,23	66,65

			Date	Name	
		Detail.	29aou11	JA	
		Inspec.	30aou11	JMV	
		Stand.			
Mod.	Date	Name	HARTING Electronics GmbH & Co. KG		

<b>Technical data sheet</b>	
<i>har flex male stacking height 1,75 and 3,25 mm</i>	
<b>DS 15 11 110 03 01</b>	

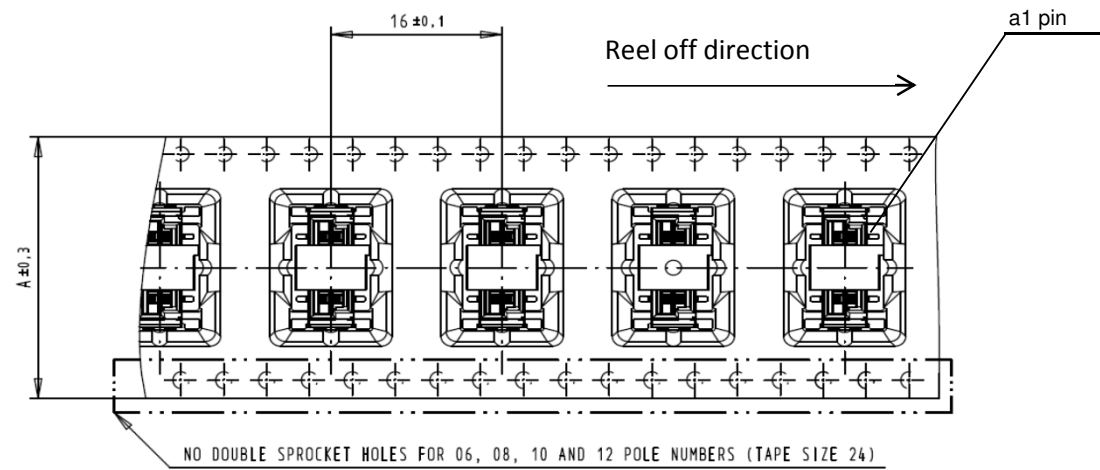


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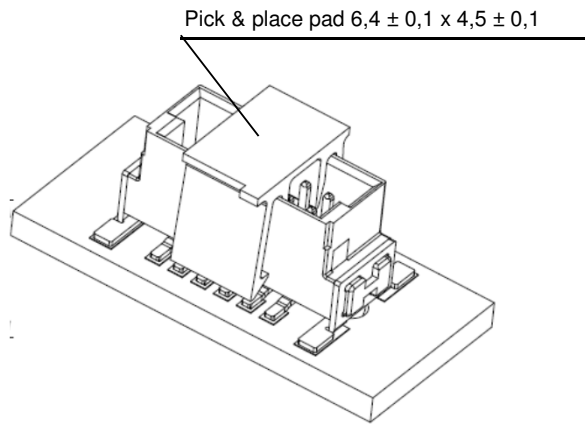


## Tape layout & packaging

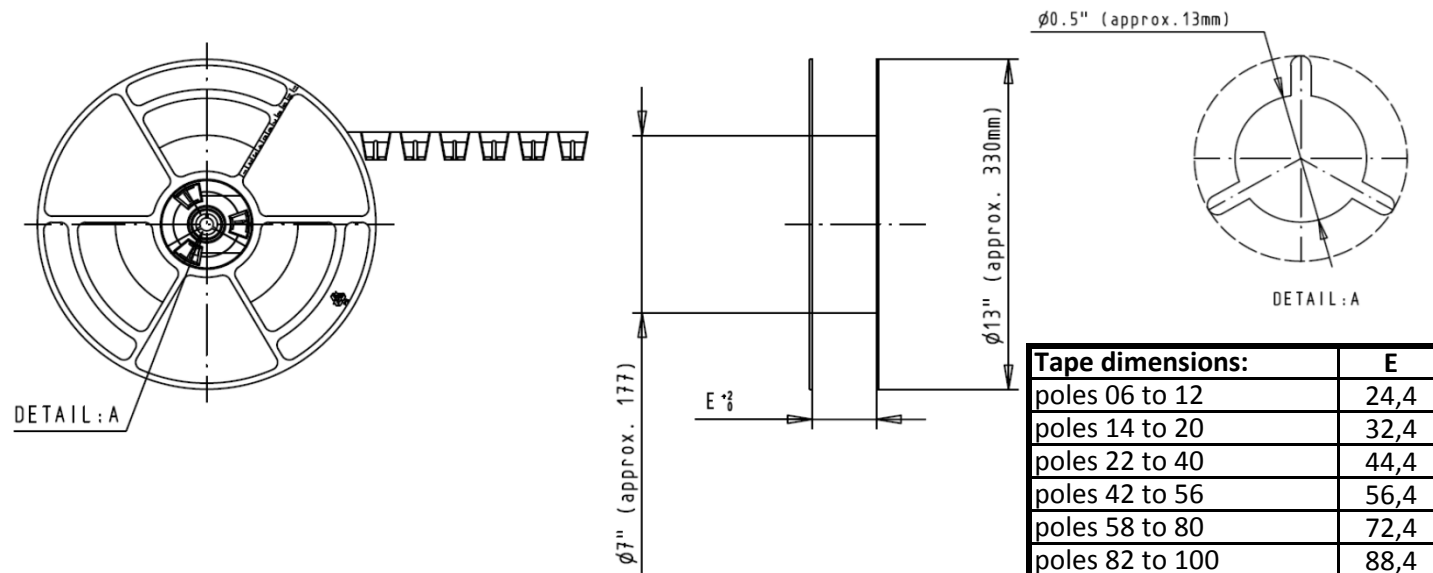
Tape acc. to IEC 60286-3



Tape dimensions:	A
poles 06 to 12	24,0
poles 14 to 20	32,0
poles 22 to 40	44,0
poles 42 to 56	56,0
poles 58 to 80	72,0
poles 82 to 100	88,0



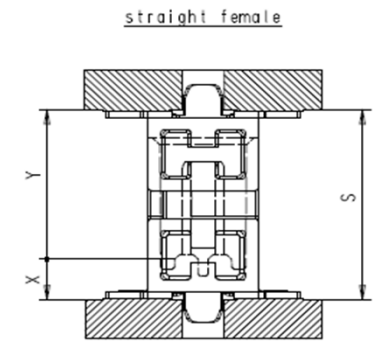
## Reel dimensions



Tape dimensions:	E
poles 06 to 12	24,4
poles 14 to 20	32,4
poles 22 to 40	44,4
poles 42 to 56	56,4
poles 58 to 80	72,4
poles 82 to 100	88,4

## Application information

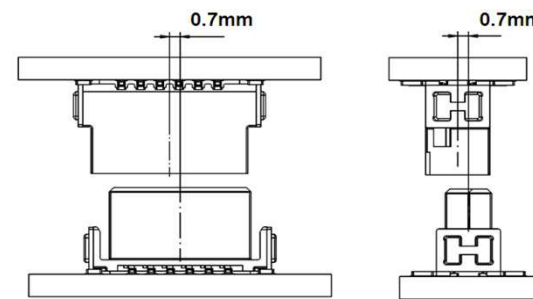
S	14mm				
	13mm				
	12mm				
	11mm				
	10mm				
X & Y	9mm				
	8mm				
	stacking heights	male 1.75mm female 6.25mm	male 3.25mm female 6.25mm	male 1.75mm female 9.05mm	male 3.25mm female 9.05mm
	PCB distance	8mm - 9.5mm	9.5mm - 11mm	10.8mm - 12.3mm	12.3mm - 13.8mm
	part numbers	15 11 ... 15 21 ...	15 12 ... 15 21 ...	15 11 ... 15 22 ...	15 12 ... 15 22 ...



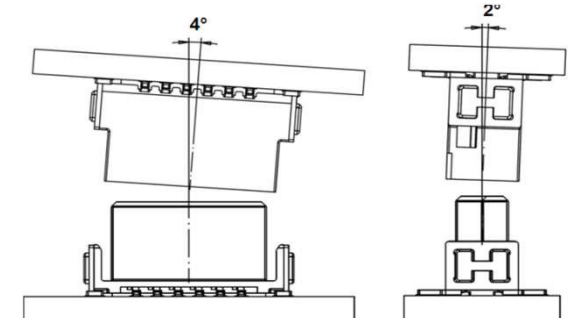
straight male			
X	Y	S <sub>min</sub>	S <sub>max</sub>
3.25	9.05	12.3	13.8
1.75	9.05	10.8	12.3
3.25	6.25	9.5	11
1.75	6.25	8	9.5

\* S<sub>max</sub> = S<sub>min</sub> + 1.5 wiping length with additional contact overlap security

### Admissible inclination



### Admissible mismatching



Mod.	Date	Name	Date	Name
			29aou11	JA
			30aou11	JMV

HARTING Electronics GmbH & Co. KG



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har flex male stacking height 1,75 and 3,25 mm	
DS 15 11 110 03 01	