



# har-flexicon male connector, vertical



## General information

male connector					
Design	har-flexicon 3.50/3.81 MTV	har-flexicon 5.00 MTV	har-flexicon 5.08 MTV	har-flexicon 3.50 MWV	har-flexicon 5.00/5.08 MWV
Type	1412xx14001xxx & 1412xx14005xxx 1412xx15001xxx & 1412xx15005xxx	1412xx16001xxx	1412xx17001xxx 1412xx17005xxx	1413xx14001xxx	1413xx16001xxx 1413xx17001xxx
Contact pitch	3.50/3.81 mm	5 mm	5.08 mm	3.50 mm	5.00/5.08 mm
No. of contacts	2-25 poles	2-20 poles	2-22 poles	2 - 12 poles	2 - 12 poles
Rated surge voltage (II/2) <sup>1)</sup>	2.5 kV	4 kV	4 kV	2.5 kV	4 kV
Rated surge voltage (III/2) <sup>2)</sup>	2.5 kV	4 kV	4 kV	2.5 kV	4 kV
Rated surge voltage (III/3) <sup>3)</sup>	2.5 kV	4 kV	4 kV	2.5 kV	4 kV
Rated Voltage	300 V	300 V	300 V	300 V	300 V
Rated voltage (II/2) <sup>4)</sup>	300 V	600 V	600 V	300 V	600 V
Rated voltage (III/2) <sup>5)</sup>	150 V	300 V	300 V	150 V	300 V
Rated voltage (III/3) <sup>6)</sup>	150 V	250 V	250 V	150 V	250 V
Working current	11 A	15 A	15 A	11 A	15 A
Usegroup B, rated voltage / current	300 V / 11 A	300 V / 15 A	300 V / 15 A	300 V / 11 A	300 V / 15 A
Usegroup C, rated voltage / current	- / -	- / -	- / -	- / -	- / -
Usegroup D, rated voltage / current	300 V / 11 A	300 V / 15 A	300 V / 15 A	300 V / 11 A	300 V / 15 A
Contact resistance	max. 15 mOhm				
Insulation resistance	min. 10 <sup>9</sup> Ohm (500 V DC)				
Temperature range	-40°C ... +110°C				
Termination technology	THR Reflow	THR Reflow	THR Reflow	wave soldering	wave soldering
Insertion force	max. 3 N				
Withdrawal force	min. 1.5 N				
Hot plugging	No				
Mechanical Shock IEC 61373 (05/10) 5 g, 30 ms, 5 shocks/axis and each direction no contact disturbance >= 1 µs for p/n ...5xxx					
Random Vibration IEC 61373 (05/10) Cat 1 class B 5.72 m/s <sup>2</sup> no contact disturbance >= 1 µs for p/n ...5xxx					
Vibration 10-150 Hz, 0.35mm, 5 g, 2 h each axes -> No contact disturbance >= 1 µs for p/n ...1xxx					
RoHS - compliant	Yes				
UL file	E314677				

## Isulator material

Material	PA/PPA	PA/PPA	PA/PPA	PA	PA
Color	black	black	black	green	green
Moisture Sensitivity Level (MSL)	1	1	1	1	1
UL classification	UL 94-V0	UL 94-V0	UL 94-V0	UL 94-V0	UL 94-V0
Material group acc. to IEC 60664-1	I (CTI > 600)	I (CTI > 600)	I (CTI > 600)	I (CTI > 600)	I (CTI > 600)

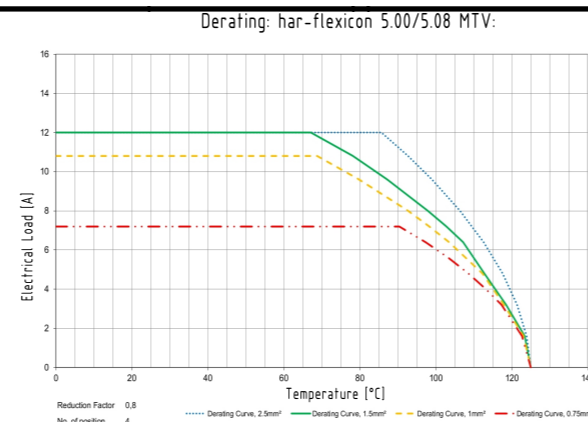
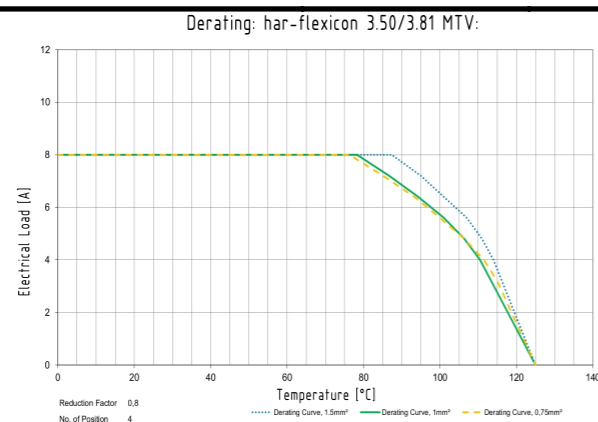
## Contact material

Contact material	Copper alloy
Plating termination zone	Sn
Plating contact zone	Sn

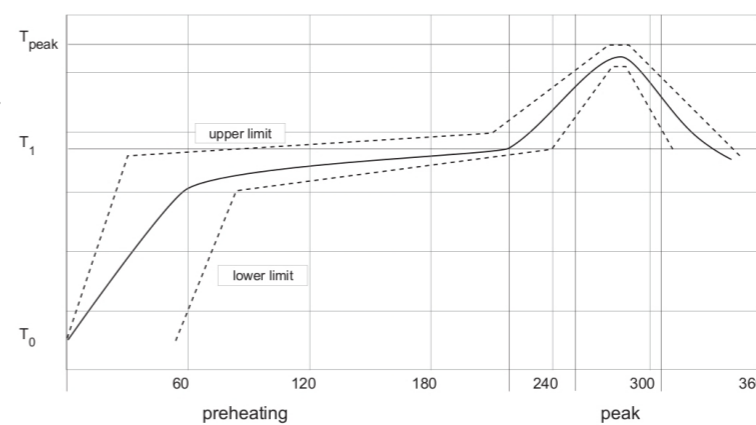
## Derating

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



## Soldering instructions for lead-free tin soldering



25°C (77°F)  
from 150°C (302°F) to 190°C (374°F)  
from 150s to 180s  
1,5°C/s (34°F/s)

from 260°C (500°F) to 275°C (527°F)  
from 10s to 30s

## Packaging units

### types 3.50/3.81 MTV

Type of packaging	No. of poles (xx)	Quantity	Index (xxx)	Remark
box	2	300	000	
box	3	200	000	
box	4 - 5	150	000	
box	6-12	100	000	
box	13 - 20	50	000	
box	21 - 25	25	000	

### types 5.00/5.08 MTV

Type of packaging	No. of poles (xx)	Quantity	Index (xxx)	Remark
box	2	300	000	
box	3	200	000	
box	4 - 5	150	000	
box	6 - 12	100	000	
box	13 - 20	50	000	
box	21 - 25	25	000	

### types 3.50/5.00/5.08 MWV

Type of packaging	No. of poles (xx)	Quantity	Index (xxx)	Remark
box	2	300	000	
box	3	200	000	
box	4 - 5	150	000	
box	6 - 12	100	000	

1412xx14001xxx

- <sup>1)</sup> (overvoltage cat. II / pollution degree 2)
- <sup>2)</sup> (overvoltage cat. III / pollution degree 2)
- <sup>3)</sup> (overvoltage cat. III / pollution degree 3)
- <sup>4)</sup> (overvoltage cat. II / pollution degree 2)
- <sup>5)</sup> (overvoltage cat. III / pollution degree 2)
- <sup>6)</sup> (overvoltage cat. III / pollution degree 3)

	All Dimensions in mm Original Size DIN A3	Scale 1:1	Free size tol.	Ref. Sub.
	All rights reserved Department EL PD	Created by ZHUANGJ	Inspected by LUOK	Standardisation 302077
HARTING Electronics GmbH D-32339 Espelkamp		Title har-flexicon male connector, vertical		Doc-Key / ECM-Nr. 100579746/UGD/000/F 500000183169
Type DS	Number 14121400201	Date 2020-11-23	State Final Release	Rev. F
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