



# har-flexicon terminal block horizontal, screwing, SMC



### General information

		PCB Terminal Block				
Design	Type	3,50/3,81 TTSH	5,00 TTSH 1,5mm <sup>2</sup>	5,00 TTSH 2,5mm <sup>2</sup>	10,16 TTSH	15,00 TTSH
Part numbers		1402xx14402xxx 1402xx15402xxx	1402xx16402xxx	1402xx16404xxx	1402xx25402xxx	1402xx27402xxx
Contact pitch		3,5 mm/3,81mm	5mm	5,08mm	10,16mm	15mm
No. of contacts		2 - 12 poles	2 - 12 poles	2 - 8 poles	2 - 4 poles	2 - 4 poles
Rated surge voltage (II/2) <sup>1)</sup>		2,5 kV	4 kV	4 kV	8 kV	8 kV
Rated surge voltage (III/2) <sup>1)</sup>		2,5 kV	4 kV	4 kV	8 kV	8 kV
Rated surge voltage (III/3) <sup>1)</sup>		2,5 kV	4 kV	4 kV	8 kV	8 kV
Rated Voltage		300 V	300 V	300 V	600 V	600 V
Rated voltage (II/2) <sup>1)</sup>		300 V	600 V	600 V	1000 V	1000 V
Rated voltage (III/2) <sup>1)</sup>		150 V	300 V	300 V	1000 V	1000 V
Rated voltage (III/3) <sup>1)</sup>		150 V	220 V	300 V	1000 V	1000 V
Working current		12 A	13,5 A	17,5 A	60 A	135 A
Usegroup B, rated voltage / current		300 V / 12 A	300 V / 13,5 A	300 V / 17,5 A	300 V / 60 A	600 V / 135 A
Usegroup C, rated voltage / current		- / -	- / -	- / -	300 V / 60 A	600 V / 135 A
Usegroup D, rated voltage / current		300 V / 12 A	300 V / 13,5 A	300 V / 17,5 A	600 V / 5 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/SMC Reflow				
PCB thickness		-	-	-	max. 2,4mm	max. 2,4mm
Insertion force		n.a				
Withdrawal force		n.a				
Hot plugging		No				
Mechanical Shock IEC 61373 (05/10)		5 g, 30 ms, 5 shocks/axis and each direction no contact disturbance >= 1µs				
Random Vibration IEC 61373 (05/10)		Cat 1 class B 5,72m/s <sup>2</sup> no contact disturbance >= 1µs				
RoHS - compliant		Yes				
UL file		E314677				

### Isulator material

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

### Contact material

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

### 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



<sup>1)</sup>(overvoltage cat. / pollution degree)

### Soldering instructions for lead-free tin soldering



preheating  
T<sub>0</sub> 25°C (77°F)  
T<sub>1</sub> from 150°C (302°F) to 190°C (374°F)  
time from 150s to 180s  
gradient 1,5°C/s (34°F/s)

peak  
T<sub>peak</sub> from 260°C (500°F) to 275°C (527°F)  
time from 10s to 30s

har-flexicon SMC products with pure tin plated pins without lead, can be soldered by a lead-free reflow process, with a peak temperature till 275°C/527°F according to the related profile.

### Cable connection

Type	3,50/3,81 TTSH	5,00 TTSH 1,5mm <sup>2</sup>	5,08 TTSH 2,5mm <sup>2</sup>	10,16 TTSH	15,00 TTSH
Part numbers	1402xx14402xxx 1402xx15402xxx	1402xx16402xxx	1402xx16404xxx	1402xx25402xxx	1402xx27402xxx
Conductor size AWG max	16 AWG	16 AWG	12 AWG	6 AWG	1 AWG
Conductor size AWG min	28 AWG	30 AWG	30 AWG	20 AWG	20 AWG
Conductor size solid max	1,5 mm <sup>2</sup>	1,5 mm <sup>2</sup>	2,5 mm <sup>2</sup>	16 mm <sup>2</sup>	35 mm <sup>2</sup>
Conductor size solid min	0,05 mm <sup>2</sup>	0,05 mm <sup>2</sup>	0,05 mm <sup>2</sup>	0,5 mm <sup>2</sup>	0,5 mm <sup>2</sup>
Conductor size stranded max	1 mm <sup>2</sup>	1,0 mm <sup>2</sup>	2,5 mm <sup>2</sup>	10 mm <sup>2</sup>	25 mm <sup>2</sup>
Conductor size stranded min	0,05 mm <sup>2</sup>	0,05 mm <sup>2</sup>	0,05 mm <sup>2</sup>	0,5 mm <sup>2</sup>	0,5 mm <sup>2</sup>
Conductor size stranded for end sleeve					
Stripping length max	6 mm	6 mm	6,5 mm	11,5 mm	18 mm
Stripping length min	5 mm	5 mm	5,5 mm	10,5 mm	18 mm
Screw thread	M2	M3	M3	M4	M5
Tightening Torque max	0,25 Nm	0,6 Nm	0,6 Nm	1,5 Nm	2,5 Nm
Tightening Torque min	0,20 Nm	0,5 Nm	0,5 Nm	1,2 Nm	2,1 Nm

### Packging unit

types 3.50/3.81/5.00/5.08 TTSH					
Type of packaging	No. of poles (xx)	Quantity	MOQ	Index (xxx)	Remark
tropical bag	2 - 3	100	100	000	
tropical bag	4 - 5	75	75	000	
tropical bag	6 - 12	50	50	000	
box	2 - 12	1	1	333	samples
type 10.16 TTSH					
tropical bag	2 - 3	50	50	000	
tropical bag	4	40	40	000	
box	2 - 4	1	1	333	sample
type 15.00 TTSH					
tropical bag	2	50	50	000	
tropical bag	3	40	40	000	
tropical bag	4	30	30	000	
box	2 - 4	1	1	333	sample



	All Dimensions in mm Original Size DIN A3	Scale 1:1	Free size tol.	Ref. Sub.
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