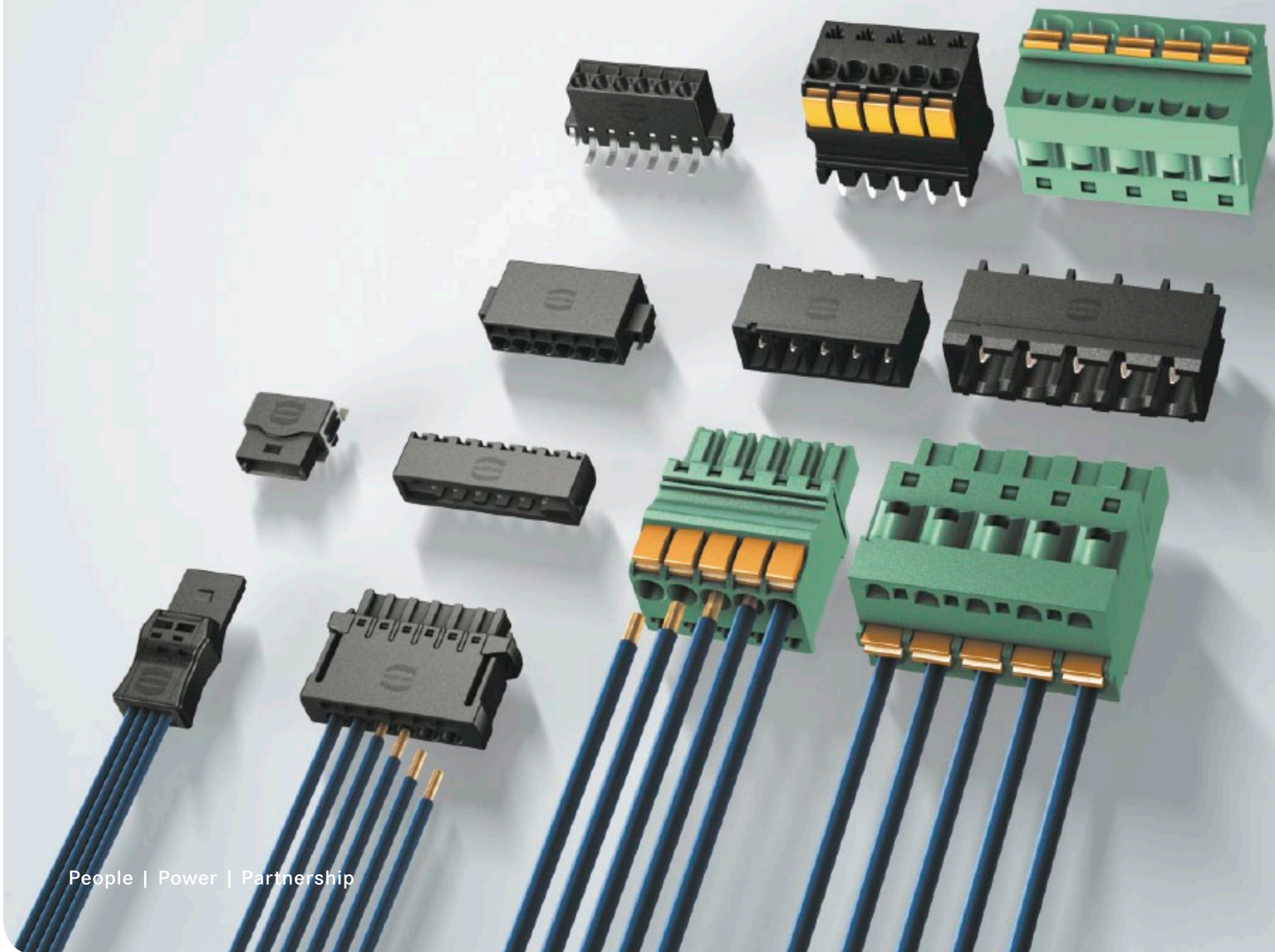




Pushing Performance



People | Power | Partnership

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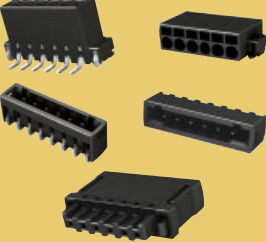
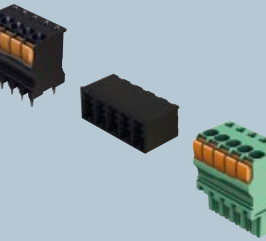
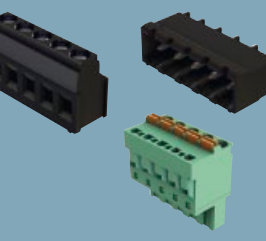
har-flexicon® Selection Guide

PCB terminal blocks and connectors
for SMC / SMT reflow solder process

HARTING *har-flexicon*® – fast single conductor wiring of I/O signals onto the PCB


The trend towards miniaturization and reflow solder process in PCB connection technology continues apace. This requires innovative responses with respect to component size, use, flexibility and handling. The new *har-flexicon*® product family allows tool-free

connection of single wires and is suitable for the SMT/ SMC reflow soldering process. Hereby *har-flexicon*® ensures rational processing for device manufacture and device installation as well.

<p>Pitch 1.27 mm</p> <p>Conductor size 0.05 - 0.14 mm²</p>		<p>In a 1.27 mm pitch, <i>har-flexicon</i>® is the most compact field-installable PCB termination technology in the industrial context. The four-pole connector offers an insulation displacement terminal for flexible single strands with cross-sections from 0.05 - 0.14 mm². The base strip is provided for processing in SMT reflow soldering processes. In spite of its high integration density, the special SMT fixations ensure that the PCB terminal is very stable on the PCB.</p>
<p>Pitch 2.54 mm</p> <p>Conductor size 0.2 - 0.5 mm²</p>		<p>In a 2.54 mm pitch, flexible and rigid conductors with cross-sections up to 0.5 mm² can be connected easily with push-in-spring-force technology. Thanks to active latching, the pluggable products feature high vibration and shock resistance. All components for the PCB are completely SMT reflow solderable and, like SMD components, can be positioned directly on the PCB surface. Special SMT fixations here ensure good stability on the PCB. Products are available for pluggable and permanent conductor connection in straight and angled executions with from 2 - 12 poles.</p>
<p>Pitch 3.50 / 3.81 mm</p> <p>Conductor size 0.05 - 1.5 mm²</p>		<p>In order to transmit larger currents and to connect corresponding conductor cross-sections, fully SMC reflow solderable products are available in 3.50 and 3.81 mm pitches. Flexible and rigid conductors with cross-sections up to 1.5 mm² are easy to contact with push-in-spring-force technology or screwed connections. Products are available for pluggable and permanent conductor connection in straight and angled executions with from 2 - 25 poles.</p>
<p>Pitch 5.00 / 5.08 mm</p> <p>Conductor size 0.05 - 2.5 mm²</p>		<p>In order to transmit larger currents and to connect corresponding conductor cross-sections, fully SMC reflow solderable products are available in 5.00 and 5.08 mm pitches. Flexible and rigid conductors with cross-sections up to 2.5 mm² are easy to contact with push-in-spring-force technology or screwed connections. Products are available for pluggable and permanent conductor connection in straight and angled executions with from 2 - 25 poles.</p>

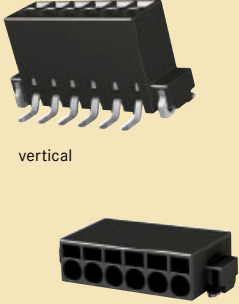
Pitch 1.27 mm / conductor size 0.05 - 0.14 mm²

PCB connector, SMT reflow
IDC termination


Pictures	Technical data	No. of contacts	Part No.
	Rated current	2 A	
	Rated voltage	160 V (II/2)	
	Conductor size solid stranded	- 0.05 - 0.14 mm ²	
	Conductor size AWG	28 - 26	
	Stripping length	0 mm	
	Conductor diameter	max. 1 mm	
	Group of insulation material	III a	
	Type of insulation material	LCP	
	Flammability rating per UL 94	V0	
	Operating temperature	-40 °C ... +125 °C	
Contact material	copper alloy	4	14 31 041 0301 000 (female)
Contact plating	nickel plated	4	14 11 041 0002 000 (male)
Suitable screw driver	1.5 x 40		14 99 000 0002

Pitch 2.54 mm / conductor size 0.2 - 0.5 mm²

PCB terminal block, SMT reflow
push-in-spring-cage termination



Pictures	Technical data	No. of contacts	Part No.		
 <p>vertical</p> <p>horizontal</p>	Rated current	6 A			
	Rated voltage	160 V (III/2)			
	Conductor size solid stranded	0.14 - 0.5 mm ² 0.2 - 0.5 mm ²			
	Conductor size AWG	24 - 20			
	Stripping length	6 mm			
	Group of insulation material	III a			
	Type of insulation material	LCP			
	Flammability rating per UL 94	V0			
	Operating temperature	-40 °C ... +125 °C			
	Contact material	copper alloy			
	Contact plating	tin plated			
				2	14 01 021 310X 000
				3	14 01 031 310X 000
		4	14 01 041 310X 000		
		5	14 01 051 310X 000		
		6	14 01 061 310X 000		
		7	14 01 071 310X 000		
		8	14 01 081 310X 000		
		9	14 01 091 310X 000		
		10	14 01 101 310X 000		
		11	14 01 111 310X 000		
		12	14 01 121 310X 000		
Please insert digit X	for mounting direction vertical	X = 1			
	for mounting direction horizontal	X = 2			
Suitable screw driver	2.0 x 40		14 99 000 0001		

PCB female connector
push-in-spring-cage termination

Pictures	Technical data	No. of contacts	Part No.
	Rated current	6 A	
	Rated voltage	160 V (III/2)	
	Conductor size solid stranded	0.14 - 0.5 mm ² 0.2 - 0.5 mm ²	
	Conductor size AWG	24 - 20	
	Stripping length	6 mm	
	Group of insulation material	III a	
	Type of insulation material	LCP	
	Flammability rating per UL 94	V0	
	Operating temperature	-40 °C ... +125 °C	
	Contact material	copper alloy	
Contact plating	tin plated		
		2	14 31 021 3101 000
		3	14 31 031 3101 000
		4	14 31 041 3101 000
		5	14 31 051 3101 000
		6	14 31 061 3101 000
		7	14 31 071 3101 000
		8	14 31 081 3101 000
		9	14 31 091 3101 000
		10	14 31 101 3101 000
		11	14 31 111 3101 000
		12	14 31 121 3101 000
Suitable screw driver	2.0 x 40		14 99 000 0001


Pitch 2.54 mm / conductor size 0.2 - 0.5 mm²

PCB male connector, SMT reflow


Pictures	Technical data	No. of contacts	Part No.	
 <p>vertical</p>  <p>horizontal</p>	Rated current	6 A		
	Rated voltage	160 V (III/2)	2	14 11 021 300X 000
	Group of insulation material	III a	3	14 11 031 300X 000
			4	14 11 041 300X 000
			5	14 11 051 300X 000
	Type of insulation material	LCP	6	14 11 061 300X 000
			7	14 11 071 300X 000
	Flammability rating per UL 94	V0	8	14 11 081 300X 000
			9	14 11 091 300X 000
	Operating temperature	-40 °C ... +125 °C	10	14 11 101 300X 000
			11	14 11 111 300X 000
			12	14 11 121 300X 000
Contact material		copper alloy		
Contact plating		tin plated		
Please insert digit X		for mounting direction vertical	X = 1	
		for mounting direction horizontal	X = 2	

Pitch 3.50 / 3.81 mm / conductor size 0.05 - 1.5 mm²

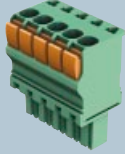
PCB terminal block, SMC reflow push-in-spring-cage termination

Pictures	Technical data	No. of contacts	Part No.	
	Rated current	10 A		
	Rated voltage	300 V (III/2)	2	14 02 021 Y101 000
	Conductor size solid	0.14 - 1.5 mm ²	3	14 02 031 Y101 000
	Conductor size stranded	0.14 - 1.5 mm ²	4	14 02 041 Y101 000
			5	14 02 051 Y101 000
	Conductor size AWG	30 - 16	6	14 02 061 Y101 000
			7	14 02 071 Y101 000
	Stripping length	9 - 10 mm	8	14 02 081 Y101 000
	Solder pin: drilled hole diameter	1.4 mm	9	14 02 091 Y101 000
			10	14 02 101 Y101 000
	Group of insulation material	I	11	14 02 111 Y101 000
	Type of insulation material	PA / PPA	12	14 02 121 Y101 000
			13	14 02 131 Y101 000
	Flammability rating per UL 94	V0	14	14 02 141 Y101 000
			15	14 02 151 Y101 000
	Operating temperature	-40 °C ... +110 °C	16	14 02 161 Y101 000
Contact material	copper alloy			
Contact plating	tin plated			
Please insert digit Y		for pitch 3.50 mm	Y = 4	
		for pitch 3.81 mm	Y = 5	


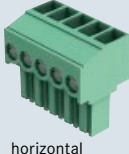
PCB terminal block, SMC reflow screw termination

Pictures	Technical data	No. of contacts	Part No.	
	Rated current	12 A		
	Rated voltage	150 V (III/2)		
	Conductor size solid	0.05 - 1.5 mm ²	2	14 02 021 Y402 000
	Conductor size stranded	0.05 - 1 mm ²	3	14 02 031 Y402 000
			4	14 02 041 Y402 000
	Conductor size AWG	28 - 16	5	14 02 051 Y402 000
	Screw thread	M2	6	14 02 061 Y402 000
	Tightening torque	0.2 - 0,25 Nm	7	14 02 071 Y402 000
	Stripping length	5 - 6 mm	8	14 02 081 Y402 000
	Solder pin: drilled hole diameter	1.1 mm	9	14 02 091 Y402 000
			10	14 02 101 Y402 000
	Group of insulation material	I	11	14 02 111 Y402 000
Type of insulation material	PA / PPA	12	14 02 121 Y402 000	
			14 02 121 Y402 000	
Flammability rating per UL 94	V0			
Operating temperature	-40 °C ... +110 °C			
Contact material	copper alloy			
Contact plating	tin plated			
Please insert digit Y		for pitch 3.50 mm	Y = 4	
		for pitch 3.81 mm	Y = 5	



PCB female connector
push-in-spring-cage termination

Pictures	Technical data	No. of contacts	Part No.	
	Rated current	11 A	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25	14 31 021 Y 102 000 14 31 031 Y 102 000 14 31 041 Y 102 000 14 31 051 Y 102 000 14 31 061 Y 102 000 14 31 071 Y 102 000 14 31 081 Y 102 000 14 31 091 Y 102 000 14 31 101 Y 102 000 14 31 111 Y 102 000 14 31 121 Y 102 000 14 31 131 Y 102 000 14 31 141 Y 102 000 14 31 151 Y 102 000 14 31 161 Y 102 000 14 31 171 Y 102 000 14 31 181 Y 102 000 14 31 191 Y 102 000 14 31 201 Y 102 000 14 31 211 Y 102 000 14 31 221 Y 102 000 14 31 231 Y 102 000 14 31 241 Y 102 000 14 31 251 Y 102 000
	Rated voltage	150 V (III/2)		
	Conductor size			
	solid	0.14 - 1.5 mm ²		
	stranded	0.14 - 1.5 mm ²		
	Conductor size AWG	30 - 14		
	Stripping length	9 - 10 mm		
	Group of insulation material	I		
	Type of insulation material	PA / PPA		
	Flammability rating per UL 94	V0		
	Operating temperature	-40 °C ... +110 °C		
	Contact material	copper alloy		
	Contact plating	tin plated		
	Please insert digit Y	for pitch 3.50 mm for pitch 3.81 mm	Y = 4 Y = 5	

PCB female connector
screw termination

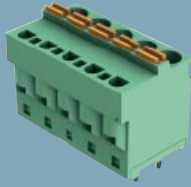
Pictures	Technical data	No. of contacts	Part No.	
 	Rated current	10 A	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25	14 31 021 Y40X 000 14 31 031 Y40X 000 14 31 041 Y40X 000 14 31 051 Y40X 000 14 31 061 Y40X 000 14 31 071 Y40X 000 14 31 081 Y40X 000 14 31 091 Y40X 000 14 31 101 Y40X 000 14 31 111 Y40X 000 14 31 121 Y40X 000 14 31 131 Y40X 000 14 31 141 Y40X 000 14 31 151 Y40X 000 14 31 161 Y40X 000 14 31 171 Y40X 000 14 31 181 Y40X 000 14 31 191 Y40X 000 14 31 201 Y40X 000 14 31 211 Y40X 000 14 31 221 Y40X 000 14 31 231 Y40X 000 14 31 241 Y40X 000 14 31 251 Y40X 000
	Rated voltage	150 V (III/2)		
	Conductor size			
	solid	0.05 - 1.5 mm ²		
	stranded	0.05 - 1.5 mm ²		
	Conductor size AWG	30 - 14		
	Screw thread	M2		
	Tightening torque	0.2 - 0.25 Nm		
	Stripping length	5.0 - 6.0 mm		
	Group of insulation material	I		
	Type of insulation material	PA / PPA		
	Flammability rating per UL 94	V0		
	Operating temperature	-40 °C ... +110 °C		
	Contact material	copper alloy		
	Contact plating	tin plated		
	Please insert digits X and Y	for mounting direction vertical for mounting direction horizontal	X = 1 X = 2	for pitch 3.50 mm for pitch 3.81 mm Y = 4 Y = 5

PCB male connector, SMC reflow


Pictures	Technical data	No. of contacts	Part No.	
 	Rated current	11 A	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25	14 12 021 Y00X 000 14 12 031 Y00X 000 14 12 041 Y00X 000 14 12 051 Y00X 000 14 12 061 Y00X 000 14 12 071 Y00X 000 14 12 081 Y00X 000 14 12 091 Y00X 000 14 12 101 Y00X 000 14 12 111 Y00X 000 14 12 121 Y00X 000 14 12 131 Y00X 000 14 12 141 Y00X 000 14 12 151 Y00X 000 14 12 161 Y00X 000 14 12 171 Y00X 000 14 12 181 Y00X 000 14 12 191 Y00X 000 14 12 201 Y00X 000 14 12 211 Y00X 000 14 12 221 Y00X 000 14 12 231 Y00X 000 14 12 241 Y00X 000 14 12 251 Y00X 000
	Rated voltage	150 V (III/2)		
	Solder pin: drilled hole diameter	1.2 mm		
	Group of insulation material	I		
	Type of insulation material	PA / PPA		
	Flammability rating per UL 94	V0		
	Operating temperature	-40 °C ... +110 °C		
	Contact material	copper alloy		
	Contact plating	tin plated		
	Please insert digits X and Y	for mounting direction vertical for mounting direction horizontal	X = 1 X = 2	for pitch 3.50 mm for pitch 3.81 mm Y = 4 Y = 5

Pitch 5.00 mm / conductor size 0.05 - 2.5 mm²


PCB terminal block, wave soldering
push-in-spring-cage termination

Pictures	Technical data	No. of contacts	Part No.	
	Rated current	12 A		
	Rated voltage	300 V (III/2)		
	Conductor size	solid	2	14 03 021 6101 000
		stranded	3	14 03 031 6101 000
	Conductor size AWG	30 - 12	4	14 03 041 6101 000
			5	14 03 051 6101 000
	Stripping length	10 mm	6	14 03 061 6101 000
			7	14 03 071 6101 000
	Solder pin: drilled hole diameter	1.4 mm	8	14 03 081 6101 000
			9	14 03 091 6101 000
	Group of insulation material	I	10	14 03 101 6101 000
			11	14 03 111 6101 000
	Type of insulation material	PA	12	14 03 121 6101 000
			13	14 03 131 6101 000
	Flammability rating per UL 94	V0	14	14 03 141 6101 000
			15	14 03 151 6101 000
	Operating temperature	-40 °C ... +110 °C	16	14 03 161 6101 000
			17	14 03 171 6101 000
Contact material	copper alloy	18	14 03 181 6101 000	
Contact plating	tin plated			


PCB terminal block, SMC reflow
screw termination, gauge 2.5 mm²

Pictures	Technical data	No. of contacts	Part No.	
	Rated current	17.5 A		
	Rated voltage	300 V (III/2)		
	Conductor size	solid	2	14 02 021 6404 000
		stranded	3	14 02 031 6404 000
	Conductor size AWG	30 - 12	4	14 02 041 6404 000
			5	14 02 051 6404 000
	Screw thread	M3	6	14 02 061 6404 000
			7	14 02 071 6404 000
	Tightening torque	0.5 - 0.6 Nm	8	14 02 081 6404 000
	Stripping length	5.5 - 6.5 mm		
	Solder pin: drilled hole diameter	1.4 mm		
	Group of insulation material	I		
	Type of insulation material	PA / PPA		
Flammability rating per UL 94	V0			
Operating temperature	-40 °C ... +110 °C			
Contact material	copper alloy			
Contact plating	tin plated			

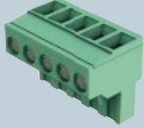
PCB terminal block, SMC reflow
screw termination, gauge 1.5 mm²

Pictures	Technical data	No. of contacts	Part No.	
	Rated current	13.5 A		
	Rated voltage	300 V (III/2)		
	Conductor size	solid	2	14 03 021 6402 000
		stranded	3	14 03 031 6402 000
	Conductor size AWG	30 - 16	4	14 03 041 6402 000
			5	14 03 051 6402 000
	Screw thread	M3	6	14 03 061 6402 000
			7	14 03 071 6402 000
	Tightening torque	0.5 - 0.6 Nm	8	14 03 081 6402 000
			9	14 03 091 6402 000
	Stripping length	5.0 - 6.0 mm	10	14 03 101 6402 000
			11	14 03 111 6402 000
	Solder pin: drilled hole diameter	1.1 mm	12	14 03 121 6402 000
	Group of insulation material	I		
	Type of insulation material	PA / PPA		
Flammability rating per UL 94	V0			
Operating temperature	-40 °C ... +110 °C			
Contact material	copper alloy			
Contact plating	tin plated			


PCB female connector
push-in-spring-cage termination

Pictures	Technical data	No. of contacts	Part No.	
	Rated current	12 A		
	Rated voltage	300 V (III/2)		
	Conductor size	solid	0.2 - 2.5 mm ²	2
		stranded	0.2 - 2.5 mm ²	3
	Conductor size AWG		30 - 12	4
				5
	Stripping length		10 mm	6
				7
	Group of insulation material		I	8
				9
	Type of insulation material		PA / PPA	10
				11
	Flammability rating per UL 94		V0	12
				13
	Operating temperature		-40 °C ... +110 °C	14
				15
	Contact material	copper alloy	16	14 31 021 Y 102 000
	Contact plating	tin plated	17	14 31 031 Y 102 000
		18	14 31 041 Y 102 000	
			14 31 051 Y 102 000	
			14 31 061 Y 102 000	
			14 31 071 Y 102 000	
			14 31 081 Y 102 000	
			14 31 091 Y 102 000	
			14 31 101 Y 102 000	
			14 31 111 Y 102 000	
			14 31 121 Y 102 000	
			14 31 131 Y 102 000	
			14 31 141 Y 102 000	
			14 31 151 Y 102 000	
			14 31 161 Y 102 000	
			14 31 171 Y 102 000	
			14 31 181 Y 102 000	
Please insert digit Y	for pitch 5.00 mm	Y = 6		
	for pitch 5.08 mm	Y = 7		

PCB female connector
screw termination

Pictures	Technical data	No. of contacts	Part No.	
	Rated current	15 A	2	
	Rated voltage	300 V (III/2)	3	
	Conductor size	solid	0.05 - 2.5 mm ²	4
		stranded	0.05 - 2.5 mm ²	5
	Conductor size AWG		30 - 12	6
				7
	Screw thread		M3	8
				9
	Tightening torque		0.5 - 0.6 Nm	10
				11
	Stripping length		6.0 - 7.5 mm	12
				13
	Group of insulation material		I	14
				15
	Type of insulation material		PA / PPA	16
				17
	Flammability rating per UL 94		V0	18
				19
	Operating temperature		-40 °C ... +110 °C	20
				21
	Contact material	copper alloy	22	14 31 021 Y 402 000
	Contact plating	tin plated	23	14 31 031 Y 402 000
			24	14 31 041 Y 402 000
			25	14 31 051 Y 402 000
				14 31 061 Y 402 000
			14 31 071 Y 402 000	
			14 31 081 Y 402 000	
			14 31 091 Y 402 000	
			14 31 101 Y 402 000	
			14 31 111 Y 402 000	
			14 31 121 Y 402 000	
			14 31 131 Y 402 000	
			14 31 141 Y 402 000	
			14 31 151 Y 402 000	
			14 31 161 Y 402 000	
			14 31 171 Y 402 000	
			14 31 181 Y 402 000	
			14 31 191 Y 402 000	
			14 31 201 Y 402 000	
			14 31 211 Y 402 000	
			14 31 221 Y 402 000	
			14 31 231 Y 402 000	
			14 31 241 Y 402 000	
			14 31 251 Y 402 000	
Please insert digit Y	for pitch 5.00 mm	Y = 6		
	for pitch 5.08 mm	Y = 7		

PCB male connector, SMC reflow

Pictures	Technical data	No. of contacts	Part No.	
	Rated current	15 A		
	Rated voltage	300 V (III/2)		
	Solder pin: drilled hole diameter		1.4 mm	2
				3
	Group of insulation material		I	4
				5
	Type of insulation material		PA / PPA	6
				7
	Flammability rating per UL 94		V0	8
				9
	Operating temperature		-40 °C ... +110 °C	10
				11
	Contact material	copper alloy	12	14 12 021 Y00X 000
	Contact plating	tin plated	13	14 12 031 Y00X 000
			14	14 12 041 Y00X 000
			15	14 12 051 Y00X 000
			16	14 12 061 Y00X 000
			17	14 12 071 Y00X 000
			18	14 12 081 Y00X 000
		19	14 12 091 Y00X 000	
			14 12 101 Y00X 000	
			14 12 111 Y00X 000	
			14 12 121 Y00X 000	
			14 12 131 Y00X 000	
			14 12 141 Y00X 000	
			14 12 151 Y00X 000	
			14 12 161 Y00X 000	
			14 12 171 Y00X 000	
			14 12 181 Y00X 000	
			14 12 191 Y00X 000	
Please insert digits X and Y	for mounting direction vertical	X = 1	for pitch 5.00 mm	
	for mounting direction horizontal	X = 2	for pitch 5.08 mm	
			Y = 6	
			Y = 7	



Pushing Performance

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