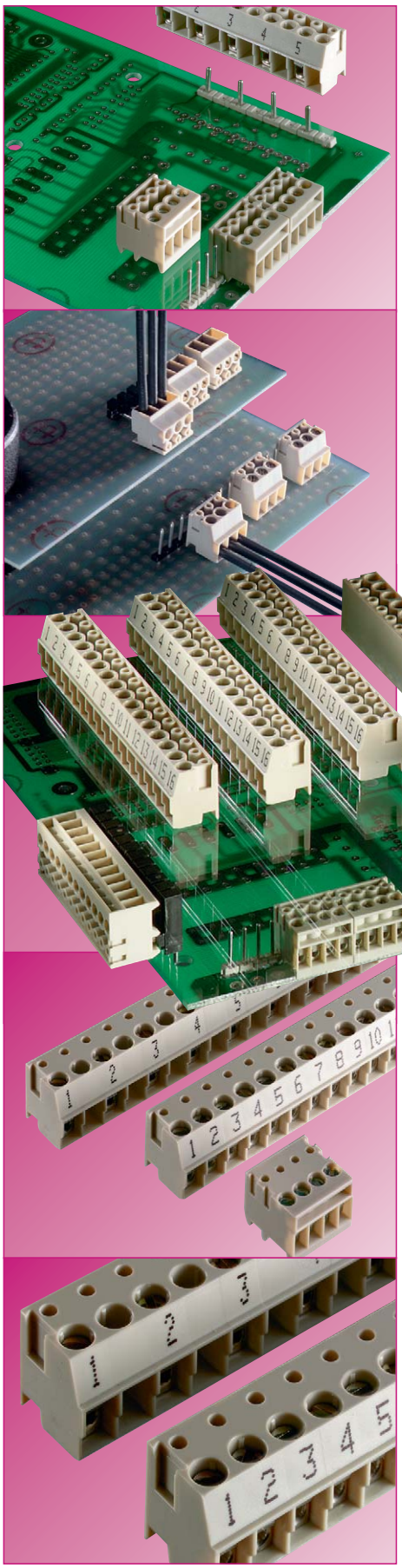
Pluggable PC board connectors with pin-strip headers

wiecon PCB



Pluggable connectors provide a simple 2-piece mateable connection between an external connector and the printed circuit board.

System features

- ❒ easy-to-operate screw termination
- ❒ installation and maintenance friendly
- ❒ quick disconnect
- ❒ pole configurations from 2 to 24 poles
- ❒ clear, straigthforward connection
- ❒ mating in both horizontal and vertical orientations to the printed circuit board
- ❒ clamping body always with wire guard

Variety of types

- ❒ spacings: (3.5/7/5/10) mm
- ❒ 2 to 24 pole
- ❒ terminal strip headers with vertical or horizontal solder pins
- ❒ solder pin diameters available in: 0.8 mm, 1 mm and 1.3 mm others are on request

Marking

- ❒ smudge-proof inkjet marking directly on the plug
- ❒ clear, easily legible marking
- ❒ custom marking possible, consult factory
- ❒ cost-effective marking directly on the plug

Abbreviations for plastic materials:

PA 66/6 = Polyamide 66/6
PC = Polycarbonate
PBT = Polybutylenterephthalate

Material

Insulating housings:

- ❒ use of high-quality polycarbonate for its excellent electrical, mechanical and chemical characteristics (see ***facts*** & DATA)

Metal parts:

- ❒ made of special alloys and/or special surface platings
- ❒ minimum feed through resistance
- ❒ high corrosion resistance
- ❒ secure, consistent clamping function
- ❒ clamping body: nickel-plated brass
- ❒ clamping screw: steel, zinc-plated and dichromated
- ❒ plug contact of type 8142 and ST 29: tin-plated bronze
  plug contact of type 8543: nickel-plated brass
- ❒ wire guard: tin-plated bronze

Pin-strip headers:

- ❒ Insulating part: made from high-quality Polyamide 66/6
- ❒ glass-fibre reinforcement for dimensional stability
- ❒ Metal parts:
  contact pin: tin plated brass

Note:

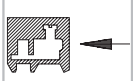
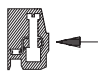
The information regarding cross sectional areas and connection types pertains to connections without ferrules.

The indicated rated current pertains to the maximum load of the PC board connector with a connected wire of the indicated rated cross section.

The rated voltage is indicated as per DIN VDE 0110 part 1 (IEC 60 664-1) – insulation coordination for electrical material in low voltage application – and refers to the delivered state of the PC board connector.

Before the PC board is fitted with connectors, an appropriate PC board must be selected and dimensioned accordingly (e.g. regarding tracking resistance of the printed circuit board, distances of the leads and solder joints). Furthermore, the ambient conditions under which the device is to be used (pollution degree) must be considered.

The indicated rated voltages will be valid for the complete module only if the printed circuit board and its connectors are correctly and carefully matched to each other.

		Page 316 	Page 318 	Page 320 
Type		**8543**	**8142**	**ST 29**
Spacing	**mm**	**3.50/7.00**	**5.00/10.00**	**5.08**
Cross section	**mm²**	**1**	**2.5**	**1.5**
Number of poles		**2 – 24**	**2 – 24**	**10**

PC board connectors
pluggable, spacings: 3.50/7.00 mm

wiecon PCB

Rated cross section:
1.0 mm²

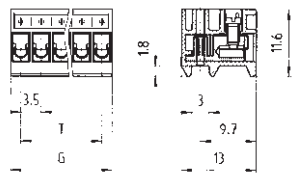
Rated current:
6 A

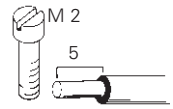
Connection range:
0.14 – 1.5 mm² solid/
0.14 – 1.0 mm² fine stranded

160 V/2.5 kV/3 – Overvoltage category III
250 V/2.5 kV/2 – Overvoltage category II
*690 V/2.5 kV/1 – Overvoltage category I

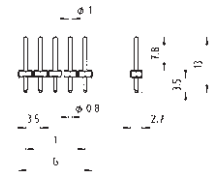
* max. 600 V for ungrounded networks or expected overvoltage ≤ 3 kV for L ≥ 2.0 mm and ≤ 2.5 kV for 2.0 mm > L ≥ 1.5 mm

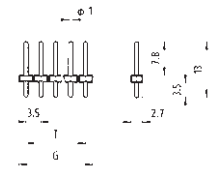
Spacing: 3.50 mm





Spacing: 3.50 mm





Color: gray
Solder pin Ø 0.8 mm
Bore hole Ø 1.0 mm

Color: black
Solder pin Ø 1.0 mm
Bore hole Ø 1.3 mm

Type 8543
plug-in 90° to wire entry

Terminal strip header
vertical mount

Rated voltages: VDE 0110 (spacing: 3.5 mm)
UL ratings — No. 22 – 16 AWG — 300 V — 10 A
CSA ratings — No. 22 – 16 AWG — 300 V — 10 A
Approvals

Std. pack	G	T	Poles	Part no. unmarked	Part no. marked	Part no. Color: gray	Part no. Color: black
Spacing: 3.50 mm							
100	7.0	3.5	2	25.602.5253.0	25.600.5253.0	Z5.531.0225.0	Z5.531.3225.0
100	10.5	7.0	3	25.602.5353.0	25.600.5353.0	Z5.531.0325.0	Z5.531.3325.0
50	14.0	10.5	4	25.602.5453.0	25.600.5453.0	Z5.531.0425.0	Z5.531.3425.0
50	17.5	14.0	5	25.602.5553.0	25.600.5553.0	Z5.531.0525.0	Z5.531.3525.0
50	21.0	17.5	6	25.602.5653.0	25.600.5653.0	Z5.531.0625.0	Z5.531.3625.0
50	24.5	21.0	7	25.602.5753.0	25.600.5753.0	Z5.531.0725.0	Z5.531.3725.0
50	28.0	24.5	8	25.602.5853.0	25.600.5853.0	Z5.531.0825.0	Z5.531.3825.0
50	31.5	28.0	9	25.602.5953.0	25.600.5953.0	Z5.531.0925.0	Z5.531.3925.0
50	35.0	31.5	10	25.602.6053.0	25.600.6053.0	Z5.531.1025.0	Z5.531.4025.0
50	38.5	35.0	11	25.602.6153.0	25.600.6153.0	Z5.531.1125.0	Z5.531.4125.0
50	42.0	38.5	12	25.602.6253.0	25.600.6253.0	Z5.531.1225.0	Z5.531.4225.0
50	45.5	42.0	13	25.602.6353.0	25.600.6353.0	Z5.531.1325.0	Z5.531.4325.0
50	49.0	45.5	14	25.602.6453.0	25.600.6453.0	Z5.531.1425.0	Z5.531.4425.0
50	52.5	49.0	15	25.602.6553.0	25.600.6553.0	Z5.531.1525.0	Z5.531.4525.0
50	56.0	52.5	16	25.602.6653.0	25.600.6653.0	Z5.531.1625.0	Z5.531.4625.0
17 to 24pole upon request							
Spacing: 7.00 mm upon request							

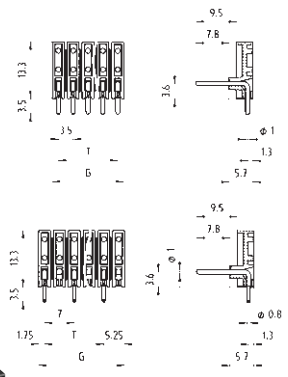
Rated voltages:
(spacing: 7 mm): VDE 0110

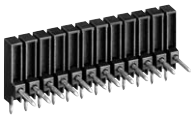
400 V/6 kV/3 – Overvoltage category III
690 V/6 kV/2 – Overvoltage category II
1000 V/6 kV/1 – Overvoltage category I

Material:
PC board connectors
Insulating housing: PC gray, UL 94-V-0
Clamping body with female contact: tin-plated brass
Clamping screw: zinc-plated steel
Wire protection: tin-plated bronze

Terminal strip header
Insulating part: PA 66/6, glass-fibre reinforced gray or black, UL 94-V-0
Contact pin: tin-plated brass

Spacing: 3.50 mm





Color: black
Solder pin Ø 0.8 mm
Bore hole Ø 1.0 mm

Color: black
Solder pin Ø 1.0 mm
Bore hole Ø 1.3 mm

Terminal strip header

horizontal mount

Part no.	Part no.
Color: black	Color: black
Z5.532.0225.0 Z5.532.0325.0 Z5.532.0425.0	Z5.532.3225.0 Z5.532.3325.0 Z5.532.3425.0
Z5.532.0525.0 Z5.532.0625.0 Z5.532.0725.0	Z5.532.3525.0 Z5.532.3625.0 Z5.532.3725.0
Z5.532.0825.0 Z5.532.0925.0 Z5.532.1025.0	Z5.532.3825.0 Z5.532.3925.0 Z5.532.4025.0
Z5.532.1125.0 Z5.532.1225.0 Z5.532.1325.0	Z5.532.4125.0 Z5.532.4225.0 Z5.532.4325.0
Z5.532.1425.0 Z5.532.1525.0 Z5.532.1625.0	Z5.532.4425.0 Z5.532.4525.0 Z5.532.4625.0

PC board connectors
pluggable, spacings: 5.00/10.00 mm

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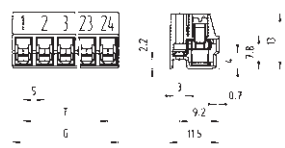
Rated cross section:
2.5 mm²

Rated current:
8 A

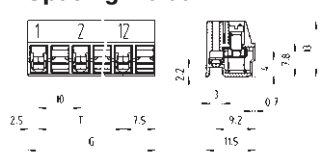
Connection range:
0.14 – 4.0 mm² solid/
0.14 – 2.5 mm² fine stranded

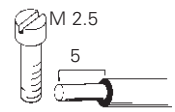
200 V/4 kV/3 – Overvoltage category III
250 V/4 kV/2 – Overvoltage category II
1000 V/4 kV/1 – Overvoltage category I

Spacing: 5.00 mm

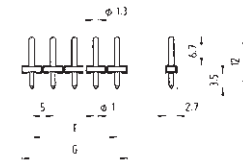


Spacing: 10.00 mm

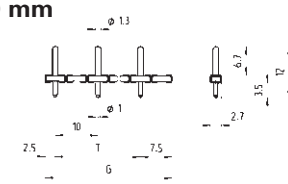




Spacing: 5.00 mm



Spacing: 10.00 mm



Color: gray
Solder pin Ø 1.0 mm
Bore hole Ø 1.3 mm

Color: black
Solder pin Ø 1.3 mm
Bore hole Ø 1.6 mm

Type 8142
plug-in 90° to wire entry

Terminal strip header
vertical mount

Rated voltages: VDE 0110 (spacing 5 mm)
UL ratings — No. 22 – 12 AWG — 300 V — 15 A
CSA ratings — No. 22 – 12 AWG — 300 V — 15 A
Approvals

Std. pack	G	T	Poles	Part no.	Part no.	Part no.	Part no.
Spacing: 5.00 mm				unmarked	marked	Color: gray	Color: black
100	10	5	2	25.602.2253.0	25.600.2253.0	Z5.530.0225.0	Z5.530.3225.0
100	15	10	3	25.602.2353.0	25.600.2353.0	Z5.530.0325.0	Z5.530.3325.0
50	20	15	4	25.602.2453.0	25.600.2453.0	Z5.530.0425.0	Z5.530.3425.0
50	25	20	5	25.602.2553.0	25.600.2553.0	Z5.530.0525.0	Z5.530.3525.0
50	30	25	6	25.602.2653.0	25.600.2653.0	Z5.530.0625.0	Z5.530.3625.0
50	35	30	7	25.602.2753.0	25.600.2753.0	Z5.530.0725.0	Z5.530.3725.0
50	40	35	8	25.602.2853.0	25.600.2853.0	Z5.530.0825.0	Z5.530.3825.0
50	45	40	9	25.602.2953.0	25.600.2953.0	Z5.530.0925.0	Z5.530.3925.0
50	50	45	10	25.602.3053.0	25.600.3053.0	Z5.530.1025.0	Z5.530.4025.0
50	55	50	11	25.602.3153.0	25.600.3153.0	Z5.530.1125.0	Z5.530.4125.0
50	60	55	12	25.602.3253.0	25.600.3253.0	Z5.530.1225.0	Z5.530.4225.0
50	65	60	13	25.602.3353.0	25.600.3353.0	Z5.530.1325.0	Z5.530.4325.0
50	70	65	14	25.602.3453.0	25.600.3453.0	Z5.530.1425.0	Z5.530.4425.0
50	75	70	15	25.602.3553.0	25.600.3553.0	Z5.530.1525.0	Z5.530.4525.0
50	80	75	16	25.602.3653.0	25.600.3653.0	Z5.530.1625.0	Z5.530.4625.0
				17 to 24pole upon request			
Spacing: 10.00 mm				unmarked	marked		
50	20	10	2	25.603.1253.0	25.601.1253.0	Z5.530.6225.0	Z5.530.8225.0
50	30	20	3	25.603.1353.0	25.601.1353.0	Z5.530.6325.0	Z5.530.8325.0
50	40	30	4	25.603.1453.0	25.601.1453.0	Z5.530.6425.0	Z5.530.8425.0
50	50	40	5	25.603.1553.0	25.601.1553.0	Z5.530.6525.0	Z5.530.8525.0
50	60	50	6	25.603.1653.0	25.601.1653.0	Z5.530.6625.0	Z5.530.8625.0
50	70	60	7	25.603.1753.0	25.601.1753.0	Z5.530.6725.0	Z5.530.8725.0
50	80	70	8	25.603.1853.0	25.601.1853.0	Z5.530.6825.0	Z5.530.8825.0
				9 to 12pole upon request			

Rated voltages:
(spacing: 10.00 mm): VDE 0110

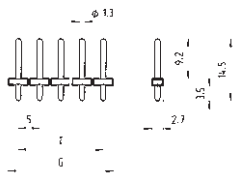
500 V/8 kV/3 – Overvoltage category III
800 V/8 kV/2 – Overvoltage category II
1000 V/8 kV/1 – Overvoltage category I

Material:
PC board connectors
Insulating housing: PC gray, UL 94-V-0
Clamping body: nickel-plated brass
Clamping screws: zinc-plated steel
Contact spring: tin-plated bronze

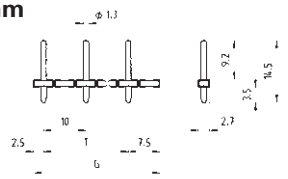
Terminal strip header
Insulating part: PA 66/6, glass-fibre reinforced
gray or black, UL 94-V-0
Contact pin: tin-plated brass

wiecon

Spacing: 5.00 mm



Spacing: 10.00 mm



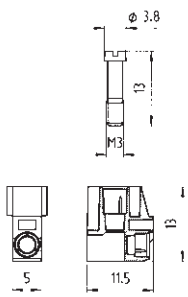
Color: black
Solder pin Ø 1.0 mm
Bore hole Ø 1.3 mm

Color: black
Solder pin Ø 1.3 mm
Bore hole Ø 1.6 mm

Terminal strip header

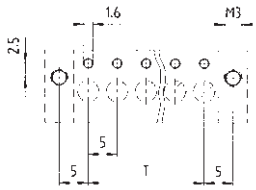
horizontal mount

vertical mount

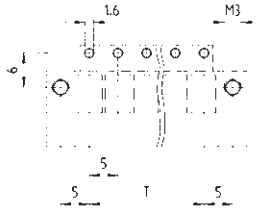


horizontal mount

Bore hole plan for fixing brackets vertical mount



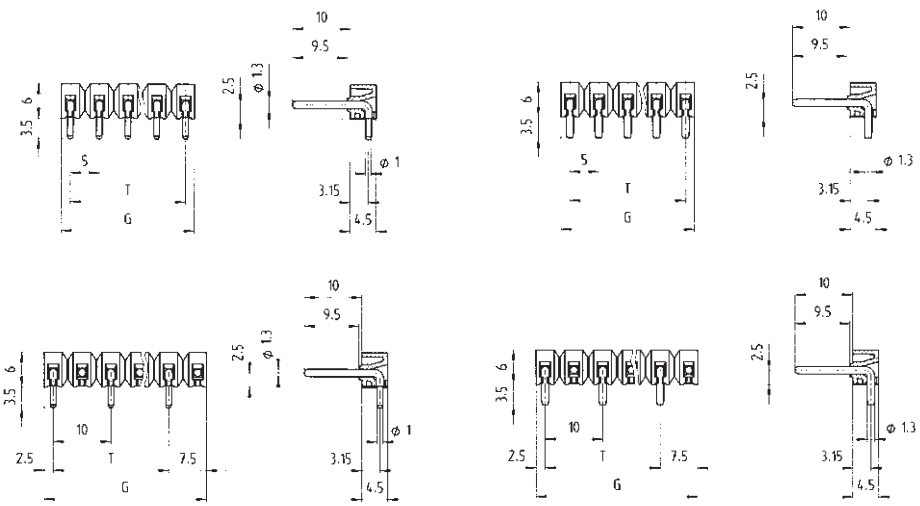
Bore hole plan for fixing brackets horizontal mount



Part no.	Part no.
Color: black	Color: black
Z5.540.0225.0	Z5.540.3225.0
Z5.540.0325.0	Z5.540.3325.0
Z5.540.0425.0	Z5.540.3425.0
Z5.540.0525.0	Z5.540.3525.0
Z5.540.0625.0	Z5.540.3625.0
Z5.540.0725.0	Z5.540.3725.0
Z5.540.0825.0	Z5.540.3825.0
Z5.540.0925.0	Z5.540.3925.0
Z5.540.1025.0	Z5.540.4025.0
Z5.540.1125.0	Z5.540.4125.0
Z5.540.1225.0	Z5.540.4225.0
Z5.540.1325.0	Z5.540.4325.0
Z5.540.1425.0	Z5.540.4425.0
Z5.540.1525.0	Z5.540.4525.0
Z5.540.1625.0	Z5.540.4625.0
Z5.540.6225.0	Z5.540.8225.0
Z5.540.6325.0	Z5.540.8325.0
Z5.540.6425.0	Z5.540.8425.0
Z5.540.6525.0	Z5.540.8525.0
Z5.540.6625.0	Z5.540.8625.0
Z5.540.6725.0	Z5.540.8725.0
Z5.540.6825.0	Z5.540.8825.0

	Part no.	Std. pack
Fixing brackets: Insulating material PA 66/6 gray, Screw M 3, zinc-plated steel	Z5.523.7653.0	100
Coding piece strip		
Color: white	05.561.9453.0	25
Color: white	05.561.9453.5	25
Cover/marking strip 12 poles		

	Part no.	Std. pack
	Z5.523.7653.0	100
Coding piece strip		
Color: white	05.561.9453.0	25
Color: orange	05.561.9453.5	25



PC board connectors, pluggable, spacing: 5.08 mm

wiecon PCB

codable

1,5 mm²

Rated cross section:
1.5 mm²

Rated current:
10 A

Connection range:
0.14 – 2.5 mm² solid/
0.14 – 1.5 mm² fine stranded

200 V/4 kV/3 – Overvoltage category III
250 V/4 kV/2 – Overvoltage category II
1000 V/4 kV/1 – Overvoltage category I

Statement of Conformity/CH

Solder pin Ø 1.3 mm
Bore hole Ø 1.6 mm

TOP connector, 10pole
Type ST 29/10 BC

plug-in 90° to wire entry

Terminal strip header

vertical mount

Rated voltages: VDE 0110
EN 60 998-1, EN 60 998-2-1
UL ratings
CSA ratings
Approvals

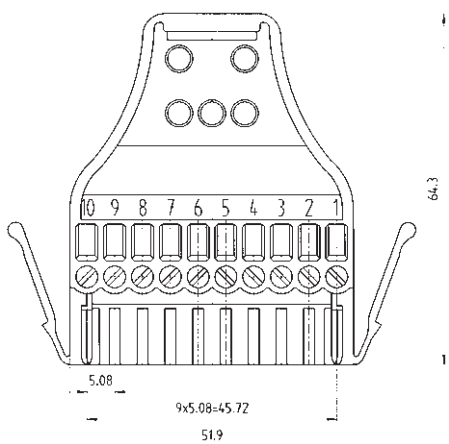
1.5 mm²	250 V	10 A
No. 22 – 14 AWG	300 V	5 A
No. 22 – 14 AWG	300 V	5 A

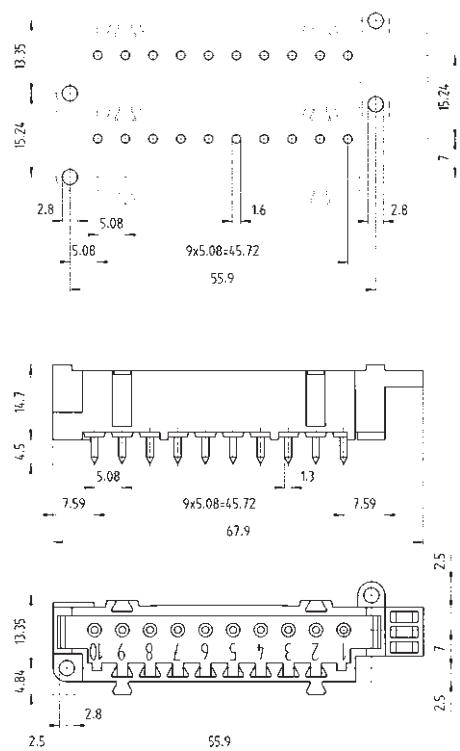
	250 V	10 A
(if all terminals carry current)		10 A
	300 V	5 A

Poles	Type	Part no.	Std. pack	Type	Part no.	Std. pack
Spacing: 5.08 mm						
10	ST 29/10 BC	93.101.2053.0	50		Z5.599.9025.0	50

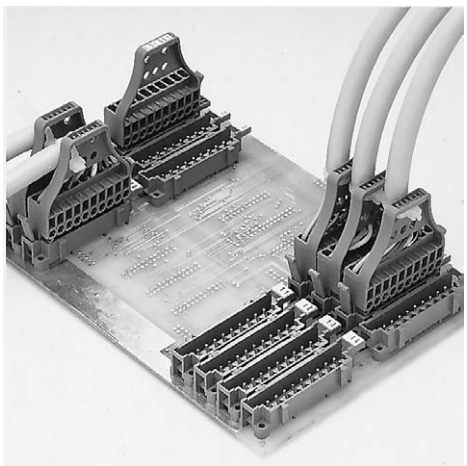
Material:
PC board connectors
Insulating housing: PA 66/6 gray, UL 94-V-2
Clamping body: nickel-plated brass
Clamping screws: zinc-plated steel
Contact spring: tin-plated bronze

Terminal strip header
Insulating part: PBT, glass-fibre reinforced gray, UL 94-V-0
Contact pin: tin-plated brass





wiecon



	Type	Part no.	Std. pack
Accessories			
Coding pieces, 10 codings each per strip		05.599.8053.0	100
Marking tag, unmarked	9705 A	04.242.0850.0	500
marked	9705 AB	04.842.0850.0	500

Coding plan
L = PC board connector
S = terminal strip header

Combination 01	S	L	L	L	L	L	L	S
Combination 02	S	L	L	L	L	L	S	L
Combination 03	S	L	L	L	L	S	L	L
Combination 04	S	L	L	L	S	L	L	L
Combination 05	S	L	L	S	L	L	L	L
Combination 06	S	L	S	L	L	L	L	L
Combination 07	S	S	L	L	L	L	L	L
Combination 08	L	S	L	L	L	L	L	S
Combination 09	L	S	L	L	L	L	S	L
Combination 10	L	S	L	L	L	S	L	L
Combination 11	L	S	L	L	S	L	L	L
Combination 12	L	S	L	S	L	L	L	L
Combination 13	L	S	S	L	L	L	L	L
Combination 14	L	L	S	L	L	L	L	S

etc.

Pluggable terminal strip header with TOP connection

A special version of the TOP system is the 5.08 mm spaced terminal strip header which can be soldered into a PC board. Two mounting holes are available in order to fix the terminal strip header.
– Strain relief
– Locking device
– Marking capabilities

By means of dove-tail guides, several terminal strip headers can be snapped together, while only the outer headers of this group must be mechanically fixed on the printed circuit board. In order to guarantee the necessary stability on the printed circuit board, it is not recommended to exceed four terminal strip headers in a group.
The terminal TOP connector and terminal strip header each possess eight slots for coding to prevent mismating the TOP plug-in system.