

har-bus 64

Number of contacts	160
Contact spacing (mm)	2.54
Working current	1 A at 70 °C and all contacts are loaded
see current carrying capacity chart	

Clearance and creepage distances

minimal clearance and creepage distance		distance in mm		
		rows a, b, c	rows z, d	female angled
between two rows	clearance	1.2	1.2	0.6
	creepage	1.2	1.2	0.6
between two contacts (in a row)	clearance	1.2	1.0	0.8
	creepage	1.2	1.0	0.8

Working voltage

The working voltage also depends on the clearance and creepage dimensions of the pcb itself and the associated wiring according to the safety regulations of the equipment Explanations see chapter 00

Test voltage $U_{r.m.s.}$ 1 kV

Contact resistance

rows a, b, c $\leq 20 \text{ m}\Omega$
rows z, d $\leq 30 \text{ m}\Omega$

Insulation resistance $\geq 10^{10} \Omega$ acc. to IEC 60512-2

Temperature range for press-in termination $-55 \text{ }^\circ\text{C} \dots +125 \text{ }^\circ\text{C}$

$-40 \text{ }^\circ\text{C} \dots +105 \text{ }^\circ\text{C}$
acc. to IEC 60512-11

During reflow soldering max. $+240 \text{ }^\circ\text{C}$ for 20 s
for SMC connectors

The higher temperature limit includes the local ambient and heating effects of the contacts under load

Electrical termination

Solder pins for pcb termination $\varnothing 1.0 \pm 0.1 \text{ mm}$
according to IEC 60326-3

Crimp terminal
 $0.09 - 0.50 \text{ mm}^2$

Compliant press-in terminations

pcb thickness $\geq 1.6 \text{ mm}$
Recommended pcb holes for press-in technology See recommendation page 00.25
in acc. to EN 60352-5

Insertion and withdrawal force $\leq 160 \text{ N}$

Materials

Mouldings

- Liquid Cristal Polymer (LCP), for male connectors, straight female connectors, UL 94-V0
- Thermoplastic resin glass-fibre filled, UL 94-V0

Contacts Copper alloy

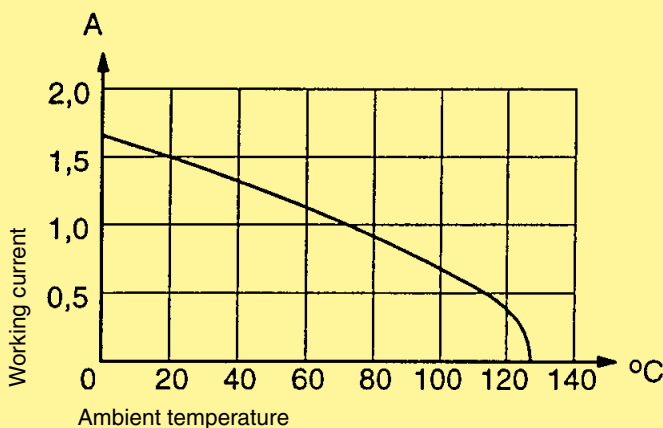
Contact surface

Contact zone Plated acc. to performance level¹⁾

Current carrying capacity chart

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



With selective loading higher currents can be transmitted. The requirements according to VITA 1.7 are fulfilled.

harbus® 64 with switches

Deviating technical characteristics for the switching elements.

minimal clearance and creepage distance	distance in mm	
	switching positions	
between two rows	clearance	0.5
	creepage	0.7
between two contacts (in a row)	clearance	0.5
	creepage	0.7

Contact resistance

Switching elements $\leq 60 \text{ m}\Omega$

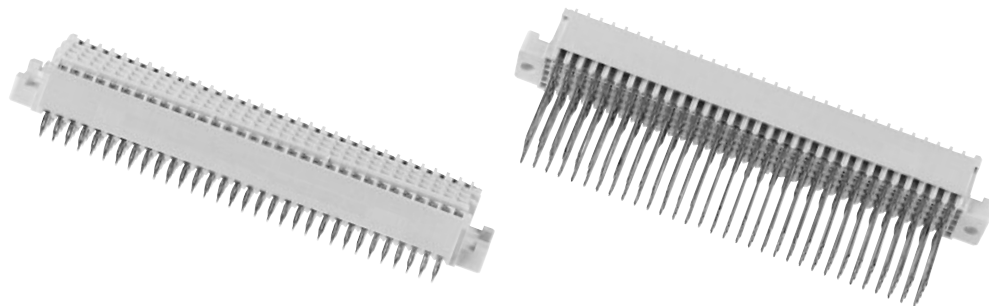
Insertion and withdrawal force

Complete connector $\leq 180 \text{ N}$

¹⁾ Explanation performance levels see chapter 00

Number of contacts

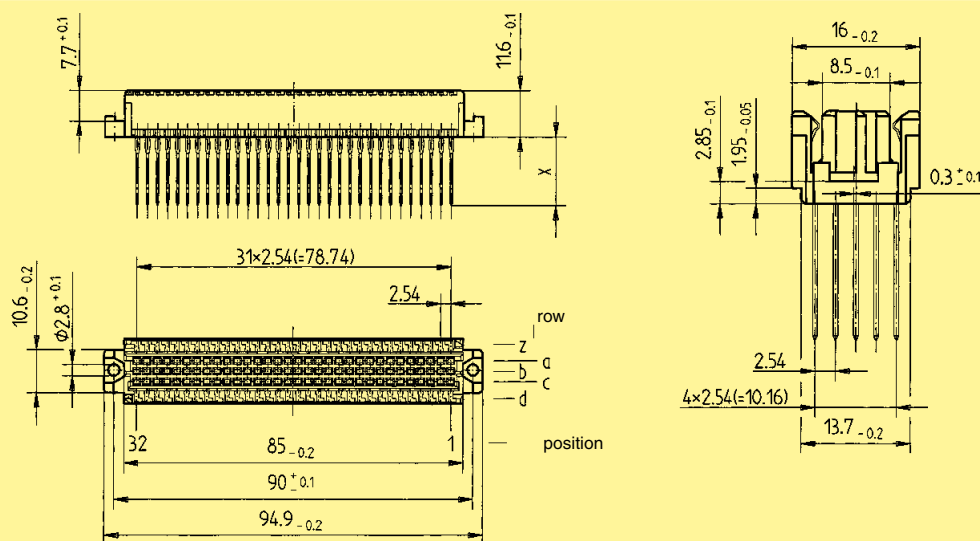
160



Female connectors

Identification	Number of contacts	Contact arrangement	Part No. Performance levels according to IEC 61 076-4-113	
			2	1
Explanation chapter 00				
Female connectors, straight ²⁾ with press-in terminations				
with 3.7 mm	160	z, a, b, c, d		02 02 160 1601
fixing flange 4.5/5 mm	160	z, a, b, c, d	02 02 160 2201	02 02 160 1201
17 mm*	160	z, a, b, c, d	02 02 160 2301	02 02 160 1301
without 5 mm	160	z, a, b, c, d	02 02 160 2202	02 02 160 1202
fixing flange 17 mm*	160	z, a, b, c, d	02 02 160 2302	02 02 160 1302

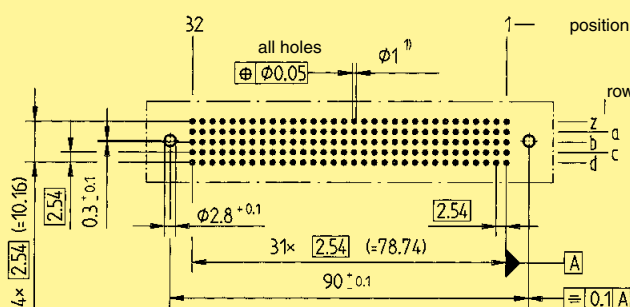
Dimensions



Part number	Dimension "X" for row				
	z	a	b	c	d
02 02 160 1601	3.7	3.7	3.7	3.7	3.7
02 02 160 2201 / 02 02 160 1201	5.0	4.5	4.5	4.5	5.0
02 02 160 2301 / 02 02 160 1301	17.0	17.0	17.0	17.0	17.0
02 02 160 2202 / 02 02 160 1202	5.0	5.0	5.0	5.0	5.0
02 02 160 2302 / 02 02 160 1302	17.0	17.0	17.0	17.0	17.0

Board drillings

Mounting side



Dimensions in mm

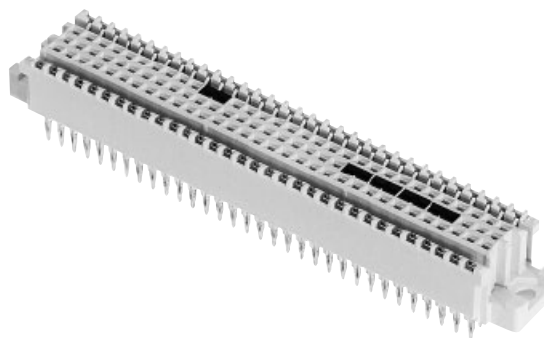
Tooling see chapter 30

¹⁾ Press-in technology and refer to recommended configuration of pcb holes, see page 00.25

* selectively gold-plated

Number of contacts

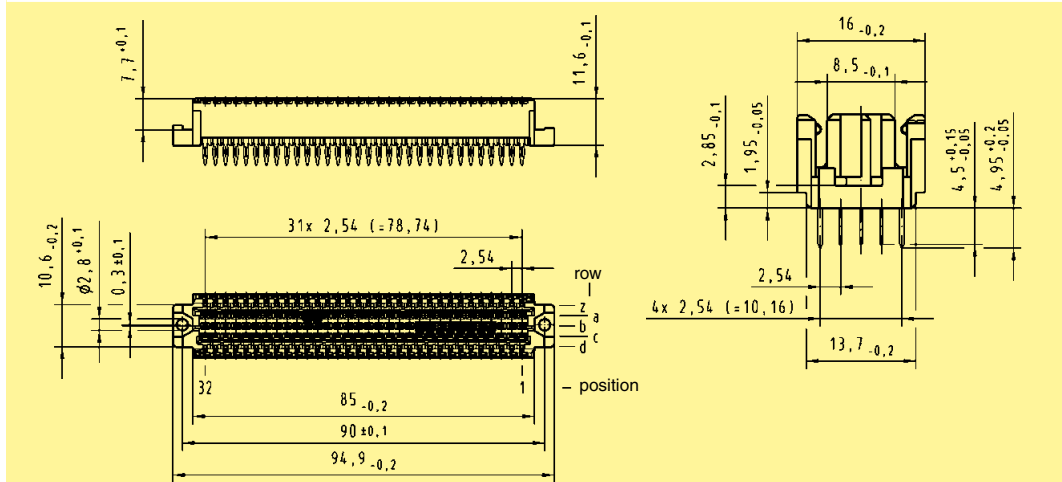
160



Female connectors

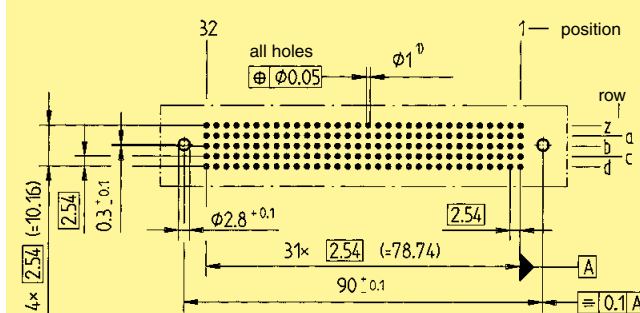
Identification	Number of contacts	Contact arrangement	Part No.
Female connectors, straight with switches ²⁾ with press-in terminations with flange 4.5/5 mm	160	z, a, b, c, d	02 03 160 2201

Dimensions



Board drillings

Mounting side



Dimensions in mm

Tooling see chapter 30

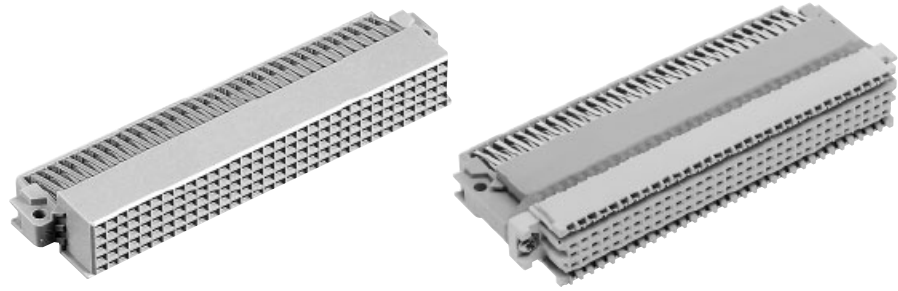
¹⁾ Press-in technology see page 00.25

²⁾ Switching elements at positions a21-22, b4-5, b6-7, b8-9 and b10-11

har-bus 64

Number of contacts

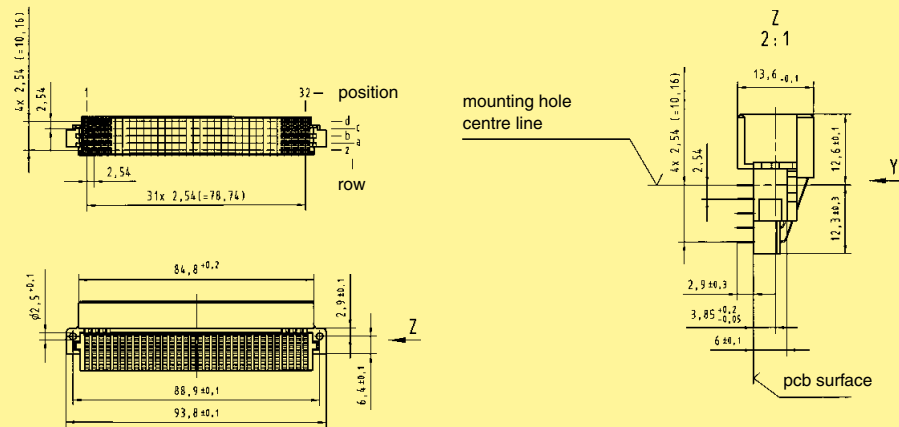
160



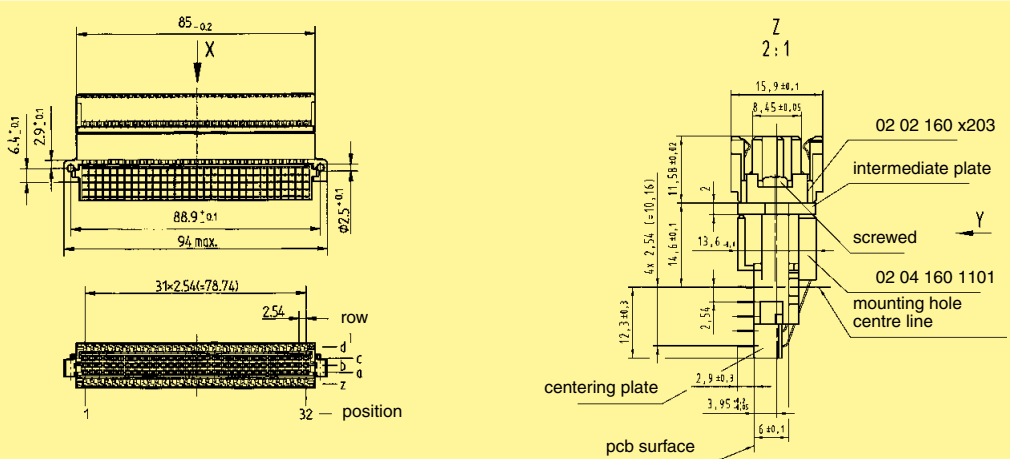
Female connectors

Identification	Number of contacts	Contact arrangement	Part No. Performance level 1 according to IEC 61 076-4-113 Explanation chapter 00
Female connectors, angled with solder pins			
for rear access	160	z, a, b, c, d	02 04 160 1101
for har-bus® 64 male connector	160	z, a, b, c, d	02 07 160 1101

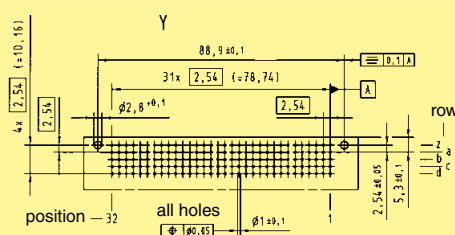
Dimensions
02 04 160 1101



Dimensions
02 07 160 1101



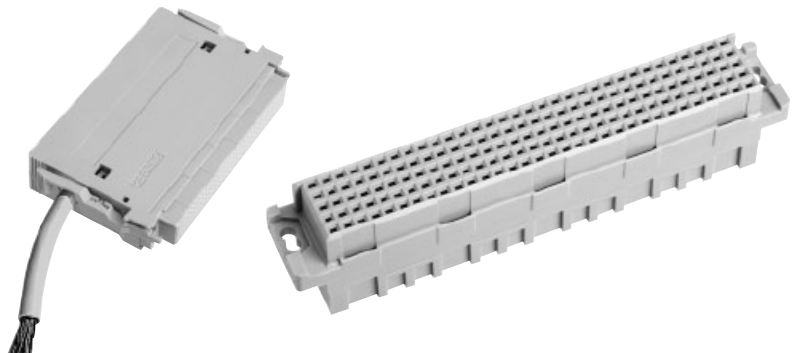
Board drillings
Mounting side



Dimensions in mm

Number of contacts

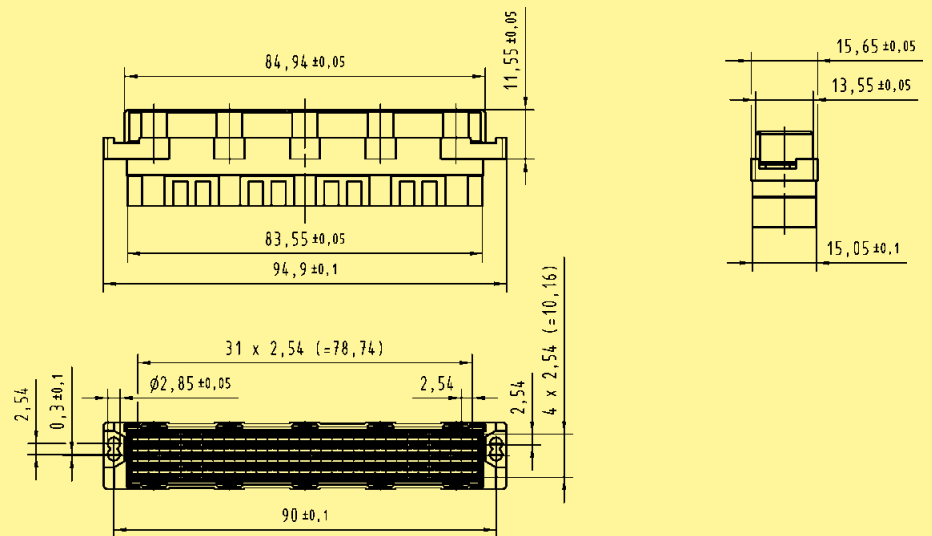
max. 160



Female connectors

Identification	Number of contacts	Contact-arrangement	Suitable for	Part No.
Female connector for crimp contacts order contacts separately fits into shell housing C see chapter 20	160		har-bus® 64 shroud	02 05 000 0004
	160		Male connector type R with 5 rows	02 05 000 0005
	160		Male connector type C with 5 rows	02 05 000 0003

Dimensions

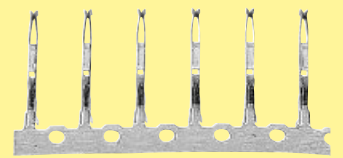


Identification	Part No.	Performance levels according to IEC 61076-4-113. Explanation chapter 00
Female crimp contacts har-bus® 64	2	1
Bandoliered contacts (approx. 5,000 pieces)	02 05 000 2511	02 05 000 1511
Bandoliered contacts (approx. 500 pieces)	02 05 000 2512	02 05 000 1512
Individual contacts ¹⁾	02 05 000 2513	02 05 000 1513

Wire gauge mm ²	AWG	Insulation ø mm
0.09 - 0.5	28 - 20	0.7 - 1.5

3.5 + 0.5 mm of insulation is stripped
For the fabrication in line with the specification please use exclusively crimp tools approved by HARTING (see DIN EN 60352-2)
Insertion, removal and crimping tools see chapter 30

Bandoliered contacts



Individual contacts



¹⁾ Packaging unit 1,000 pieces