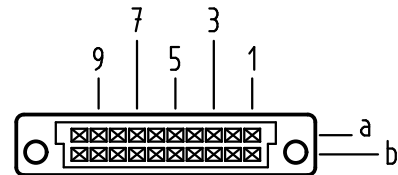


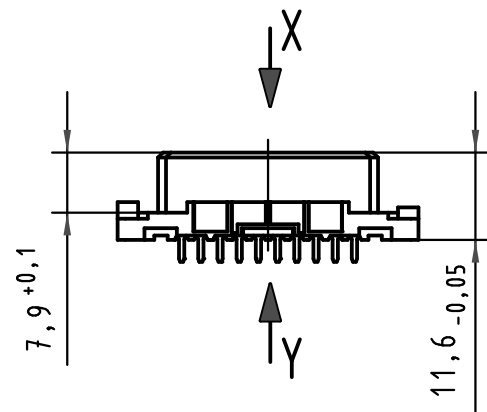
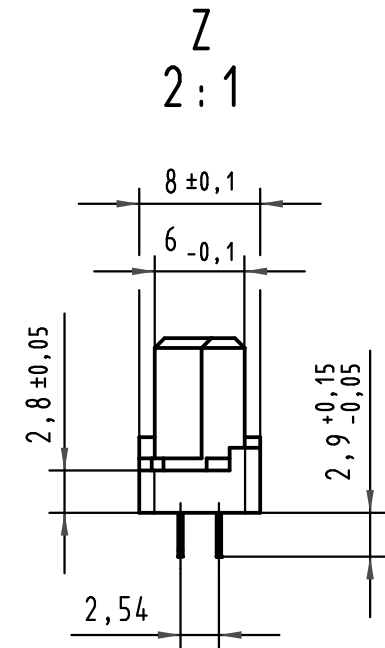
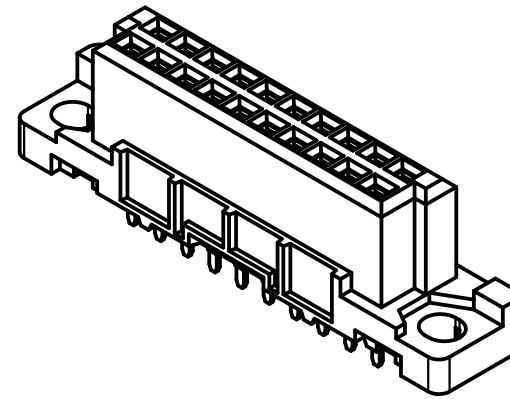
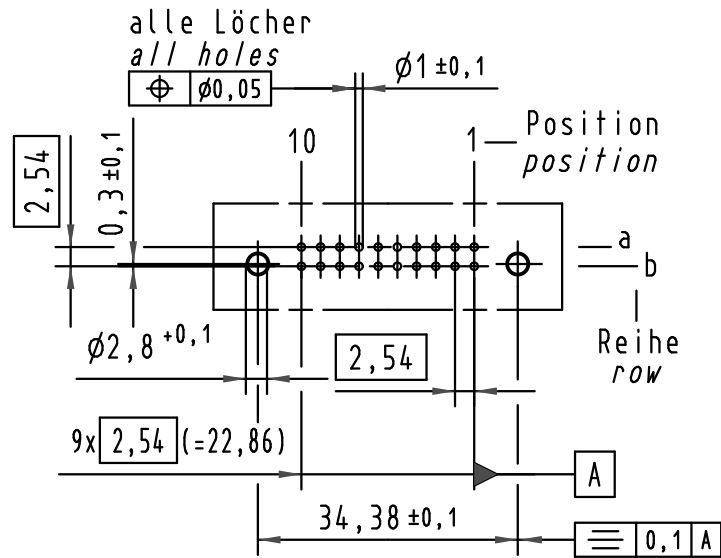
X
Kontaktanordnung
contact arrangement



20 SMC Einlöt-Kontakte
20 solder-contacts

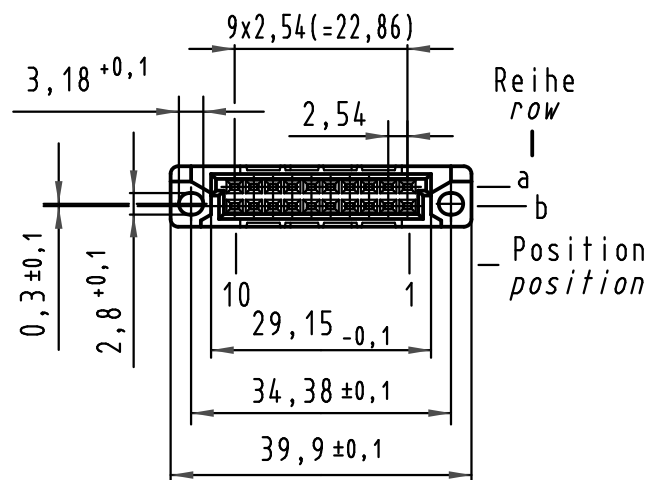
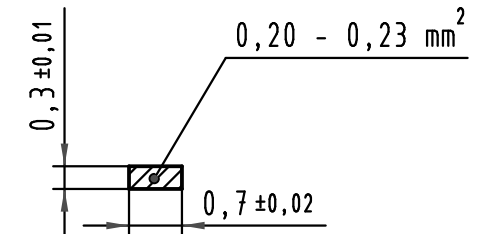
- ⊗ = Einlöt-Kontakt
= solder-contact
- = Kontaktposition nicht belegt
= position without contact

X
(Lochbild)
(board drillings)



Y
10:1

Querschnitt der
Lötanschlüsse:
cross-section of
solder terminations:



09 24 220 6824	2	Au über/over Ni
Bestell-Nr. part-no.	Anforderungsstufe nach IEC performance level acc.to IEC	Kontaktoberfläche contact plating

All Dimensions in mm Original Size DIN A 3	Techn. Character.			Nicht tolerierte Maße/Free size tolerances IEC 60603-2	
	Detail.	Dat.	Name	Maßstab/Scale	
				1:1	
				2:1 10:1	
				har-bus 3B Federleiste Einlöt 2,9 , 20 pol. har-bus 3B female connector solder 2,9 , 20 pol.	
Mod.	Dat.	Name	HARTING Electronics GmbH & Co. KG D-32339 ESPELKAMP		TB 09 24 220 x824 Sub.

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WIKIPEDIA

DIN 41612

DIN 41612 is a DIN standard for electrical connectors that are widely used in rack based electrical systems. Standardisation of the connectors is a pre-requisite for open systems, where users expect components from different suppliers to operate together. The most widely known use of DIN 41612 connectors is in the VMEbus system. They were also used by NuBus. The standard has subsequently been upgraded to international standards **IEC 60603-2** and **EN 60603-2**.

DIN 41612 connectors are used in STEBus,^[1] Futurebus, VMEbus, Multibus II, NuBus, VXI Bus,^[2] eurocard TRAM motherboards,^[3] and Europe Card Bus, all of which typically use male DIN 41612 connectors on Eurocards plugged into female DIN 41612 on the backplane in a 19-inch rack chassis.

Contents

- Mechanical details**
- Electrical details**
- Performance Classes**
- References**
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Mechanical details

The standard describes connectors which may have one, two or three rows of contacts, which are labelled as rows a, b and c. Two row connectors may use rows a+b or rows a+c. The connectors may have 16 or 32 columns, which means that the possible permutations allow 16, 32, 48, 64 or 96 contacts. The rows and columns are on a 0.1 inch (2.54 mm) grid pitch. Insertion and removal force are controlled, and three durability grades are available.

Often the female DIN 41612 connectors have press fit contacts rather than solder pin contacts, to avoid thermal shock to the backplane.^[4]

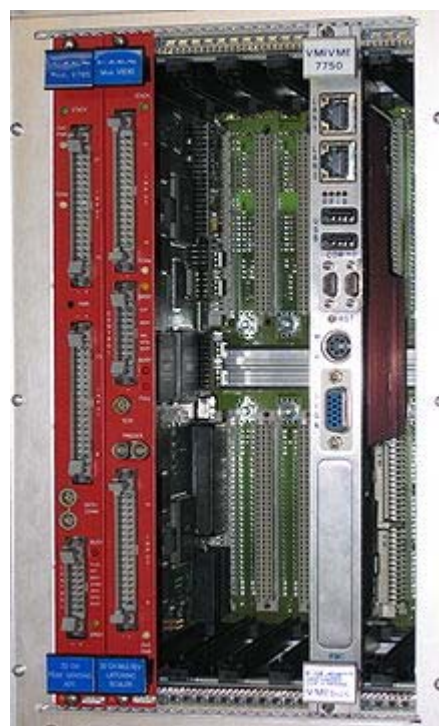
Electrical details

The headline performance of the connectors is a 2 amp per pin current carrying capacity, and 500 volt working voltage. Both these figures may need to be de-rated according to safety requirements or environmental conditions.

Performance Classes



A NuBus graphics card with a male 3x32 DIN 41612 connector (white, foreground left).



VMEbus crate. 3x32 DIN 41612 female connectors can be seen on the green motherboard in back.

The DIN 41612 specification identifies 3 different classes or "levels"; it's more complicated than this, but, essentially: class 1 is good for 500 mating cycles; class 2 is good for 400 mating cycles, and, class 3 is good for 50 mating cycles.

References

1. Michael J. Spinks. "Microprocessor System Design: A Practical Introduction" (<https://books.google.com/books?id=0vf8BAAAQBAJ>). 2013. p. 158.
2. "Eurocard Connectors per DIN 41612 and IEC 60603-2" (https://www.digikey.com/Web%20Export/Supplier%20Content/Tyco_8004/PDF/te-connectivity-eurocard-connectors.pdf?redirected=1)
3. "IMS B012 User Guide and Reference Manual" (<http://www.transputer.net/mg/b012ug/b012ug.html#x1-50002>). "Appendix A" (<http://www.transputer.net/mg/b012ug/b012ug.html#x1-35000A>). 1988.
4. Andrew Fletcher. "Connector Industry: A Profile of the European Connector Industry" (<https://books.google.com/books?id=dW4vBQAAQBAJ>). p. 67.



A NuBus motherboard, with six female 3x32 DIN 41612 connectors (black, centre left).

External links

- [VME Bus Connector Mechanical Dimensions](http://www.interfacebus.com/Design_VME_Connectors.html) (http://www.interfacebus.com/Design_VME_Connectors.html)

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