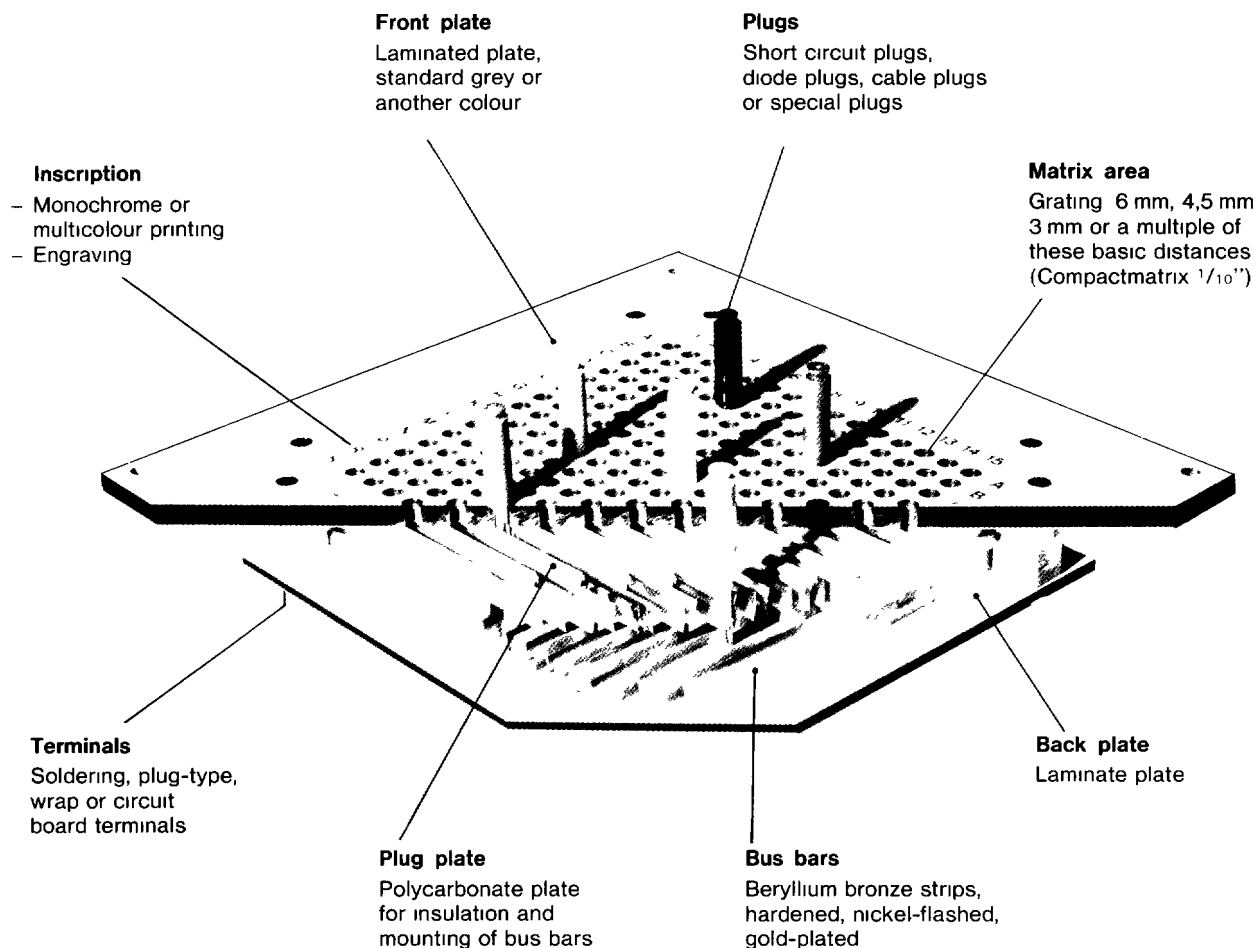The Ghielmetti matrix programme board consists of two parallel decks with bus bars rightangled to each other. The X and Y co-ordinates can be connected by means of contact plugs.

This matrix board is a single and many-sided programming device. The following points are worthy of special notice:

■ Simplicity of the programming

■ Easy examination of the programme
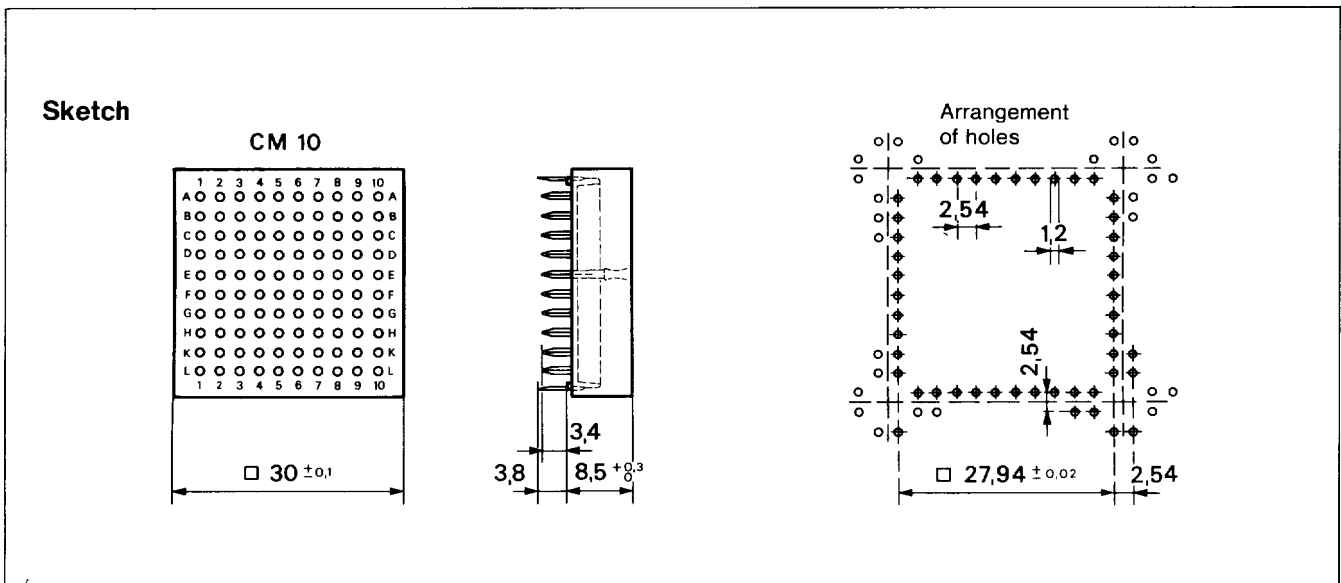
■ Wear resistant

Construction

Front plate
Laminated plate, standard grey or another colour

Plugs
Short circuit plugs, diode plugs, cable plugs or special plugs

Inscription
– Monochrome or multicolour printing
– Engraving

Matrix area
Grating 6 mm, 4,5 mm 3 mm or a multiple of these basic distances (Compactmatrix 1/10")

Terminals
Soldering, plug-type, wrap or circuit board terminals

Back plate
Laminate plate

Plug plate
Polycarbonate plate for insulation and mounting of bus bars

Bus bars
Beryllium bronze strips, hardened, nickel-flashed, gold-plated

Compactmatrix

The «Compactmatrix» is a miniature matrix board suited for printed circuit board mounting The compact design of this matrix board permits a pin spacing of $^1/_{10}$'' (2,54 mm), which corresponds to the usual standards for electronic components

Sketch

Technical data

| Order Code 145-328	Compactmatrix
Grating	2,54 mm
* Operating voltage	50 V
** Thermal rated current	2 A
Contact resistance (bus bar–plug–bus bar)	1 mΩ
Resistance of a bus bar pair per grating	3 mΩ
Insulation resistance of parallel bus bar pairs over 10 plug points, at an air humidity of 80–95 %	10^6 MΩ
Insulating material	Polycarbonate
Air and surface–leakage paths	min 0,4 mm
Test voltage	500 V
Working temperature	–20 ..+60° C
Capacity of two parallel bus bar pairs, distance 10 plug points	~ 3 pF
Capacity of two crossed bus bar pairs, distance 10 plug points	~ 2 pF
Bus bars	Beryllium copper, hardened, gold plated
Contact force	> 50 p
Plugs	Brass contact pin, gold plated
Diameter of contact pins	1,22 mm

* For voltages of up to 50 V AC or 72 V DC respectively the plugs may only be inserted or removed in the «switched off» condition

** Diode plugs and short circuit plugs may not be changed when the device is live, i e they may be changed only in absence of current

Short circuit plug

Diode plug

Control unit

Rows

A B C D E F G

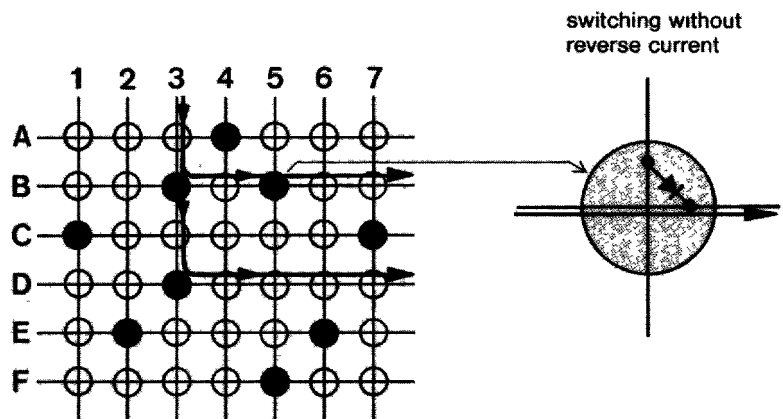1 2 3 4 5 6 7   Function relays
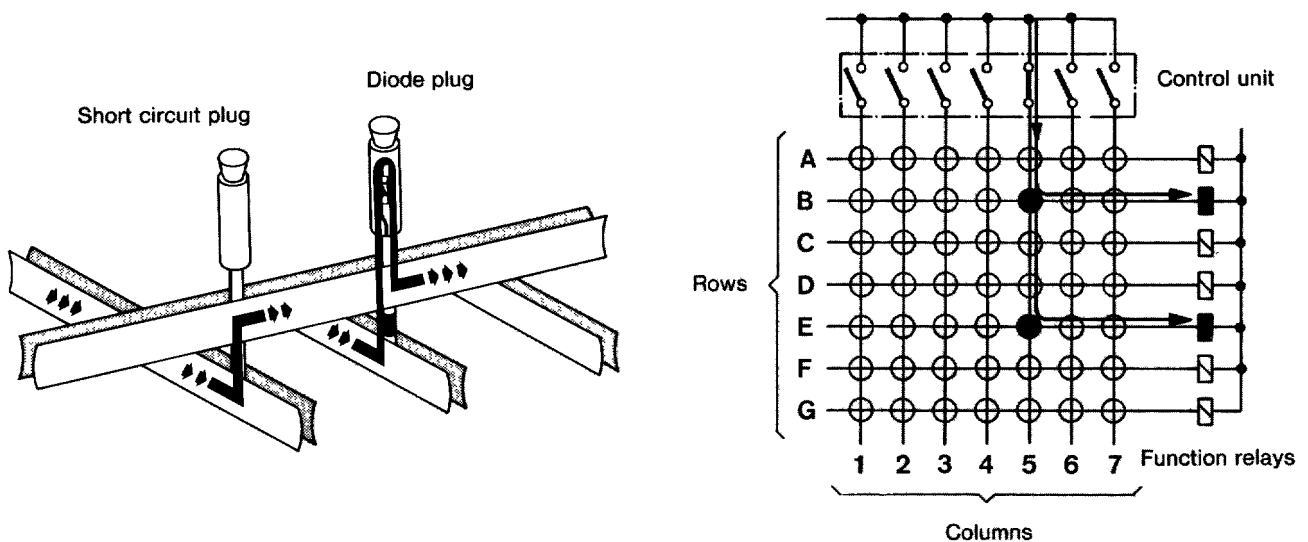
Columns

Switching with short circuit plugs

If more than one short circuit plug is used
per row or per column reverse currents may
result. This leads to false informations at
the output of the matrix programme board

switching with
reverse current

False information
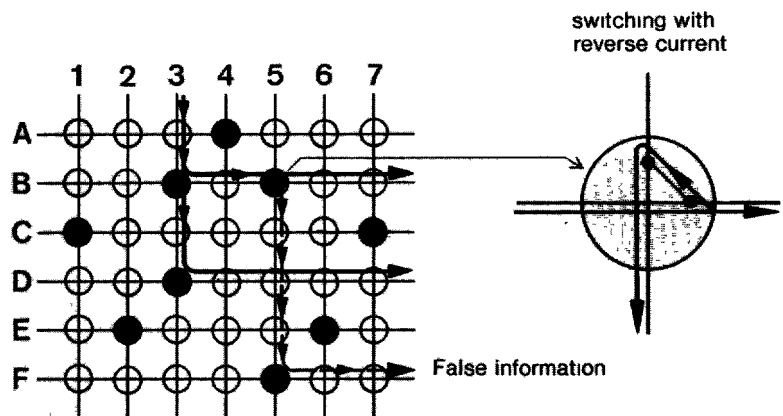
Switching with diode plugs

Diode plugs are used to prevent the
occurence of reverse currents

switching without
reverse current

Code for standard plugs Compactmatrix

Order number | 679 | . | ⬚ | . | 0 | . | ⬚

Description

Diode plug — 210

Short circuit plug — 310

Sleeve colour

02 red

05 green

09 white

Sleeve length 8 mm

Short circuit plug — 2

Diode plug
Polarity from row (+) to column (−) — 6

Polarity from column (+) to row (−) — 7

Execution

0 Short circuit plug

1 Diode 1 N 4148
*V_R max = 75 V
*I_F max = 150 mA

*Data as supplied by the diode manufacturers It is recommended to limit operational values of voltage and current to approx one third of the listed values
Care should be taken to avoid an overstressing of the diodes by the voltage surges due to switching of inductive loads

679-310-200-09 = 145-330
679-210-610-02 = 145-331
679-210-705-05 = 145-332

Plug extractor Order Code 145-329

Order number
674.110.481.00