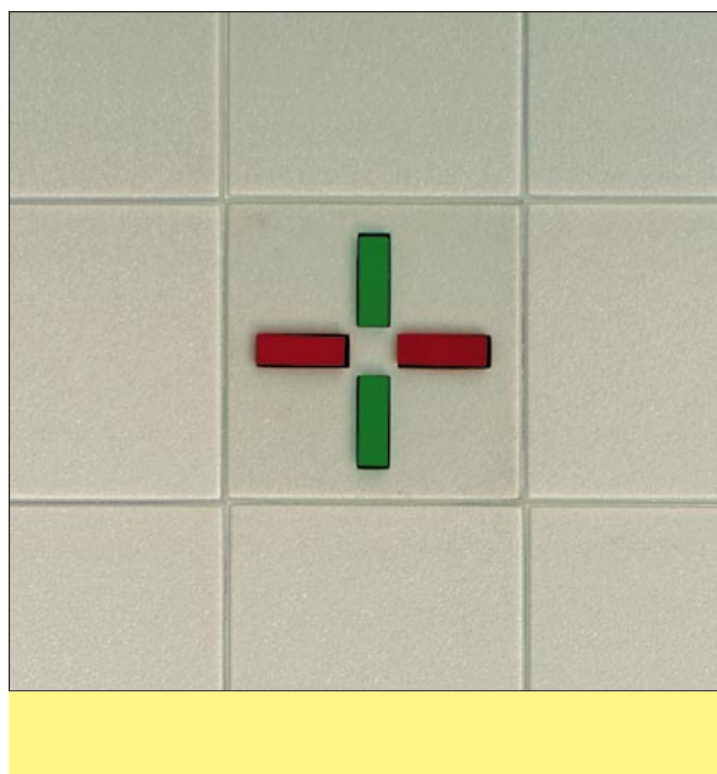


# Switch position indicator



## FG 24 PD

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These products are intended for industrial use and comply with the requirements of EC Directive 89/336/EEC (Directive of the Council for Harmonisation of Legislation of the Member States Concerning Electromagnetic Compatibility, amended by RL 91/263/EEC, 92/31/EEC and 93/68/EEC of the Council).

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## Application

The FG 24 PD diode module serves as a position indicator in the M 24 T mosaic system. The module is used directly in the mosaic system and can also be used rotated through 90°.

A front LED cross consisting of red and green rectangular LED displays can be used for various indication purposes.

The FG 24 PD diode module contains an internal logic circuit, which is controlled via two inputs. One of the possible indicating variations can be set via an externally accessible switch.

A further input serves for testing the LED's.

The inputs are electrically isolated from the other parts of the circuit via optocouplers and act as constant current sinks over a wide input level range. A protective circuit for the input and supply circuits ensures the necessary interference immunity and protects the module against damage.

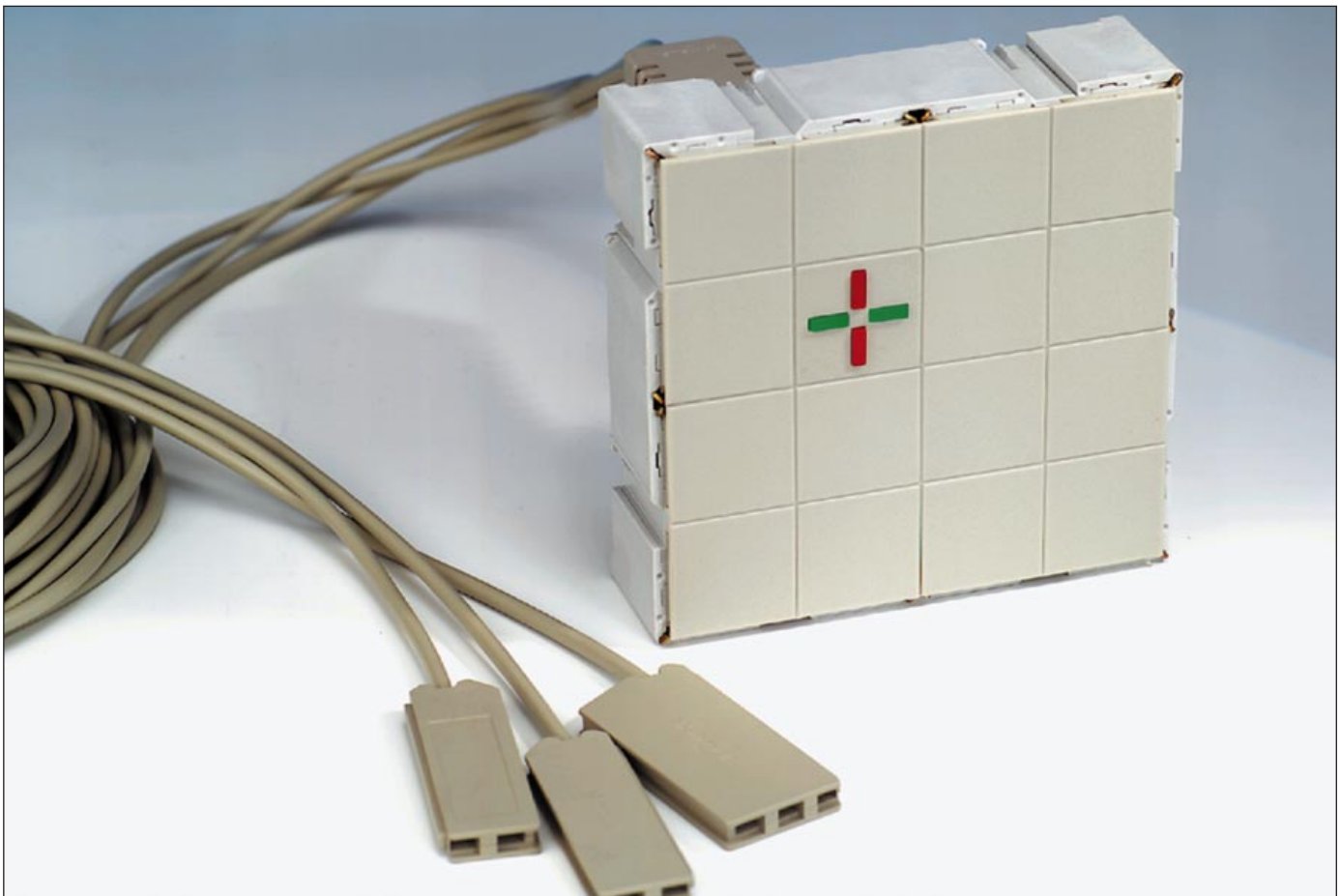
The internal polarised voltage transformer enables supply over a wide voltage range.

## Design

The module consists of a double-sided printed board essentially employing SMD technology, which is fitted in the housing shell halves.

A switch for indication variant selection can be accessed through a opening in the housing.

The input connections are applied to connectors via individual cables to enable connection to a push-on plug distributor. This connection system has been designed for fast installation and easy expansion.



*M24T Diode module in mosaic grid*

**Indication variations**

Switch position S1

 E1 = 0  
E2 = 0  
LT = 0

 E1 = 1  
E2 = 1  
LT = 0

0



1



2



3



4



5



6



7



8



9



A



B



C



D



E



F



Switch position S1

 E1 = 1  
E2 = 0  
LT = 0

 E1 = 0  
E2 = 1  
LT = 0

0



Switch position S1

 E1 = 0 or 1  
E2 = 0 or 1  
LT = 1

0


**Technical data**

 Supply voltage  
Power consumption

 18 V to 72 V DC  
max. 0,7 W

Inputs E1, E2, LT

Input signals

0-Signal

0 V to 5 V DC

1-Signal

12 V to 60 V DC

Input current

with 1-Signal

1.5 mA to 2.5 mA

Indicator

Indicator elements

2.5 mm

Rectangular LED 7.5 mm x

Indicator current

about 20 mA per LED

Connections

Cable length

Conductor

3-cable with Mauell plug

about 2.2 m

 0.14 mm<sup>2</sup>, flexible

Ambient conditions

Operating temperature range

Transport temperature range

Storage temperature range

Relative air humidity

0 °C to +50 °C

-25 °C to +70 °C

-25 °C to +55 °C

&lt; 75 % in yearly mean

&lt; 95 % on 30 days at 30 °C

Moisture condensation inadmissible during operation

**Mechanical load**

Oscillation

sinusoidal IEC 68-2-6,

Testing Fc,

Variable frequency 1 octave/min

2g ± 0.15 mm,

10 Hz to 150 Hz,

3 x 20 cycles

Oscillation during operation

2g ± 0.15 mm, 10 Hz to 150 Hz,

3 x 20 cycles

Continuous shocks IEC 68-2-29,

Testing Eb

15 g/6 ms

3 x 4000 shocks

**Mechanical data**

Front dimensions

Module length

designed for plugging into M 24 T mosaic system

18.9 mm x 18.9 mm

about 110 mm

**Safety parameters**

Electric strength

between signal inputs E1,

E2 and LT

3750 Vrms/1 min

between signal inputs and

supply voltage

3750 Vrms/1 min

Impulse strength DIN VDE 0435, part 303, Class III

between signal inputs E1,

E2 and LT

5 kV

between signal inputs

and supply voltage

5 kV

Protection class according to

DIN 40050

IP 20, safe from finger touch

DIN VDE 0106, part 100

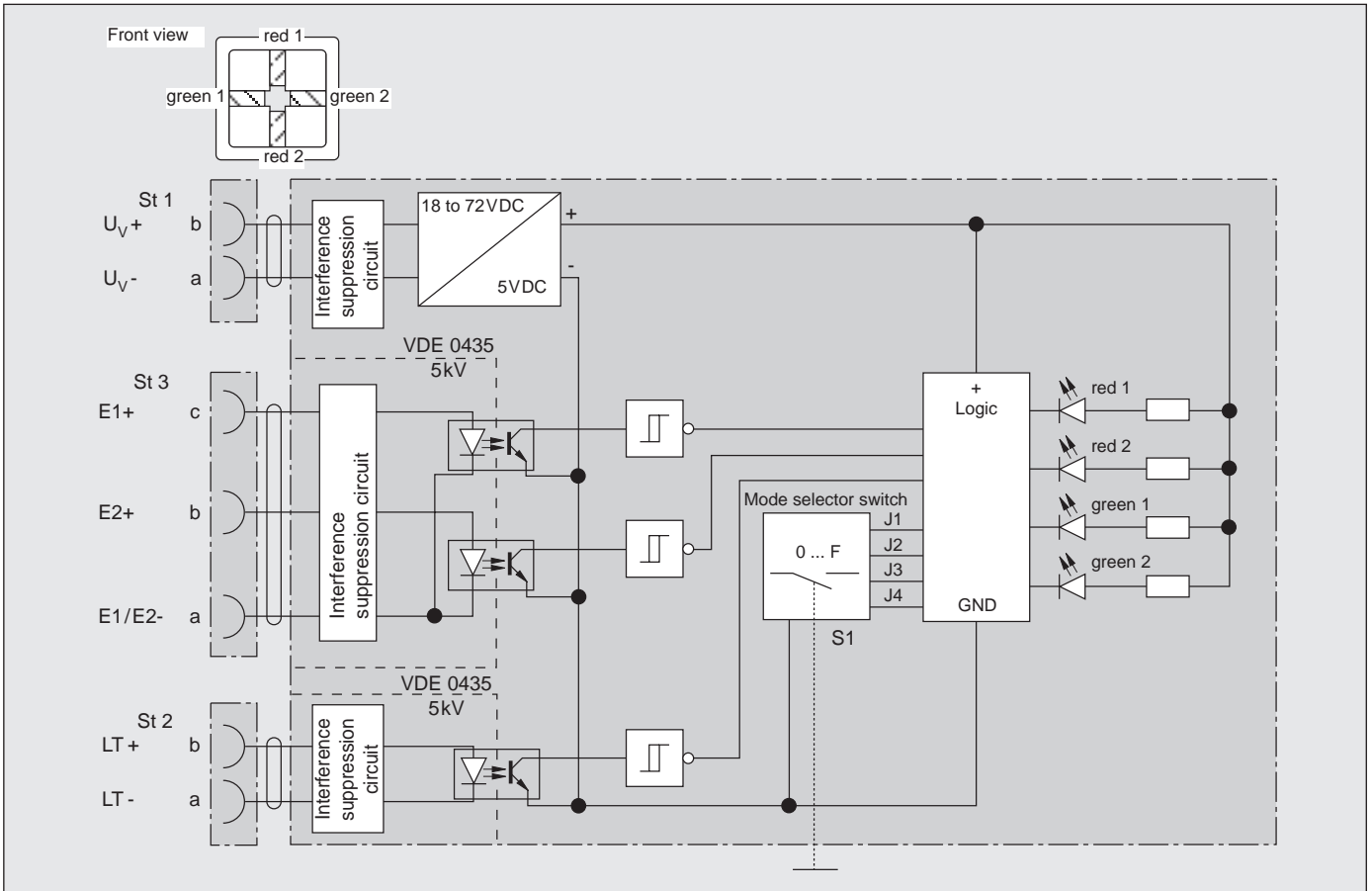
Burning behaviour

Housing material

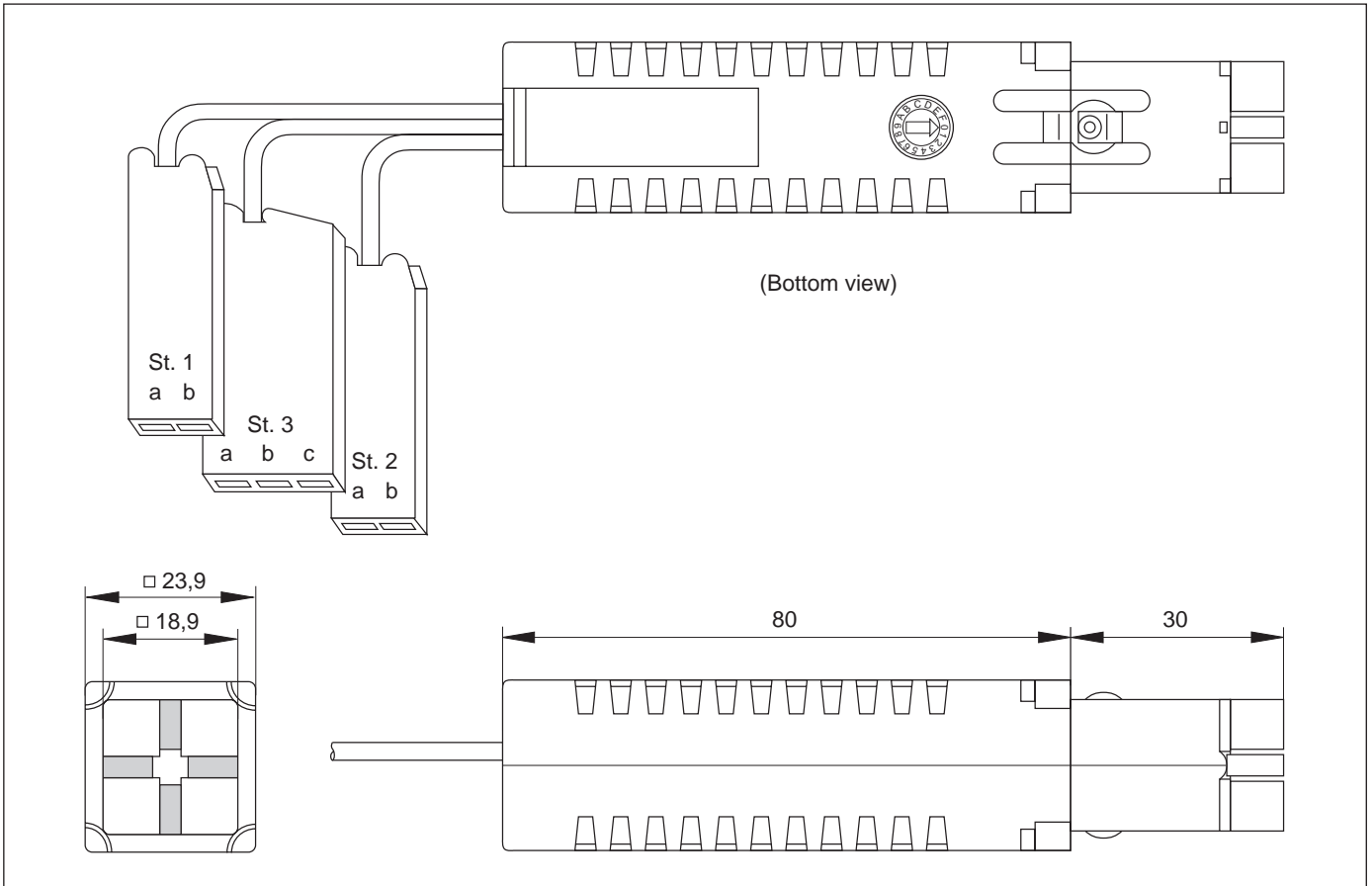
Flammability

POCAN B 4225 - FB.Nr.07051

V-0 according to UL 94 (IEC 707)



Block diagram



Dimension drawing