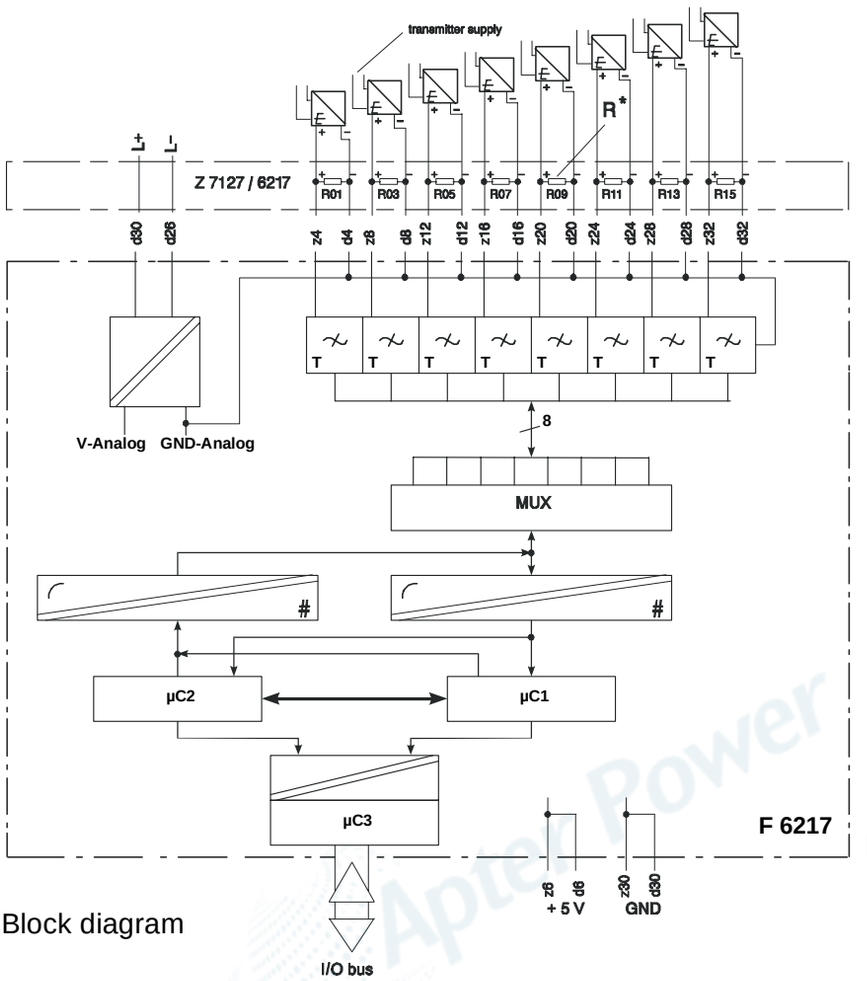
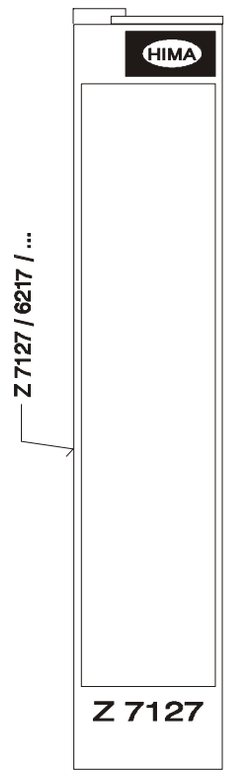
F 6217

F 6217: 8 fold analog input module, safety related

for current inputs 0/4...20 mA, voltage inputs 0...5/10 V,
with safety isolation
resolution 12 bits
tested according to AK6/SIL3



Block diagram



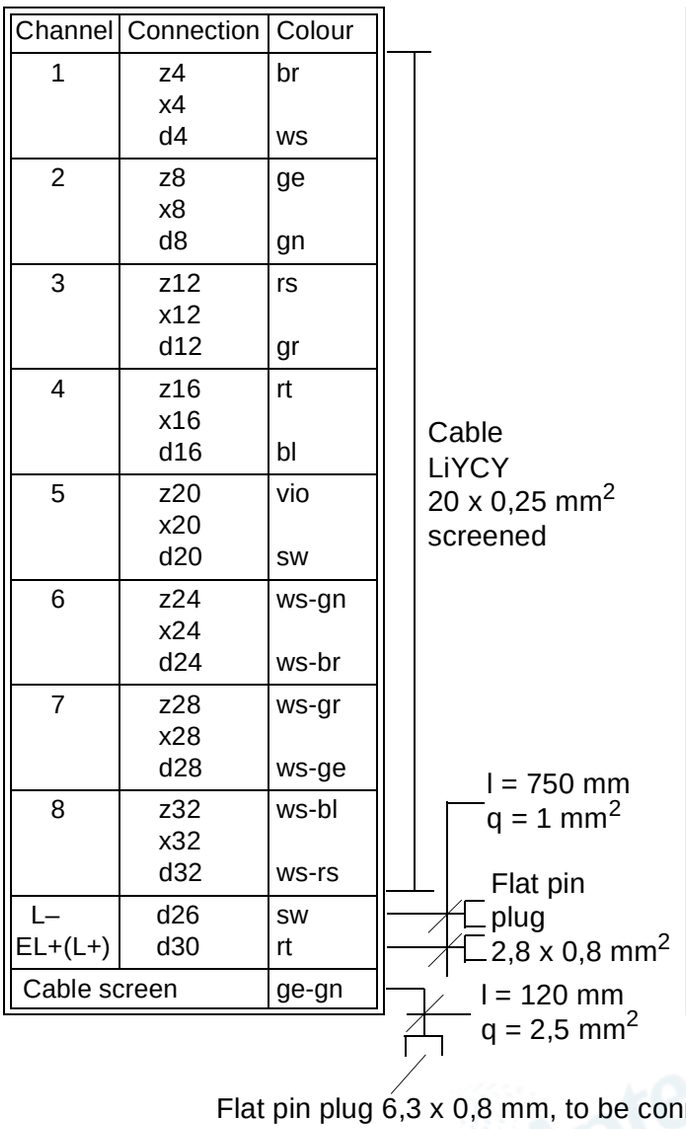
Front cable plug

Input voltage	0...5.5 V
max. input voltage	7.5 V
Input current	0...22 mA (via shunt)
max. input current	30 mA
R*: Shunt with current input	250 Ohm; 0.05 %; 0.25 W; T<10 ppm/K; part-no: 00 0710251
Resolution	12 bit, 0 mV = 0 5.5 V = 4095
Measurand up date	50 ms
Safety time	< 450 ms
Input resistance	100 kOhm
Time const. inp. filter	appr. 10 ms
Basic error	0.1 % at 25 °C
Operating error	0.3 % at 0...+60 °C
Error limit related on safety	1 %
Electric strength	200 V against GND
Space requirement	4 TE
Operating data	5 V DC: 80 mA, 24 V DC: 50 mA

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HIMA Paul Hildebrandt GmbH + Co KG, Postfach 1261, 68777 Brühl

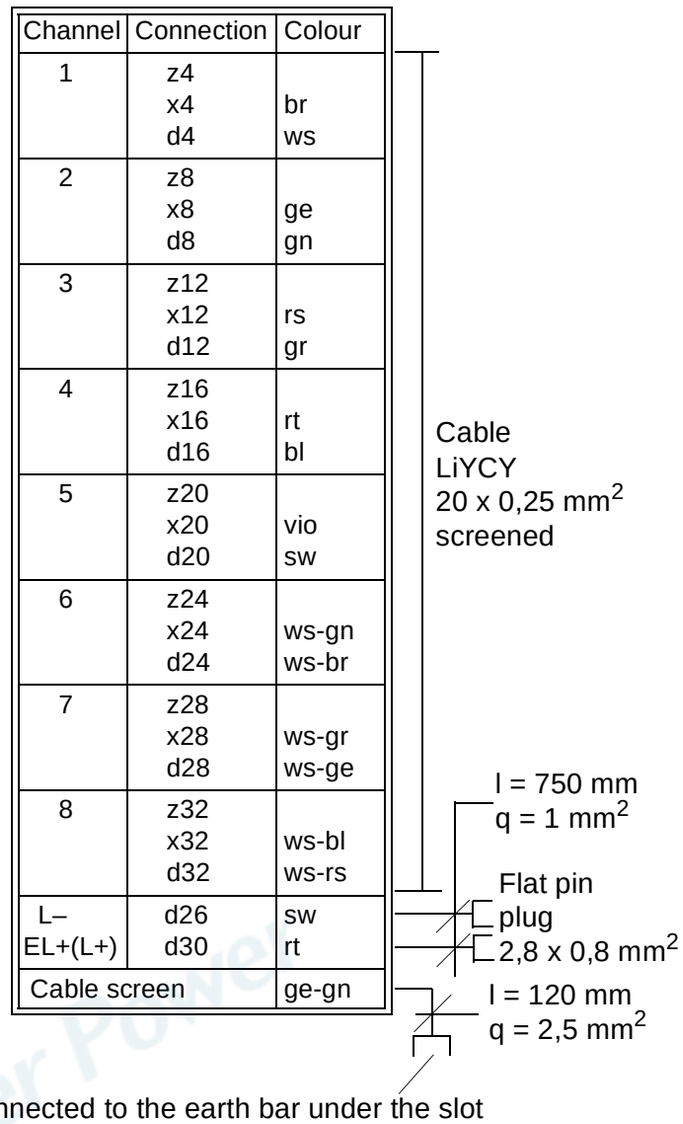
F 6217 (9912)

Channel	Connection	Colour
1	z4 x4 d4	br ws
2	z8 x8 d8	ge gn
3	z12 x12 d12	rs gr
4	z16 x16 d16	rt bl
5	z20 x20 d20	vio sw
6	z24 x24 d24	ws-gn ws-br
7	z28 x28 d28	ws-gr ws-ge
8	z32 x32 d32	ws-bl ws-rs
L– EL+(L+)	d26 d30	sw rt
Cable screen		ge-gn



Lead marking cable plugto connect current/ voltage Z 7127 / 6217 / C.. / I (U5V)

Channel	Connection	Colour
1	z4 x4 d4	 br ws
2	z8 x8 d8	 ge gn
3	z12 x12 d12	 rs gr
4	z16 x16 d16	 rt bl
5	z20 x20 d20	 vio sw
6	z24 x24 d24	 ws-gn ws-br
7	z28 x28 d28	 ws-gr ws-ge
8	z32 x32 d32	 ws-bl ws-rs
L– EL+(L+)	d26 d30	sw rt
Cable screen		ge-gn



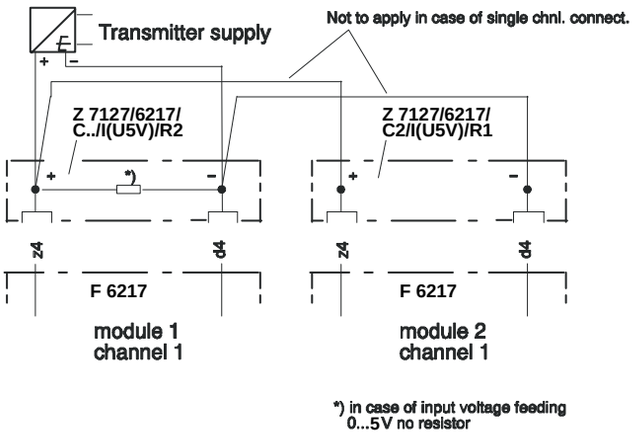
Lead marking cable plug to connect voltage via potentiometer and smart transmitters Z 7127 / 6217 / C.. / U10V

Flat pin plug 6,3 x 0,8 mm, to be connected to the earth bar under the slot

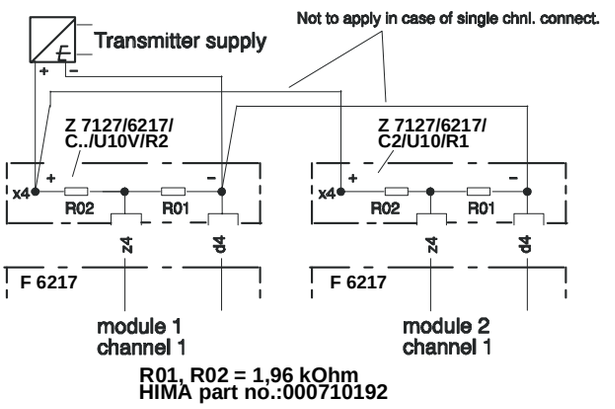
The module contains a redundant, safety related processor system. Because of this, all the tests are executed directly on the module. The main test routines are:

- Linearity of the AD converters
- Cross talking between the 8 input channels
- Function of the input filters
- Function of the IO bus communication
- Selftests of the microcontrollers
- Tests of the memories

F 6217 (9912)

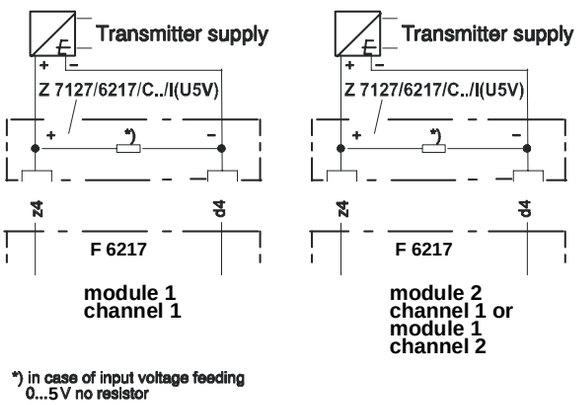


Redundant connection of current or voltage



Note : Regard to the internal resistance of the power source of the transmitter

Redundant connection via potentiometer



Current or voltage connection of redundant transmitters (evaluation in the user program)

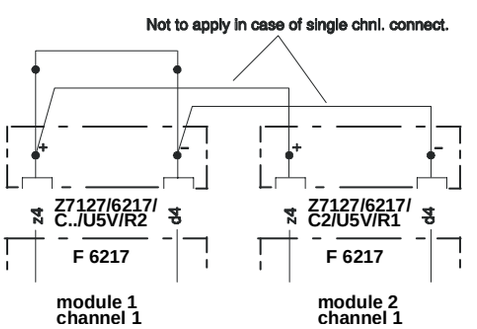
Occupation of not used inputs

Not used voltage inputs 0 ... 5 V have to be terminated with jumpers. Not used current inputs are terminated with the shunt, not used voltage inputs with the potentiometer in the cable connector.

Not used inputs, redundant connection

Example is for channel 1.

Installation of jumpers outside the cable connectors: On terminals.



Voltage input 0 ... 5 V

Notes to the safety related operation and use

Screened cables have to be used for the field input circuits, twisted leads are recommended.

If it is sure that the environment of the transmitter up to the module is free from interferences and the distance is relatively short (e. g. inside a cabinet) then the cabling can be performed without screened cables or twisted leads. However, the immunity from interference to the analog inputs can only be achieved by using screened cables.

Planning hints in ELOP II

For each input channel of the module an analog input value exists and a appertaining channel fault bit. With activated channel fault bit a safety-related reaction has to be programmed in ELOP II related to the corresponding analog input.

Recommendations for the use of the module according to IEC 61508, SIL 3

- Leads for power supply shall be locally separated from the input and output circuits.
- Application of a suitable earthing must be regarded.
- Measures against rising of the temperature are to be taken outside of the module, e. g. fans in the cabinet.
- Recording events in a logbook for operation and maintenance.

A maintenance of the module is not required. The failed module must be replaced.

Apter Power