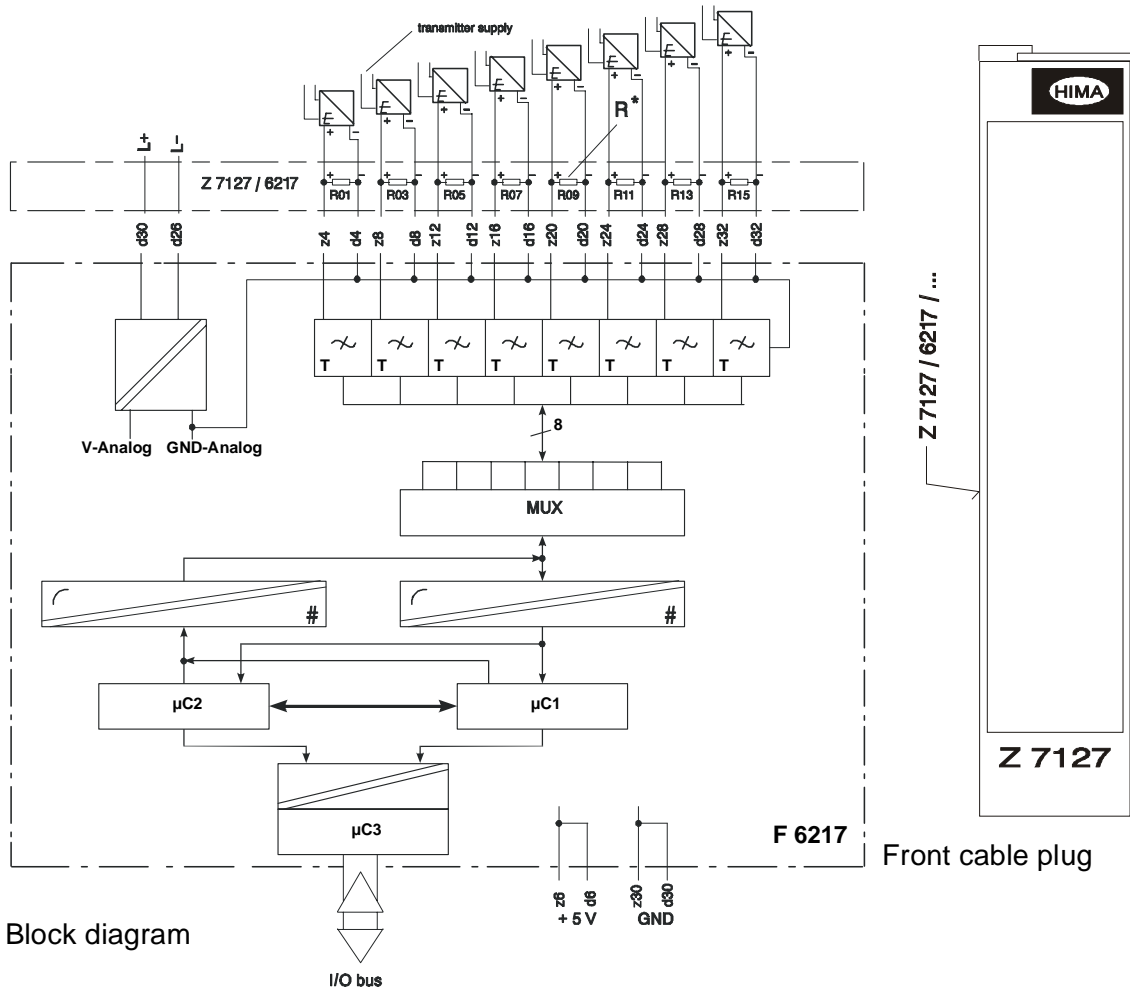




# F 6217

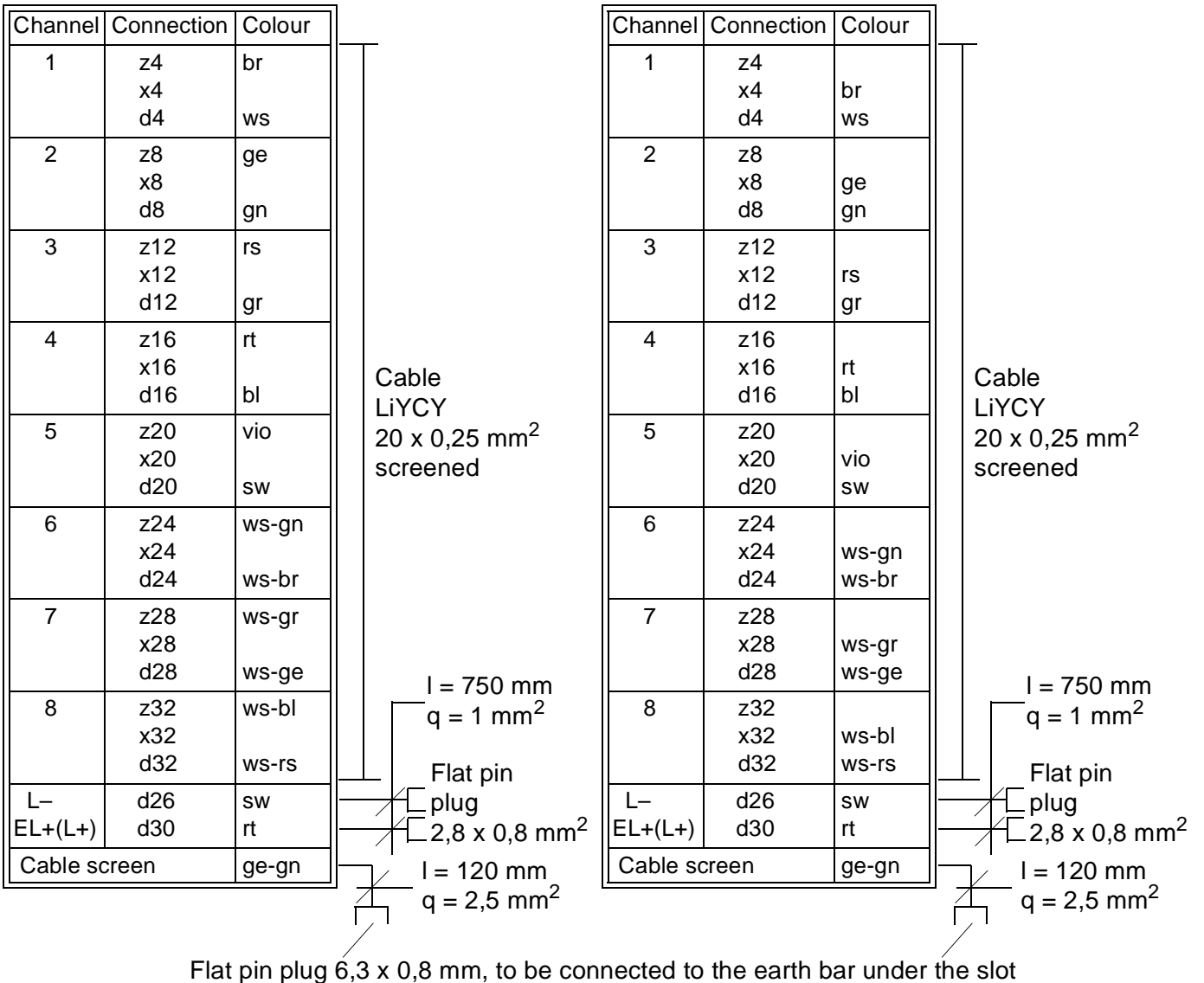
## F 6217: 8 fold analog input module, safety related

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

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	250 Ohm; 0.05 %; 0.25 W;
current input	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

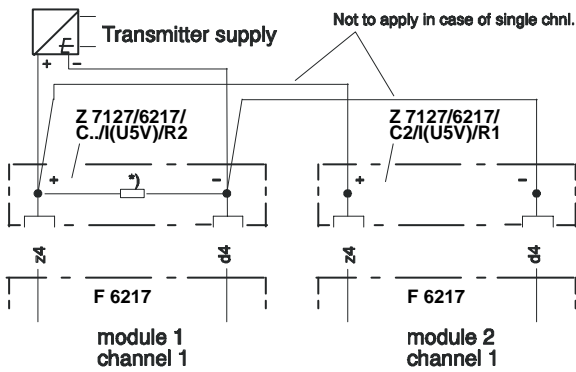


Lead marking cable plug to connect current/  
voltage Z 7127 / 6217 / C.. / I (U5V)

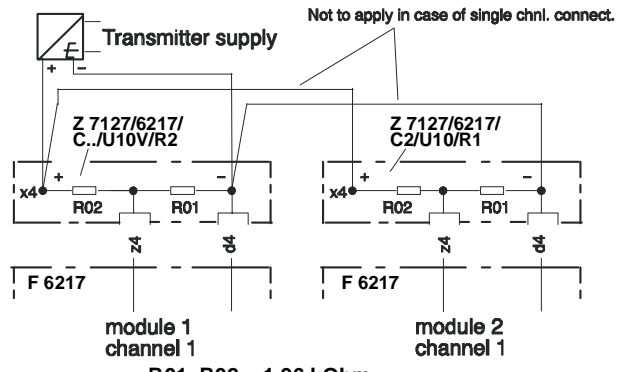
Lead marking cable plug to connect voltage via  
potentiometer and smart transmitters  
Z 7127 / 6217 / C.. / U10V

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



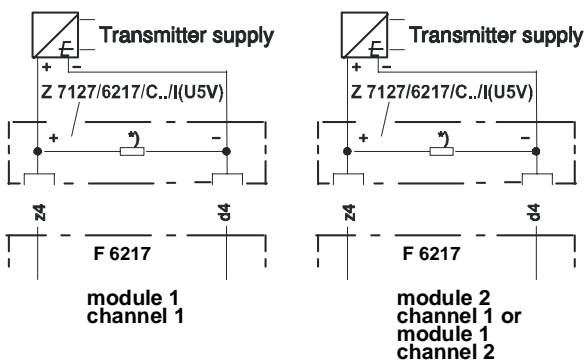
\*) in case of input voltage feeding 0...5V no resistor



R01, R02 = 1,96 kOhm  
HIMA part no.:000710192

Redundant connection of current or voltage

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



\*) in case of input voltage feeding 0...5V no resistor

Redundant connection via potentiometer

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

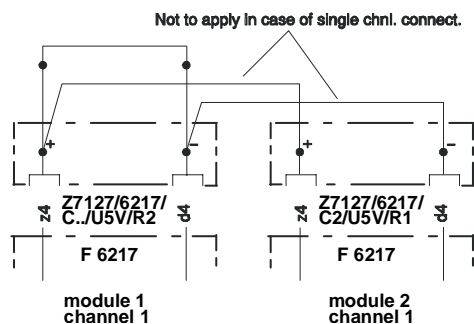
**Occupation of not used inputs**

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.