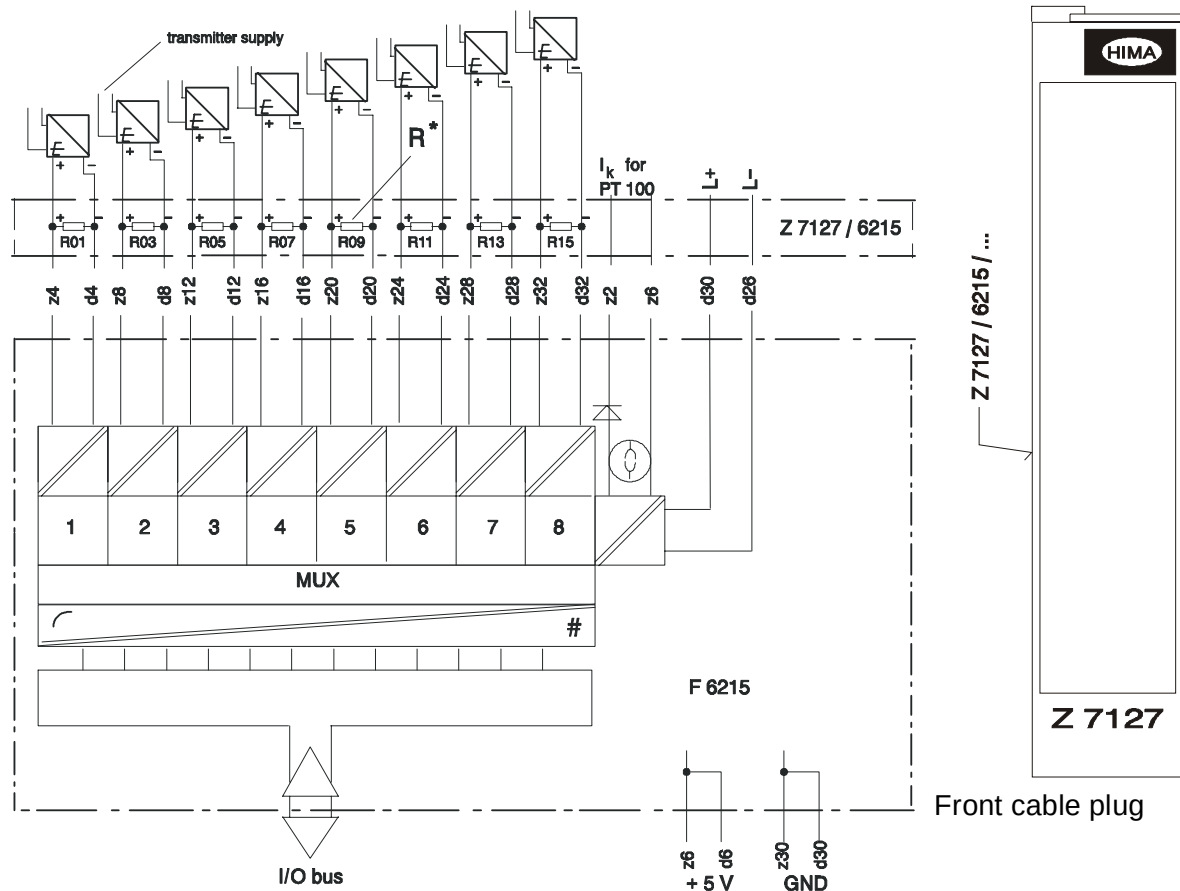




F 6215

F 6215: 8 fold analog input module

for voltage inputs 0...1/5/10 V, Pt 100 inputs
current inputs 0/4...20 mA,
with safety isolation to the plant and galvanically
isolation between the inputs,
resolution 12 bits



Block diagram

Input voltage	0...1.06 V (appr. 6 % overflow)
Digital values	0 mV = 0, 1 V = 3840
R*: Shunt with current input	50 Ohm; 0.05 %; 0.125 W; T<10 ppm/K; part-no: 00 0710500
Input resistance	min. 1 MOhm
Time const. inp. filter	appr. 2.2 ms
Conversion time	max. 4 ms for 8 channels
Basic error	0.1 % at 25 °C
Operating error	0.3 % at 0...+60 °C
Electric strength	200 V against Analog GND
I _k for PT 100	2.5 mA
Space requirement	4 TE
Operating data	5 V DC: 100 mA, 24 V DC: 140 mA

Channel	Connection	Colour
IK for PT100	z2 z6	ws-rt ws-sw
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- L+	d26 d30	sw rt
Kabelschirm		ge-gn

Cable
LiYCY
20 x 0,25 mm²
screened

l = 750 mm
q = 1 mm²

Flat pin
plug
2,8 x 0,8 mm²

l = 120 mm
q = 2,5 mm²

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

Lead marking cable plug to connect current/
voltage Z 7127 / 6215 / C.. / I (U1V)

Channel	Connection	Colour
IK for PT100	z2 z6	ws-rt ws-sw
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- L+	d26 d30	sw rt
Kabelschirm		ge-gn

Cable
LiYCY
20 x 0,25 mm²
screened

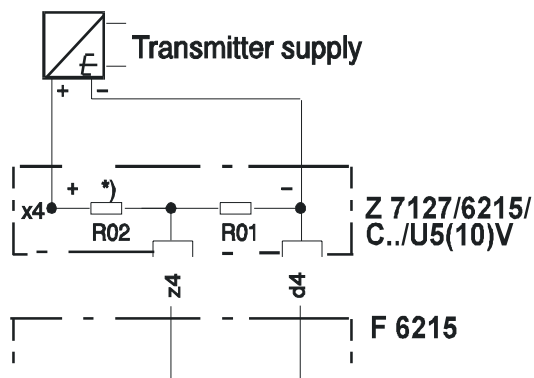
l = 750 mm
q = 1 mm²

Flat pin
plug
2,8 x 0,8 mm²

l = 120 mm
q = 2,5 mm²

Lead marking cable plug to connect voltage via
potentiometer
Z 7127 / 6215 / C.. / U5V (U10V)

Note to voltage inputs:
It is recommended to short-circuiting unused voltage inputs in the cable
plug or on the appertaining terminal row.



*) R02 = Potentiometer type resistor,
value depending on voltage range

Connection with potentiometer (for voltage areas $\neq 0 \dots 1 \text{ V}$)

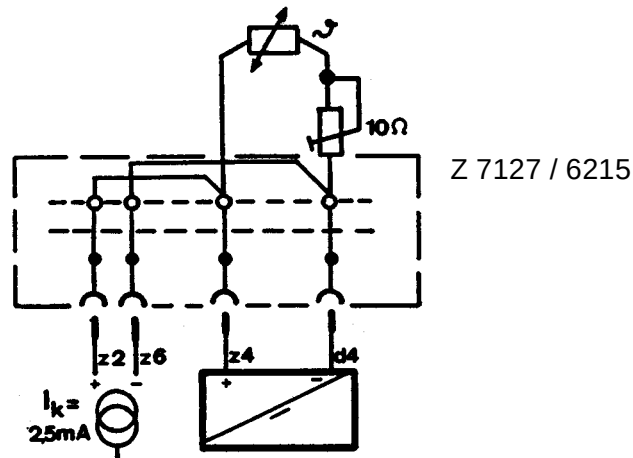
Note to the connection with potentiometer:

Due to the tolerance of the potentiometer resistors the accuracy defined in the data sheet is at first guaranteed after a new balancing of all channels within the user's program or resistors with tolerances $< 1 \%$ have to be used.

Resistor equipment for the potentiometers on Z7127/6215,
channel 1 ...8:

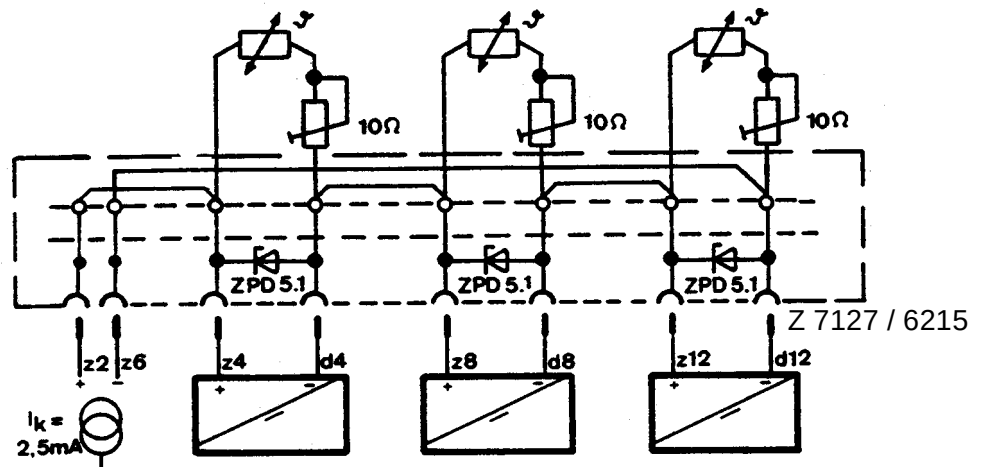
Measuring range U_M	R01, 03, 05, 07, 09, 11, 13, 15	R02, 04, 06, 08 10, 12, 14, 16
$U_M = 0 \dots 5 \text{ V}$ Value: Part no.:	33,2 k Ω , 1% 00 0751333	133 k Ω , 1% 00 0751134
$U_M = 0 \dots 10 \text{ V}$ Value: Part no.:	20 k Ω , 1% 00 0751203	178 k Ω , 1% 00 0751174

Two-wire technique with one Pt100 and line balancing (option):



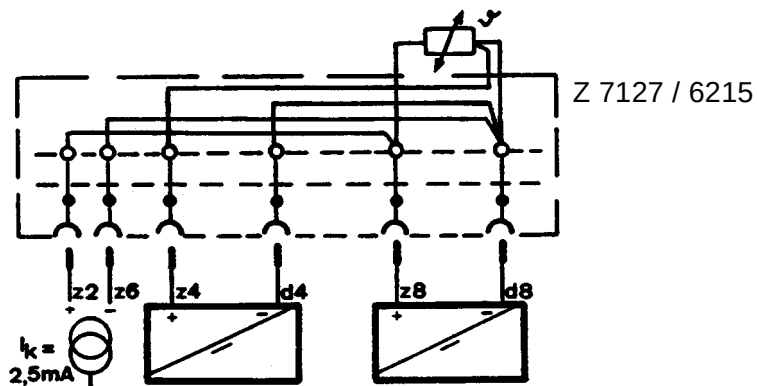
Line compensation via correction calculation in the user's program.

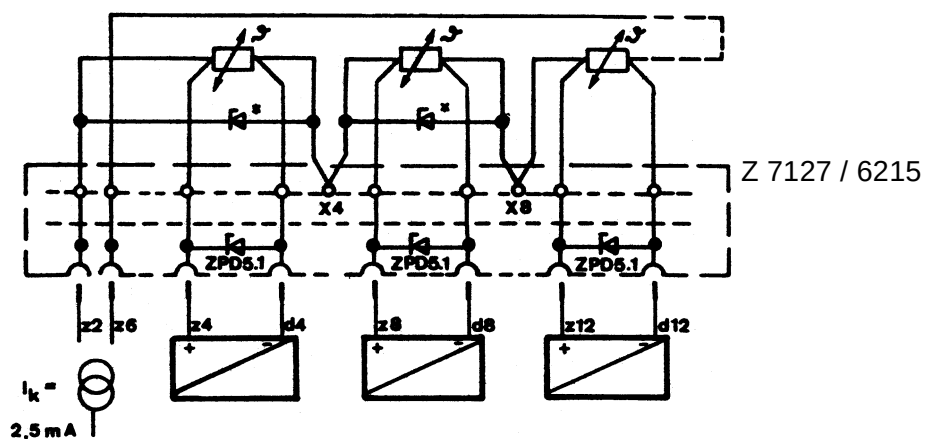
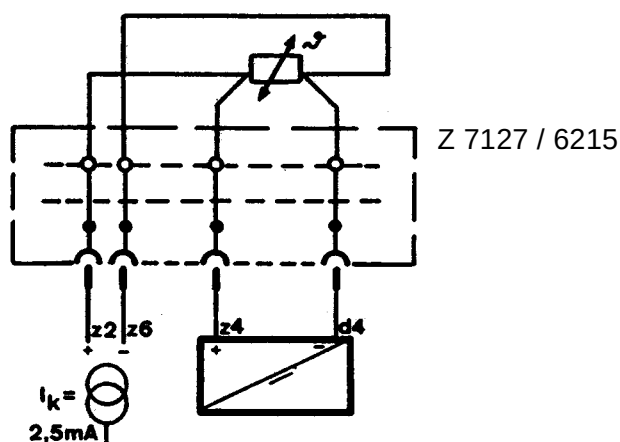
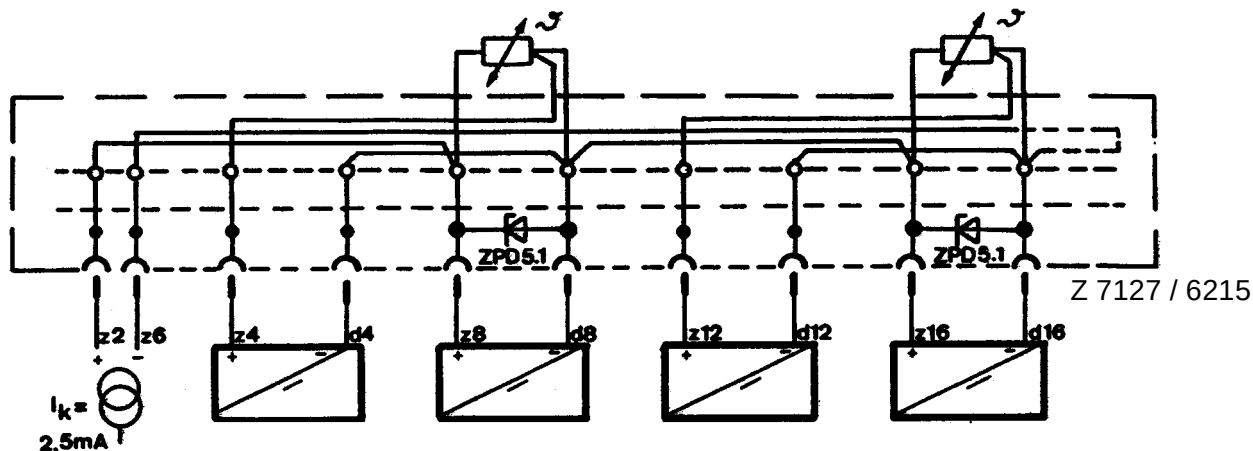
Using of more than one Pt100 in two-wire technique:



Line compensation via correction calculation in the user's program.

Connection of one Pt100 in three-wire technique:





*) Installation of diode ZPD 5.1 on terminals in case of interchanging a Pt100.

The resistance of the current loop must be less than 6 kOhm!
Reason: Granting security of the functions of all other Pt100 measurements in case of **one** thermometer break.

For your notes