HIMA

F 3330

F 3330: 8-channel output module

safety-related, applicable up to SIL 3 according to IEC 61508

- resistive or inductive load up to 500 mA (12 W)
- lamp load up to 4 W
- with integrated safety shutdown, with safe isolation
- no output signal with break of the L- supply

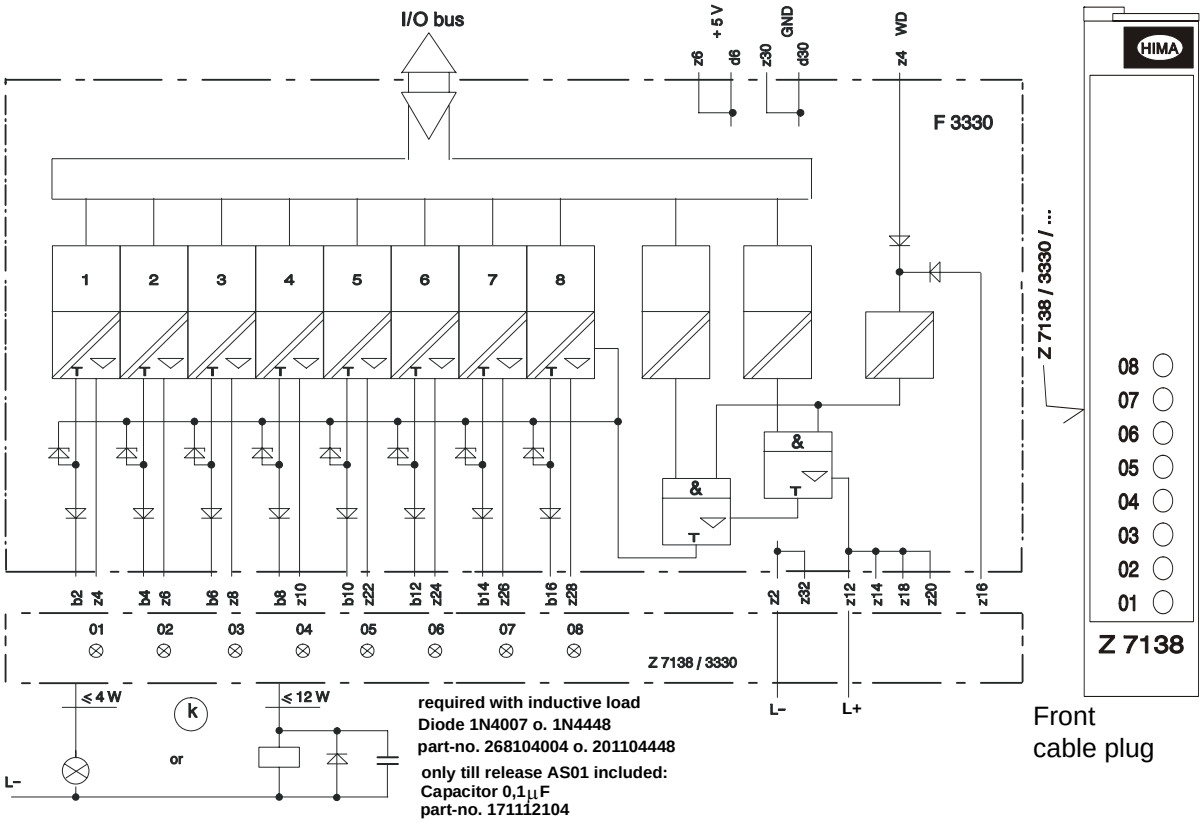

Figure 1: Block diagram and front cable plug

The module is automatically tested during operation. The main test routines are:

– Reading back of the output signals. The operating point of the 0-signal read back is ≤ 6.5 V. Up to this value the level of the 0-signal may arise in case of a fault and this will not be detected

– Switching capability of test signal and cross-talking (walking-bit test).

Outputs	500 mA, (k) short-circuit-proof
Internal voltage drop	max. 2 V at 500 mA load
Admissible line resistance (in + out)	max. 11 Ω
Undervoltage tripping	at ≤ 16 V
Operating point f. short-circuit current	0.75...1.5 A
Outp. leakage current	max. 350 µA
Output voltage if output is reset	max. 1.5 V
Current input WD	max. 30 mA
Monitored switching time	max. 200 µs
Space requirement	4 SU
Operating data	5 VDC / 110 mA
	24 VDC / 180 mA plus load

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HIMA Paul Hildebrandt GmbH + Co KG, P.O. Box 1261, 68777 Brühl

Chan-nel	Connec-tion	Color
1	b2	WH
2	b4	BN
3	b6	GN
4	b8	YE
5	b10	GY
6	b12	PK
7	b14	BU
8	b16	RD
L–	z2	BK
L+	z12	RD

Cable
LiYY
8 x 0.5 mm^2

Flat pin
plug
2.8 x
0.8 mm^2

q = 1 mm^2
l = 750 mm

Lead marking of the cable plug
Z 7138 / 3330 / C..

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1	b2	BN
	x2	WH
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3	b6	PK
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4	b8	RD
	x8	BU
5	b10	VT
	x10	BK
6	b12	WHGN
	x12	WHBN
7	b14	WHGY
	x14	WHYE
8	b16	WHBU
	x16	WHPK
L–	z2	BK
L+	z12	RD

Cable
LiYY 16 x 0.5 mm^2

Flat pin plug
2.8 x 0.8 mm^2

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Lead marking of the cable plug
Z 7138 / 3330 / C.. / P2
2-pole connection

Figure 2: Lead markings of the cable plugs

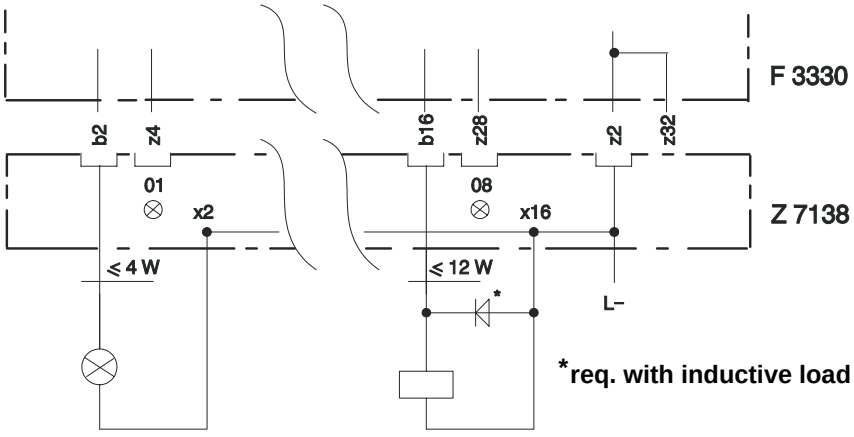

Figure 3: 2-pole connection

Note The safety-related outputs can be connected via the electronic fuses of the module **H 7014** (500 mA). Detailed information is available from the appertaining data sheet.

Planning notes

– max. 10 output modules with nominal load may be used in one I/O rack
– can be used in parallel without external diodes
– for lamp load 4 W to 10 W please refer to following sketch:

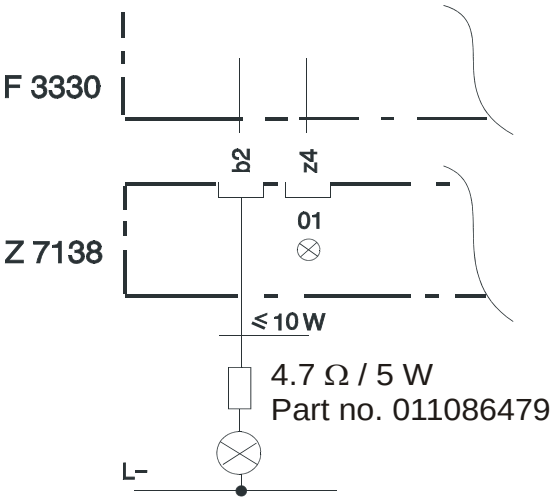

Figure 4: Connection of a lamp load

The connection of capacitive loads is not permitted. A length of the connection line up to 3 km is possible. The line capacity, however, is limited to a maximum of 1 µF.