



Fig.1 The URCA6I module.

APPLICATION

Galvanic isolated extension module allowing attach six digital inputs to one analog input of the controller. It is functional equivalent of the MDAC6OP module.

DESCRIPTION

The URCA6I module is digital to analog converter, changing the logical combination of six digital inputs on an analog voltage signal 0 - 9,45V. Giving the voltage U_{AB} to optically isolated digital input, output signal is generated by the formula:

$$U_{OUT} = (0,15d_1 + 0,3d_2 + 0,6d_3 + 1,2d_4 + 2,4d_5 + 4,8d_6) [V]$$

$$\text{where: } U_{1...6(AB)} < 3VAC/DC \Rightarrow d_{1...6} = 0$$

$$U_{1...6(AB)} > 8VAC/DC \Rightarrow d_{1...6} = 1$$

LED diodes indicate digital inputs states.

TECHNICAL DATA

Power supply	24 V AC \pm 10%
Current consumption for $R_L = 1k\Omega$	85mA
Input current for $U_{X(AB)} = 24V AC/DC$	2,4mA
Max. input voltage $U_{X(AB)}$	40V AC/DC (option: 230V)
Max. output current	15mA
Protection class of the case	IP-40
Protection class of terminals	IP-20
Ambient temperature range	-10...+50°C
Diameter of terminals	2,5 mm ²
Mounting	DIN-35 or DIN-32 rail
Dimensions (L x W x H)	96mm x 70,5mm x 42mm
Weight	130 g

URCA6I

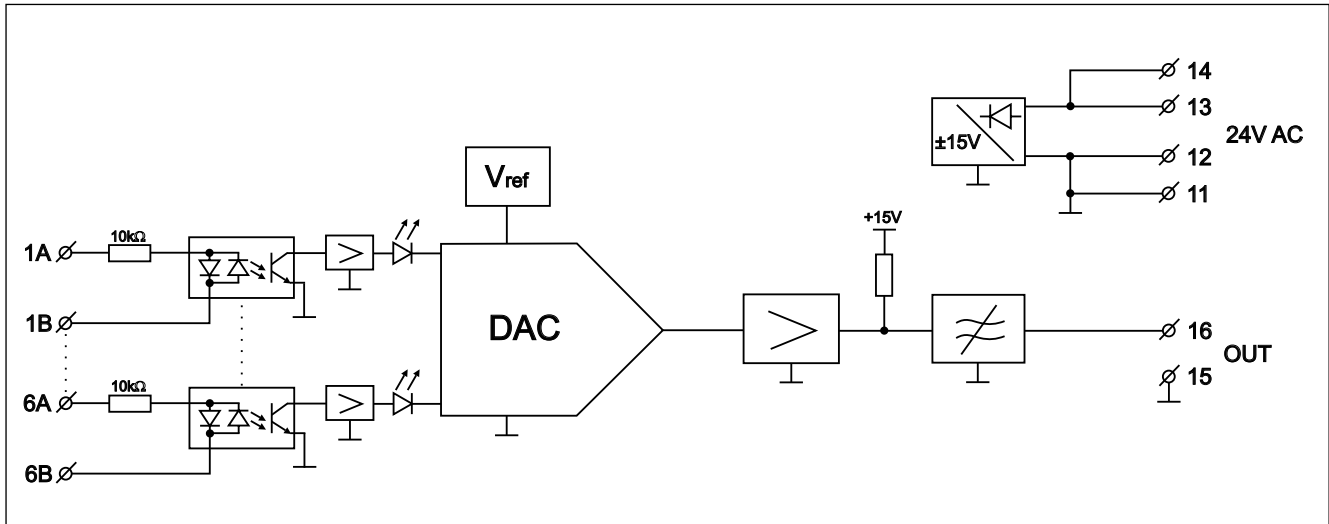


Fig.2 Connections of the URCA6I.

TABLE OF STATES

State	Digital inputs						U _{OUT} [V DC]	State	Digital inputs						U _{OUT} [V DC]
	d ₁	d ₂	d ₃	d ₄	d ₅	d ₆			d ₁	d ₂	d ₃	d ₄	d ₅	d ₆	
0	0	0	0	0	0	0	0,00	32	0	0	0	0	0	1	4,80
1	1	0	0	0	0	0	0,15	33	1	0	0	0	0	1	4,95
2	0	1	0	0	0	0	0,30	34	0	1	0	0	0	1	5,10
3	1	1	0	0	0	0	0,45	35	1	1	0	0	0	1	5,25
4	0	0	1	0	0	0	0,60	36	0	0	1	0	0	1	5,40
5	1	0	1	0	0	0	0,75	37	1	0	1	0	0	1	5,55
6	0	1	1	0	0	0	0,90	38	0	1	1	0	0	1	5,70
7	1	1	1	0	0	0	1,05	39	1	1	1	0	0	1	5,85
8	0	0	0	1	0	0	1,20	40	0	0	0	1	0	1	6,00
9	1	0	0	1	0	0	1,35	41	1	0	0	1	0	1	6,15
10	0	1	0	1	0	0	1,50	42	0	1	0	1	0	1	6,30
11	1	1	0	1	0	0	1,65	43	1	1	0	1	0	1	6,45
12	0	0	1	1	0	0	1,80	44	0	0	1	1	0	1	6,60
13	1	0	1	1	0	0	1,95	45	1	0	1	1	0	1	6,75
14	0	1	1	1	0	0	2,10	46	0	1	1	1	0	1	6,90
15	1	1	1	1	0	0	2,25	47	1	1	1	1	0	1	7,05
16	0	0	0	0	1	0	2,40	48	0	0	0	0	1	1	7,20
17	1	0	0	0	1	0	2,55	49	1	0	0	0	1	1	7,35
18	0	1	0	0	1	0	2,70	50	0	1	0	0	1	1	7,50
19	1	1	0	0	1	0	2,85	51	1	1	0	0	1	1	7,65
20	0	0	1	0	1	0	3,00	52	0	0	1	0	1	1	7,80
21	1	0	1	0	1	0	3,15	53	1	0	1	0	1	1	7,95
22	0	1	1	0	1	0	3,30	54	0	1	1	0	1	1	8,10
23	1	1	1	0	1	0	3,45	55	1	1	1	0	1	1	8,25
24	0	0	0	1	1	0	3,60	56	0	0	0	1	1	1	8,40
25	1	0	0	1	1	0	3,75	57	1	0	0	1	1	1	8,55
26	0	1	0	1	1	0	3,90	58	0	1	0	1	1	1	8,70
27	1	1	0	1	1	0	4,05	59	1	1	0	1	1	1	8,85
28	0	0	1	1	1	0	4,20	60	0	0	1	1	1	1	9,00
29	1	0	1	1	1	0	4,35	61	1	0	1	1	1	1	9,15
30	0	1	1	1	1	0	4,50	62	0	1	1	1	1	1	9,30
31	1	1	1	1	1	0	4,65	63	1	1	1	1	1	1	9,45

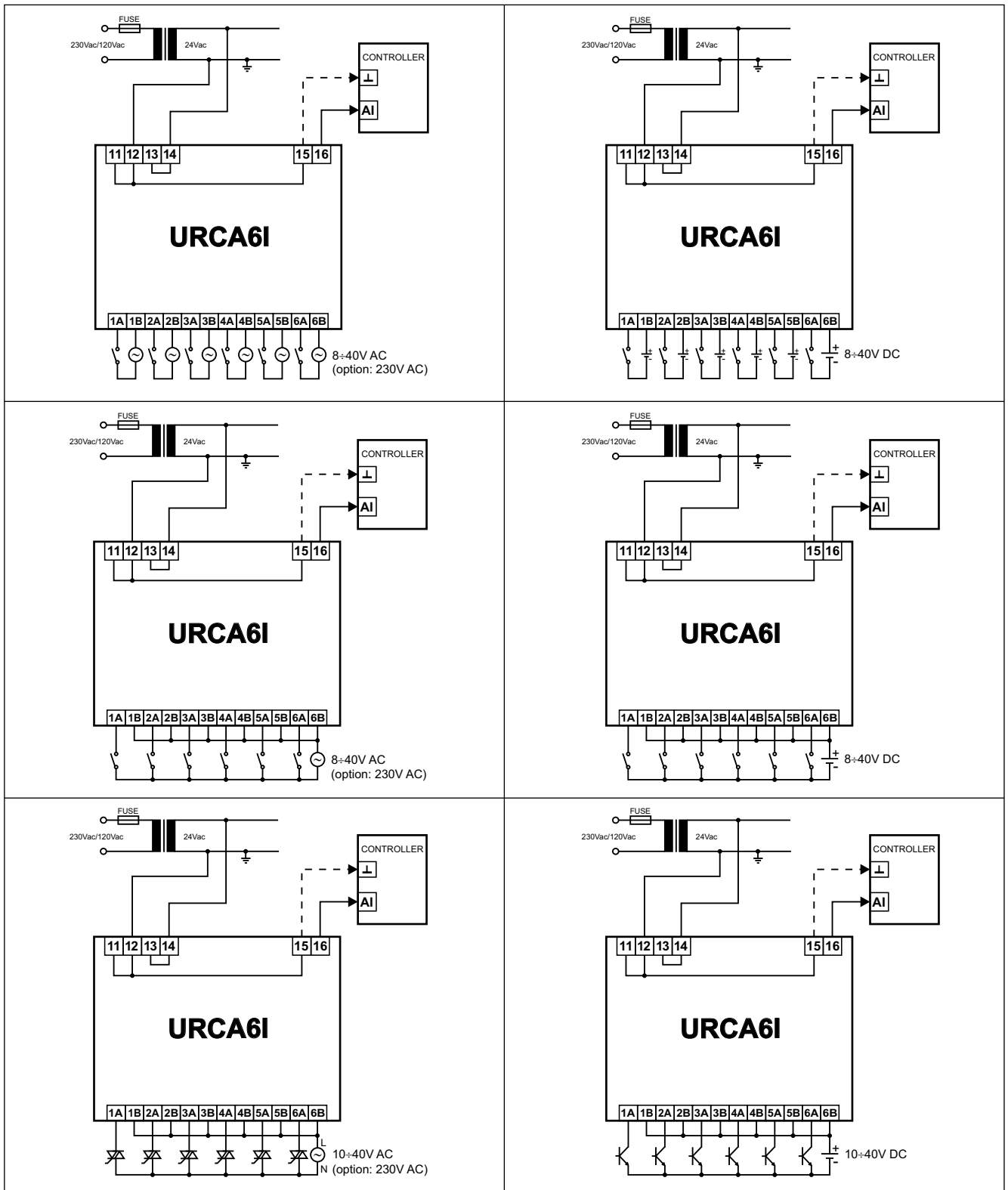


Fig.3 Example ways of connecting the URCA6I.

Terminals 11 and 13 are supporting, for example, to provide power to other modules.
 Connection the terminal 15 to the ground is recommended.

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