

Fig.1 The URCA6P module.

APPLICATION

The extension module allowing attach six digital inputs to one analog input of the controller. It is functional equivalent of the MDAC6 module.

DESCRIPTION

The URCA6P module is digital to analog converter, changing the logical combination of six digital inputs on an analog voltage signal 0 - 9,45V. Connecting discrete inputs ($d_1 \div d_6$) to common bus (C) voltage output is generated by the formula:

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

where: $d_{1...6} = 0$ for opened terminals
 $d_{1...6} = 1$ for closed terminals

LED diodes indicate digital inputs states.

TECHNICAL DATA

Power supply	24 V AC \pm 10%
Current consumption for $R_L = 1k\Omega$	65mA
Input current for $R_{IN} = 0\Omega$	2,2mA
Max. resistance for input terminals	1,8k Ω
Max. output current	13mA
Protection class of the case	IP-40
Protection class of terminals	IP-20
Ambient temperature range	-10...+55°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	115 g

URCA6P

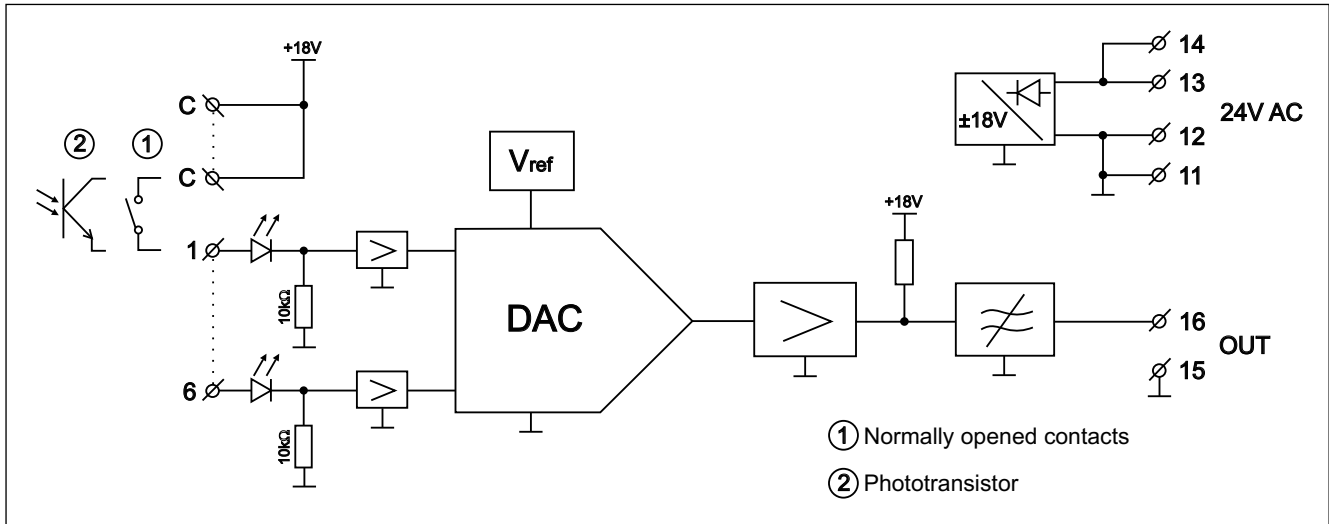


Fig.2 Connections of the URCA6P.

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

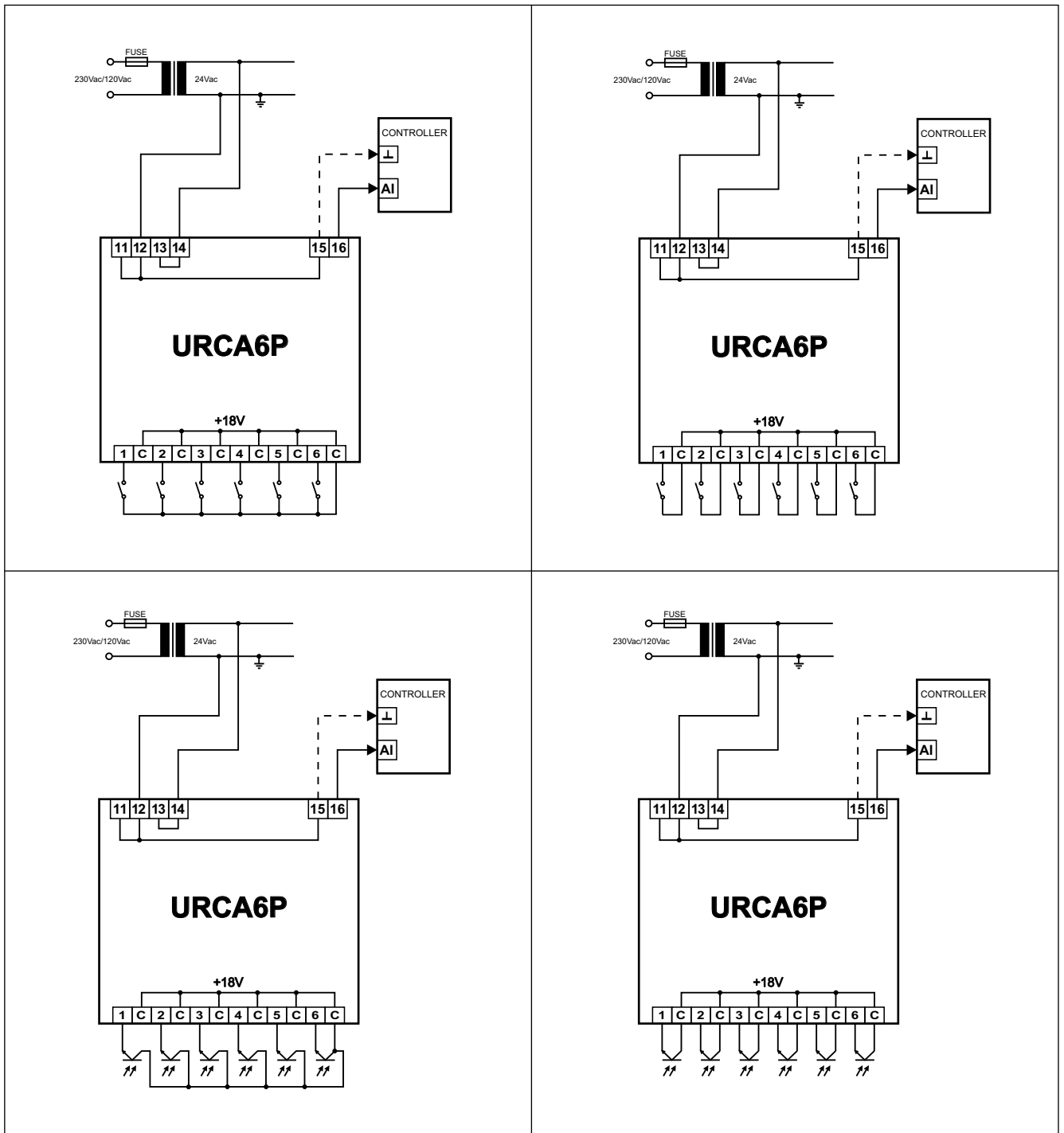


Fig.3 Example ways of connecting the URCA6.

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

June 2004, modified: May 2008