

1. AO775

1.1 General

The AO775 is a standard analog output module.

1.2 Order data


Model number	Short description	Figure
	Analog output module	
3AO775.6	2005 analog output module, 8 outputs, 0 to 20 mA, 11 bit, order 1 x TB170 terminal block separately	
	Required accessories	
3TB170.9	2005 terminal block, 20-pin, screw clamps	
3TB170.91	2005 terminal block, 20-pin, cage clamps	
Terminal blocks not included in the delivery (see "Accessories").		

Table 1: AO775 - Order data

1.3 Technical data

Product ID	AO775
C-UL-US listed	Yes
B&R ID code	\$A1
Number of outputs	8 current outputs
Electrical isolation	
Output - PLC	Yes
Output - Output	No
Output signal	0 to 20 mA
Digital converter resolution	11-bit
Output filter	Low pass 1st order / cut-off frequency: 1 kHz

Table 2: AO775 - Technical data

Analog output module AO775

Product ID	AO775
Conversion time for all channels	250 μ s
Load	Max. 500 Ω
Accuracy Basic Accuracy (at 20°C) Precision (0 to 60°C)	\pm 0.5% \pm 0.75%
Power consumption 5 V 24 V Total	Max. 1 W Max. 4.5 W Max. 5.5 W
Dimensions	B&R 2005 single-width

Table 2: AO775 - Technical data (cont.)

1.4 Status LEDs


Figure	LED	Description
	RUN	The RUN LED indicates that the digital/analog converter is running.

Table 3: AO775 - Status LEDs

1.5 Pin assignments

Connection	Name
2	- Output 1
3	+ Output 2
4	- Output 2
5	+ Output 3
6	- Output 3
7	+ Output 4
8	- Output 4
9	Shield
10	Shield
11	Shield
12	Shield
13	+ Output 5
14	- Output 5
15	+ Output 6
16	- Output 6
17	+ Output 7
18	- Output 7
19	+ Output 8
20	- Output 8

Table 4: AO775 - Pin assignments

1.6 Signal cable connection

Shielded cables must be used with analog output modules. The ground connection for the shield is made on one of the terminal block shield connections provided for the two outputs.

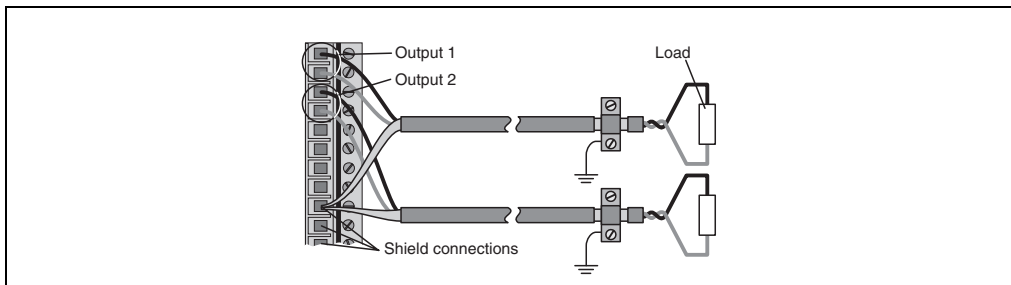


Figure 1: AO775 - Signal cable connection

Analog output module AO775

The four shield connections are of the equal value and each connected via RC elements with ground (\perp i.e. deviation plate and mounting rail).

R: 22 k Ω , C: 10 nF / 60 V

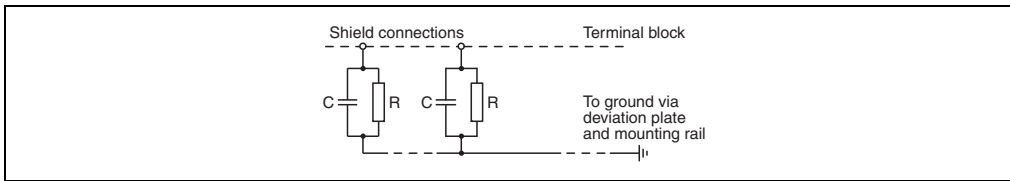


Figure 2: AO775 - Shield connection

1.7 Output circuit diagram

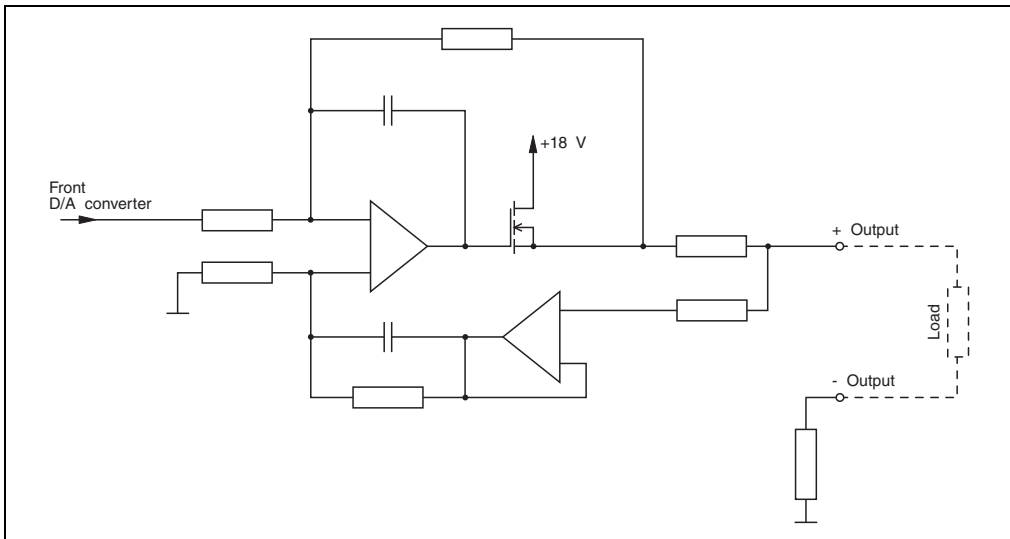


Figure 3: AO775 - Output circuit diagram

1.8 Relationship between numerical value and output current

Numeric value		Output current
Hexadecimal	Decimal	
0000	0	0 mA
0010	16	9.77 μ A
4000	16384	10 mA
7FF0	32752	20 mA

Table 5: AO775 - Relationship between numerical value and output current

1.9 Variable declaration

The variable declaration is made in B&R Automation Studio:

Function	Variable declaration				
	Scope	Data type	Length	Module type	Channel
Single analog output (channel x)	tc_global	UINT	1	Analog out	1 ... 8

Table 6: AO775 - Variable declaration