

5.1 Input/output modules EA12

Order No.	6DD1642-0BC0
Features	<ul style="list-style-type: none"> • 8 analog outputs • 20-pin connector for the analog outputs • 8 test socket pairs (2.3 mm) on the front panel to connect measuring equipment (for start-up) • L bus connection
Load capability	An analog output (signal at the connector and interface module and at the test socket) can be loaded up to 10 mA and is short-circuit proof for 2 min.
Adjustment, temperature	<p>The manufacturer adjusts the outputs as far as offset and gain are concerned for an ambient temperature of approximately 20° C:</p> <p>This adjustment is made using 2 potentiometers for each output, which are not sealed so that they can be re-adjusted in operation (e. g. due to different ambient temperatures).</p> <p>The temperature dependency is max. approx. +/-240 µV at a temperature change of +/-1° C.</p>

Analog output	Offset	Gain
Output 1	-R49	-R46
Output 2	-R55	-R52
Output 3	-R61	-R58
Output 4	-R67	-R64
Output 5	-R73	-R70
Output 6	-R79	-R76
Output 7	-R85	-R82
Output 8	-R91	-R88

Table 5-1 Adjustment potentiometers for analog outputs

Adjustment	<p>The module should be operated for approx. 2 min before any adjustment is made so that it has time to reach its operating temperature.</p> <p>The offset adjustment is first made. The value 0.0 (0%) should be output in the configured software at the connection of the associated function block, and the associated offset potentiometer should be adjusted until 0 V is measured.</p> <p>The output voltage is increased by rotating the potentiometer clockwise.</p> <p>The gain is then adjusted. The associated analog output should be driven with 2.0 (200%) (configured software) and the associated offset potentiometer should be adjusted until 10 V is measured.</p>
Noise signals at the outputs	<p>The switch-mode power supply causes voltage spikes (these can be measured up to 100 mV) on the ground cable. They can be suppressed by:</p> <ul style="list-style-type: none"> • smoothing at the load input • low-ohmic load

5.1.1 Supplementary components

Interface modules with terminals	All of the cables for the output signals are not directly connected at the module, but via interface modules. The interface modules serve as mechanical connecting element (screw/plug-in terminals) and toelectrically adapt the system/plant signals (optional).
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5.2.4 Technical data

General data

No. of slots occupied	1
Dimensions W x H x D [mm]	20.14 x 233.4 x 220
Weight	Approx. 0.6 kg

Power supply

Rated voltage	min.	max.	Typ. current drain
+5 V	+4.75 V	+5.25 V	420 mA
-15 V	-15.6 V	-14.4 V	20 mA (only as reference)
+24V	+20 V	+30 V	0,2 A (from an external power supply) + current drain of the connected SB70, SB71 interface modules + current drain from the binary outputs which are directly connected at the binary outputs of the connected components (when using SB10, SU11, SU12)

Binary inputs

No.	2 x 16
Input voltage	+24 V rated value
for 0 signal	-1 V to +6 V; or open-circuit binary inputs
for 1 signal	+13 V to +33 V
Input current for an 1 signal	5 mA typ.
Delay time	200 µs

Binary outputs

No.	2 x 16
Power supply voltage	
rated value	+24 V DC
ripple	3.6 V DC
permissible range	+20 to +30 V, including ripple
briefly	+35 V for < 0.5 s
Output current for a 1 signal	
rated value	50 mA
permissible range	0.2 mA to 50 mA
Short-circuit protection	Thermal / electronic
Limiting inductive switch-off voltage	To the supply +1 V
Residual current	20 µA for a 0 signal
Signal level	
for 0 signal	Max. 3 V
for 1 signal	Min. supply - 2.5 V
Delay time	15 µs

5.2.5 Connecting diagram

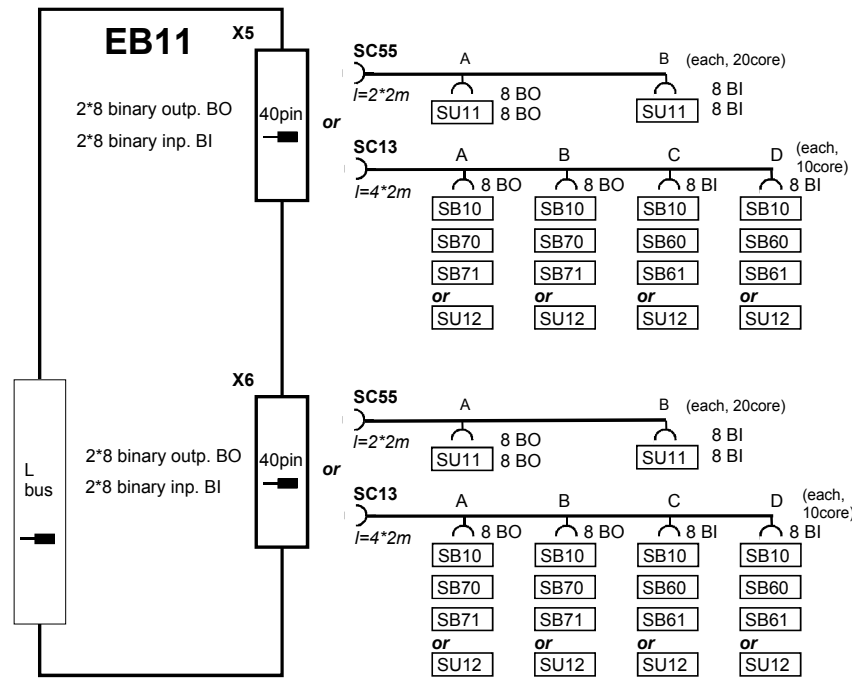


Fig. 5-2 Connecting cables and interface modules