

5.3.1 ICSA 04 B5 4 outputs, 12 bits

Analog Output remote unit

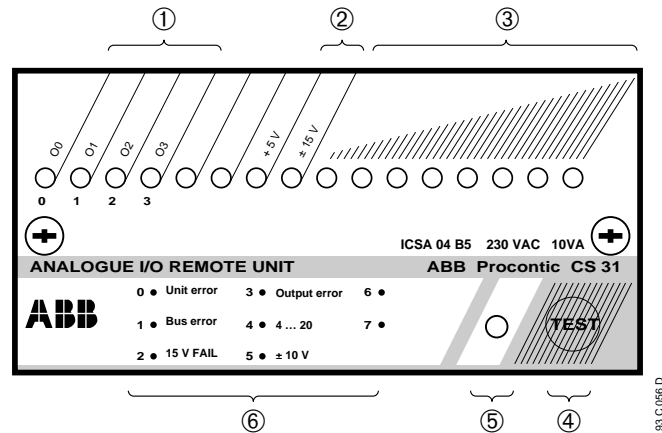
The analog output remote unit can be used for $\pm 10\text{ V}$, $\pm 12.5\text{ V}$, $0 \dots 20\text{ mA}$ or $4 \dots 20\text{ mA}$.

The wiring on the plug-in base ECZ is used to select the current or voltage input.

The unit is configured by the dip switches in the rear of the unit. The configuration by the central unit is not necessary.

Description of the unit front :

- Four yellow output status led's «O0» to «O3»①
- Two inactive led's
- Two green power supply led's «+ 5 V», « $\pm 15\text{ V}$ » ②
- Eight yellow led's to display the signal value of outputs③
- «TEST» push-button ④
- Red error led ⑤
- List of error codes ⑥



The unit has to be mounted on a plug-in base ECZ.

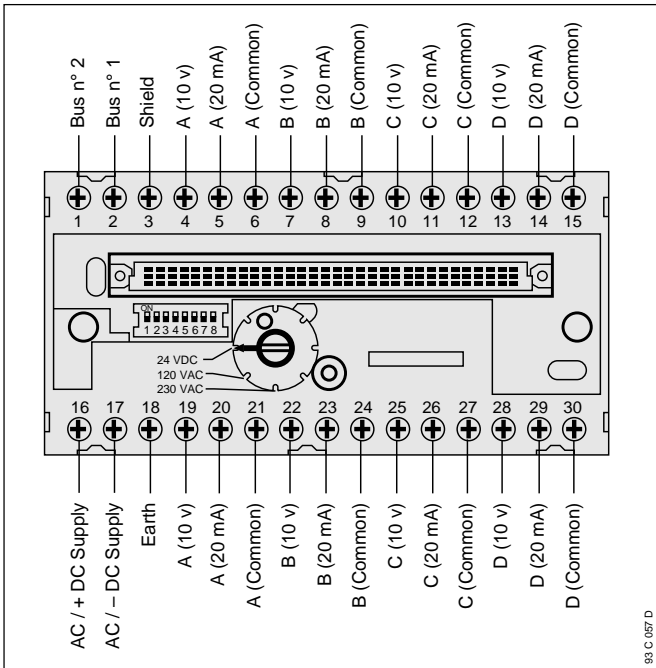
4 analog outputs per unit

TECHNICAL CHARACTERISTICS		
Power supply	24 VDC	230 VAC/120 VAC
Number of outputs per unit	4	4
Power supply isolation	no	yes (1500 VAC)
Outputs opto-isolated	no	no
Power supply outputs 10 VDC ($\pm 1\%$)	no	no
Maximum power consumption	0.2 A	10 VA
Maximum power dissipation	4.8 W	8 W
Order number : FPR 334 1501	R1042	R0046/R0044
Weight (kg)	0.25	0.43

OUTPUT SPECIFICATIONS

Nominal range	$\pm 10 \text{ V}$	$\pm 12.5 \text{ V}$	$0 \dots 20 \text{ mA}$	$4 \dots 20 \text{ mA}$
Resolution : 12 bits	$\pm 1 \text{ LSB}$ ($\pm 5 \text{ mV}$)	$\pm 1 \text{ LSB}$ ($\pm 6 \text{ mV}$)	$\pm 1 \text{ LSB}$ ($\pm 10 \mu\text{A}$)	$\pm 1 \text{ LSB}$ ($\pm 8 \mu\text{A}$)
Linearity error	$\pm 1 \text{ LSB}$ ($\pm 5 \text{ mV}$)	$\pm 1 \text{ LSB}$ ($\pm 6 \text{ mV}$)	$\pm 1 \text{ LSB}$ ($\pm 4.8 \mu\text{A}$)	$\pm 1 \text{ LSB}$ ($\pm 4 \mu\text{A}$)
Error of maximum value	$\pm 0.3 \%$	$\pm 0.5 \%$	$\pm 0.5 \%$	$\pm 0.5 \%$
Temperature coefficient	100 ppm/K	100 ppm/K	100 ppm/K	100 ppm/K
Maximum load current	$\pm 2 \text{ mA}$	$\pm 2 \text{ mA}$	–	–
Resistance of the load circuit	–	–	500	500

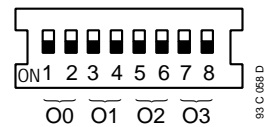
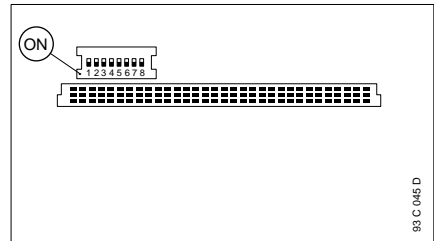
• Electrical connection



• Initialization

The selection between current or voltage output is dependent upon the dip switches in the rear of the unit. Two switches for one channel :

- N° 1 : channel 00
- N° 2 : channel 00
- N° 3 : channel 01
- N° 4 : channel 01
- N° 5 : channel 02
- N° 6 : channel 02
- N° 7 : channel 03
- N° 8 : channel 03







The factory default setting is $\pm 10\text{V}$.

The commons are internally connected.

NOTE : Channels 19 to 30 are the same as 4 to 15.

The wires for analogue outputs must be shielded and the shield has to be connected to the earth on the side of the remote unit.

Possible configuration

dip switch	output current	output voltage
OFF ON 	0 ... 16 mA*	± 10 V
OFF ON 	4 ... 20 mA	± 10 V
OFF ON 	4 ... 25 mA*	± 12.5 V
OFF ON 	0 ... 20 mA	± 12.5 V

* For this special format the output conversion tables are not allowed.

The unit initializes itself after power on.

The error led goes out after initialization.

The value of the analog output O0 is displayed on the 8 led's on the right and the led's "+ 5 and ± 15" are illuminated.

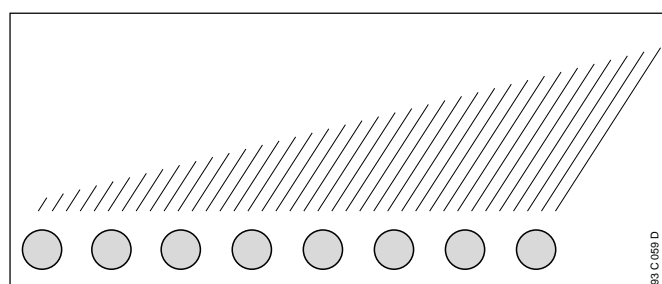
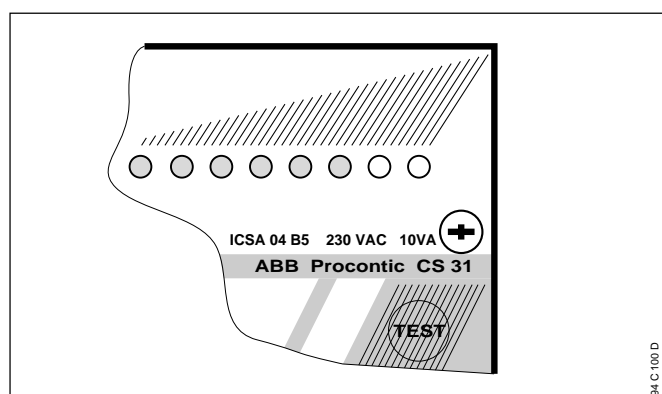
• Utilization

VARIABLES USED IN THE CENTRAL UNIT						
CENTRAL UNITS	07 KR 31, 07 KR 91, 07 KT 92, 07 KT 93		UCZA/UCZB		PCZB	
Address xx on the plug-in base ECZ	00 ... 05		even 00 ... 14		1 ... 8	
Switch N. 8 on the plug-in base	OFF	ON	OFF	ON	OFF	
Output	A	AWxx, 00	AWxx, 08	AAxx, 00	AAxx, 08	OAx0
	B	AWxx, 01	AWxx, 09	AAxx, 01	AAxx, 09	OAx1
	C	AWxx, 02	AWxx, 10	AAxx, 02	AAxx, 10	OAx2
	D	AWxx, 03	AWxx, 11	AAxx, 03	AAxx, 11	OAx3

In the case of UCZA/UCZB, the addresses 08 ... 14 are only allowed with the SCZ unit.

For the PC board 07 CM 90 and the coupler boards 07 CS 61 or 35 CS 91, refer to their own description.

The value of the output selected by pressing the "TEST" button can be displayed on the 8 leds on the right. These 8 led's have the following meaning :



no led ON ○○○○○○○○	4 led's ON ●●●●○○○○	8 led's ON ●●●●●●●●	Configuration
- 10 V - 12.5 V	0 V	+ 10 V + 12.5 V	± 10 V ± 12.5 V
-	0 mA	20 mA	0 ... 20 mA
-	0 mA	16 mA	0 ... 16 mA
-	4 mA	20 mA	4 ... 20 mA
-	4 mA	25 mA	4 ... 25 mA

Each channel can be displayed by pressing the "TEST" button.

The channel 00 is always displayed after initialization until otherwise selected.

Fault indication:

- Led 0 : «Unit error»
- Led 1 : «Bus error»
- Led 2 : «15 V Fail»
- Led 3 : «Output error»

The configuration of each channel is indicated by the led's 4 and 5.

- Led 4 : «4 ... 20»
Current configuration 4 ... 20 mA or ± 12.5 V

Led 4 «OFF» :
Channel 0 ... 20 mA or ± 10 V, depends upon the dip switches in the rear of the unit.

Led 4 «ON» :
Channel 4 ... 20 mA or ± 12.5 V, depends upon the dip switches in the rear of the unit.

Led 5 «± 10 V» :
± 10 V configuration.

Led 5 «OFF» :
Current or ± 12.5 V configuration.

Led 5 «ON» :
Channel ± 10 V.

If an error occurs, (see chapter 9, volume 2 «In case of failure»).

NOTE : The 4 ... 20 mA configuration with an handheld programming unit TCZ or CS 31 configuration functions (see chapter 2, volume 2 «Central Unit») is necessary for detecting error (open circuit detection),