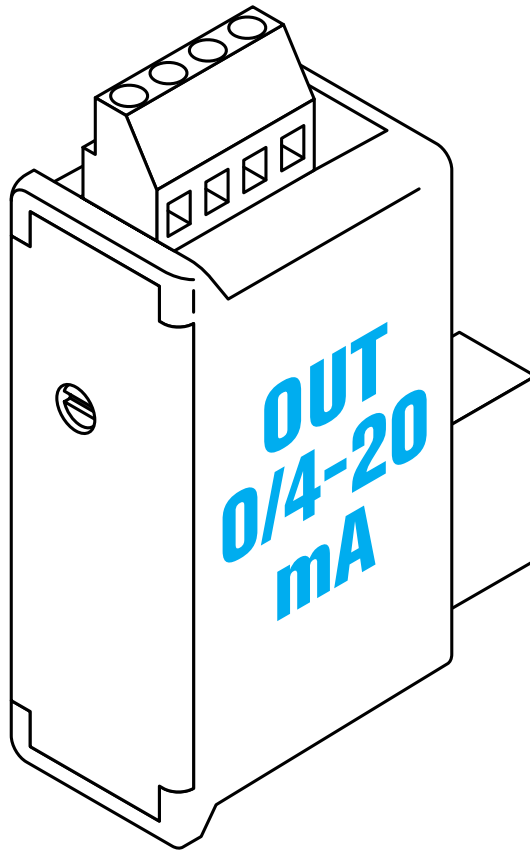


# DIRIS Ap

## Out 0/4 – 20 mA





## **Contents**

<b>PRELIMINARY OPERATIONS</b>	_____	<b>p. 4</b>
<b>GENERAL INFORMATION</b>	_____	<b>p. 4</b>
<b>INSTALLATION</b>	_____	<b>p. 4</b>
<b>PROGRAMMING</b>	_____	<b>p. 6</b>
<b>TECHNICAL CHARACTERISTICS</b>	_____	<b>p. 9</b>

---

# PRELIMINARY OPERATIONS

**NB:**  
*For personnel and product safety please read the contents of these operating instructions carefully before connecting.*

Check the following points as soon as you receive the Diris Ap package:

- the packing is in good condition,
- the product has not been damaged during transit,
- the product reference number conforms to your order,

- the package contains the product fitted with a pull-out terminal block,
- operating instructions.

---

# GENERAL INFORMATION

## FUNCTIONS

This module provides 2 entirely configurable 0/4-20 mA analog outputs (threshold at 0 or 4 mA and threshold at 20 mA) on I1, I2, I3, In, U12, U23, U31, V1, V2, V3, ΣP, ΣQ, ΣS, ΣPF and F. Up to a maximum of 2 modules, that is 4 analog outputs installed on one Diris Ap.

---

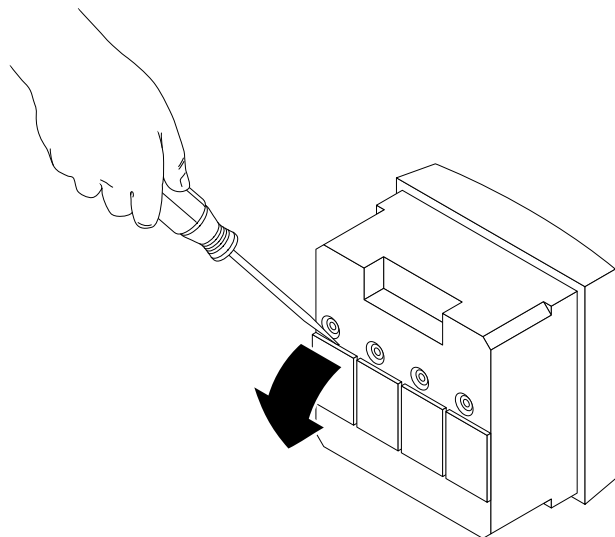
# INSTALLATION

The module is fitted onto the back of the DIRIS Ap in one of the 4 positions provided.

## CONNECTION

 **The DIRIS Ap must be switched off**

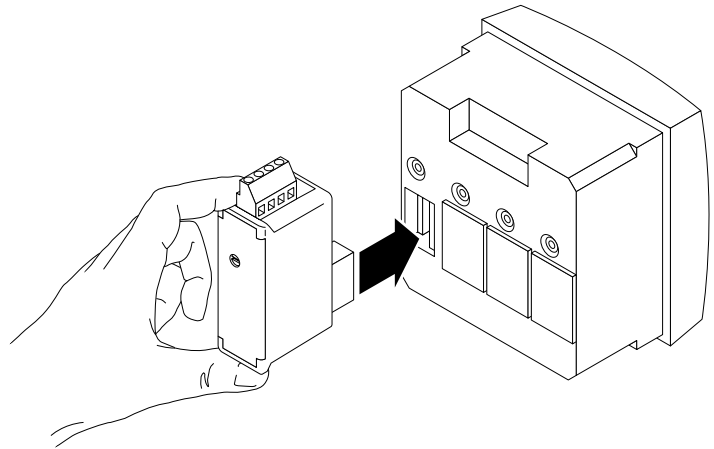
**1**



DIRIS 342 A

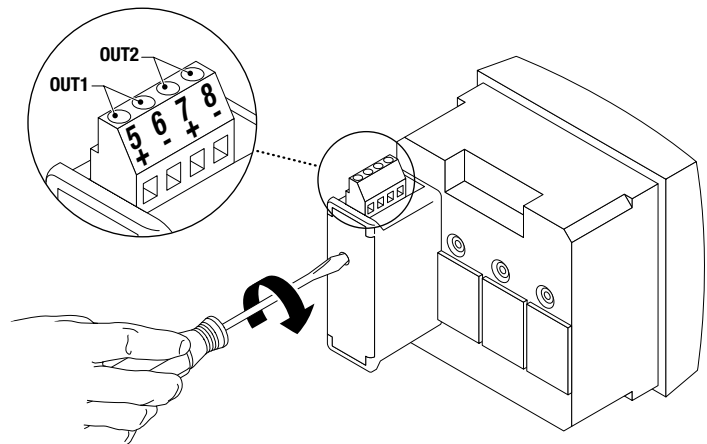
**2** Fix the module in one of the four positions.

DIRIS 343 A



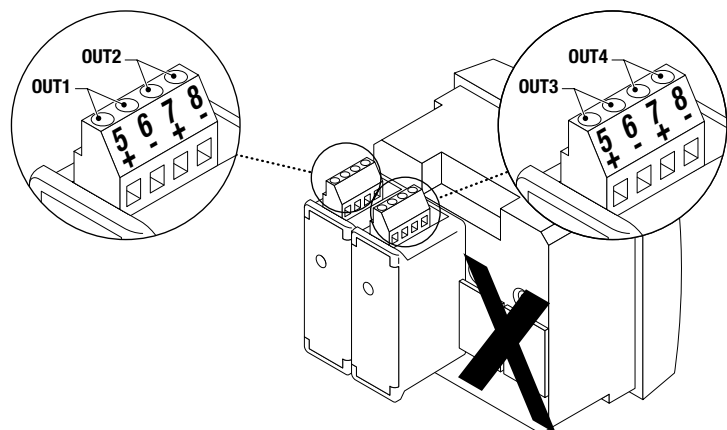
**3**

DIRIS 435 A



**4** When using the four outputs, the two modules must be installed in **the two left-hand positions as shown.**







DIRIS 436 B



# PROGRAMMING









## 1 PROGRAMMING THE N° 1 ANALOG OUTPUT TYPE (OUT 1 20 MA TYPE)

**NB:** The type default setting is 4-20 mA. If you want this setting, press ▼. You will pass to number 1 analog output allocation programming (OUT 1 20 MA PAR). If not, proceed as follows:

KEYS	INSTRUCTIONS	DISPLAY	COMMENT
	Press once		To display flashing 4-20 mA.
	Press once		To select 0-20 mA. Press again for 4 – 20 mA.
	Press once		Confirm type. Press ▼ to programme its allocation

## 2 PROGRAMMING OF THE N° 1 ANALOG OUTPUT ALLOCATION (OUT 1 20 MA PAR)


**NB:** The allocation default setting is I1. If you want this allocation, press ▼. You will pass to value at 0 or 4 mA programming (OUT 1 20 MA LV). If not, proceed as follows:

KEYS	INSTRUCTIONS	DISPLAY	COMMENT
	Press once		To display flashing I1.
	Press once		Press again for: I3, In, U12, U23, U31, V1, V2, V3, ΣP, ΣQ, ΣS, ΣPF, F, I1, I2.
		or	
	Press once		Press again for: F, ΣS, ΣQ, ΣP, V3, V2, V1, U31, U23, U12, In, I3, I2, I1.
	Press once		Confirm size. Press ▼ to programme the value at 0 or 4 mA (LV).

### 3 PROGRAMMING OF THE N° 1 ANALOG OUTPUT VALUE AT 0 OR 4 mA (OUT 1 20 MA LV)

**NB:** The type default setting is 0 mA (LV 0000). If you want this setting, press ▼. You will pass to value at 20 mA programming (OUT 1 0 MA HV). If not, proceed as follows:

KEYS	INSTRUCTIONS	DISPLAY	COMMENT
	Press once		Press as many times as necessary to move to the right or on ◀ to move to the left.

Press on ▼ to decrement or on ▲ to increment selected digit value.  
 Press once on  to confirm value.  
 Press once on ▼ to pass to value at 20 mA programming (OUT 1 20 MA HV).

**NB:** the first four digits correspond to the value in decimals and the sixth digit to the weight /, K (kilo) or M (Mega).

**Example:** programming of 1000 kilo once entered in the OUT 1 20 MA LV menu

KEYS	INSTRUCTIONS	DISPLAY	COMMENT
	Press once		To display flashing 1 <sup>st</sup> digit.
	Press once		To increment the 1 <sup>st</sup> digit.
	Press four times		To display flashing 5 <sup>th</sup> digit.
	Press once		Press again for : M, / and K
	Press once		To confirm value . Press ▼ to programme the value at 20 mA (HV).


**NB:** for  $\Sigma P$ ,  $\Sigma Q$ ,  $\Sigma S$  and  $\Sigma PF$  the lower threshold (LV) corresponds to the negative value (example : -1000 kW).

#### 4 PROGRAMMING OF THE N° 1 ANALOG OUTPUT VALUE AT 20 mA (OUT 1 20 MA HV)

**NB:** The type default setting is 0 mA (HV 0000). If you want this setting, press ▼. You will pass to type programming (OUT 2 20 MA TYPE). If not, proceed as follows:

KEYS	INSTRUCTIONS	DISPLAY	COMMENT
	Press once		Press as many times as necessary to move to the right or on ◀ to move to the left.

Press ▼ to decrement or on ▲ to increment selected digit value.

Press once  to confirm value.

Press once ▼ to pass to analog output 2 type programming (OUT 1 20 MA TYPE).

**NB:** the first four digits correspond to the value in decimals and the sixth digit to the weight /, K (kilo) or M (Mega).

**Example:** programming of 2000 M once entered in the Out 1 20 mA HV

KEYS	INSTRUCTIONS	DISPLAY	COMMENT
	Press once		To display flashing 1 <sup>st</sup> digit.
	Press once		To increment the 1 <sup>st</sup> digit
	Press four times		To display flashing 5 <sup>th</sup> digit.
	Press once		Press again for : M, / and K
	Press once		To confirm value. Press ▼ to programme analog output 2 type (OUT 2 20 MA TYPE).

**NB:** for ΣP, ΣQ, ΣS and ΣPF the upper threshold (HV) may correspond to the positive value (example : + 1000 kW).



## 5 PROGRAMMING OF N° 2 ANALOG OUTPUT (OUT 2 20 MA TYPE)

Proceed as for number 1 analog output. If you do not wish to use it, press ▼ to return to network programming (Net) or to pass to number 3 analog output programming (if the 2<sup>nd</sup> 0/4 – 20 mA module is installed) or press for 3 seconds on **PROG** to quit programming.

## 6 PROGRAMMING OF N° 3 ANALOG OUTPUT (OUT 3 20 MA TYPE)

Proceed as for number 1 analog output. Number 3 output is present while installing a 2<sup>nd</sup> analog output module. If you do not wish to use it, press ▼ to pass to number 4 analog output programming (OUT 4 – 20 MA TYPE) or press for 3 seconds on **PROG** to quit programming.

## 7 PROGRAMMING OF N° 4 ANALOG OUTPUT (OUT 4 20 MA TYPE)

Proceed as for number 1 analog output. Number 4 output is present while installing a 2<sup>nd</sup> analog output module. If you do not wish to use it, press ▼ to return to network programming (Net) or press for 3 seconds on **PROG** to quit programming.

---

# TECHNICAL CHARACTERISTICS

### ANALOG OUTPUTS

Load resistance	0 to 600 Ohms
Response time	1 sec
Galvanic insulation	2.5 kV
Accuracy (full scale)	0.5 %

**HEAD OFFICE**

**SOCOMEC GROUP**  
Industrial Switching and Protection Systems

**SOCOMEC S.A.**  
capital 11 407 400 €

R.C. Strasbourg 5484500 149 B  
BP 10 - Rue de Westhouse  
F-67235 Benfeld cedex  
Tel. (33) 3 88 57 41 41 - Fax (33) 3 88 57 42 60

**SALES MANAGEMENT DIVISION**

**SOCOMEC**  
95, rue Pierre grange  
F-94132 Fontenay-sous-Bois Cedex  
Tel. (33) 1 45 14 63 40 - Fax (33) 1 48 77 31 12

 **SOCOME**  
Industrial Switching & Protection Systems

This document is not contractual. SOCOME reserves the right to modify features without prior notice in view of continued improvements.