



Caution: « Bromine » MODUPAC built-in only 2 relays outputs and 2 analogues outputs. Functions of each output must be defined during the programming task. All the possibilities of module could not be used until all outputs are affected.

c) Programming protocols:



See the annex document: « MODUPAC General programming synoptic»



Caution: Repairs must be done by a qualified technician and must be sent in our customer service.



Recycled products: Paper and carton boxes must be recycled according to standards.



WEEE directives: Electricals parts must be forwarded us to perform recycling process according to 2002/96/CE European directives and to the management of the electric and electronic wastes (WEEE).

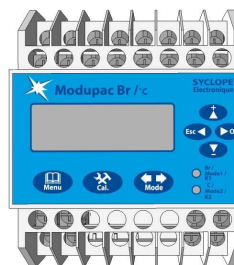


In case of troubles, call our customer service.

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MODUPAC « Bromine » 4...20mA Bromine acquisitions Module for standard DIN 4U rails



Power supply: 24 Volts DC Power: 3Watts max with « Power » module
Input 1: 4...20mA Bromine according to measurement cell type.
Measurement ranges: 0-2 ppm, 0-10ppm, 0-20ppm
Input 2: pT100 temperature probe
Measurement range: 0 to 100°C (For other values contact us)
2 programmable discrete relays outputs Max: 48V@1A
2 programmable analogues outputs (Regulations or data transfer "BMS")
1 RS485 communication output connection with « COMT » module
1 discrete input for distant remote or flow sensor.



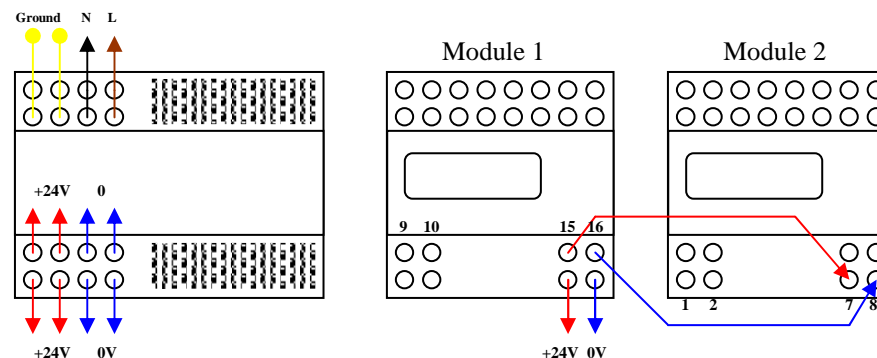
Note: It is essential to use 24V DC 1.5 A MODUPAC "Power" module in order to insure the correct operation of "Bromine" module and to preserve the galvanic isolation of the equipments.

1: Connecting / Supplies:

a) 230Volts 50Hz and 24Volts DC chain supplies connecting.



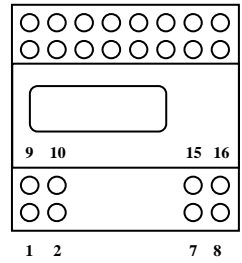
Caution: « MODUPAC Power » power module must be installed according to applicable standards. It must be protect by a thermal circuit breaker or a fuse.



Maximal number of modules chained with « MODUPAC Power » module is finding out by maximal consumption of each acquisition module.

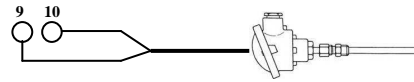
Ex: Power supply MODUPAC « Power » Ref: **MAL0000**: 30W
Maximal power of MODUPAC « Bromine » 3W
Maximal number of module by supply: **10**

b) (Optional) Temperature sensor and Bromine cells connection:

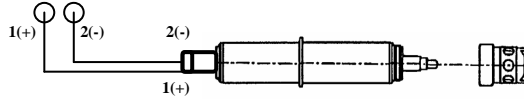


Temperature nodes: 9 and 10
Bromine nodes: 1(+) and 2(-)

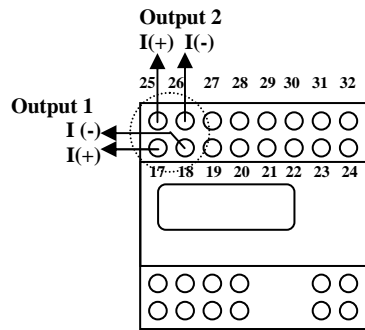
Temperature sensor connection : « pT100 » 2 wires



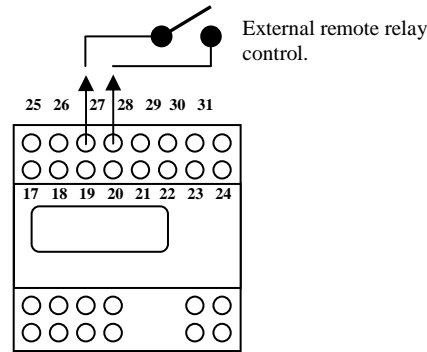
Bromine probe connection (4...20mA): 2 wires



c) 0/4...20mA analogues outputs connection and.....

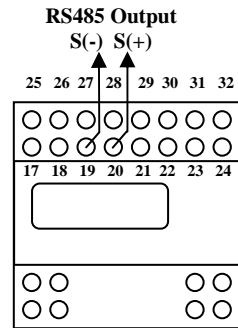


The remote control discrete input:

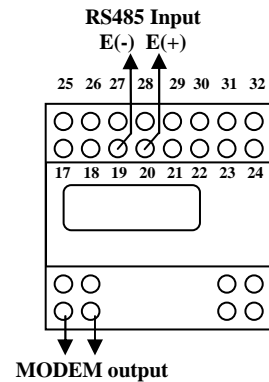


Caution: When the remote control is disabled (open circuit) both indicators blinks.

d) RS485 communication output connection with «COMT»module:

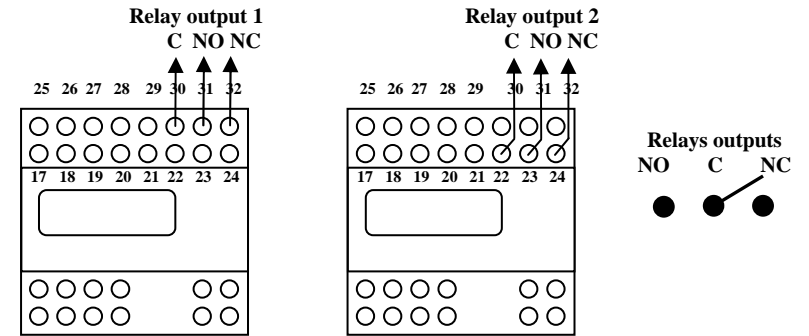


MOD1040



MCT 000x

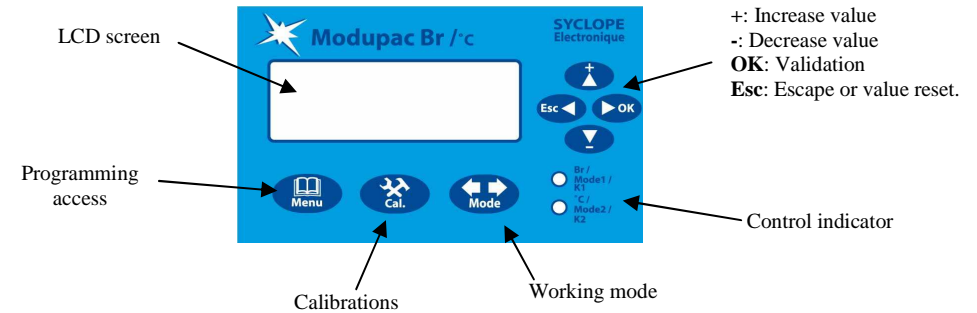
e) Relays outputs connection:



Caution: Relays outputs don't support more power.
 Maximal voltage on relay can't exceed 48 Volts (AC or DC)
 Maximal current can't exceed 1A.

2: Programming:

a) Module presentation:



b) Main functions

The MODUPAC « Bromine » can be programmed to do following functions:

- ✓ Regulator, Analyser for Bromine (According the probe type "Input 1: 4...20mA")
- ✓ Available in different measurement range versions: 0-2 ppm, 0-10ppm, 0-20ppm
- ✓ Regulator, Analyser for temperature 0 to 100°C (Input 2: pt100).
- ✓ Bromine and temperature with P, PI, PID and auto-adaptive regulation.
 - Proportional band : 1 to 100 %
 - Constant : 1 to 100 %
 - Integral time : 1 to 1000 s
 - Derived time : 1 to 1000 s
 - Dead band : 0 to 50 %
- ✓ Discrete mode regulation, width modulation, frequency modulation or 3 points regulation.
- ✓ Programmable alarm threshold high and low value, for each input.
- ✓ Remote discrete control input or pulsed frequency control.
- ✓ 2 relays outputs configurable in alarm or regulation.
- ✓ 2 0/4...20mA outputs configurable in regulation or data transfer (BMS).
- ✓ RS 485 communication output to save and transmit data with « COMT » module.