

# UNIT FOR TIMED ON-OFF CONTROLS & ACQUISITION ALARMS

C ← BUS

## UCO 318 Eng.



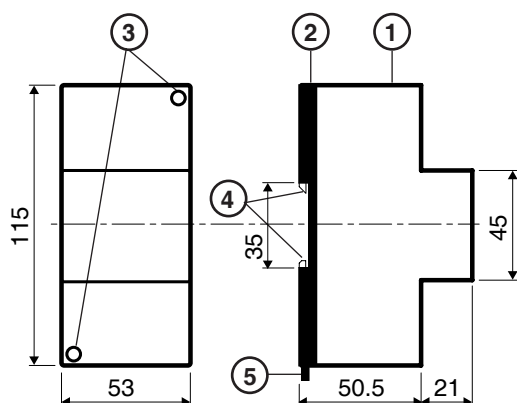
- 1 relay output for timed control
- 1 digital input for extension
- 1 digital input for switching on
- 1 digital input for changing program or alarm or status switch
- Communication systems: C-Bus for telemanagement
- Power supply 230 V~ , DIN rail mounting

### 1. APPLICATION

Designed for use in telemanagement systems for On-Of control of one electrical device with 24hour or 7day programs.

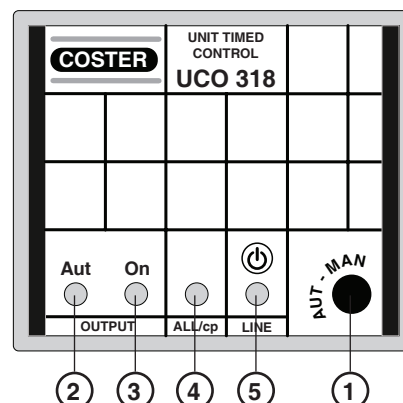
If no other devices are connected via C-Bus to the modem it is possible to connect it directly to a GSM 713 modem by means of an ACB 232/S1 convertor cable.

### 2. OVERALL DIMENSIONS



- 1 – Protective cover for electronic components
- 2 – Base with transformer, relay and terminal blocks
- 3 – Screws for securing base and cover
- 4 – DIN rail securing elements
- 5 – DIN rail release lever

### 3. FACIA



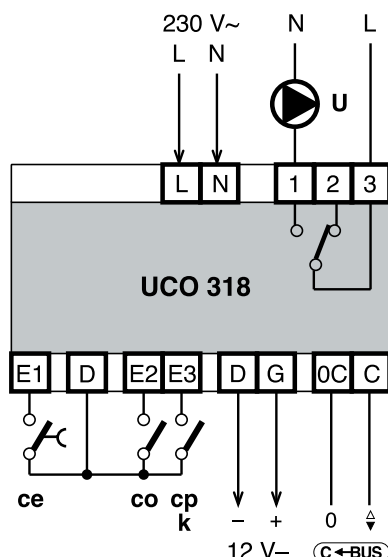
- 1 – Manual/Automatic (Reset) key
- 2 – Automatic/Manual output LED  
Lit = Automatic; Unlit = Manual
- 3 – On-Off output LEDs  
Lit = On; Unlit = Off
- 4 – **k** alarm LED or closure **cp** switch
- 5 – Power LED

### 4. TECHNICAL DATA

Power supply	230 V~ ± 10%
Frequeny	50 Hz
Consumption	3 VA
Protection	IP40
Radio disturbances	VDE0875/0871
Vibration test	with 2g (DIN 40 046)
Construction standards	Italian Electrotech. Committee (CEI)
Enclosure	DIN 3E module
Mounting	on DIN 35 rail
Materials:	
Base	NYLON
Cover	ABS
Ambient temperature:	
Operating	0 ... 45 °C
Storage	- 25 ... + 60 °C
Ambient humidity	Class F DIN 40040
Weight	0.31 kg

Outputs	1
Inputs for control outputs :	
Extension button <b>ce</b>	1
Switching on <b>co</b>	1
Program changing switch <b>cp</b> (as alternative to <b>k</b> )	1
Input for alarm or status <b>k</b> (as alternative to <b>cp</b> )	1
Signalling alarm :	
– for switch closed	
– for switch open	
Delay receiving alarm	0...1...255 min
Delay reeeiving-end alarm	0...1...255 min
Programs & periods :	
24hour programs	1...15
On times	1...6
Off times	1...6
7day programs	0...7
Annual periods	0...15
Extension control	1...60...255 min
Telemanagement address	1...255

## 5. WIRING DIAGRAM



U – Output : Lit = 1-3 closed, 2-3 open  
 Unlit = 1-3 open, 2-3 closed  
 ce – Extension button  
 co – On switch  
 cp – Program-changing switch (as alternative to k)  
 k – Alarm or status switch (as alternative to cp)  
 C-Bus – Telemangement data transmission  
 D-G – Unstabilised 12 V- output (max.10 mA).

## 6. INSTALLATION

UCO 318 must be installed in a dry space that respects the relevant environmental conditions included under 4. Technical Data. If installed in a location classified as “Hazardous” it must be enclosed in a cabinet for electrical equipment constructed according to the regulations in force for the class of danger concerned. It can be mounted on a DIN rail or in a DIN modular enclosure.

## 7. ELECTRICAL CONNECTIONS

Proceed as follows :

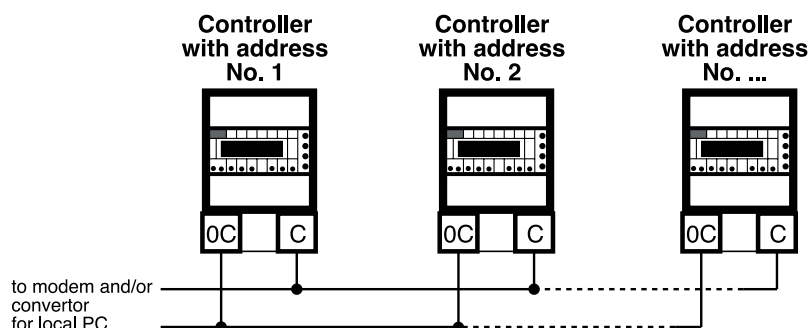
- Separate base from cover after having loosened the securing screws
  - Mount the base on the DIN rail and check that it is firmly anchored by the securing elements (2.4)
  - Carry out the wiring according to the diagram and in compliance with current electrical regulations and using :
    - 1.5 mm<sup>2</sup> wires for power supply and relay control outputs.
    - 1 mm<sup>2</sup> wires for input switches.
    - 1 mm<sup>2</sup> for C-Bus. For length limits see data sheet T 021.
  - Apply power (230 V~) and check its presence across terminals L and N.
  - Remove power, replace cover on base/terminal block and secure it with the two screws supplied (2.3) .
- You are advised not to insert more than two cables in a single terminal and, if necessary, to use an external junction box.

## 8. COMMUNICATION

### 8.1 C-Bus communication for telemangement (for detailed information see data sheet T 021)

UCO 318 must be connected via the C-Bus output to a telemangement system (local PC and /or modem),

### 8.2 C-Bus electrical connections



### 8.3 Address for telemangement

In order to be identified by the telemangement PC the unit must be allotted a progressive address number (section 9.3).

## 9. OPERATION

UCO 318 controls :

- 1 relay output **U** for timed On-Off control, using :
  - fifteen 24hour and seven 7day programs; - 15 annual periods with dates.
  - 1 timed extension program via external switch **ce**.
  - 1 On control via external switch **co**.
  - 1 program via external switch **cp**.
- 1 On-Off input **k** (as alternative to **cp**) for signalling alarms or status, programmable with times for closed or open switch using :
  - fifteen 24hour and seven 7days programs; - 15 annual periods with dates.

### 9.1 Telemanagement PC

From the telemanagement PC you can :

- Set the current time (automatic or manual changing BST/GMT), day of week and date.
- For relay output **U** :
  - Display status of relay ;
  - Enter name of output.
  - Select Manual/Automatic operating program :
    - Manual : - On ; - Off.
    - Automatic : - 24hour 1...15 ; - 7day 1...7 ; - On ; - Off.
  - Enter 24hour programs :
    - number of programs to be used (1...15) ;
    - On and Off times (max. 6+6) for each program.
  - Enter 7day programs:
    - number of programs to be used (0...7) ;
    - program for each day of week: 24hour 1...15: On; Off.
  - Enter annual periods :
    - number of annual periods to be used (0...15) ;
    - dates of start and end of each period ;
    - program for period: 7day 1...7; 24hour 1...15; On; Off.
  - Enter operation of extension control **ce** :
    - enable **ce** switch (not operative in Manual mode) ;
    - enter duration time (minutes) of extension period (On) ;
  - Enter operation of On control **co** :
    - enable switch **co** (not operative in Manual mode) ;
    - enter action mode of switch **co** (On with switch closed or open).
  - Enter operation of Change Program control **cp** (as alternative to **k**) :
    - enable switch **cp** (not operative in Manual mode);
    - select program to set by closure switch **cp** ;
- For the alarm input **k** (as alternative to **cp**) :
  - Enable the input.
  - Enter name of the input.
  - Display status of the switch (always available).
  - Enable its use as alarm.
  - Enter the type of action of the alarm switch (alarm with switch closed or open)
  - Enter the delay receiving and of receiving-end alarm.
  - Enable sending of alarm status ended.
  - Select the program for enabling the alarm :
    - 24hour 1...15 ; - 7day 1...7 ; - Input enabled; - Input disabled
  - Set the 24hour programs for the alarm :
    - number of programs to be used (1...15)
    - On and Off times (max. 6+6) for each program
  - Set the 7day programs for the alarm::
    - number of 7day programs to be used (0...7)
    - program for each day of the week: 24hour 1...15; On; Off.
  - Set the annual periods for the alarm :
    - number of annual periods to be used (0...15)
    - dates of start and end of each period;
    - program for the period: 7day 1...7; 24hour 1...15; On; Off.

### 9.2 Facia

The UCO 318 facia :

- Signals the operational status of the Output by one pair of LEDs **Aut** (3.2) and **On** (3.3):
  - Aut : - lit = automatic operation with timed programming set by the telemanagement PC.
  - off = manual operation.
  - flashing = Extension control **ce** enabled
- On : - on = output On (1-3 closed, 2-3 open).
- off = output Off (1-3 open, 2-3 closed).
- Signals with LED **All** / **cp** (3.4) the status of switch **k** or **cp** (for switch closed or open according choice by PC):
  - LED off = no alarm status.
  - LED lit = alarm status received.
  - LED flashing = Alarm being received.

### 9.3 Setting telemanagement address (1...255)

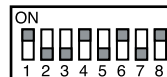
To set the telemanagement address use the dipswitches on the base of the unit (default address = 1)

- 1 On = 1
- 2 On = 2
- 3 On = 4
- 4 On = 8
- 5 On = 16
- 6 On = 32
- 7 On = 64
- 8 On = 128



The address entered is the sum of the values of the dipswitches in the On position.

e.g. : Desired address = 169  
 Setting : 8 On = 128 ; 6 On = 32 ; 4 On = 8 ; 1 On = 1 ;  
 Result : 128+32+8+1 = **169**



### 9.4 Procedure for local control Output (manual)

- Press the key AUT-MAN for 5 seconds. : LED **Output Aut** goes out (Manual).
- Press the key AUT-MAN for 2 seconds : If LED **Output On** is lit, it goes out (Off) or vice versa.  
 Leave in desired condition.
- Press the key AUT-MAN for 5 seconds : LED **Output Aut** lights (Automatic).

Use the same procedure to test the control output.

### 9.5 Returning to factory settings

To return to factory settings, switch off power to the unit and then re-power it keeping pressed the key until LEDs 3.2.3.4 start to flash.  
 After about 30 seconds the flashing ceases and the unit is ready for use.

### 9.6 Extension program

To enable the timed Extension program press the external button **ce** for at least three seconds; to interrupt it, press for at least 15 seconds.

### 9.7 Alarm timer

In the event of a fault in the internal clock, LEDs 3.2.3.4, flash, an alarm is sent to the telemanagement PC and the output is set for Manual operation with the relative program.

### Amendment to data sheet

Date	Revision No.	Page	Section	Amendment description
02.03.07 LB	<b>01</b>	1	4. TECHNICAL DATA	Add value of delay receiving-end alarm