

## UBT2000DIN - Digital Universal Bus Transceiver

Only suitably qualified personnel should install this equipment.

The UBT2000DIN expands the scope of The Ex-Or MLS Digital by enabling otherwise uncontrolled lighting and non-lighting loads to be brought into the system. UBTs also allow external devices to provide inputs into the system.

### Fixing

The UBT2000DIN is designed to be DIN Rail mounted. By extending the two plastic fixing wings the unit may be fixed directly to a panel using suitable screws.

### Connection

The MLS Bus cable should be 1.5mm<sup>2</sup> twisted pair unscreened.  
The digital output cable should be 1.5mm<sup>2</sup> 2-core flex unscreened.  
The mains supply terminals are suitable for 1 x 4mm<sup>2</sup> or 2 x 2.5mm<sup>2</sup> cable.  
For connection options please see overleaf; also MLS Wiring Guide AN4001.

### Important Additional Notes

1. All terminals on this product are provided for final connections. It is not intended that the product be used as a junction box for looping cables.
2. A means for disconnection must be incorporated in the fixed wiring in accordance with the current wiring regulations.

### Technical Data

MLS CABLE: 1.5mm<sup>2</sup> unscreened twisted-pair: see Application Note AN4001  
RANGE TO HP2000: 0.2m (8 inches)

OPERATING VOLTAGE: 230V 50Hz (UK & Europe)

PRODUCT RATING & RECOMMENDED CIRCUIT PROTECTION: 10 Amps

MAXIMUM RECOMMENDED LOAD: 10 Amps

Incandescent lamps: 1500W max (at 230V)

DIGITAL DIMMING OUTPUT LOAD: up to 20 BALLASTS

POWER CONSUMPTION: <10W

WEIGHT: 376g

SIZE: 105mm x 90mm x 60mm

This device presents a load of 1 unit to the MLS Bus.

### Ex-Or Limited

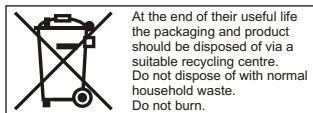
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W4163C



## UBT2000DIN Universal Bus Transceiver for use with The Ex-Or MLS Digital



### Installation and Commissioning Instructions

Note: HP2000 required for commissioning

(Please read these instructions fully before installation)

### Commissioning a UBT using the HP2000

When commissioning a UBT, the HP2000 should be held at a shorter distance from the unit than for detectors, ie not more than 0.2m away from the infrared transmitter and receiver which are positioned just below the MLS bus connections.

1. Switch on HP2000 by pressing the red power button.
2. Point HP2000 at the UBT and press the DOWNLOAD button. The HP2000 will confirm the product's identity and call up the correct menu of parameters and their current settings.
3. Use a combination of UP, DOWN, FORWARD and BACK buttons to navigate the parameter menu, selecting options for each shown. (See Tips below.)
4. When options for all parameters have been selected, point the HP2000 at the UBT and press the UPLOAD button. The luminaire(s) will switch off briefly during the programming process and the HP2000 shows DATA OK to confirm operation.
5. After a short period of inactivity (default 5 minutes), the HP2000 hibernates retaining the most recent settings.

### Tips

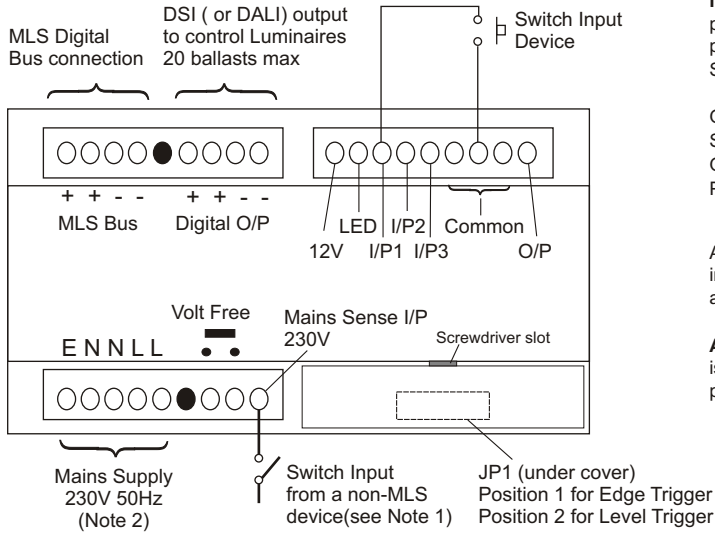
- i) Where there are only two options such as ON/OFF, a double click of the OK button toggles between them.
- ii) Where there are multiple options, a double click of the OK button recalls a list of all options for that parameter. Use the UP, DOWN and OK buttons to select.
- iii) Use the OK button to go forward (through the menus) without displaying help pages.
- iv) Press UPLOAD at any time to transfer all current settings from the handset to the product.

Please refer to HP2000 instructions for comprehensive commissioning details.

When commissioning, the following options are available (pre-sets shown in bold):

Function	Options	Description
Power-up	<b>On/Off</b>	Sets the digital output and relay state at power-up irrespective of occupancy.
Response	<b>Auto/</b> Semi-auto	Auto: switches on and off automatically. Semi-auto: requires input commands on inputs 1-3 or the MLS Bus to switch on but switches off automatically.
Min on-time	<b>No/Yes</b>	If set to Yes, the luminaires stay on for at least 20 minutes regardless of the Off delay. Once the Minimum on-time has elapsed, the programmed Off delay is reinstated.
Off delay	5-60 min <b>20 min</b>	Off delays are programmable in 5 minute steps with a 10 second walk-test option.
Bus connect	<b>Yes/No</b>	Selecting No electronically disconnects the unit from the bus.
Zones	1 to 50 Pre-set to -- (no zone)	Seven zones are listed which can be programmed at the time of commissioning. Detectors programmed to the same zone switch on or stay on when movement is detected anywhere in that zone. The 5th, 6th and 7th entries in the list may also be programmed as Common Zones or Global Zones (see Note 3 overleaf re Global Messages).
Input 1-3	Various <b>Sustain</b>	When the switch inputs go active, the programmed command is transmitted to the zones in the UBT's list.
Start lamps	<b>Min/Max</b>	Selects the digital dimming output at power-up which then adjusts to the required state.
Entry scene	1-6 <b>Scene 1</b>	Choose scene 1-6 which is selected when the area is first occupied.
Fade to off	<b>No/Yes</b>	After the Off delay, digital dimming output either switches off or fades to off gradually over a few minutes.
Vacant	<b>Off</b> Scn 6 Scn 6 3 hr Scn 6 bld	<b>Switch off after off delay.</b> Go to Exit Scene (Scene 6) until next occupancy. Go to Exit Scene (Scene 6) for 3 hours then switch off. Go to Exit Scene (Scene 6) until building is vacated then switch off.
User remote		Simulates HC5 functions.
Request download		Extracts information regarding product type and current settings from Ex-Or device.
Programme all		Transmits all programme parameters.

**USING THE UBT AS AN INTERFACE DEVICE (TRANSMITTER MODE)\***



- Input:** Signal on input 1, 2 or 3 from an external switch. These inputs can be programmed to send Global Commands (which will be received by all devices programmed to accept Global Commands - see Note 3) as follows:
- SUSTAIN - Assume local presence, i.e. stay ON if ON, switch ON if already OFF, unless switched OFF manually.
  - OFF - Switch off
  - SCENE 1-6 - Go to specified scene
  - ON - Switch on to your entry scene.
  - PARTITION - Causes any zone information programmed to the 3rd and 4th positions to be disregarded temporarily (see Application Note AN4002).

A momentary input will action the command and local presence will sustain it. A latched input will maintain the command regardless of presence until the input is opened. If using a latched command, link JP1 must be set to 'Level'.

**Action:** The UBT's internal timer (for the purpose of operating its relay and digital output) is started or refreshed. Sends signal out on MLS Bus, communicating with similarly programmed devices on the same zones.

**Note 1 Mains Sense Input**

230V 50Hz input sends SUSTAIN command, as above, to all other MLS devices programmed to the same zone and common zones.

**Note 2 Phase Connections**

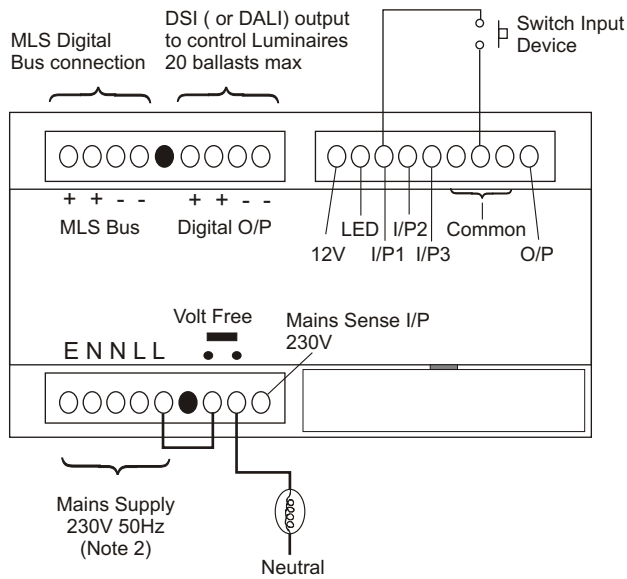
Please ensure that all mains-voltage connections are fed from the same phase as the UBT2000 power supply input.

**Note 3 Global Messages**

The 5th, 6th and 7th Zones may be programmed as Global Zones and, as such, will transmit and/or receive Global Messages. Global Messages add an extra, independent layer of control and can be used for load shedding, setting a scene for when the building is empty, and many other applications some of which are illustrated below. There are two Global Zones that can either Transmit and Receive (G1 and G2 TxRx) or Receive only (G1 and G2 Rx). Global Zones are set by choosing 'Yes' (they are pre-set to No) at the time of commissioning. In this way the UBT may broadcast information to other system devices (e.g. presence detectors) that are also programmed to respond to Global Messages.

**\* The UBT can be used in either Transmitter or Receiver mode, or both, for any combination of the features.**

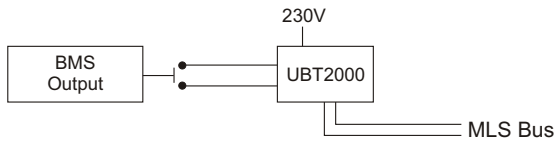
**USING THE UBT TO RECEIVE SIGNALS FROM THE BUS TO SWITCH AN EXTERNAL NON-MLS DEVICE (RECEIVER MODE)\***



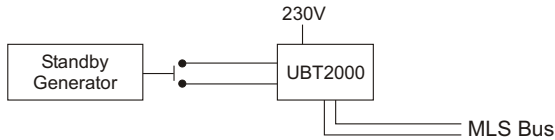
**Input:** MLS Bus signal from other MLS devices programmed to the same zone.

**Action:** The UBT's internal timer (for the purpose of operating its relay and digital output) is started or refreshed. Closes volt-free output - to operate external device/signal BMS etc. Sends digital signal to ballasts (if connected) to set light level as programmed.

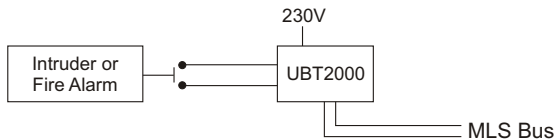
**Examples of Remote Inputs to MLS Digital**



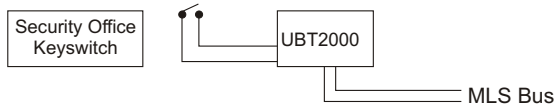
Suitable for: Time-switching, e.g. Common Zones  
Go to a Scene, e.g. Out-of-hours pattern



Suitable for: Load-shed Global Message (see Note 3)

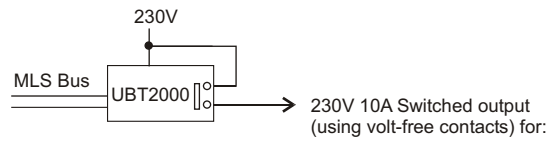


Suitable for: ALL (or selected) ON Global Message (see Note 3)



Suitable for: 'Switch On' Security Patrol Pattern

**Examples of Outputs to Remote Device from MLS Digital**



Non-dimming Luminaires  
Blinds  
Screen  
Other devices

