

# MINOS SYSTEM

---

Remote, Automatic Monitoring and Control for Lighting Installations



- Save Maintenance Costs
- Save Energy Costs
- Better Management of Lighting Stock
- Remote Metering Option



Tele-management for a wide range of applications. Including:

- Street-Lighting
- Commercial developments
- Private developments
- Railways
- Sports Arenas





Minos tele-management systems have an enviable record of reliable operation in numerous applications across Europe and South America, with some 50,000 units in operation. The system is now available in the UK.

The MINOS system uses existing mains supply cables to switch lighting on and off, and to transmit lamp-fault data back to a local control cabinet. MINOS uses patented mains signalling techniques in accordance with CEI-EN50065/1/1/A1, at 112kHz, for reliable operation.

The local ANDROS cabinet CPU communicates with SYRA modules fitted one per lighting point. ANDROS collects and stores the lighting status and fault data, and also instructs the SYRA modules when to switch on or off.

The stored data is collected, and the switching program is updated by via GSM modem or fixed telephone landline between the cabinet and the supervisor's PC. Other methods of remote connection are also available, including fibre optic link and radio.

Up to 255 lighting points can be controlled and monitored by each ANDROS Cabinet . Up to 32,000 cabinets can be monitored remotely on one system.

**The main components of the system are:**

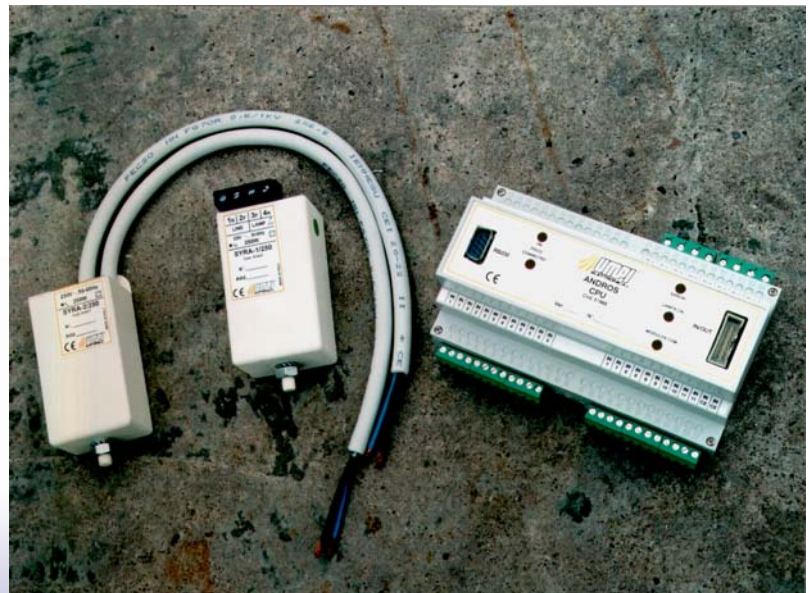
**ANDROS** cabinet CPU module. ANDROS stores data and programming information, and communicates with the SYRA lighting modules, commanding them to switch the light on or off, and receiving fault information.

ANDROS CPU connects with the cabinet modem to transmit data between cabinet and remote supervisor PC.

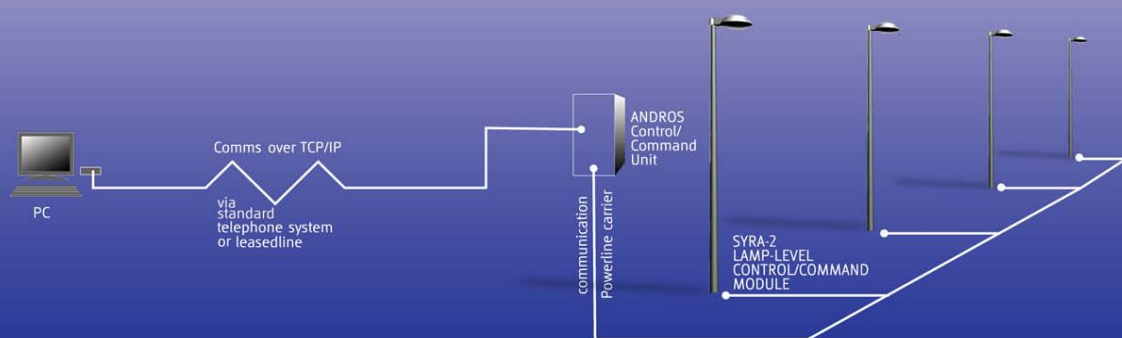
**SYRA** modules can be fitted either in the column or luminaire. SYRA modules require no additional cables, simply Live and Neutral in, and Live and Neutral to lamp. The modules operate on a 'normally closed relay' basis - and in the absence of commands the luminaire will switch on.

As part of the MINOS commitment to reliability, MINOS SYSTEMS will advise, test and confirm applications where SYRA is to be fitted in the luminaire as placement can be critical to reliability.

The modules are extremely compact, only 88 x 52 x 36mm, with M8 stud for easy mounting.



SYRA modules can be mounted either in the luminaire (screw terminal) , or in the column base (flying leads).



**A wide application base;** Applications for MINOS are virtually limitless. Local Authority Street-lighting, Highways, Private Developments, Commercial Centres, Railways and many others.

MINOS is designed to operate where possible on dedicated lighting supply cabling as the exclusion of mains-borne interference is important. A series of specially designed filters are available which when fitted in the cabinet, provide this exclusion. The SYRA units provide full filtering of any luminaire-generated interference.

MINOS system can provide energy consumption metering by linking a pulsing watt-meter at cabinet level.

It is possible to have multiple levels of supervision, for example several local supervisor stations, each uploading information to a senior monitoring authority.

Independent, central monitoring by MINOS SYSTEMS will also be available.

**Functionality;** MINOS controls the switching times of each lighting point, individually or in groups. The main switching program is based on the astronomical clock feature of the system. This can be linked to other switching means, such as photocell, if required.

MINOS continually self-checks to ensure that all components of the system are operating correctly, and reports on status. For standard control gear the system reports lighting faults for broken fuse, cycling lamp, gear faults, lamp out or shorted, and power factor capacitor condition.

ANDROS repeatedly interrogates the SYRA units during operation, where a fault condition is detected, asks the SYRA unit to confirm the fault a second time before it is logged.

Programming and set up of MINOS is by simple, intuitive, Windows based MINOS NG software. Data can be transferred to other applications, such as logging programs, via DDE link software.

The software provides all of the flexibility needed to control lighting and report faults, but also provides a data-base of the installation.

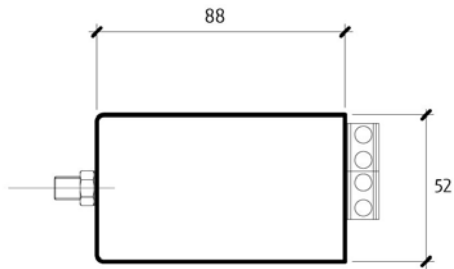
The system provides **Emergency Callout** facilities in case of user-defined events occurring.

The screenshot displays the MINOS NG software interface. The main window shows a log of events for 'City - Cabinet : Cabinet 4' with columns for Date, Time, Message, and Notice. The log includes entries such as 'ON Input 5', 'OFF Input 4', 'OFF Input 1', 'ON Input 1', 'Successful remote connection', 'Faulty or missing capacitor - Nr. 2', and 'ON switched lamp - Nr. 2'. A 'Configuration' window is open, showing settings for 'Program 1 settings' under the 'Weekly' mode. The 'ON switching' section includes a table of days and times for Prg1, Prg2, and Prg3. The 'OFF switching' section is also visible. The interface includes a menu bar (File, Setup, Language, Help) and a toolbar with icons for Events, Data, Status, Call, Andros, and Print.

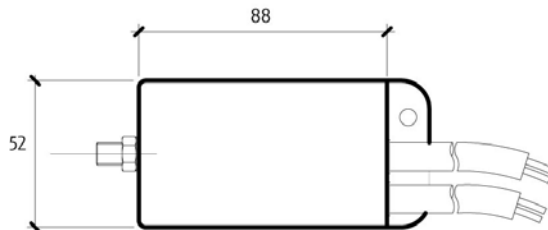
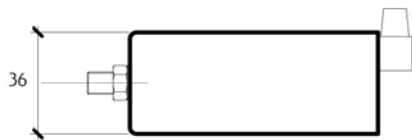
Date	Time	Message	Notice
24/07	16:34	ON Input 5	
24/07	16:34	OFF Input 4	
24/07	16:34	OFF Input 1	
24/07	16:34	ON Input 1	
24/07	16:33	Successful remote connection	
24/07	16:05	Faulty or missing capacitor - Nr. 2	Showroom UMPI Elettronica
24/07	15:50	ON switched lamp - Nr. 2	Showroom UMPI Elettronica
24/07	15:49	ON switched lamp - Nr. 4	
24/07	15:49	ON switched lamp - Nr. 3	
24/07	15:49	ON switched lamp - Nr. 1	
24/07	15:48	Start prolonged low battery	
24/07	15:47	General OFF command	
24/07	15:47	Reset hardware (power-up)	
24/07	15:40	Successful remote connection	
24/07	15:01	Start prolonged low battery	
24/07	15:01	General OFF command	
24/07	15:01	Reset hardware (power-up)	

Days	Sun	Prq1	Prq2	Prq3
01 Jan	16:40	16:40	16:40	16:40
02 Jan	16:40	16:40	16:40	16:40
03 Jan	16:41	16:41	16:41	16:41
04 Jan	16:42	16:42	16:42	16:42
05 Jan	16:43	16:43	16:43	16:43
06 Jan	16:44	16:44	16:44	16:44
07 Jan	16:45	16:45	16:45	16:45
08 Jan	16:46	16:46	16:46	16:46
09 Jan	16:47	16:47	16:47	16:47
10 Jan	16:48	16:48	16:48	16:48
11 Jan	16:49	16:49	16:49	16:49
12 Jan	16:50	16:50	16:50	16:50





Compact SYRA modules



For further information, software demonstration, and all enquiries, please call or photocopy and send the fax-back form below.

FAXBACK To **MINOS SYSTEMS** 0121 678 6701

Name.....

Company or Authority.....

Title.....

Telephone Number.....Fax Number.....

Please call me to discuss **MINOS** in further detail.

I already use monitoring systems

I have an application requiring monitoring systems

**MINOS SYSTEMS**  
 319 Long Acre Nechells Birmingham B7 5JT  
 Tel: 0121 678 6700  
 Fax: 0121 678 6701  
 sales@minos-systems.com

MINOS is part of an on-going development programme, and specifications may change from time to time.

