

AGL Control & Monitoring

APECUS

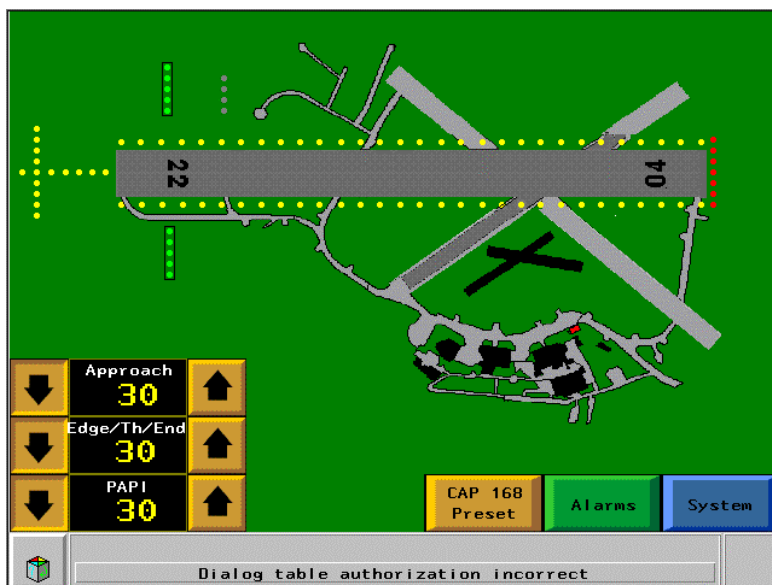
Copperchase – AGL Control & Monitoring

Flexible Control & Monitoring of Aeronautical Ground Lighting (AGL)

The Copperchase new Control and Monitoring system for airfield AGL installations offers state of the art touch-screen and Programmable Logic Controller (PLC) packages tailored to the individual needs of the airfield operation.

No more expensive new mimic displays each time you upgrade your AGL facilities. Airfield layouts are redrawn electronically and configured to accommodate changes to layout and additional circuits.

A modular PLC allows for increased numbers of Input/Output (I/O) to be added quickly, and easily.



From The Small Regional Airport To The International Hub.

The Copperchase AGL Control & Monitoring system features a range of process control products from Schneider Electric.

From the ultra compact but very powerful Momentum range of PLCs which can be used as a stand alone system for small to medium sized airfield installations, or as distributed I/O for the more powerful Quantum series on larger more demanding AGL systems.

The Man Machine Interface (MMI) is in the form of either an LCD screen with tactile switch panel or resistive matrix touch-screen.

Both Control & Monitoring can be realised on one panel or a combination of two or more screens providing Control & Mimic separately.

Typical Small Airports System

At the heart of the system is a Momentum PLC complete with processor, option adapter and I/O base.

Additional digital I/O for Control & Monitoring of CCRs is added as required up to max of 8192 drops, each capable of up to 32 I/O.

Direct control of CCRs is also possible through Modbus connectivity where this is available as an option to the CCR.

Primary Circuit Current Monitoring (PCCM) is achieved by the inclusion of an analogue input module. This module can interface either to an existing CCR proportional current output or to a current transducer cabinet supplied separately.

Designed using state of the art process control equipment

Design inspired by safety first approach, including redundant elements from power supplies and communications paths, to full hot standby processors

Modular construction makes the system suitable for any aerodrome, of any complexity or particular needs

Adaptable to changes in an aerodrome's physical layout, without costly re-engineering

Touch-screen technology for maximum flexibility of operation and ease of change in response to changes in aerodrome layout

OPTIONS

Alarm & Monitoring packages

User Reports

Medium Sized Airport System

A Momentum PLC is interfaced to two touch-screen displays. Screen 1 acts as a Mimic whilst Control is exercised via the second screen. Advantages of such a system are built in redundancy. Should one screen fail the software will automatically allow the remaining display to act as both Mimic & Control until such time as the U/S display is replaced. Where a large number of circuits are managed this approach allows manipulation of the system settings and monitoring of alarms whilst retaining the overall Mimic layout at all times. Options here include upgrade to Quantum PLC where greater functionality is required, and additional screens such as the 5.7" touch-screen display - ideal for local stop bar control in situations where the main panel is not directly to hand due to Tower layout.



Large Airport Systems

Quantum PLCs offer enhanced functionality over the smaller Momentum range. Whether used alone or with Momentum as distributed I/O, the system can handle almost any task. With connection to touch-screen displays, computers, terminals and a whole range of process control devices, the solution can be tailored to your needs. Efficient traffic management using taxiway routing facilities and direct control of ancillary equipment. A choice of networking solutions to adapt to your Airport layout covering any combination of B centres and other outstations.

A Solution For The Most Demanding Airport Layout

A combination of Magelis touch-screen devices in the VCR covering Control, Mimic and where required additional stop-bar and taxiway routing terminals in either 5.7" or 10.4" resistive matrix touch-screens. Hot standby systems providing seamless changeover in the event of a failure. Fibre optics and dual redundant cabling are also available to enhance network reliability.

Field Proven Communications And A Choice Of Networks To Suit All Airfield Layouts.

Remote I/O in B centres can be connected to the A centre by a variety of different networking solutions. Modbus is the de-facto standard for easy, cost effective networking of B centres, based on the industry standard RS232 protocol. For faster communications with systems requiring large amounts of I/O - Modbus Plus provides fast (1MB/s) reliable interconnection. As well as an array of other commonly used standards including Interbus, I/O bus, Profibus DP and Fipio, the PLC can be configured to use Ethernet allowing connection to corporate IT systems for access to operational data from the field.

Reliability Features That Are Easy To Add As Required.

- Dual cabling options for both Remote I/O and Modbus Plus protects the system from single cable breaks or damaged connectors.
- Fibre optic repeaters are available for both Remote I/O and Modbus Plus to increase distance between nodes or to maximise network noise immunity.
- Fibre optic repeaters and the fibre optic Modbus Plus network option module can be connected into self-healing rings for reliable communications over long distances.



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