ILCMS by GRP

INDIVIDUAL LAMP CONTROL & MONITORING SYSTEM

GENERAL DESCRIPTION

GRP PROVIDES A **STATE-OF-THE-ART** SYSTEM THAT IS CAPABLE OF CONTROLLING AND MONITORING INDIVIDUALLY THE LIGHTS OF THE AIRFIELD (AGL).

IT USES THE POWER PRIMARY CABLE TO COMMUNICATE, THUS NOT NEEDING A SEPARATE DEDICATED CABLE.

FEATURES:

- ONE OF THE KEY ELEMENTS OF AN A-SMGCS (ADVANCED-SURFACE MOVEMENT GUIDANCE CONTROL SYSTEM).
- MONITORING OF LAMP FAILURES WITH LOCATION INDICATION.
- COMMUNICATION THROUGH SERIES CIRCUIT CABLE.
- NO NEED OF CHANGE IN THE EXISTING CABLING.
- RESPONSE TIMES ACCORDING TO ICAO.
- INTEGRATION WITH EXISTING CONTROL AND MONITORING SYSTEM (CMS).

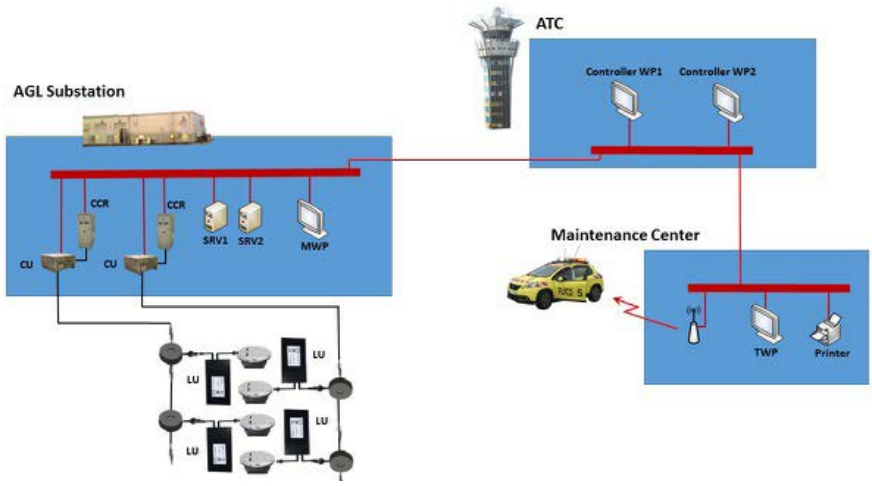
KEY TECHNOLOGICAL FEATURES:

- UNSHIELDED CABLE COMPATIBLE.
- NO MINIMUM VALUE OF INSULATION REQUIRED IN THE POWER CABLE.
- NO REGENERATORS REQUIRED.
- SEVERAL FREQUENCY CHANNELS AVAILABLE.
- SEVERAL CHANNELS RUN SIMULTANEOUSLY IN EVERY LAMP UNIT.

MEETING THE RECOMMENDATIONS OF ICAO

THE **ILCMS-GRP SYSTEM** ALLOWS TO FULLY COMPLY WITH THE REQUIREMENTS OF ICAO WITH REGARDS TO MONITORING SYSTEMS AS IT ALLOWS THE DETECTION OF FAILURES OF ADJACENT LAMPS.

WITHOUT INDIVIDUAL LAMP MONITORING OF EVERY LAMP, MEETING OF ICAO REQUIREMENTS IS JUST NOT POSSIBLE.



BENEFITS FOR THE AIRPORTS

Savings in investment

TRADITIONALLY IN THE DESIGN OF CIRCUITS FOR AGL, THE NUMBER OF CIRCUITS IS THE RESULT OF GROUPING AND SEPARATING THE LIGHTS ASSOCIATED TO THE DIFFERENT FUNCTIONS. THIS LEADS TO A HIGH NUMBER OF CIRCUITS, GENERALLY FOR A SMALL NUMBER OF LIGHTS.

IN THE SAME TIME, DESIGNING A TAXIWAY GUIDANCE, OFTEN REQUIRES A HIGH NUMBER OF DIFFERENT SEGMENTS THAT WILL INDUCE A HIGH NUMBER OF CIRCUITS.

THUS, THE DESIGN BECOMES COSTLY WHILE INCAPABLE OF DETERMINING THE LOCATION OF FAILED LAMPS, NOT MAKING POSSIBLE TO MEET ICAO REQUIREMENTS.

ILCMS- GRP ALLOWS TO MAKE COST EFFECTIVE DESIGNS BY GATHERING GROUPS OF LIGHTS THAT HAVE DIFFERENT FUNCTIONS IN THE SAME CIRCUIT, MEETING ICAO REQUIREMENTS. THIS CONCEPTION WILL DRAMATICALLY REDUCE THE NUMBER OF CIRCUITS.

Savings in power consumption and maintenance

LESS CIRCUITS HAVE DIRECT INVESTMENT IMPLICATIONS ON SAVINGS. MOREOVER THIS ALSO HAS IMPORTANT MAINTENANCE IMPLICATIONS AS THERE ARE A MINOR NUMBER OF ELEMENTS (CABLE, REGULATORS, ETC) TO MAINTAIN AND, VERY IMPORTANT, LESS ENERGY CONSUMPTION (LESS METERS OF PRIMARY CABLE).

BESIDES, ACCORDING TO ICAO ANNEX 14, WHEN HAVING AN ILCMS, THE DISTANCES BETWEEN LIGHTS IN DIFFERENT SYSTEMS CAN BE DOUBLED, WITH THE SAVING IN ENERGY CONSUMPTION.

GRP

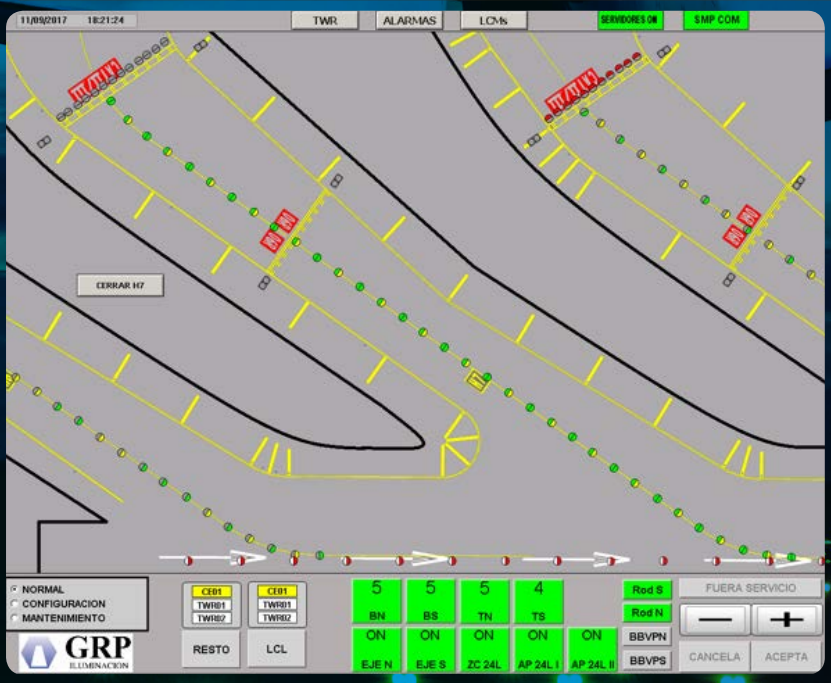
ILCMS INTEGRATED IN OTHER SYSTEMS

USUALLY THE SITUATION TO FACE IS AN OPERATING AIRPORT WITH AN EXISTING TRADITIONAL CMS.

IT IS POSSIBLE TO HAVE A SYSTEM WITH ILCMS-GRP INTEGRATED IN THE EXISTING CMS.

A GOOD EXAMPLE IS THE OPERATION OF A STOP BAR SYSTEM. GRP CAN DEVELOP A SOLUTION SPECIFICALLY DESIGNED FOR EVERY CASE AND EVERY AIRPORT, HAVING A LONG EXPERIENCE ON THIS MATTER.

THIS WAY, THE AIRPORT WOULD HAVE A STOP BAR OPERATION FULLY RESPECTING ICAO REQUIREMENTS, INTEGRATED IN THE EXISTING CMS. SAME CONSIDERATION COULD BE MADE TO ANY OTHER AGL SYSTEM SUCH AS RETIL (RUNWAY EXIT TAXIWAY INDICATION LIGHTS), RUNWAY SYSTEMS, ETC.



COMPONENTS OF THE ILMS-GRP

The ILCMS-GRP includes the following elements:

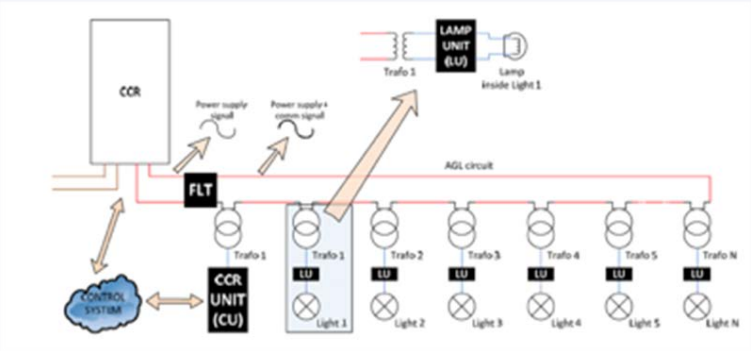
Computer/Servers:
- Communicates with the CMS system and with the Constant Current Regulator Units (CU)

CCR Unit (CU):
- Controls and Monitors all the lights present in the circuit through the Lamp units (LU) in the field.

Lamp Unit (LU) or Lamp Unit Double (LUD):
- These units switch on/off the lights and monitor the status of the lamps receiving/transmitting data status about the light to the CU.

TECHNICAL DATA LU / LUD

Weight: 2,4 Kg
Height: 19 cm
Width: 10,5 cm
Depth: 6 cm
Coating: PUR
Op. Temp.: -40 to 55 0C
Max. Hum.: 100%
Degree of protection: IP68-IK9
Power Consumption: 5W-PF>98%
Current range: 1,8 A to 6,6 A
Switching Capacity: 16 A
Fail safe status Online configurable: ON, OFF and last command.
Protection: ±4,4 kV (8/20 µs, 1kA)
Certified according to: EN 50490:2008 (current version)



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