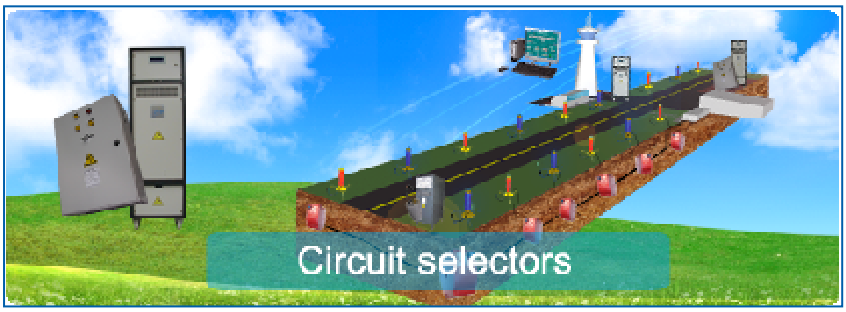
SCS

Stand-alone Circuit Selector



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Compliance with standards

ICAO Aerodrome Design Manual, part 5
IEC (CCR's standard 61822)
FAA (AC150/5345-5 - L847)

Applications

SCS series selectors are up-to-date circuits selectors designed to feed up to 6 airfield lighting loops from one constant current regulator. They are fitted with a simplified electronic enable to communicate with latest generation supervision systems, allowing a very fast and simple commissioning.

Circuits can be alternate (only one circuit will be supplied at a time), or simultaneous (different circuit at the same time).

Typical applications are :

- Alternate supply for PAPI's and approach systems.
- Supply sections of taxiway (ground guidance).

Advantages

- **Design :**

The circuit selector is provided as a stand alone cabinet, that can be wall mounted.

Access to screw terminals is granted through a front door fitted with a key lock.

The selector is provided with high tension relays, and can accept serial communication means (Jbus, Ethernet, …) single or dual, in order to ease its parameter setting as well as remote control operation.

The user interface is located on the front panel, and enable direct feedback of each circuit status as well as inrush current presence on the lighting loops (optional).

A rotative switch can be used for local control or to enable automatic operations.

- **Safety of operations :**

Zero current switching is achieved by mean of an interlock connection, that can be installed with the constant current regulator (refer to CCR manufacturer manual). The final status for each circuit is thus either a short circuit or a full load, switching occurring without possible damage to the light bulbs.

The front door is also fitted with a door switch, is order to grant a power shut down while accessing the inside components of the cabinet.

SCS : Technical Characteristics

GENERAL PRESENTATION

SCS selector is a stand alone cabinet, fitted with four brackets for wall mounting purposes.

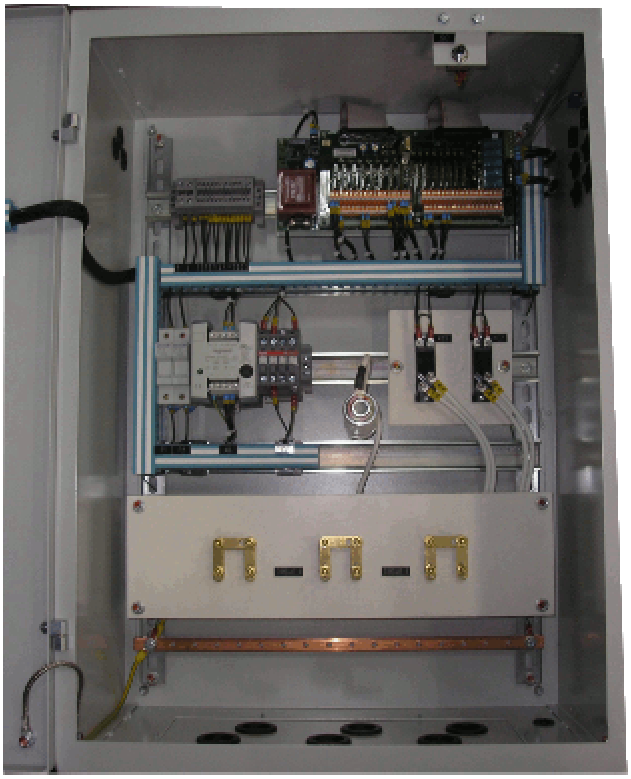
A front door, with a key lock, grants internal access, in order ot ease installation and maintenance operations

Power connection is provided inside the cabinet.

Outside connectors are available for communication link with the remote control system.

CHARACTERISTICS

- Amount of ways : up to 6
- Dielectric strength : Depending on CCR rating, and according to standards IEC (2xUn + 2500 Vca) or FAA (5xUn).
- Supply voltage : 230V / 400V.
- Protection index : IP 21.
- Dimensions : H 700 mm, W 500 mm, D 300 mm
  (2 ways model)
- Use : -20°C to +55°C (IEC) or -40°C to +55°C (FAA)
  Max. humidity: 95%.
- Natural air cooling.
- Access: front door.
- Remote control: Jbus, Ethernet

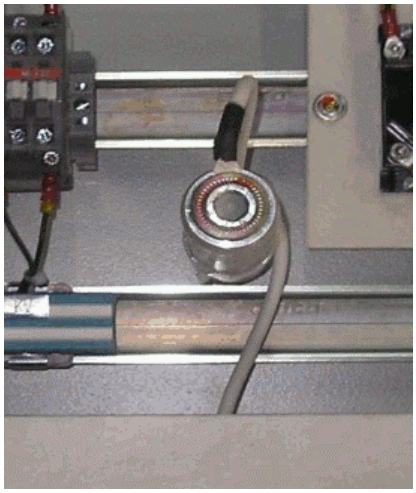


SCS : Technical Characteristics

PROTECTIONS

Upon request, the selector may be fitted with the following options:

- Output lightning arrestors
- Input lightning arrestors
- Circuit breaker.



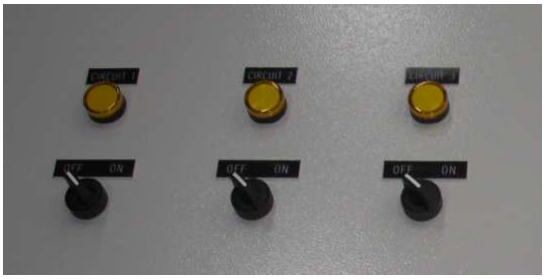
INSTALLATION

Design for wall mounting, the cabinet is fitted with four brackets, in order to ease its installation close to the related CCR.

SCS : User Interface

PRESENTATION :

The user interface is located on the front door, and enable either a local use or a remote control mode, displaying feedback through light signals.



CONTROL

In case of an alternate selector, a rotative switch is provided to select the active way or remote control operation.
In case of a simultaneous selector, one switch per way is provided, as well as a local/remote switch.

FEEDBACK

A light signal is provided for every way status feedback, as well as CCR inrush current presence (optional feature).

PARAMETER SETTING

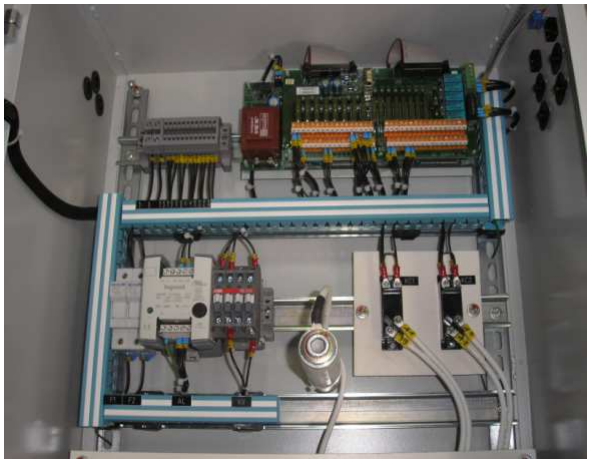
Some options may require some parameter setting (serial links, ...), in such a case an RS232 connection (also accessible by an outside connector) enable communication with a laptop and setting parameters using INTERMODBUS software.

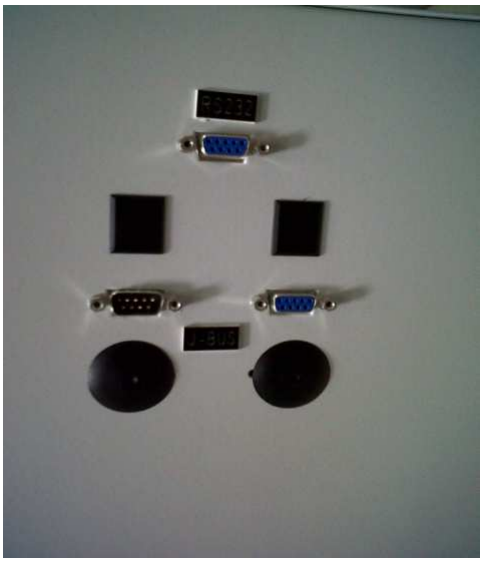
SCS : Connections

INTERNAL CONNECTIONS

Power supply as well as interlock and remote control multiwire connection is performed through a terminal block, located inside the cabinet.

Through holes are provided to protect the cables.





SERIAL LINK REMOTE CONTROL

Connectors are available on the outside side panel, for communication connection to the remote control system.

RJ45 connectors for Ethernet, SubD connectors for RS485/JBus

AIRFIELD LIGHTING LOOP

Airfield circuit connection is performed through screw terminals located at the inside bottom of the cabinet.

Loop connection is identified through labels displayed on the supporting plate.

Stand-alone Circuit Selector

The Stand alone Circuit Selector is identified by a serialised ordering code which indicates its type and particularity. If needed, add all useful precision and options.

Example : SCS-IEC-1-4S-10-50-400-B4-100 = SCS compliant to IEC, 6.6A, 4 simultaneous ways, 50Hz/400V for max. 10kVA CCRs, with lightning arrestors, multiwire remote control and Ethernet connection:

S	C	S	-	I	E	C	-	1	-	4	S	-	1	0	-	5	0	-	4	0	0	-	B	4	-	1	0	0

Series SCS : SCS selector family

Type IEC : According to IEC standard (no circuit isolation, use –20°C +55°C, supply network +-10%, dielectric strength 2xUn + 2500 V)
847 : According to FAA AC 150/5345-5-L-847 (circuit isolation , use –40°C +55°C, supply network +10% -5%, dielectric strength 23 kV)

Class 1 : Loop current 6.6A
2: Loop current 20A

Configuration 2X : 2 circuits
3X : 3 circuits
4X : 4 circuits
5X : 5 circuits
6X : 6 circuits

XA : alternate (1 circuit at a time)
XS : simultaneous

Power rating 10 : for CCR and lighting circuit which power rating is up to 10kVA
30 : for CCR and lighting circuit which power rating is up to 30kVA

Freq. 50 : 50 Hz
60 : 60 Hz

Supply XXX : single phase voltage: 208, 240, 277, 415, 480 (or other)
A22 : Universal supply : 220/230 V and 380/400 V

Control

0X : No multiwire interface
AX : Internal 20 to 60Vdc remote control
BX : External 20 to 60Vdc remote control
GX : Internal 120Vac remote control
HX: External 120Vac remote control

X0: No communication bus
X1: 1 x Jbus RS485
X2: 2x Jbus RS485
X3: 1 x lonworks port
X4: 1 x Ethernet port
X5: 1 x Jbus port and 1 x Ethernet port
X6: 2 x Ethernet ports

Options

0XX : No protection option
1XX : Output lightning arrestors
2XX : Input lightning arrestors
3XX : Circuit breaker

X0X : No monitoring option
X1X : Loop current feedback

XX0 : No cut out
XX1 : FAA cut out (1 per way)