

Instruction Bulletin

ACE937 Fiber Optic Interface Installation Sheet

Retain for future use.

Function

The ACE937 fiber optic interface is used to connect the Sepam™ relay to a fiber optic communication star system. This remote module is connected to the Sepam base unit by means of a CCA612 cable.



Characteristics

The table below lists the ACE937 operating characteristics.

⚠ CAUTION
POTENTIAL EYE INJURY
<ul style="list-style-type: none"> Never look directly into the end of a fiber optic cable
Failure to follow this instruction can cause serious injury.

ACE937 Module				
Weight	0.22 lb (0.1 kg)			
Assembly	On Symmetrical DIN rail			
Power Supply	Supplied by Sepam			
Operating Temperature	-13° to +158° F (-25° to +70° C)			
Environmental Characteristics	Same Characteristics as Sepam Base Units			
Fiber Optic Interface				
Fiber Type	Graded-Index Multimode Silica			
Wavelength	820 nm (Invisible Infrared)			
Type of Connector	ST (BFOC Bayonet Fiber Optic Connector)			
Fiber Optic Diameter (μm)	Numerical Aperture (NA)	Maximum Attenuation (dBm/km)	Minimum optical Power Available (dBm)	Maximum Fiber Length
50/125	0.2	2.7	5.6	2300 ft (700 m)
62.5/125	0.275	3.2	9.4	5900 ft (1800 m)
100/140	0.3	4	14.9	9200 ft (2800 m)
200 (HCS)	0.37	6	19.2	8500 ft (2600 m)

The maximum fiber optic cable length is calculated with:

- Minimum optical power available
- Maximum fiber attenuation
- Losses in 2 ST connectors: 0.6 dBm
- Optical power margin: 3 dBm (according to IEC 60870 standard).

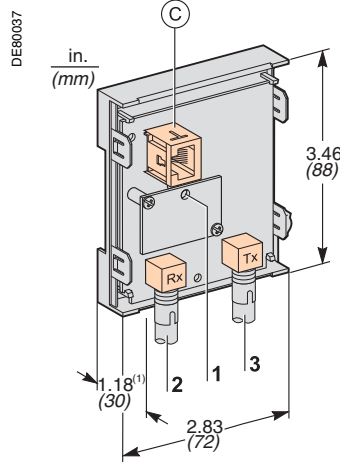
Example for a 62.5/125 μm fiber

$$L_{max} = (9.4 - 3 - 0.6)/3.2 = 1.12 \text{ mi (1.8 km)}$$

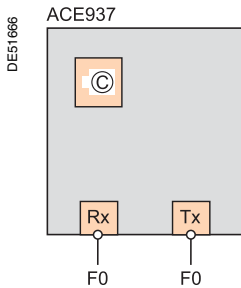
Description and Dimensions

Ⓒ RJ45 socket to connect the interface to the base unit with a CCA612 cable.

1. Link activity LED, flashes when communication is active (sending or receiving in progress)
2. Rx, female ST type connector (Sepam receiving).
3. Tx, female ST type connector (Sepam sending).



Connection



The sending and receiving fiber optic fibers must be equipped with male ST type connectors. Fiber optics are screw-locked to Rx and Tx connectors. The interface is to be connected to connector on the base unit using a 9.8 ft (3 m) CCA612 cable (green fittings).

⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

- Only qualified electrical workers should install this equipment. Such work should be performed only after reading this entire set of instructions
- NEVER work alone
- Isolate the fiber optic interface from dangerous voltages
- Turn off all power supplying the power meter and the equipment in which it is installed before working on it
- Always use a properly rated voltage sensing device to confirm that all power is off

Failure to follow these instructions will result in death or serious injury.

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Electrical equipment should be installed, operated, serviced, and maintained only by qualified personnel. No responsibility is assumed by Schneider Electric for any consequences arising out of the use of this material.

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