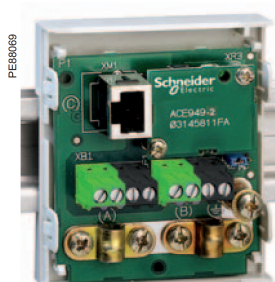
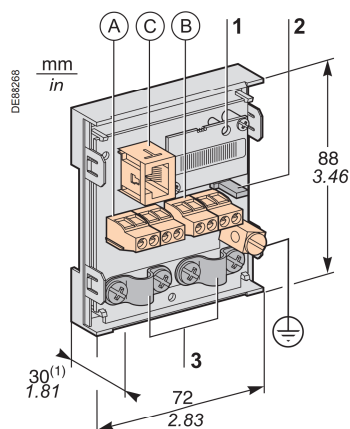


# ACE949-2

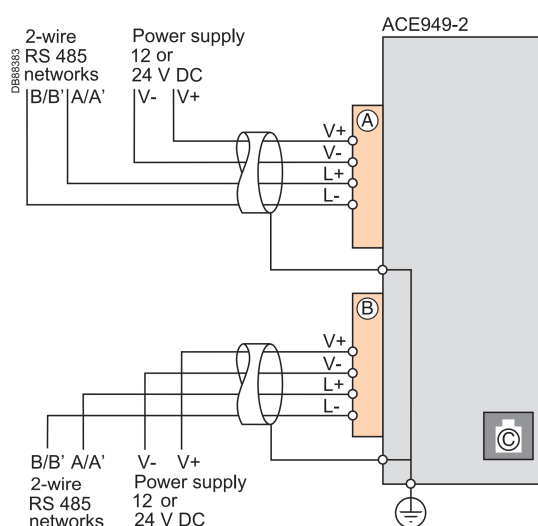
## 2-wire RS 485 network interface



ACE949-2 2-wire RS 485 network connection interface.



(1) 70 mm (2.8 in) with CCA612 cord connected.



### Function

The ACE949-2 interface performs 2 functions:

- Electrical interface between Sepam and a 2-wire RS 485 communication network
- Main network cable branching box for the connection of a Sepam with a CCA612 cord.

### Characteristics

#### ACE949-2 module

Weight	0.1 kg (0.22 lb)
Assembly	On symmetrical DIN rail
Operating temperature	-25°C to +70°C (-13°F to +158°F)
Environmental characteristics	Same characteristics as Sepam base units

#### 2-wire RS 485 electrical interface

Standard	EIA 2-wire RS 485 differential
Distributed power supply	External, 12 V DC or 24 V DC $\pm 10\%$
Power consumption	16 mA in receiving mode 40 mA maximum in sending mode

#### Maximum length of 2-wire RS 485 network with standard cable

Number of Sepam units	Maximum length with 12 V DC power supply	Maximum length with 24 V DC power supply
5	320 m (1000 ft)	1000 m (3300 ft)
10	180 m (590 ft)	750 m (2500 ft)
20	160 m (520 ft)	450 m (1500 ft)
25	125 m (410 ft)	375 m (1200 ft)

### Description and dimensions

- (A) and (B) Terminal blocks for network cable
- (C) RJ45 socket to connect the interface to the base unit with a CCA612 cord
- (⊕) Grounding/earthing terminal

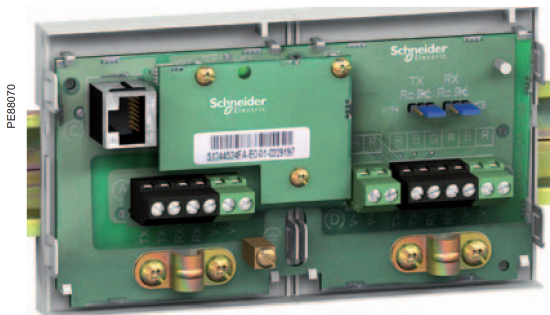
- 1 Link activity LED, flashes when communication is active (sending or receiving in progress).
- 2 Jumper for RS 485 network line-end impedance matching with load resistor ( $R_c = 150 \Omega$ ), to be set to:
  - $R_c$ , if the module is not at one end of the network (default position)
  - $R_c$ , if the module is at one end of the network.
- 3 Network cable clamps (inner diameter of clamp = 6 mm or 0.24 in).

### Connection

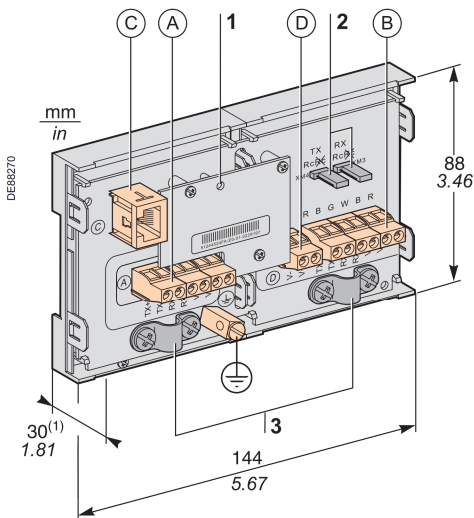
- Connection of network cable to screw-type terminal blocks (A) and (B)
- Connection of the earthing terminal by tinned copper braid with cross-section  $\geq 6 \text{ mm}^2$  (AWG 10) or cable with cross-section  $\geq 2.5 \text{ mm}^2$  (AWG 12) and length  $\leq 200 \text{ mm}$  (7.9 in), fitted with a 4 mm (0.16 in) ring lug. Check the tightness (maximum tightening torque 2.2 Nm or 19.5 lb-in).
- The interfaces are fitted with clamps to hold the network cable and recover shielding at the incoming and outgoing points of the network cable:
  - the network cable must be stripped
  - the cable shielding braid must be around and in contact with the clamp
- The interface is to be connected to connector (C) on the base unit using a CCA612 cord (length = 3 m or 9.8 ft, white fittings)
- The interfaces are to be supplied with 12 V DC or 24 V DC.

# ACE959

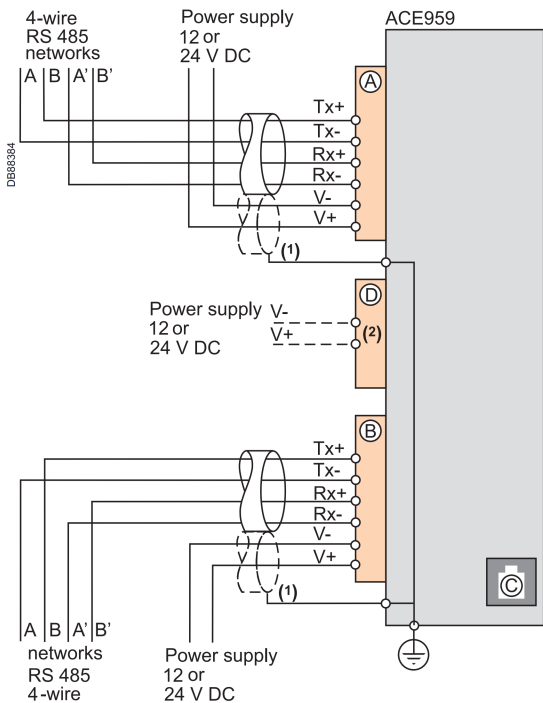
## 4-wire RS 485 network interface



ACE959 4-wire RS 485 network connection interface.



(1) 70 mm (2.8 in) with CCA612 cord connected.



(1) Distributed power supply with separate wiring or included in the shielded cable (3 pairs).  
(2) Terminal block for connection of the distributed power supply module.

### Function

- The ACE959 interface performs 2 functions:
- Electrical interface between Sepam and a 4-wire RS 485 communication network
  - Main network cable branching box for the connection of a Sepam with a CCA612 cord.

### Characteristics

ACE959 module		
Weight	0.2 kg (0.441 lb)	
Assembly	On symmetrical DIN rail	
Operating temperature	-25°C to +70°C (-13°F to +158°F)	
Environmental characteristics	Same characteristics as Sepam base units	
4-wire RS 485 electrical interface		
Standard	EIA 4-wire RS 485 differential	
Distributed power supply	External, 12 V DC or 24 V DC ±10%	
Power consumption	16 mA in receiving mode 40 mA maximum in sending mode	
Maximum length of 4-wire RS 485 network with standard cable		
Number of Sepam units	Maximum length with 12 V DC power supply	Maximum length with 24 V DC power supply
5	320 m (1000 ft)	1000 m (3300 ft)
10	180 m (590 ft)	750 m (2500 ft)
20	160 m (520 ft)	450 m (1500 ft)
25	125 m (410 ft)	375 m (1200 ft)

### Description and dimensions

- (A) and (B) Terminal blocks for network cable
  - (C) RJ45 socket to connect the interface to the base unit with a CCA612 cord
  - (D) Terminal block for a separate auxiliary power supply (12 V DC or 24 V DC)
  - ⊕ Grounding/earthing terminal
- 1 Link activity LED, flashes when communication is active (sending or receiving in progress).
  - 2 Jumper for 4-wire RS 485 network line-end impedance matching with load resistor ( $R_c = 150 \Omega$ ), to be set to:
    - $R_c$ , if the module is not at one end of the network (default position)
    - $R_c$ , if the module is at one end of the network.
  - 3 Network cable clamps (inner diameter of clamp = 6 mm or 0.24 in).

### Connection

- Connection of network cable to screw-type terminal blocks (A) and (B)
- Connection of the earthing terminal by tinned copper braid with cross-section  $\geq 6 \text{ mm}^2$  (AWG 10) or cable with cross-section  $\geq 2.5 \text{ mm}^2$  (AWG 12) and length  $\leq 200 \text{ mm}$  (7.9 in), fitted with a 4 mm (0.16 in) ring lug. Check the tightness (maximum tightening torque 2.2 Nm or 19.5 lb-in).
- The interfaces are fitted with clamps to hold the network cable and recover shielding at the incoming and outgoing points of the network cable:
  - the network cable must be stripped
  - the cable shielding braid must be around and in contact with the clamp
- The interface is to be connected to connector (C) on the base unit using a CCA612 cord (length = 3 m or 9.8 ft, white fittings)
- The interfaces are to be supplied with 12 V DC or 24 V DC
- The ACE959 can be connected to a separate distributed power supply (not included in shielded cable). Terminal block (D) is used to connect the distributed power supply module.