AUTROSAFE CONTROLLER RACK UNIT BC-440 / BC-440G2

AutroSafe Interactive Fire Detection System, Release 4
Product Datasheet

t

Features

- Main board of AutroSafe ready for subrack mounting
- Designed to meet the requirements of:
  - EN54-2
  - IACS UR E10
  - IMO/SOLAS
  - FM /NFPA72
  - IEC61508 SIL2 (116-BC-440G2 only)
- Subrack 3Ux12HP, 200mm deep
- Fault Output Relay
- Redundant Power Input, monitored
- Serial port RS232/RS422/RS485
- AutroFieldBus
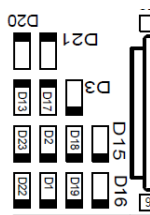- Redundant Ethernet

Description / Application

The Controller Rack Unit BC-440 serves as a connection unit for the detection loop, alarm sounders, controls and inputs. It is a variant of the BC-420 Controller prepared for rack installations. Together with the IO modules the unit will have the full functionality of the BC-420 Controller.

The Controller is equipped with 2 Ethernet ports, one AutroFieldBus port and one serial port. The Controller communicates with other system units using the Ethernet-based local area network, AutroNet and external equipment using AutroCom and Modbus.

The serial port may be set to RS-232/422 or 485 and can communicate with external equipment using AutroCom, Modbus, NMEA and ESPA 4.4.4.
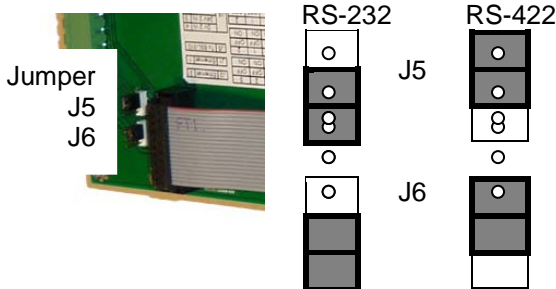
Capacity

- 31 BC-440 per system
- 15000 loop units per system
- 30 I/O modules can be connected to one I/O stack if BSL-310A is used (12 I/O modules if BSL-310 is used)
- 12 loop driver modules can be connected to one panel
- 512 loop units can be connected to one I/O-stack
- 1024 loop units can be connected to one panel (a total of 512 detectors and/or manual call points if EN 54 approval is required)
- 31 AutroFieldBus units can be connected to AutroFieldBus
- 127 loop units can be connected to one detection loop
- 15 loop units can be connected to one Powerloop

Indicators

D20 System reset 5V	D21 System reset 3V3		
D13 AFB TX	D17 AFB RX	D3 System fault LED	
D23 Not used	D2 Not used	D18 Not used	D15 Not used
D22 System heart beat	D1 SD-Card activity indicator	D19 Serial Port activity indicator	D16 Power indicator

Protecting life, environment and property

AUTRONICA

Technical Specifications

Technical Specifications	
Dimensions (mm)	3Ux12HPx200mm
Weight (g)	930
Housing material	Aluminum, printed circuit board
Mounting	3U Subrack
Power supply	18-32V
Current consumption	125mA
Operating Temperature range	-15 to +70 °C
Storage Temperature range	-40 to +70 °C
Humidity	10% - 95% RH (non-condensing)
Degree of protection	Built in subrack
Approvals	MED
Interfaces	Autronica Loop Communication protocol (AL_Com) Serial port (RS-232/485/422) Dual Ethernet AutroFieldBus
Cable terminals	Max 2.5 mm² single core wires
Cable requirements AL_Com	Refer to specification for AutroSafe or Autroprime
Fault relay rating	1A 30VDC
Output relay type	Dry contact, Fail to Safe; show Fault state on loss of power.
Length 10-wire ribbon cable	Maximum 3m (included)

Product Name	Part number	Description
BC-440	116-BC-440	AutroSafe Controller Rack Unit
BC-440G2	116-BC-440G2	AutroSafe Controller Rack Unit, IEC61508 SIL2
Optional:		
UB-383	116-UB-383	19" subrack 160mm Europe
UW-1516/1	116-UW-1516/1	Dummy plate 19" for BC-440 3Ux12HP
-	6175-100-0010	Ferrite clamps

Installation / Connections

- For information on rotary switches and dipswitches, refer to the Installation Handbook, AutroSafe 4 Interactive Fire Detection System.
- Rear end: 2 Ethernet RJ-45 sockets
- 10-wire ribbon cable to BSL-310 Module, 3m long included. 2 Ferrite clamps, one at each end of the 10-wire ribbon cable shall be applied.

Note

The installation shall ensure sufficient cooling by airflow.

Terminal	Function
J18.1	+24v In 1
J18.2	0v In 1
J18.3	+24v In 2
J18.4	0v In 2

Terminal	Function	Description
J1.1	ASFB A1	AutroFieldBus AS (In+)
J1.2	ASFB A2	AutroFieldBus AS (In-)
J1.3	ASFB B1	AutroFieldBus AS (Out+)
J1.4	ASFB B2	AutroFieldBus AS (Out-)
J1.5	Chassis	Connected to frame
J1.6	Serial 1	RS-485: A / RS-232 TX
J1.7	Serial 2	RS-485: B / RS-232 RX
J1.8	MFSPX	RS-422: X
J1.9	MFSPZ	RS-422: Z
J1.10	Chassis	Connected to frame
J1.11	Fault Relay NO	Closed to common when OK, open at Fail
J1.12	Fault Relay COM	Common contact

Dimensions

Jumper Settings RS-232 and RS-422