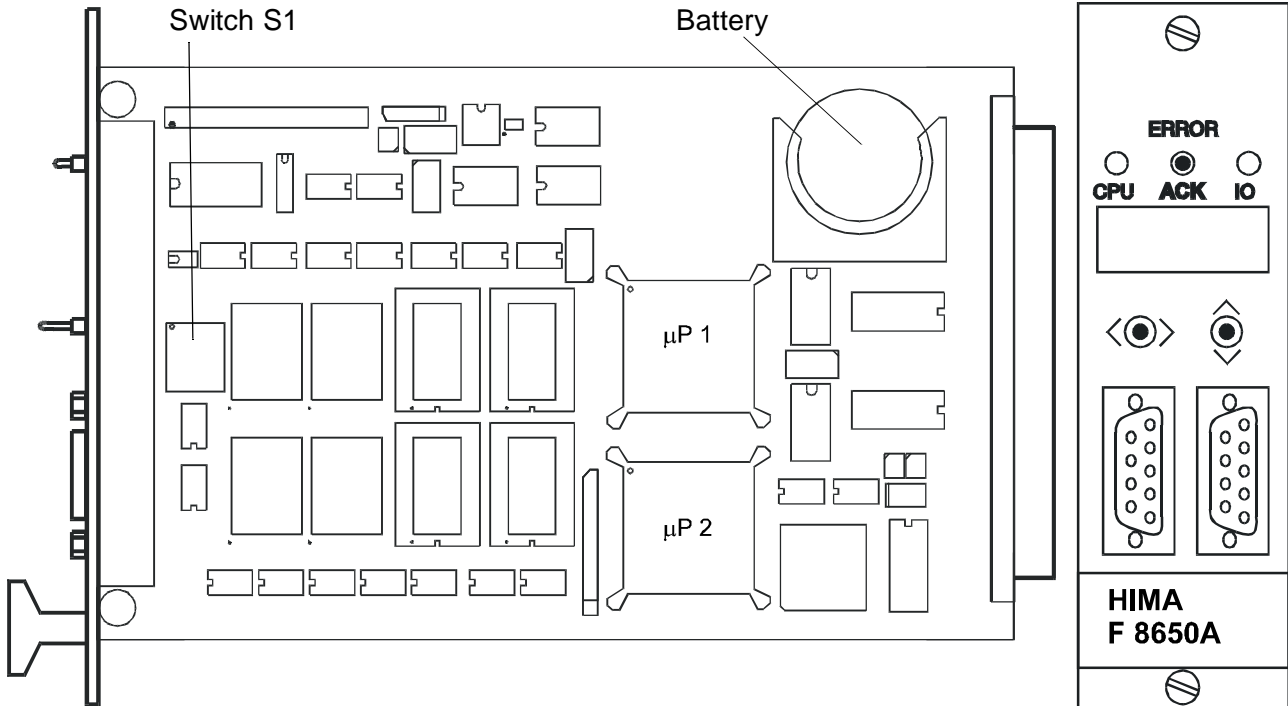




F 8650A

F 8650A: Central module

use in the PES H51q-MS, HS, HRS,
safety-related, requirement classes RC 1...6



Central module with two clock-synchronised operating microprocessors.

| | |
|---------------------------|--|
| Microprocessor (2x) | Type INTEL 386EX, 32 bits clock frequency 25 MHz |
| Memory per microprocessor | Flash-EPROM 1 MByte |
| operating system | Flash-EPROM 512 kByte |
| user program | sRAM 256 kByte |
| data store | 2 serial interfaces RS 485 |
| Interfaces | 4-digit matrix display with requestable information |
| Diagnostic display | safety-related watchdog with output 24 V DC, up to 500 mA, short-circuit-proof |
| Error switch off | 2 PCBs in European standard |
| Construction | 1 PCB for the circuits of the diagnostic display |
| Space requirements | 8 TE |
| Operating data | 5 V DC: 2000 mA |

Note: Before withdrawing a central module its fixing screws must be loosened completely and freely movable. The module must be withdrawn and inserted uninterruptedly to prevent triggering any faulty signals in the system!

Setting of the bus station no. via switches S1-1/2/3/4/5:

| | | | | | | | |
|---------------|--|---------------|--|----------------|--|----------------|--|
| Station no. 0 | 1 2 3 4 5 | Station no. 8 | 1 2 3 4 5 | Station no. 16 | 1 2 3 4 5 | Station no. 24 | 1 2 3 4 5 |
| | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> not permitted | | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 1 | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | 9 | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | 17 | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | 25 | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 2 | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | 10 | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | 18 | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | 26 | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 3 | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | 11 | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | 19 | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | 27 | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 4 | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | 12 | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | 20 | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | 28 | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 5 | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | 13 | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | 21 | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | 29 | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 6 | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | 14 | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | 22 | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | 30 | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 7 | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | 15 | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | 23 | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | 31 | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |

Setting of transm. rate with switch S1-8:

S1-8 ON = 9600 bps

 S1-8 OFF = 57600 bps

Pin allocation of the interface channels RS 485

| Pin | RS 485 | Signal | Meaning |
|-----|--------|-----------|------------------------------------|
| 1 | - | - | not used |
| 2 | - | RP | 5 V, decoupled by diodes |
| 3 | A/A | RxD/TxD-A | Receive/Transmit Data A |
| 4 | - | CNTR-A | Control signal A |
| 5 | C/C | DGND | Data Ground |
| 6 | - | VP | 5 V, positive pole of power supply |
| 7 | - | - | not used |
| 8 | B/B | RxD/TxD-B | Receive/Transmit Data B |
| 9 | - | CNTR-B | Control signal B |

Diagnostic display of the central module

- 4 digit alphanumerical display,
- 2 LEDs for the common display of errors (CPU for the central modules, IO for the testable I/O-modules,
- 2 switch-over pushbuttons marked with < > and \diamond to request detailed information,
- Pushbutton ACK resets the error indication. In failure stop ACK will react like the switch-on of the system.

For further information to the diagnostic display refer to the documentation "Functions of the Operational System BS 41q/51q".

Notes for start-up and maintenance

- Lifetime of the buffer battery (*without* voltage feeding):
 1000 days at $T_A = 25\text{ °C}$
 200 days at $T_A = 60\text{ °C}$
- It is recommended to change the buffer battery (CPU in operation) at the latest after 6 years, or with display BATI within three weeks (Lithium battery, e. g. type CR 2477N, HIMA part no. 44 0000018)
- Check the bus station no. and transmission rate at switch S1 for correct settings
- **Important:** When upgrading to an F 8650A module the fan concept is also to be changed!