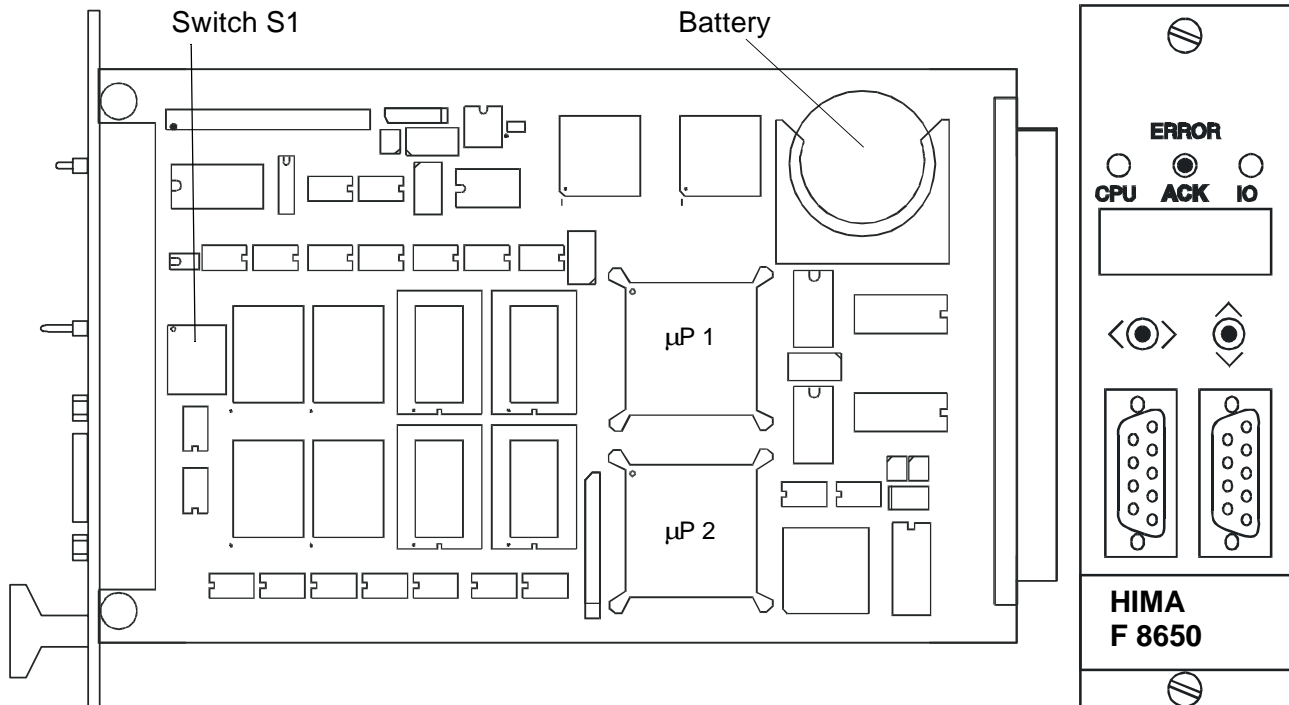




F 8650

F 8650: Central module

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



Central module with two clock-synchronised operating micro processors.

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

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

Station no. 1 2 3 4 5	Station no. 1 2 3 4 5	Station no. 1 2 3 4 5	Station no. 1 2 3 4 5
0 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> not permitted	8 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	16 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	24 <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 IO-modules)
- 2 switch-over pushbuttons marked with <> and ↕ to request detailed information
- Push-button 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".

Hints for start-up and maintenance:

- Lifetime of the buffer battery without voltage feeding:
 2500 days at $T_A = 25\text{ °C}$
 100 days at $T_A = 60\text{ °C}$
- It is recommended to change the buffer battery after 4 years (lithium battery, e. g. type CR 2477N, HIMA part no. 44 0000018)
- Check the bus station no. and transm. rate at switch S1 for correct settings