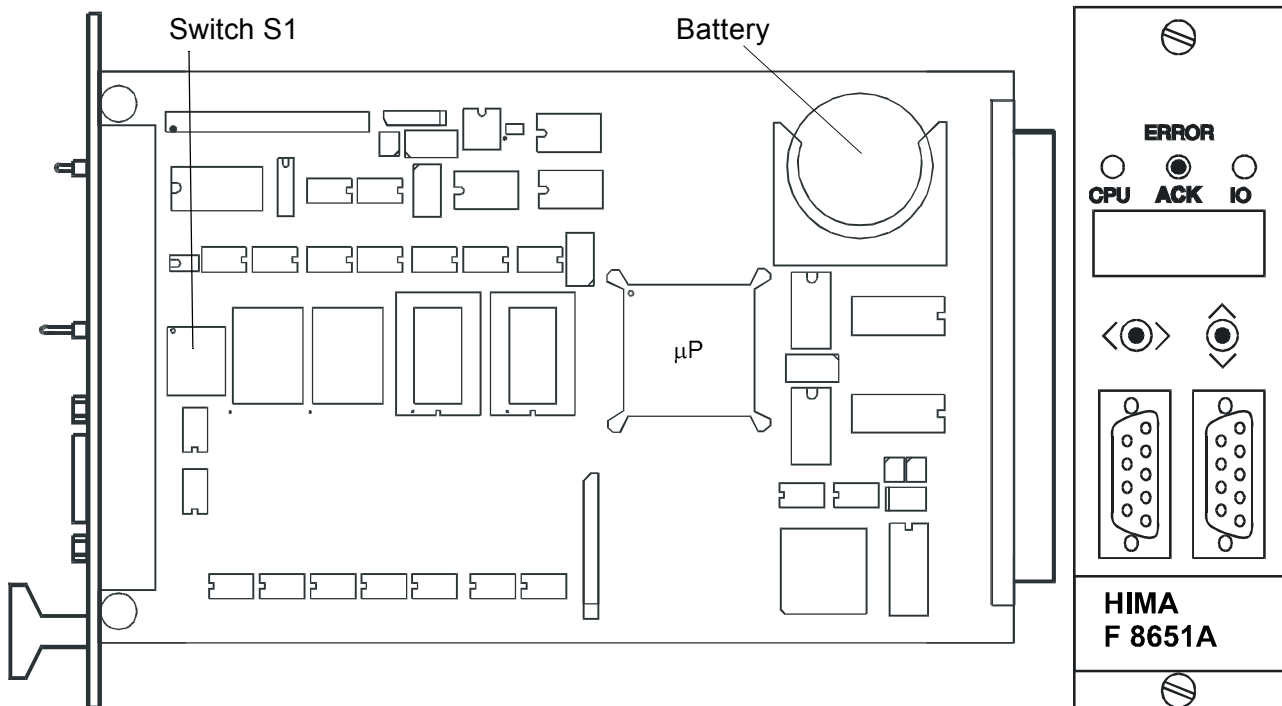




## F 8651A

**F 8651A: Central module**  
use in the PES H51q-M, H, HR



Microprocessor	Type INTEL 386EX, 32 bits clock frequency 25 MHz
Memory per microprocessor	
operating system	Flash-EPROM 1 MByte
user 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	safety-related watchdog with output 24 V DC, 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 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 The module must be withdrawn and inserted uninterruptedly to prevent triggering any faulty signals in the system!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.	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"/>	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"/>	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"/>	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"/>	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"/>	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"/>	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"/>	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"/>	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:


1 2 3 4 5 6 7 8  
☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ S1-8 ON = 9600 bps

1 2 3 4 5 6 7 8  
☐ ☐ ☐ ☐ ☐ ☐ ☐ ☒ 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  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 an F 8651 to an F 8651A module the fan concept is also to be changed!