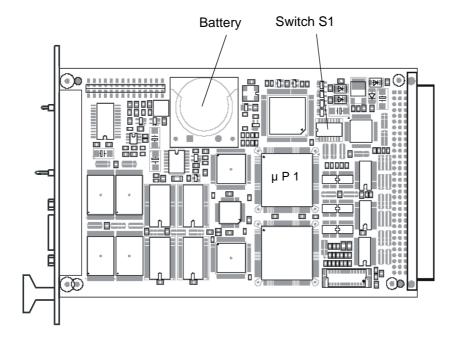


F 8653X

(€

F 8653X: Central module

Use in the PES H41q-M, -H, -HR,



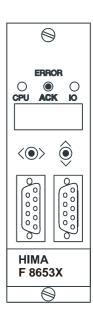


Figure 1: View

Microprocessor INTEL 386EX, 32 bits Clock frequency 25 MHz

Memory per microprocessor
Operating System Flash-EPROM 1 MB
User program Flash-EPROM 1 MB *
Data SRAM 1 MB *

* Degree of utilization depending on operating system version Interfaces

Two serial interfaces RS 485 with electric isolation

Diagnostic display

Four digit matrix display with selectable information
Shutdown on fault

Safety-related watchdog with output 24 V,

loadable up to 500 mA, short-circuit proof
Construction

Two European standard PCBs,

onstruction Two European standard PCBs, one PCB for the diagnostic display

Space requirement 8 SU
Operating data 5 V / 2 A

Setting of the bus station no. via switches S1-1/2/3/4/5/6/7:

Position switch no. 6 7							
On Off Switch no.	Switch no.	Switch no.	Switch no.				
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				
Off	Off	16 Off	24 On				
1 Of	9 Off 🗌 🗎 🗎 🗎	17 On	25 On				
2 On	10 On	18 On	26 On				
3 On	11 On	19 On	27 On				
4 On	12 On	20 On	28 On				
5 Off	13 Off	21 On	29 On				
6 Off	14 Off	22 On	30 On				
7 Off I I I	15 On	23 On	31 On				
Position switch no. 6 7							
Switch no. Station no. 1 2 3 4 5	Switch no. Station no. 1 2 3 4 5	Switch no. Station no. 1 2 3 4 5	Switch no. Station no. 1 2 3 4 5				
32 On	40 Off	48 On	56 Off				
33 On	41 On	49 On	57 On				
34 On	42 On	50 On	58 On				
35 On	43 On	51 On	59 On				
36 On	44 On	52 On	60 On				
37 On	45 Of	53 On	61 On				
38 On	46 On	54 On	62 On				
39 On	47 On	55 On	63 On				
Position switch no. 6 7							
off ■ □ Switch no.	Switch no.	Switch no.	Switch no.				
Station no. 1 2 3 4 5 64 Off	Station no. 1 2 3 4 5 72 On	Station no. 1 2 3 4 5 80 Off	Station no. 1 2 3 4 5 88 Off 1 1 1 1				
		o. On ■ □ □ □ ■					
	*"	81 Off					
66 On	74 On		90 On				
67 Off	75 Of	83 Off	91 On				
68 Off	76 On	84 Off	92 On				
69 On	77 On	85 Off	93 On				
70 On	78 On	86 Of	94 On				
71 On	79 On	87 Off B	95 On				
Position switch no. 6 7	Legend:		_				
Switch no. Station no. 1 2 3 4 5	Positions white sw	vitch:					
96 On	on Bit is set	on ☐ Bit is not set					
97 On	White switch in	Off ■ Bit is not set White switch in					
98 On	position OFF	position ON					
99 On							

Setting of the transmission rate with switch S1-8:

	12345678			12345678	
Off		S1-8 ON = 9600 bps	Off		S1-8 OFF = 57600 bps
On	Off ∐ ∐ ∐ ∐ ∐ ∐ ■	2 1-0 ON - 9000 bps	On	Off LI LI LI LI LI LI LI	31-0 UFF - 3/00

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

Table 1: Pin assignment of the interface RS 485, 9-pole

For the serial interface only the bus station no. 1-31 can be set.

Within an Ethernet network the bus station no. can be set from 1 to 99. Therefore the switches S1-6/7 must be set in addition to the switches S1-1/2/3/4/5.

The number of the communication partners within a network is still limited to 64.

This enhanced setting of the bus station no. is only possible from operating system BS41q/51q V7.0-8 (05.31) of the central module.

Applications with the communication module F 8627X:

- connection of the central module to a PADT (ELOP II TCP)
- connection to other communication partners within an Ethernet network (safeethernet, Modbus TCP)

The communication runs from the central module via the backplane bus to the communication module F 8627X and from the Ethernet ports of the F 8627X into the Ethernet network and vice versa.

Special features of the central module:

- Self-education: from operating system BS41g/51g V7.0-8 (05.31)
- ELOP II TCP: from operating system BS41q/51q V7.0-8 (05.31)

Further informations about the bus station no., ELOP II TCP, loading of operating systems and application programs (self-education) et al. corresponding to the central module you will find in the data sheet of the F8627X as well as the operating system manual of H41q/H51q and the safety manual of H41q/H51q.



Before removing a central module its fixing screws must be completely loosened and freely movable. Remove the module from the bus board by pushing the ejection lever (front label) top down and quickly removing in an upward motion to ensure that faulty signals are not triggered within the system!

To attach the module, place it on the terminal block and press it inwards as far as it will go. This action should be performed quickly to ensure that faulty signals are not triggered within the system!

Function of the ejection lever with front label

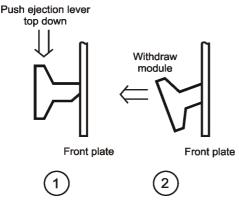


Figure 2: Function of the ejection lever

Diagnostic display of the central module

- Four digit alphanumerical display,
- two LEDs for the general display of errors (CPU for the central modules, IO for the testable input/output modules),
- two toggle switches to request detailed error information,
- push-button ACK resets the error indication;
 in failure stop ACK behaves like restarting the system.

For further information on the diagnostic display and lists of error codes, refer to the documentation "Functions of the operational system BS 41q/51q" (also on ELOP II CD).

Notes for start-up and maintenance

- Lifetime of the buffer battery (without voltage feeding):
 1000 days at T_A = 25 °C
 200 days at T_A = 60 °C
- It is recommended to change the buffer battery (CPU in operation) at the latest after 6 years, or with display BATI within three months
 (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
- The F 8653X can be used to replace the previous moduls: F 8653, F 8653A and F 8653E!