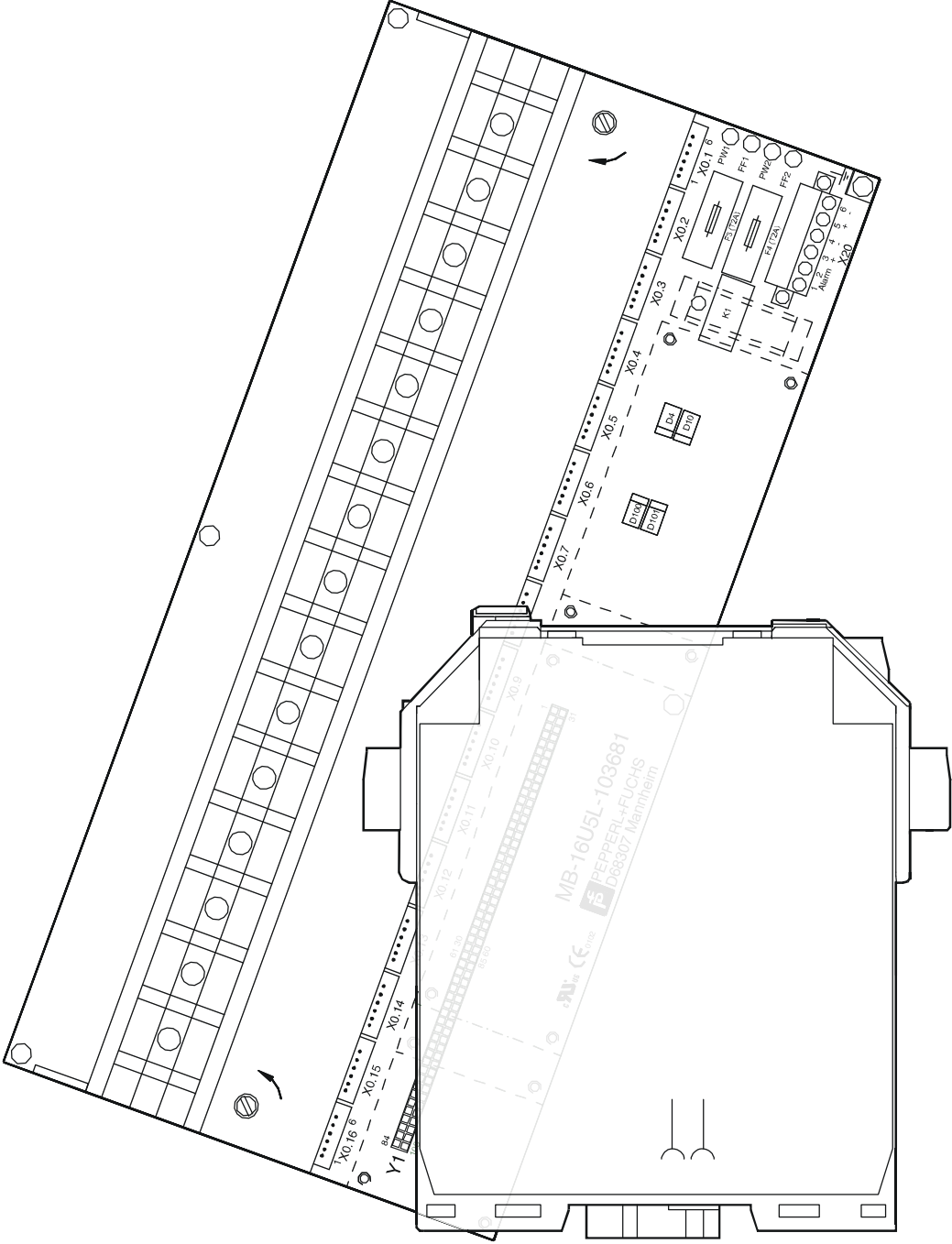


PROCESS AUTOMATION

HAZ-RTP adapted to

Honeywell 1756 Rack IO Modules



Hazardous Area Remote Termination Panels With Galvanic Isolators

Honeywell 1756 Rack IO Modules • I/O card number • Signal type	P+F Motherboard • Order name • Part No. • Drawing No.	Description • Module • Motherboard • Dimensions
TC/TK-IAH061 (6 AI)	<ul style="list-style-type: none"> • HAZ-RTP-IAH061-118251 • Part No. 118251 • Drawing No. 36-7459_ 	<u>Module:</u> • type KFD2-STC4-Ex1, single channel, (AI) <u>Motherboard:</u> • 6 modules (6 channels) • 1 D-SUB 25 pin, female system connector • 2 HART 26 pin, male connector <u>Dimensions (wxhxd):</u> • 165x150x150 mm
TC/TK-IAH161 (16 AI)	<ul style="list-style-type: none"> • HAZ-RTP-IAH161S-107755 • Part No. 107755 • Drawing No. 36-7282_ 	<u>Module:</u> • type KFD2-STC4-Ex1, single channel, (AI) <u>Motherboard:</u> • 16 modules (16 channels) • 1 D-SUB 37 pin, female system connector • 2 HART 26 pin, male connector <u>Dimensions (wxhxd):</u> • 325x150x150 mm
	<ul style="list-style-type: none"> • HAZ-RTP-IAH161-123894 • Part No. 123894 • Drawing No. 36-7527_ 	<u>Module:</u> • type KFD2-UT-Ex1, single channel, (AI) <u>Motherboard:</u> • 16 modules (16 channels) • 1 D-SUB 37 pin, female system connector <u>Dimensions (wxhxd):</u> • 325x150x150 mm
	<ul style="list-style-type: none"> • HAZ-RTP-IAH161H-105268 • Part No. 105268 • Drawing No. 36-7220_ 	<u>Module:</u> • type KFD2-STC4-Ex2, dual channel, (AI) <u>Motherboard:</u> • 16 modules (32 channels) • 1 D-SUB 37 pin, female system connector <u>Dimensions (wxhxd):</u> • 325x150x150 mm
TC/TK-OAV081 (8 AO)	<ul style="list-style-type: none"> • HAZ-RTP-OAV081H-105269 • Part No. 105269 • Drawing No. 36-7223_ 	<u>Module:</u> • type KFD2-SCD-Ex1.LK, single channel, (AO) <u>Motherboard:</u> • 8 modules (8 channels) • 1 D-SUB 25 pin, female system connector • 2 HART 26 pin, male connector <u>Dimensions (wxhxd):</u> • 165x150x150 mm
	<ul style="list-style-type: none"> • HAZ-RTP-OAV081-105289 • Part No. 105289 • Drawing No. 36-7250_ 	<u>Module:</u> • type KFD2-CD-Ex1.32, single channel, (AO) <u>Motherboard:</u> • 8 modules (8 channels) • 1 D-SUB 25 pin, female system connector <u>Dimensions (wxhxd):</u> • 165x150x150 mm
TC/TK-IDX161 (16 DI)	<ul style="list-style-type: none"> • HAZ-RTP-IDX161-105281 • Part No. 105281 • Drawing No. 36-7224_ 	<u>Module:</u> • type KFD2-SR2-Ex2.2S, dual channel, (DI) <u>Motherboard:</u> • 8 modules (16 channels) • 1 D-SUB 37 pin, female system connector <u>Dimensions (wxhxd):</u> • 165x150x150 mm
TC/TK-IDD321 (32 DI)	<ul style="list-style-type: none"> • HAZ-RTP-IDD321-105270 • Part No. 105270 • Drawing No. 36-7226_ 	<u>Module:</u> • type KFD2-SRA-Ex4, four channel, (DI) <u>Motherboard:</u> • 4 modules (32 channels) • 1 D-SUB 37 pin, female system connector <u>Dimensions (wxhxd):</u> • 165x150x150 mm
TC/TK-ODX121 (16 DO)	<ul style="list-style-type: none"> • HAZ-RTP-ODX121-118258 • Part No. 118258 • Drawing No. 36-7461_ 	<u>Module:</u> • type KFD2-SL2-Ex2.B, dual channel, (DO) <u>Motherboard:</u> • 8 modules (16 channels) • 1 D-SUB 37 pin, female system connector <u>Dimensions (wxhxd):</u> • 165x150x150 mm
TC/TK-ODD321 (32 DO)	<ul style="list-style-type: none"> • HAZ-RTP-ODD321-105271 • Part No. 105271 • Drawing No. 36-7227_ 	<u>Module:</u> • type KFD2-SL2-Ex2.B, dual channel, (DO) <u>Motherboard:</u> • 8 modules (16 channels) • 1 D-SUB 37 pin, female system connector <u>Dimensions (wxhxd):</u> • 165x150x150 mm
TC/TK-HAI081 (8 AI)	<ul style="list-style-type: none"> • HAZ-RTP-HAI081-127742 • Part No. 127742 • Drawing No. 36-7590_ 	<u>Module:</u> • type KFD2-STC4-Ex1, single channel, (AI) <u>Motherboard:</u> • 8 modules (8 channels) • 1 D-SUB 25 pin, female system connector • 2 HART 26 pin, male connector <u>Dimensions (wxhxd):</u> • 165x150x150 mm

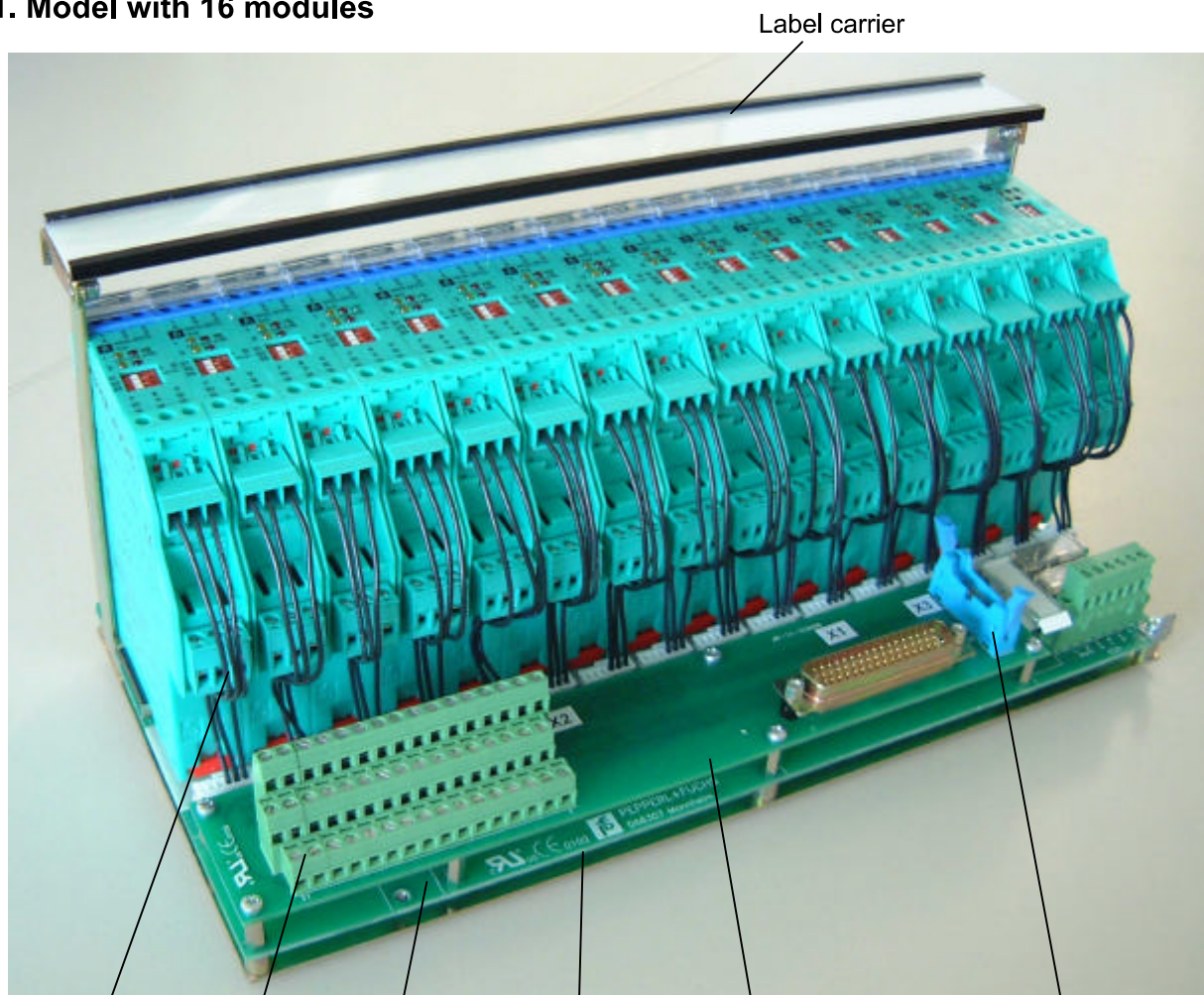
Hazardous Area Remote Termination Panels With Galvanic Isolators

Honeywell 1756 Rack IO Modules <ul style="list-style-type: none"> • I/O card number • Signal type 	P+F Motherboard <ul style="list-style-type: none"> • Order name • Part No. • Drawing No. 	Description <ul style="list-style-type: none"> • Module • Motherboard • Dimensions 						
TC/TK-HAO081 (8 AO)	<ul style="list-style-type: none"> • HAZ-RTP-HAO081-132002 • Part No. 132002 • Drawing No. 36-7632_ 	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;"><u>Module:</u></td> <td style="border: none;"> <ul style="list-style-type: none"> • type KFD2-SCD2-Ex1.LK, single channel, (AO) </td> </tr> <tr> <td style="border: none;"><u>Motherboard:</u></td> <td style="border: none;"> <ul style="list-style-type: none"> • 8 modules (8 channels) • 1 D-SUB 25 pin, female system connector • 2 HART 26 pin, male connector </td> </tr> <tr> <td style="border: none;">Dimensions (wxhxd):</td> <td style="border: none;"> <ul style="list-style-type: none"> • 165x150x150 mm </td> </tr> </table>	<u>Module:</u>	<ul style="list-style-type: none"> • type KFD2-SCD2-Ex1.LK, single channel, (AO) 	<u>Motherboard:</u>	<ul style="list-style-type: none"> • 8 modules (8 channels) • 1 D-SUB 25 pin, female system connector • 2 HART 26 pin, male connector 	Dimensions (wxhxd):	<ul style="list-style-type: none"> • 165x150x150 mm
<u>Module:</u>	<ul style="list-style-type: none"> • type KFD2-SCD2-Ex1.LK, single channel, (AO) 							
<u>Motherboard:</u>	<ul style="list-style-type: none"> • 8 modules (8 channels) • 1 D-SUB 25 pin, female system connector • 2 HART 26 pin, male connector 							
Dimensions (wxhxd):	<ul style="list-style-type: none"> • 165x150x150 mm 							

The **HAZardous Area Remote Termination Panel** (HAZ-RTP...) is designed for 16 or 8 KF-modules. Power feed and system connector to Honeywell 1756 Rack IO Modules are integrated in the motherboard, which results in noticeable space savings the interface cabinet. The power source has a redundant design, increasing the reliability of the system. The operating status of the power supply is monitored and reported via LEDs and relay output. (Dry contact)

The KF modules are interfaced to the motherboard himself by using 2- to 6- pin coded cable connectors (FSY...). The motherboard configuration is mounted on a stable metal plate. There are two retainers on the back for mounting the board quickly and easily to a standard DIN rail in accordance with EN 50022.

1. Model with 16 modules



Cable connector (FSY...) between the modules and the PCB

Main board

Adapter board with customer specified system plug to Honeywell 1756 Rack IO Modules

Terminal strip (removable) for redundant power supply and power monitoring (Option: LB/SC monitoring)

Metal base plate with integrated brackets for mounting on DIN rail

Connector for HART-Multiplexer (Option)

Urheberrecht nach DIN 34 Weitergabe sowie Vervielfältigung ist nicht gestattet

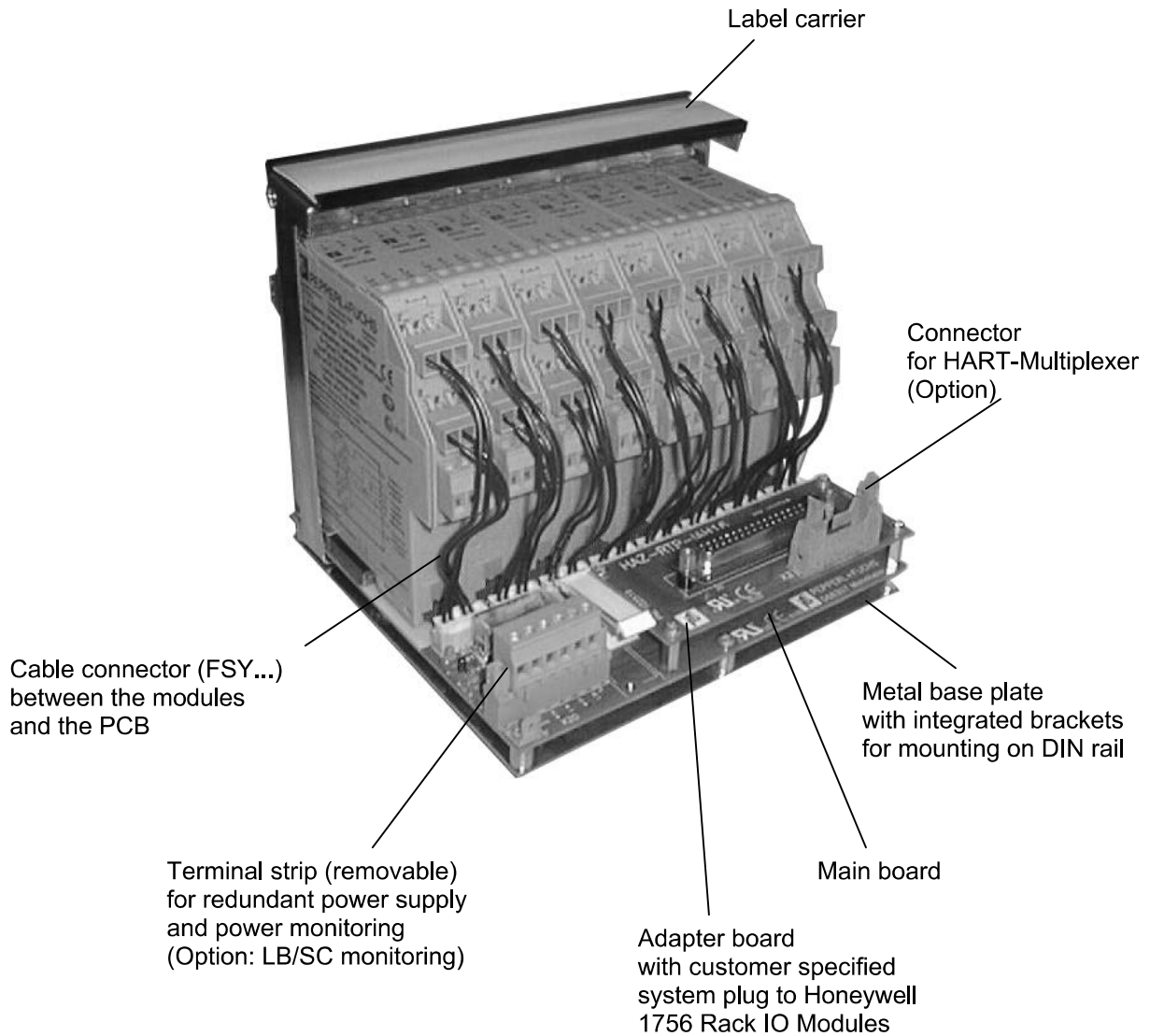



PEPPERL+FUCHS
Mannheim-Schönau

**HAZ-RTP...(Motherboard)
General Description**

22.08.02					
Datum	S	TD	Off. In ch.	contr. techn.	contr. Norm
Dept.: PA-VP			No. Word		
Up date: 26.03.04			Replaces: B: Sb/Bro Xxxx / 36-xxxx		Sheet 1
			Scale:		from 1

2. Model with 8 Modules

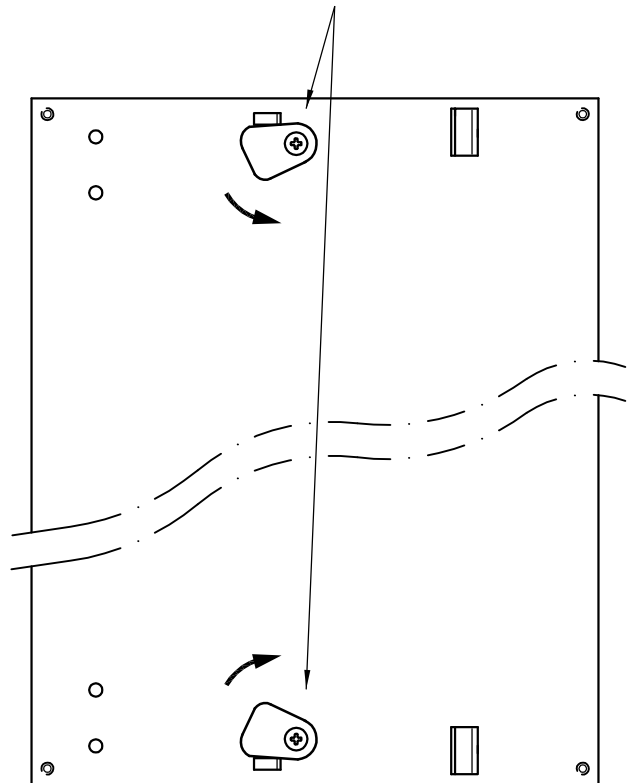
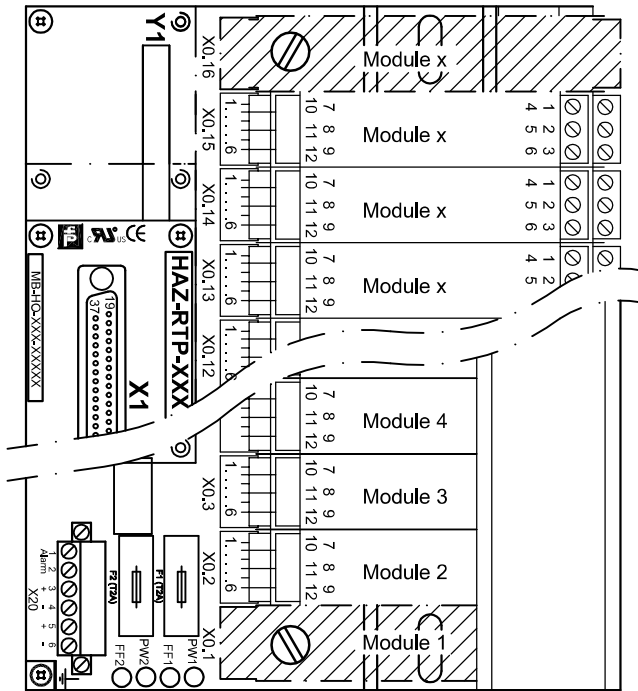


	PEPPERL+FUCHS Mannheim-Schönau	HAZ-RTP...(Motherboard) General Description	24.10.00					
			Datum	S	TD	Off. In ch.	contr. techn.	contr. Norm
			Dept.: PA-VP		No. Word			
			Up date: 26.03.04		B: S5/Bro	Replaces : Xxxx / 36-xxx		Sheet 1
		Scale:		from 1				

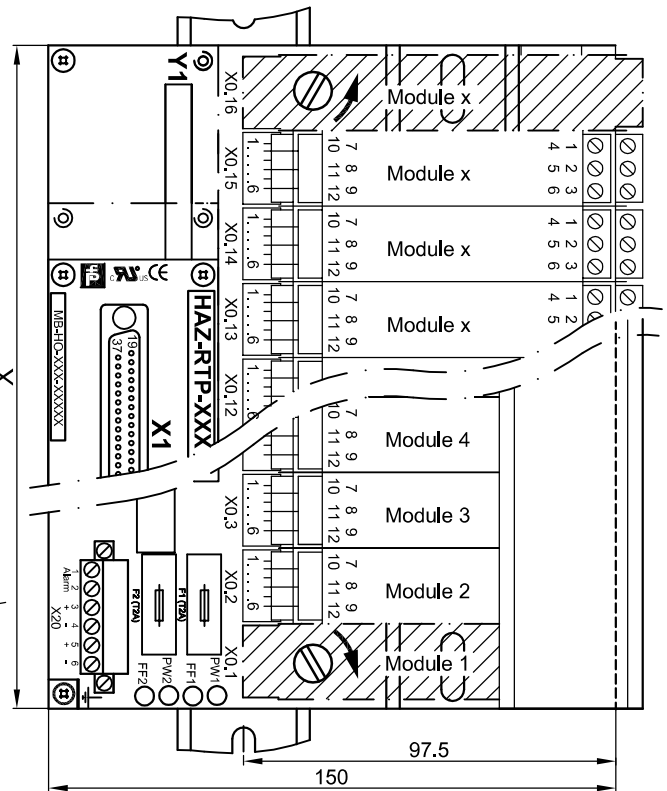
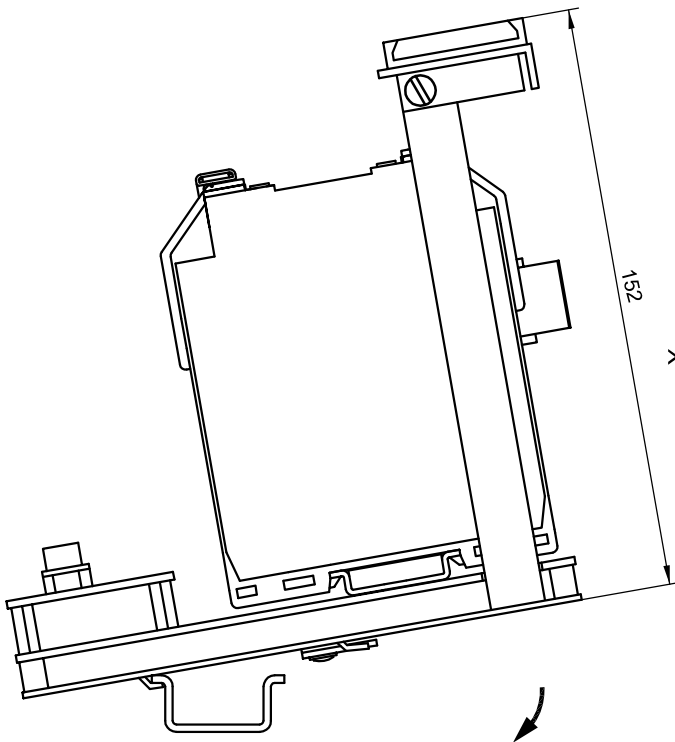
Installations instructions

1. Take away first and last module.
Operate the screw to fix the board on to the DIN rail.

2. Turn the part as shown the stopper!



3. Set the board on the DIN rail. Turn the screw as shown till the board is fixed.
(Arrows are showing direction how to turn for fixing the board)



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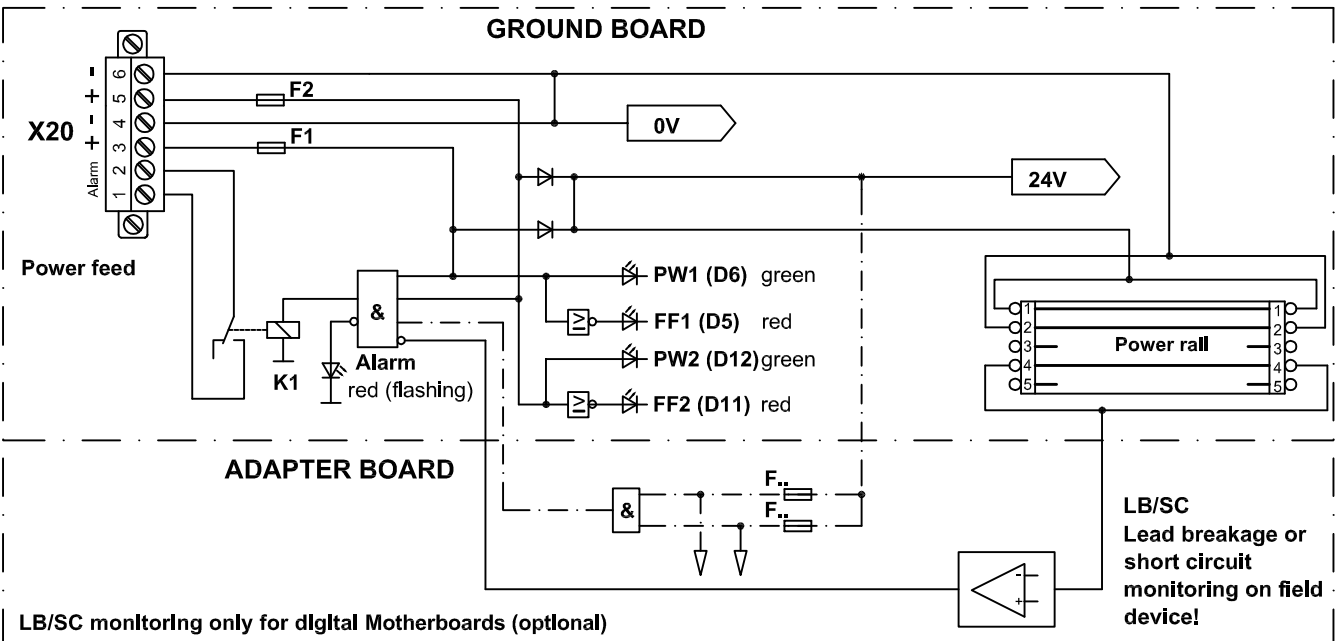


PEPPERL+FUCHS
Mannheim-Schönau

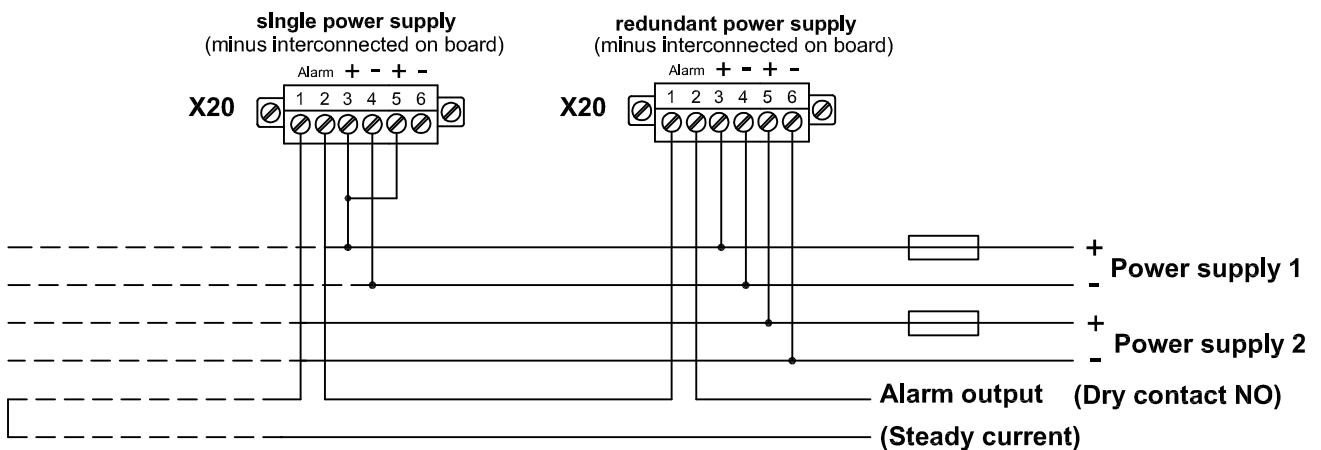
Mounting instructions
for HAZ-RTP...

14.02.00	DN	vB	Sb/vB		
Date	S	TD	Off. in ch.	contr. techn.	contr. Norm
Dept.: PA-VP	Sch/Br		No. 36-9159A1		
Up date: 02.02.04	Replaces:		xxxxxx / 36-xxxx	Sheet 1	
Scale:			-	of 1	

Block diagram power supply and error message



Connection power supply and error message



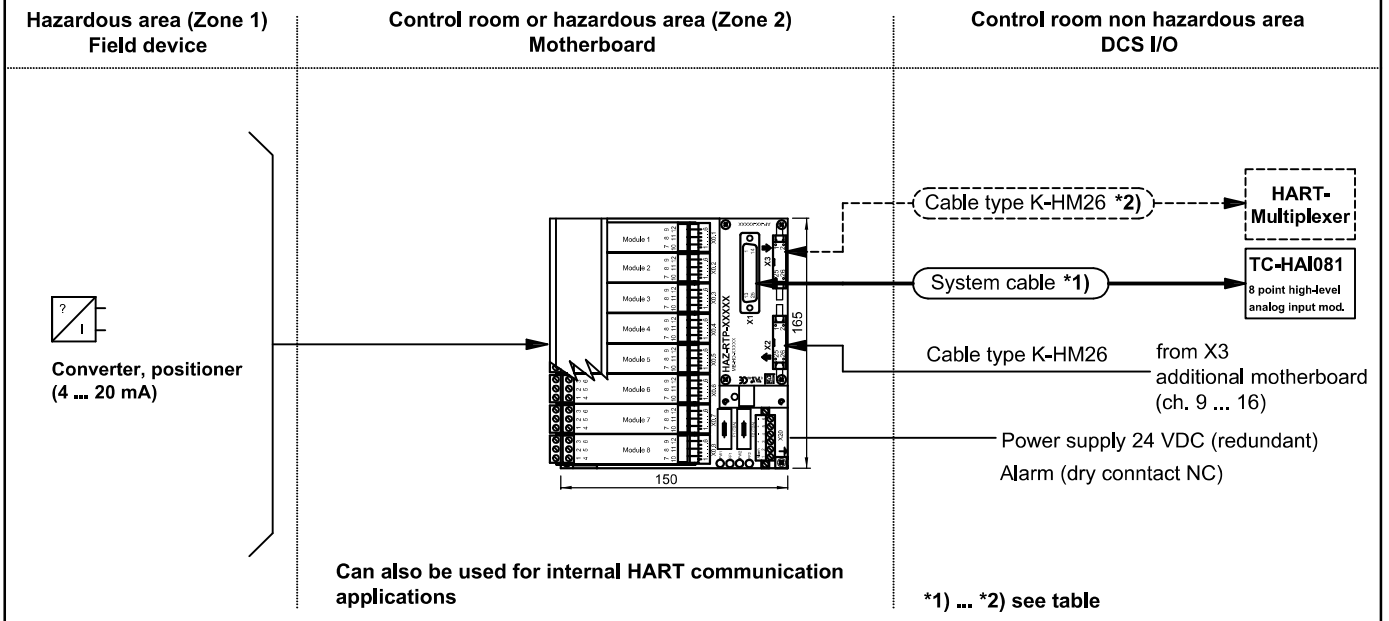
Error message and Alarm

Power supply 1	Power supply 2	LED red	LED green	X20.1, 2 Alarm contact
PS ON and Fuse 1 OK	PS ON and Fuse 2 OK	D5 OFF D11 OFF	D6 ON D12 ON	contact closed
PS ON and Fuse 1 OK	PS OFF	D5 OFF D11 ON	D6 ON D12 OFF	contact open
PS OFF	PS ON and Fuse 2 OK	D5 ON D11 OFF	D6 OFF D12 ON	contact open
PS ON and Fuse 1 OK	PS ON and Fuse 2 broken	D5 OFF D11 ON	D6 ON D12 OFF	contact open
PS ON and Fuse 1 broken	PS ON and Fuse 2 OK	D5 ON D11 OFF	D6 OFF D12 ON	contact open
PS ON and Fuse 1 broken	PS ON and Fuse 2 broken	D5 OFF D11 OFF	D6 OFF D12 OFF	contact open
PS OFF	PS OFF	D5 OFF D11 OFF	D6 OFF D12 OFF	contact open
In case of LB/SC				contact open

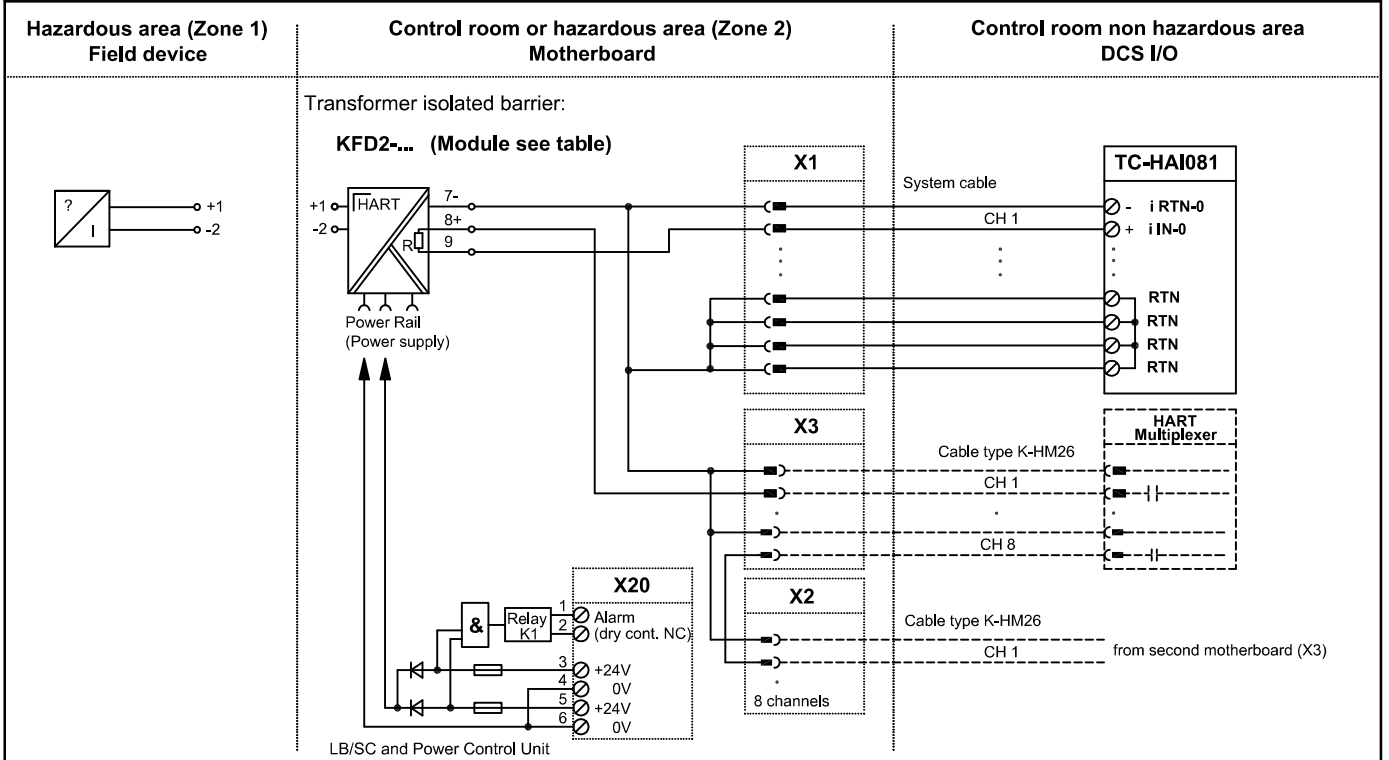
04.04.01	vB	Sb	vB/Sb
Date	S	TZ	Off. in ch.
Dept.: PA-PG-IF	Nr. 36-7143F1		
Up date: 21.04.2010	Replaces: xxxxxxxx/ 36-xxxx	Sheet 1	
xxxxx	Scale: X : X	of 1	

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1756 Rack IO Modules



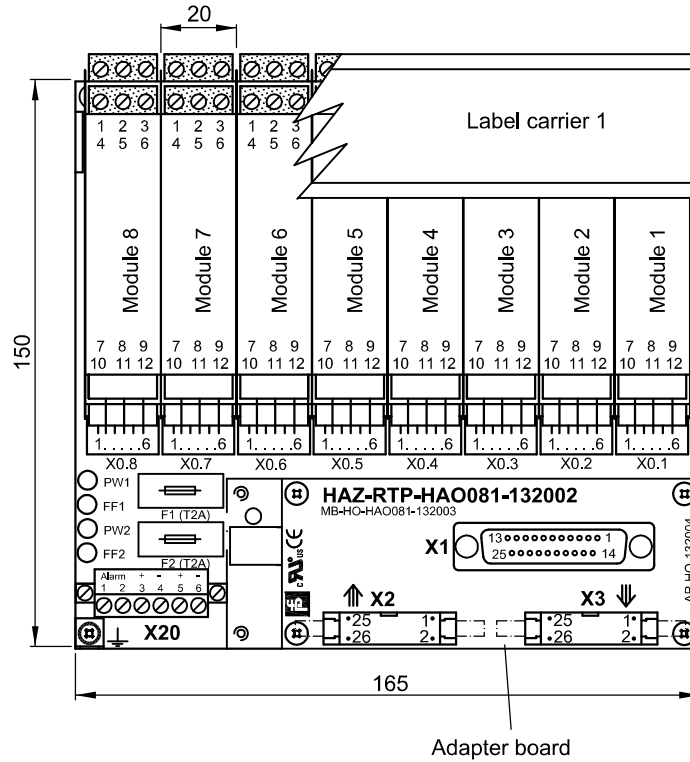
LOOP-DIAGRAM (1-channel modules)



Motherboard	Signal	Module	System cable *1)	HART communication *2)	Option
HAZ-RTP-HAO081-132002	AO, current	KFD2-SCD2-Ex1.LK	HAZ-25xMx	yes	

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	APPLICATION FOR				
	Honeywell				
	1756 Rack IO Modules				
	29.03.04	Bro	Sb.	Sb.	Sb.
Date	S	TD	Off. in ch.	contr. techn.	contr. Norm
Dept.: PA - VP			No. 36-6032		
Up date: xx.xx.xx			Replaces: xxxxxx / 36-xxxx		Sheet 1
Scale: 1 : 5				of 1	

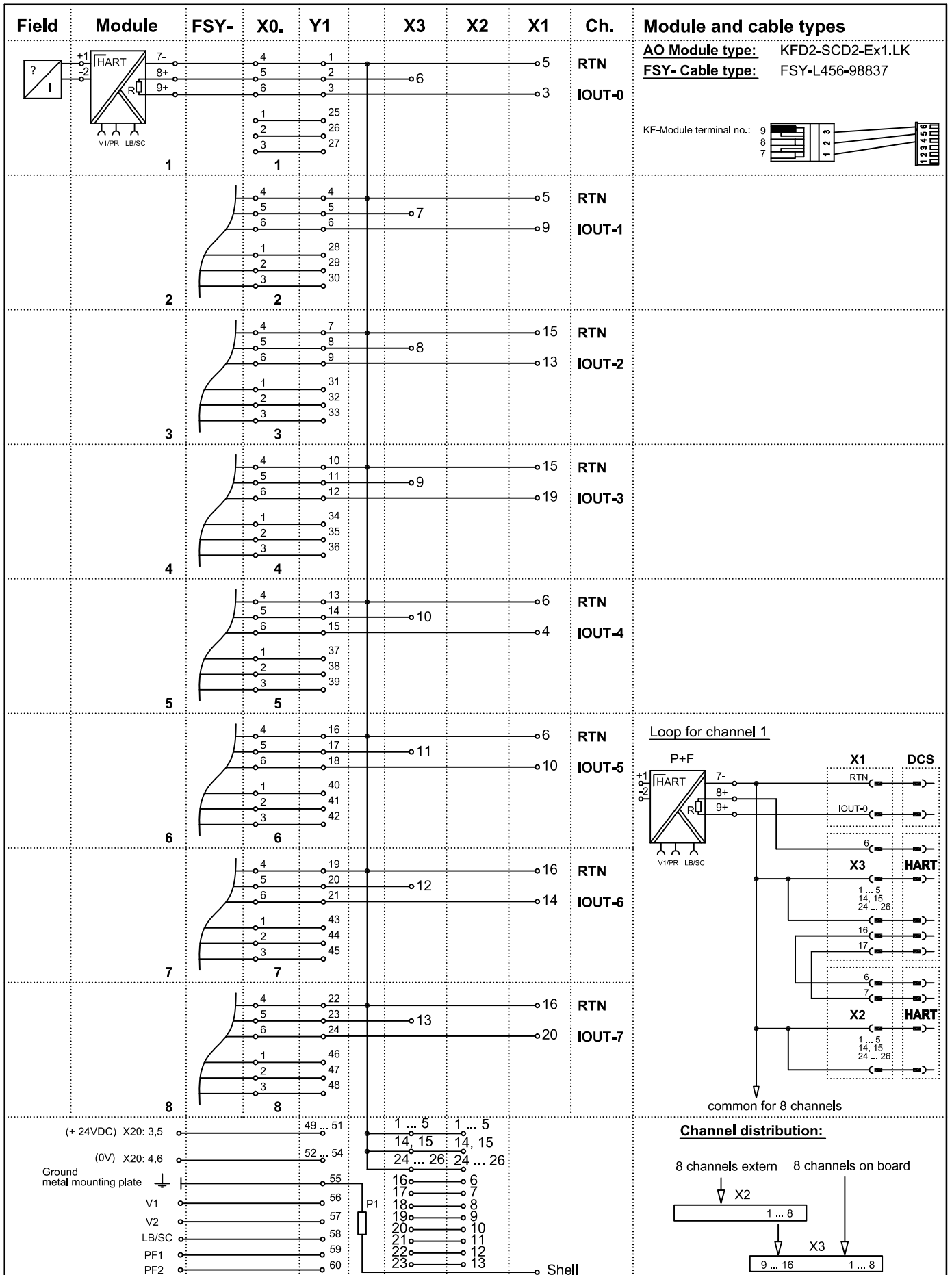


Name	Note
X1	25 pin female system connector DSUB
X2, X3	26 pin HART connector male
X0.1 8	6 pin male terminals for cable tree FSY....
X20.3 6	Power supply screw terminals
X20.1, X20.2	Alarm screw terminal
F1, F2	Fuse
PW1, PW2, FF1, FF2	LEDs for power and power failure
Power consumption	24VDC/0,84A/20W

Ordering information: HAZ-RTP-HAO081-132002	
Basic components:	Description
8 pieces: KFD2-SCD2-Ex1.LK (AO)	KF-Module type (function)
1 piece: MB-HO-HAO081-132003	Motherboard without modules
composed by:	
1 piece: MB-8U2-Y97680	Motherboard without modules, adapter board, FSY cable tree and Label carrier
1 piece: AP-HO-132004	Adapter board
1 piece: KFD0-LC1-8M-99143	Label carrier 1
8 pieces: FSY-L456-98837	Cabel tree connection KF-Module-Motherboard

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	PEPPERL+FUCHS Mannheim-Schönau	Motherboard unit Analog Output + HART 8 channels HAZ-RTP-HAO081-132002	26.03.04	Bro	Sb	Sb		
			Date	S	TZ	Off. in ch.	contr. techn.	contr. Norm
			Dept.: PA-VP	Nr. 36-7632				
			Up date: xx.xx.xx	Replaces: xxxxxx / 36-xxxx			Sheet 1	
		MB-8U2	Scale: 1 : 2		of 2			



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PEPPERL+FUCHS
Mannheim-Schönau

Motherboard unit
Analog Output - HART
8 channels
HAZ-RTP-HAO081-132002

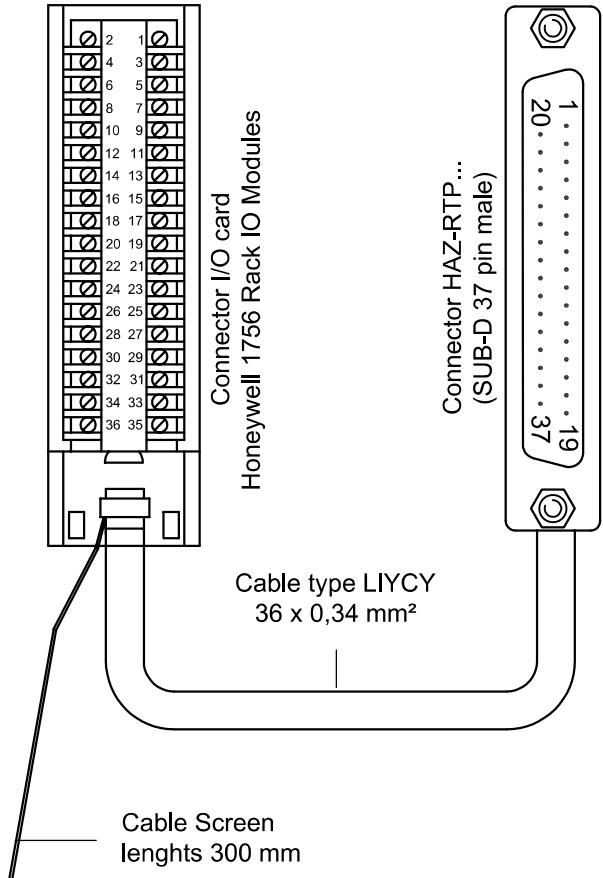
26.03.04		Bro	Sb	Sb	
Date	S	TZ	Off. in ch.	contr. techn.	contr. Norm
Dept.: PA-VP		Nr. 36-7632			
Up date: - : -		Replaces: - : -		Sheet 2	
		xxxxxx/36-xxxx		of 2	
		Scale: -			

11. Accessories

	Page
System cable HAZ-37-xMx.....	11- 1
System cable HAZ-25-xMx.....	11- 2
Samples of cabinet assembly.....	11- 3
Cables for the HART Multiplexer-System.....	11- 5

Pinout Honeywell 1756 Rack IO Modules system cable

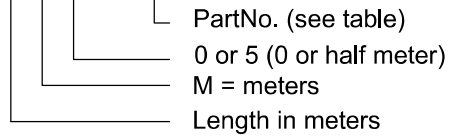
cable type LIYCY 36x0,34mm ²		
Color code	SUB-D37(HAZ 37) (Male)	I/O Terminal block
white	1	1
brown	2	2
green	3	3
yellow	4	4
grey	5	5
pink	6	6
blue	7	7
red	8	8
black	9	9
violet	10	10
grey/pink	11	11
red/blue	12	12
white/green	13	13
brown/green	14	14
white/yellow	15	15
yellow/brown	16	16
white/grey	17	17
grey/brown	18	18
white/pink	19	19
pink/brown	20	20
white/blue	21	21
brown/blue	22	22
white/red	23	23
brown/red	24	24
white/black	25	25
brown/black	26	26
grey/green	27	27
yellow/grey	28	28
pink/green	29	29
yellow/pink	30	30
green/blue	31	31
yellow/blue	32	32
green/red	33	33
yellow/red	34	34
green/black	35	35
yellow/black	36	36
NC	37	—




PartNo.	Honeywell 1756 Rack IO Modules RTP HAZ-RTP cables
198869	HAZ-37-xMx-198869
133679	HAZ-37-0M5-133679
131739	HAZ-37-1M0-131739
131740	HAZ-37-1M5-131740
131741	HAZ-37-2M0-131741
131742	HAZ-37-2M5-131742
131743	HAZ-37-3M0-131743
131744	HAZ-37-3M5-131744
131745	HAZ-37-4M0-131745
131746	HAZ-37-4M5-131746
131747	HAZ-37-5M0-131747
131748	HAZ-37-5M5-131748
131749	HAZ-37-6M0-131749
131750	HAZ-37-6M5-131750
131751	HAZ-37-7M0-131751
131752	HAZ-37-7M5-131752
131753	HAZ-37-8M0-131753
131754	HAZ-37-8M5-131754
131755	HAZ-37-9M0-131755
131756	HAZ-37-9M5-131756
131738	HAZ-37-10M0-131738

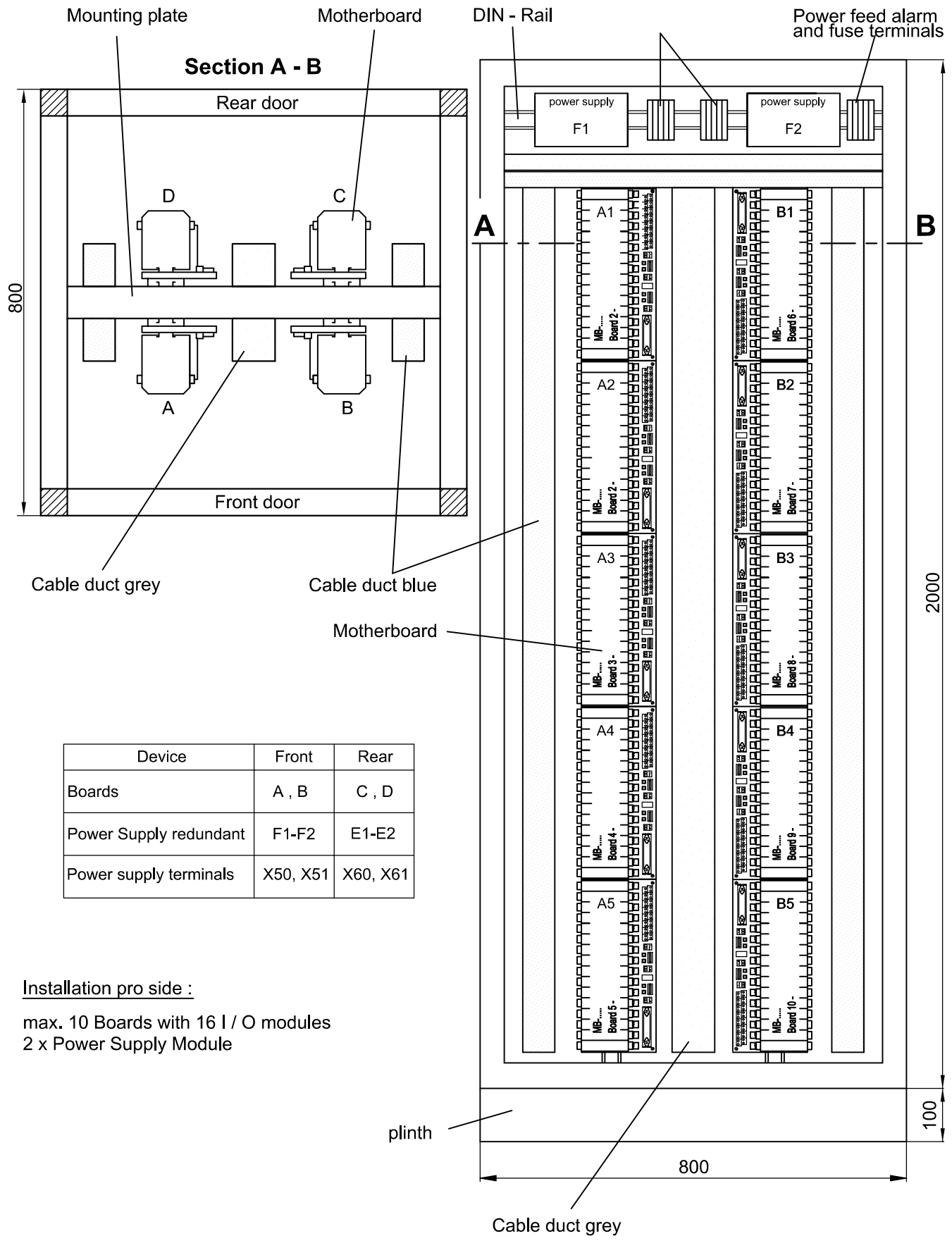
Type code:

HAZ - 37 - x M x - XXXXX



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 PEPPERL+FUCHS Mannheim-Schönau	Pinout System cable Honeywell 1756 Rack IO Modules	01.02.01	KT	Sb.		
		Date	S TD	Off. in ch.	contr. techn.	contr. Norm
		Dept.: PA - VP vB/D6 Up date: 07.02.08		No. 36-6066F1 Replaces: xxxxxx / 36-xxxx		Sheet 1
		Scale:		of 1		

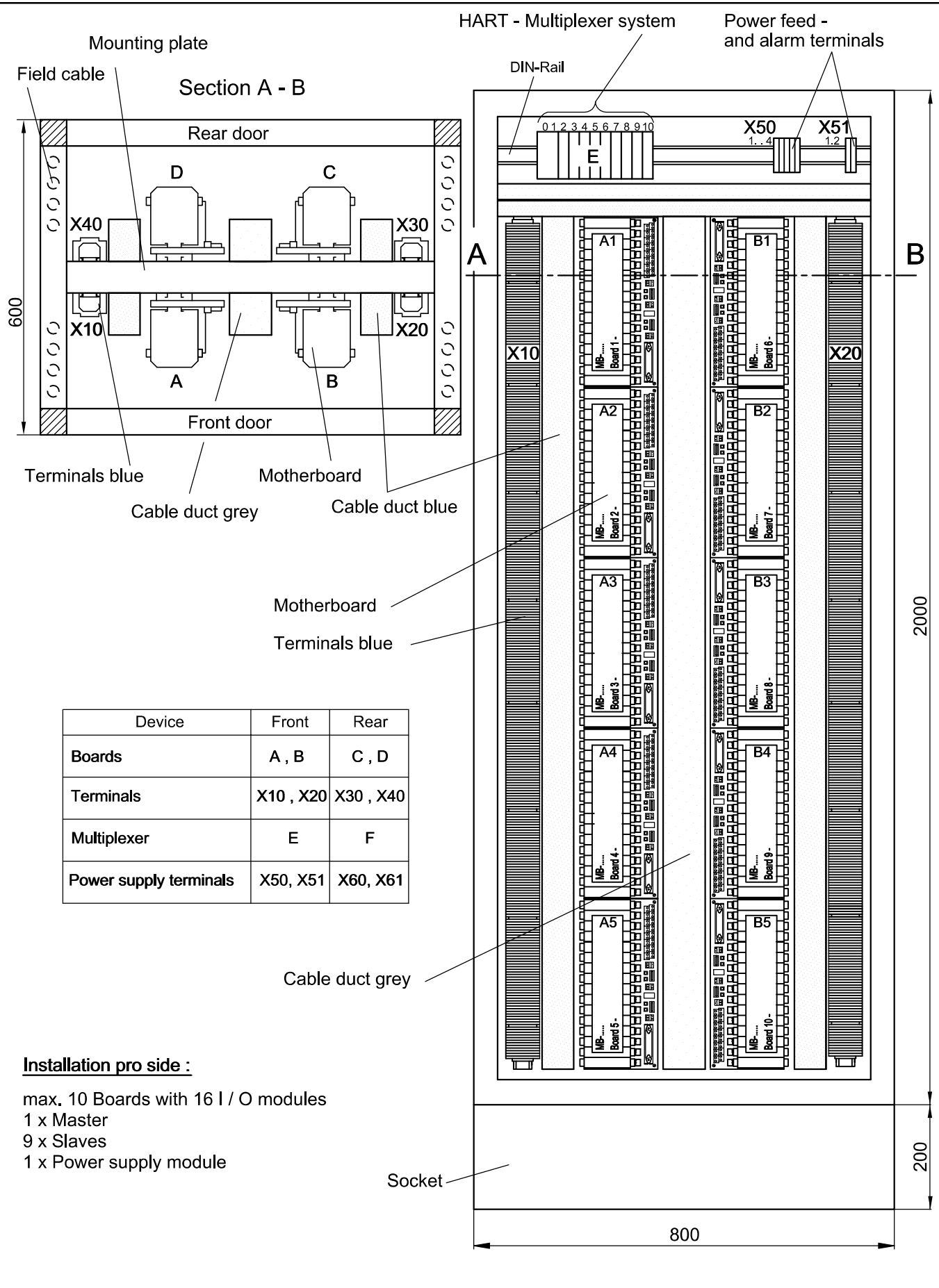


Device	Front	Rear
Boards	A , B	C , D
Power Supply redundant	F1-F2	E1-E2
Power supply terminals	X50, X51	X60, X61

Installation pro side :
max. 10 Boards with 16 I / O modules
2 x Power Supply Module

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 PEPPERL+FUCHS Mannheim-Schönau	Cabinet assembly with motherboards and redundant Power Supply		14.03.00		DN	MB	MB	
	Date	S	TD	Off. in ch.	contr. techn.	contr. Norm		
	Dept.:	PA-VP		No. TAB298		Ind. A		
	Up date:	xx.xx.xx		Replaces: -		Sheet x		
			Scale: 1 : 10		of x			




Device	Front	Rear
Boards	A , B	C , D
Terminals	X10 , X20	X30 , X40
Multiplexer	E	F
Power supply terminals	X50, X51	X60, X61

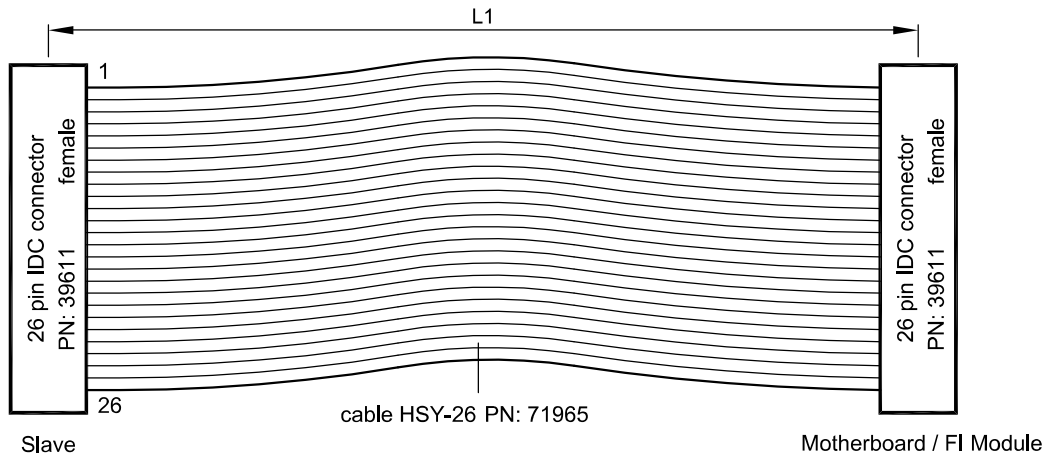
Installation pro side :

- max. 10 Boards with 16 I / O modules
- 1 x Master
- 9 x Slaves
- 1 x Power supply module

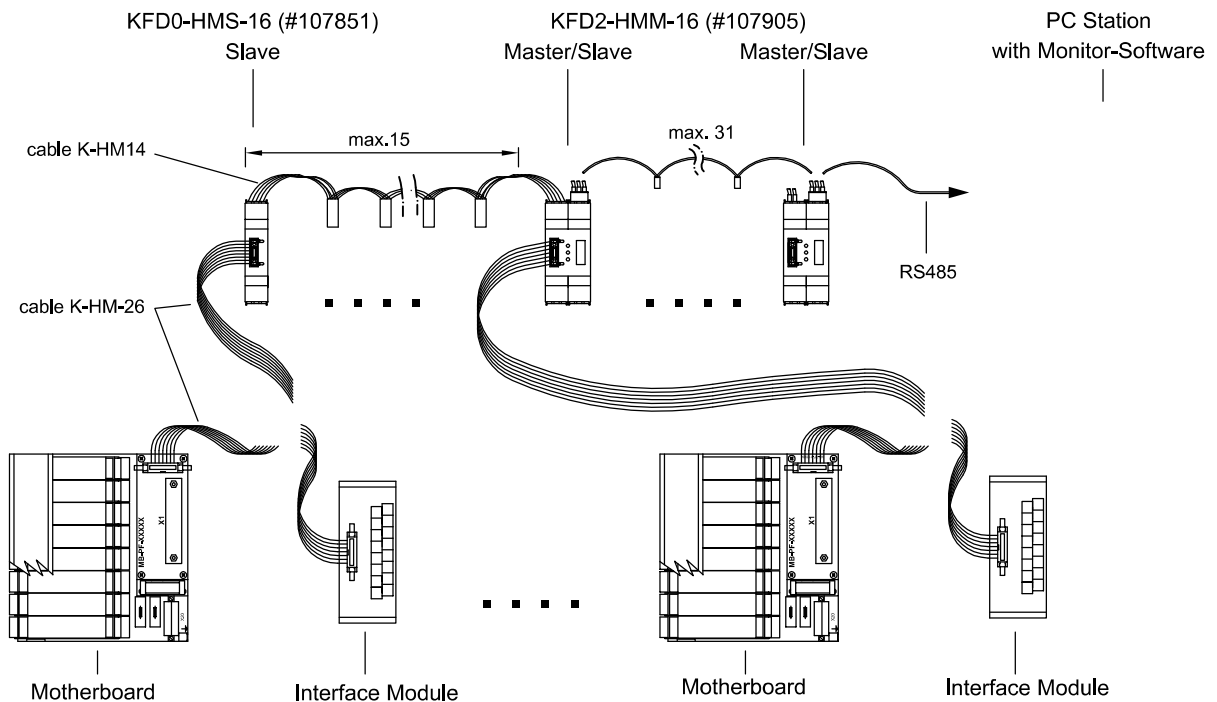
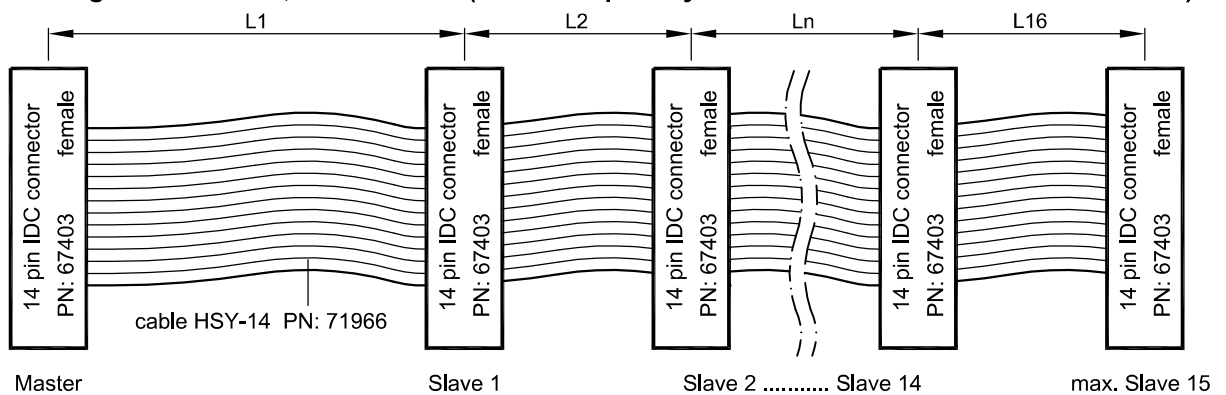
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 PEPPERL+FUCHS Mannheim-Schönau	Cabinet assembly with motherboards, marshalling and HART-Multiplexer		10.12.97		vB	vB	vB		
			Date	S	TD	Off. in ch.	contr. techn.	contr. Norm	
			Dept.: PA-VP	No. TAB174-B		Replaces: XXXXXX / 36-XXXX		Sheet 1	
Up date: xx.xx.xx			Scale: 1 : 10		of	1			


connecting cable K-HM26, PN:114025 (cable length 1m)
 connecting cable K-HM26, PN:114026 (cable length variable - max. 8m)



connecting cable K-HM14, PN: 39630 (16 conneters, cable length 0,45m)
 connecting cable K-HM14, PN: 102483 (conneter quantity variable - max.16 conneters + max. 8m)



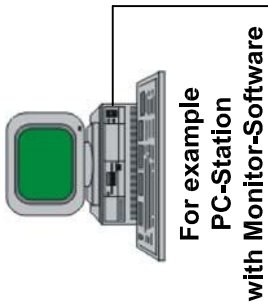
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 PEPPERL+FUCHS Mannheim-Schönau	Cables for the HART Multiplexer-System		05.03.04	DN	vB	MB	
	Date	S	TD	Off. in ch.	contr. techn.	contr. Norm	
	Dept.: PA-VP		No. 36-9274 1				
	Up date: xx.xx.xx		Replaces: XXXXXX / 36-9205B			Sheet 1	
			Scale: -:-		of 1		

System requirements:

- HART Multiplexer Master (40 mm) KFD2-HMM-16
- HART Multiplexer Slave (20 mm) KFD0-HMS-16
- Cable Motherboard - Master/Slave K-HM 26
- Cable Master - Slave K-HM 14

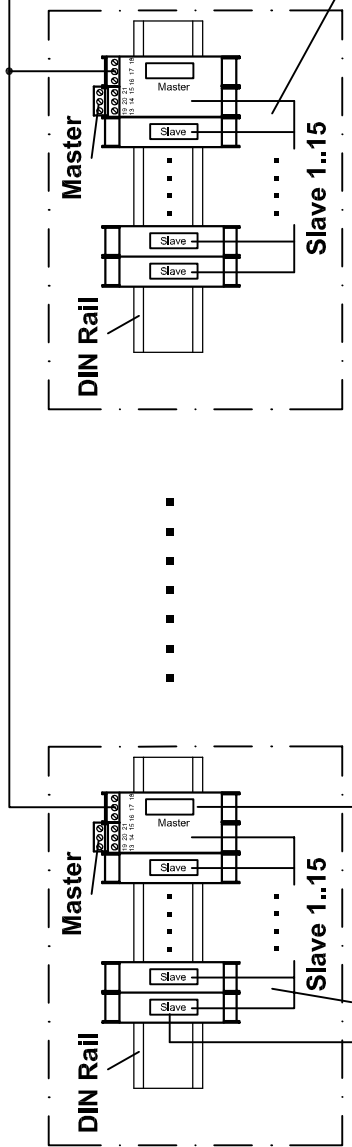
PC-Maintenance-Station with HART Management software



RS 485 connection
 to PC (3 wire)

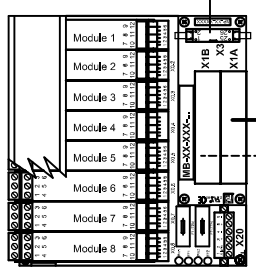
Master Slave 32

Master Slave 1

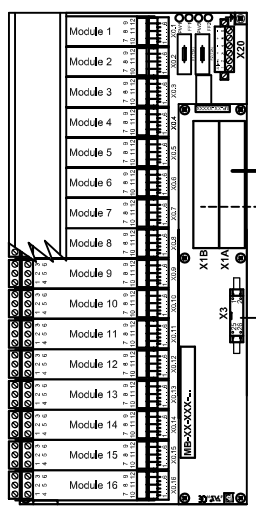


Cable K-HM 26

Cable K-HM 14



System cable
 to Yokogawa
 I/O module



System cable
 to Yokogawa
 I/O module

Max. 16 boards
 with 16 ch. each



PEPPERL+FUCHS
 Mannheim-Schönau

Structure
 HART Multiplexer System

29.10.04	Bro	Sb	Sb	contr. techn.	contr. Norm
Date	S	TD	in ch.		
Dept.: PA-VP		No. 36-9274B5		Replaces:	
Up date: 12.01.06		H/Bro		XXXXXX / 36-XXXX	
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