

IOCHAS-0001S

IO Chassis for non-redundant IO modules (Safety Manager)

Description

The IOCHAS-0001S is a chassis for up to 18 non-redundant IO modules. It consists of the following components:

Table 8 Components of the FS-IOCHAS-0001S¹ V1.0

Component	Amount	Description	See
IO housing	1	19 inch mechanical case including cover plates for up to 18 IO modules	page 99
FS-IOB-0001S ¹	1	IO Backplane for non-redundant IO	page 100
FS-IO-0001 ¹ V1.0	1	IO Extender module located at slot 21	page 479
FS-IOBUS-HBS ¹ V1.0	1	Horizontal IO bus backplane for non-redundant IO	page 104
Blind fronts	2	Located at slot 19 and 20	

¹ FS-type modules are non conformal coated modules.

Table 9 Components of the FC-IOCHAS-0001S¹ CCV1.0

Component	Amount	Description	See
IO housing	1	19 inch mechanical case including cover plates for up to 18 IO modules	page 99
FS-IOB-0001S	1	IO Backplane for non-redundant IO	page 100
FC-IO-0001 ¹ CCV1.0	1	IO Extender module located at slot 21	page 479
FC-IOBUS-HBS ¹ CCV1.0	1	Horizontal IO bus backplane for non-redundant IO	page 104
Blind fronts	2	Located at slot 19 and 20	

¹ FC-type modules are conformal coated modules. Conformal coated modules have the letters 'CC' preceding the version number.

Figure 48 Front view of an empty IOCHAS-0001S

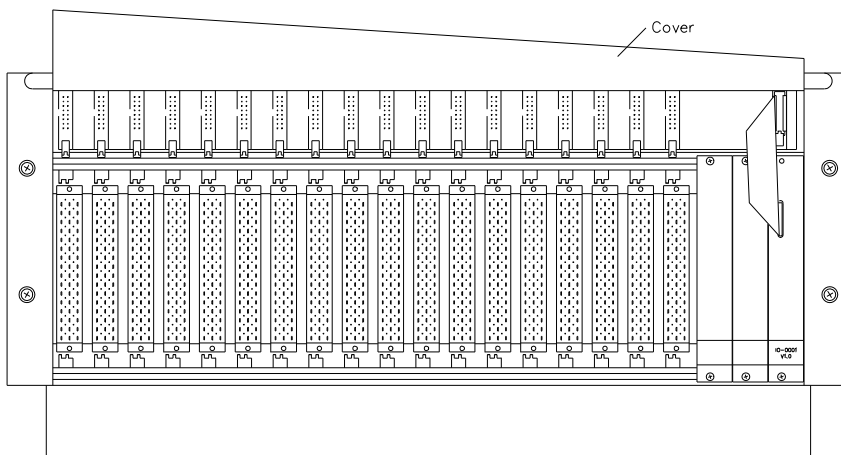


Figure 48 on page 99 shows the front side of an empty IOCHAS-0001S with the front-cover raised. A 19" chassis has 21 slots for modules (each 4TE wide). These slots are numbered 1 to 21, starting at the left-hand side of the chassis. In the IOCHAS-0001S, slots 1 to 18 are available for IO modules. Slot 19 and 20 cannot be used and slot 21 contains the IO-0001 module. The IOB-0001S provides the 18 IO-connectors in the middle of the chassis. The IOBUS-HBS provides the 18 flatcable-connectors in the top of the chassis.

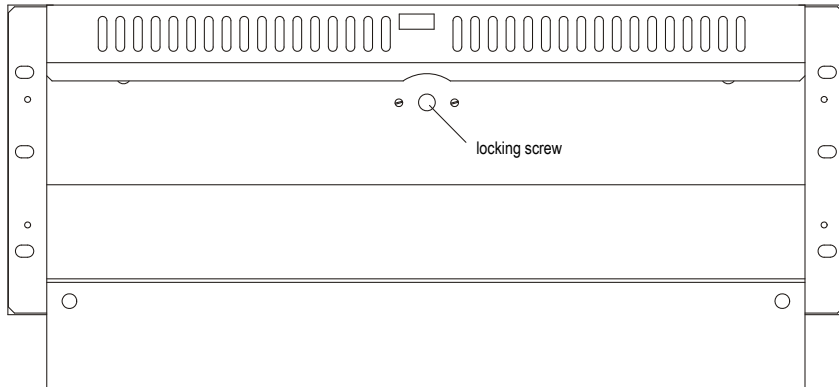
IO Housing

The IO housing is specifically designed for Safety Manager.

It is a 19" based housing.

A coverplate assembly at the front of the chassis shields the flatcables of the IO modules. This cover can be swung upwards to access the flatcables. To swing the cover upwards, unlock it by moving the two locking slides horizontally towards the middle of the chassis. The backside of the IO cover assembly provides room for a tagnumber assignment drawing.

The backside of the IO housing is covered by an IO back cover plate that can be removed by rotating the half-turn locking screw anti-clockwise (see Figure 49 on page 100).

Figure 49 Back view of a closed IOCHAS-0001S**Attention**

The IO back cover plate will be completely unattached from the IO chassis after the locking screw has been turned. Be careful not to drop it.

IO cable clamp support (with tie wrap) at the back of the IO housing leads all cables towards the side of the IO chassis.

Figure 54 on page 106 shows a side view of the IOCHAS-0001S.

IO Backplane for non-redundant IO: IOB-0001S

The front of the IOB-0001S backplane is visible in the middle of Figure 48 on page 99.

Figure 50 on page 101 shows the back of the IOCHAS-0001S with the back-cover removed.

Table 10 on page 101 describes the connectors present on the IOB-0001S.

Figure 50 Back view of an open IOCHAS-0001S

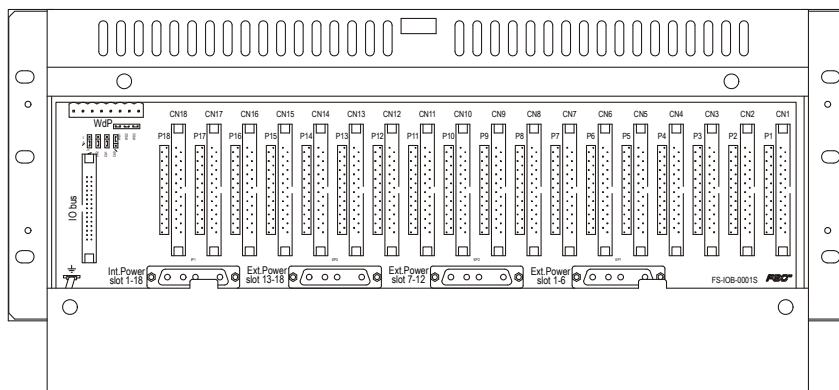


Table 10 Connectors on the IOB-0001S

Connector	Amount	Description	See
Front side			
48-pin female chassis connector	18	Connectors for IO modules, slot 1 to 18	“Input modules” on page 289 “Output modules” on page 343
48-pin female chassis connector	1	Connector for IO extender IO-0001, slot 21	“IO-0001” on page 479
Back side			
IO bus	1	Connector for IOBUS-CPIO (IO bus to Controller chassis)	“IOBUS-CPIO” on page 491
CN1 to CN18	18	Connector for system interconnection cables SICC-0001/Lx or SICP-0001/Lx, slot 1 to 18	“SICC-0001/Lx” on page 715 “SICP-0001/Lx” on page 718
P1 to P18	18	Connector for IO converter modules, slot 1 to 18	“Input converter modules” on page 321 “Output converter modules” on page 407
IP1	1	Connector for internal power, slot 1 to 18	Cable: FS-PDC-IOIP1, see “PDC-IOxPx” on page 809

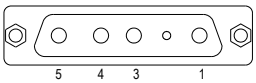
Table 10 Connectors on the IOB-0001S (continued)

Connector	Amount	Description	See
EP1	1	Connector for external power, slot 1 to 6	Cable: FS-PDC-IOEP1, see “PDC-IOxPx” on page 809
EP2	1	Connector for external power, slot 7 to 12	Cable: FS-PDC-IOEP2, see “PDC-IOxPx” on page 809
EP3	1	Connector for external power, slot 13 to 18	Cable: FS-PDC-IOEP3, see “PDC-IOxPx” on page 809
CA0 to CA3	4	Jumpers for defining the IO chassis address	“Address settings” on page 481
WdP	1	Connector for watchdog and 5 V power signal, connects to Controller backplane	“Controller backplane CPB-0001” on page 91 Cable: PDC-IOS05, see “PDC-IOS05” on page 838.
WD1 to WD3 ¹	3	Connector to enable external watchdog grouping	See the <i>Safety Manual</i> .

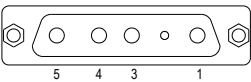
1 On delivery, a triple jumper is placed and no watchdog grouping is used. Watchdog grouping can be used for each group (WD1 corresponds to slot 1—6, WD2 to slot 7—12, WD3 to slot 13—18) by removing the jumper from the WDx connector for that group, and connecting the WDx connector to the watchdog group relays (See the *Safety Manual*).

Pin allocation

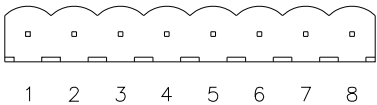
The back view and pin allocation of the Internal Power connector IP1 is:

		IP1
	1	IP slot 1—9
	3	0 V
	4	0 V
	5	IP slot 10—18


The back view and pin allocation of the External Power connectors EP1, EP2 and EP3 are:

		EP3	EP2	EP1
	1	EP slot 13, 14, 15	EP slot 7, 8, 9	EP slot 1, 2, 3
	3	0 V	0 V	0 V
	4	0 V	0 V	0 V
	5	EP slot 16, 17, 18	EP slot 10, 11, 12	EP slot 4, 5, 6

The back view and pin allocation of the WdP connector is:

		WdP
1		nc
2		nc
3		ground
4		5VR of CP1 and CP2
5		WDR of CP1 and CP2
6		ground
7		nc
8		nc

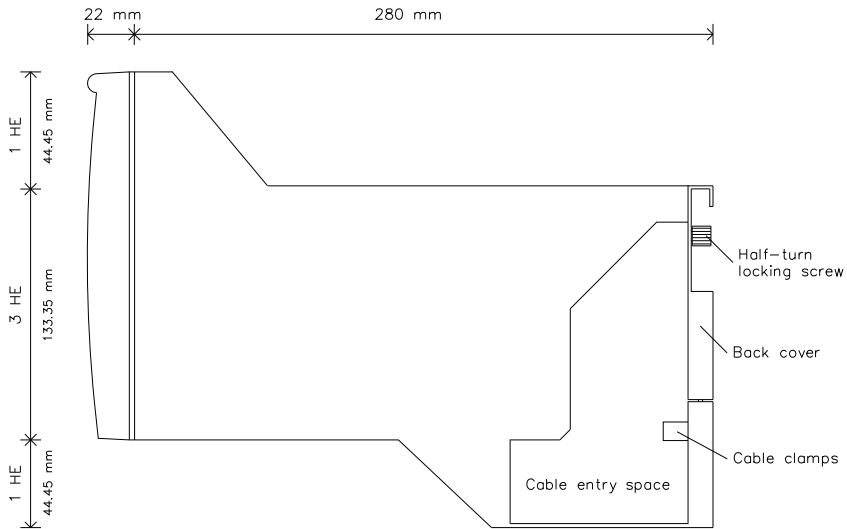
The back view and pin allocation of the WD jumper is:

		WD
1		WDR of CP1 and CP2
2		WD of slot 1, 2, 3, 4, 5 and 6
3		WDR of CP1 and CP2
4		WD of slot 7, 8, 9, 10, 11 and 12
5		WDR of CP1 and CP2
6		WD of slot 13, 14, 15, 16, 17 and 18

The pin allocation of each respective input and output module can be found in the module datasheet.

Figure 51 on page 104 shows the pin mapping from an IO chassis connector at the front to both a SIC cable (CNx) connector and a converter (Px) connector at the back of the IO Chassis.

Figure 54 Side view of the IOCHAS-0001S



Technical data

General	Type number ¹ :	FS-IOCHAS-0001S FC-IOCHAS-0001S
	Approvals:	CE, UL, CSA, TUV, FM
Power	5V-R:	35 mA (IO-0001 slot 21)
Dimensions	Height:	1 + 3 + 1 HE for first IO chassis 4 HE for every next IO chassis see Figure 54 on page 106 44.5 + 133.4 + 44.5 mm 1.75 + 5.25 + 1.75 in
	Width:	482.6 mm, 19 in
	Depth:	280 mm, 11 in
	Weight:	8,5 kg

¹ FS-type modules are non conformal coated modules.
FC-type modules are conformal coated modules.