



## 1 Overview

I/O subrack, 4 units high

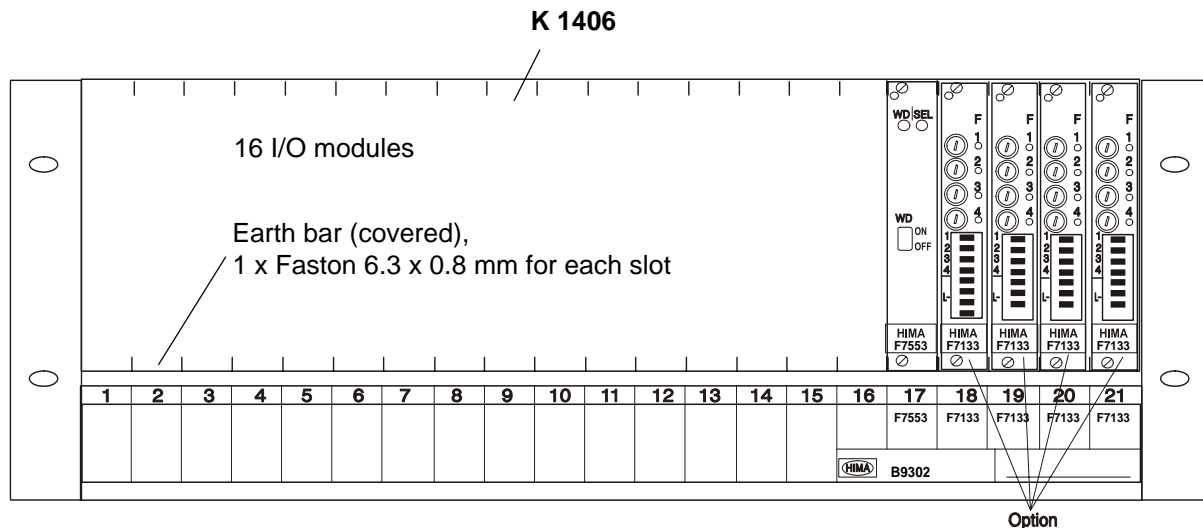


Figure 1: Side view

## 2 Parts of the assembly kit B 9302

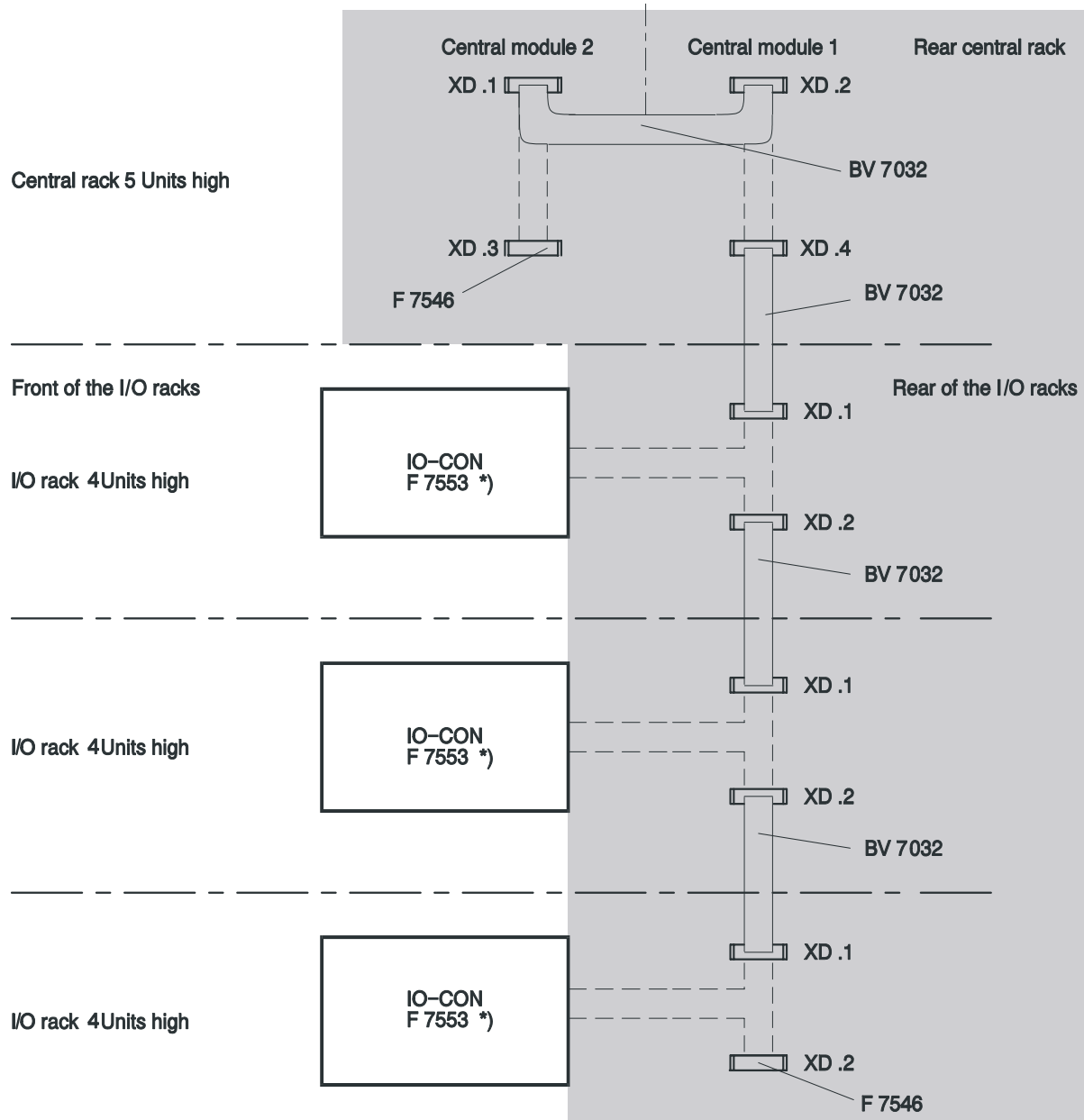
- 1 x K 1406 I/O subrack, 4 units high, 19 inch, with integrated cable tray, with a hinged receptacle for the label
- 1 x F 7553 coupling module (in slot 17)
- 1 x BV 7032 flat cable, length is depending on the order. The standards are B 9302 with 0.5 m cable. Assembly kit B 9302 with choosable cable length on demand. Total bus length is maximum 12 m.

The slots 1 through 16 of the rack K 1406 are reserved for I/O modules.

Modules for option (separate order):

- 1...4 x F 7133 4-fold power distribution with fuses (slots 18...21) to fuse and distribute L+ (EL+) and L-.

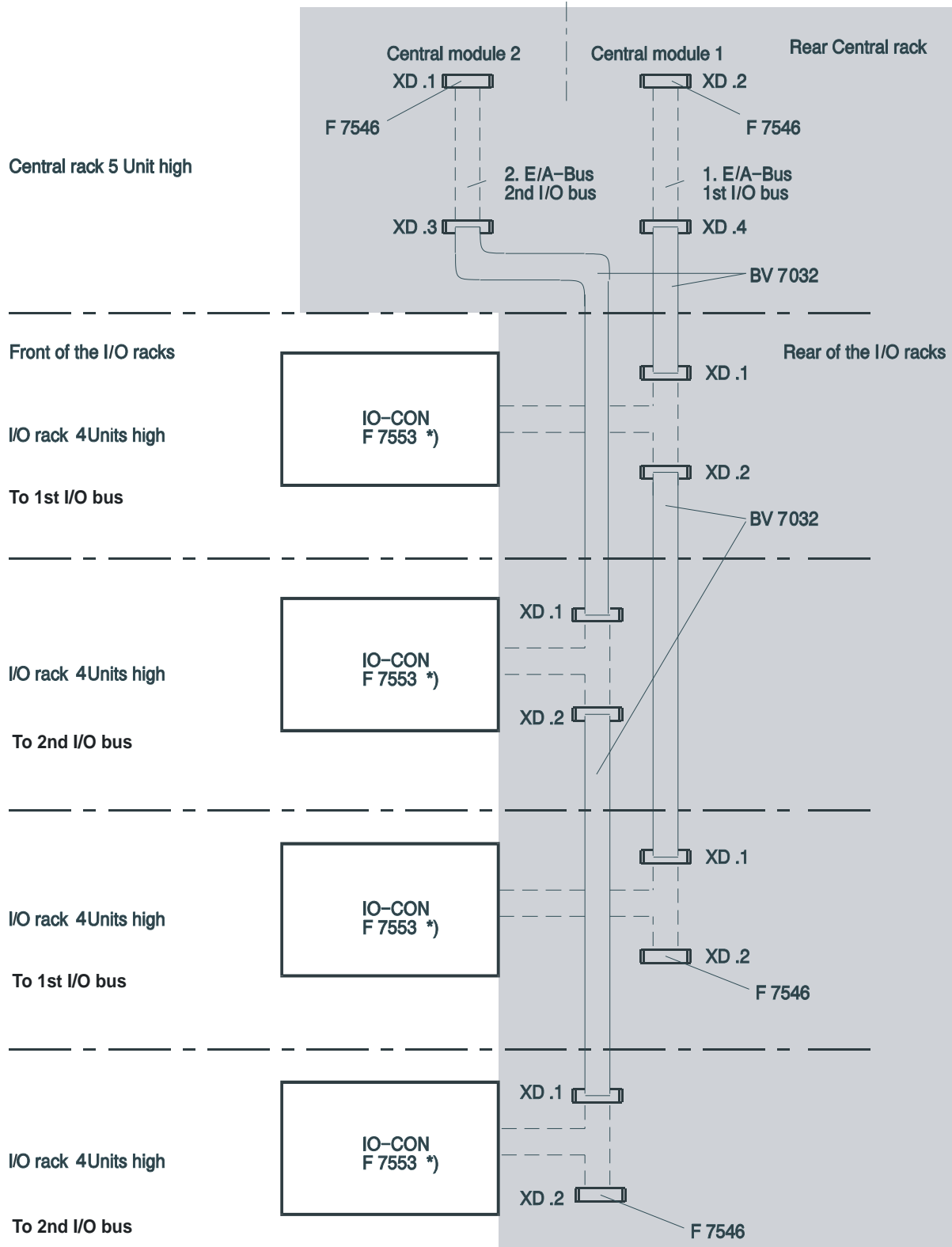
The fuse monitoring on the current distribution modules are internally switched in series. A corresponding fault signal is served via a neutral contact. The fault contact of a not installed current distribution module is bypassed by a jumper.



\*) Set I/O rack address by means of a coding switch (refer to data sheet F 7553)

Figure 2: Wiring of the single channel I/O bus

max. length I/O bus:	12 m
max. length cable BV 7032:	5 m



\*) Set I/O rack address by means of a coding switch (refer to data sheet F 7553)

Figure 3: Wiring of the redundant I/O bus

max. length of I/O bus:	12 m
max. length cable BV 7032:	5 m

### 3 Wiring of the assembly kit connections

Wirings to be done by the user:

#### 3.1 Supply 24 VDC

Connection	Wire and connection	Fusing	Use
XG.7 (L+)	RD 2.5 mm <sup>2</sup> , Faston 6.3 x 0.8	max. 16 A gL	F 7133, slot 21
XG.8 (L+)	RD 2.5 mm <sup>2</sup> , Faston 6.3 x 0.8	max. 16 A gL	F 7133, slot 20
XG.9 (L+)	RD 2.5 mm <sup>2</sup> , Faston 6.3 x 0.8	max. 16 A gL	F 7133, slot 19
XG.10 (L+)	RD 2.5 mm <sup>2</sup> , Faston 6.3 x 0.8	max. 16 A gL	F 7133, slot 18
RD = Color code red			

Table 1: Supply 24 VDC

#### 3.2 Output 24 VDC

Connection	Wire and connection	Use
XG.3 (L+)	RD 1.5 mm <sup>2</sup> , Faston 6.3 x 0.8	from central rack and to further I/O racks
XG.11 (L-)	BK 2 x 2.5 mm <sup>2</sup> , Faston 6.3 x 0.8 (see note)	Reference pole L-
RD = Color code red                      BK = Color code black		

Table 2: Output 24 VDC

**Note** To be wired to the central L- bus bar with at least 2 x 2.5 mm<sup>2</sup> BK. If output modules with 2-pole connection to the actuators are used depending on the load up to 4 x 2.5 mm<sup>2</sup> BK wiring is necessary.

### 3.3 Output 5 VDC

Connection	Wire and connection	Use
XG.4: +5 V	YE 2 x 2.5 mm <sup>2</sup> , Faston 6.3 x 0.8	from central rack
XG.12: GND	GN 2 x 2.5 mm <sup>2</sup> , Faston 6.3 x 0.8	from central rack
GN = Color code green                      YE = Color code yellow		

**Table 3: Output 5 VDC**

### 3.4 Connection WD

Connection	Wire and connection	Use
XG.15:1	GY 0.5 mm <sup>2</sup> , wire end ferrule	from central rack and to further I/O racks
GY = Color code gray		

**Table 4: Connection WD**

### 3.5 I/O Bus

Connection	Procedure
XD.1	Plug in BV 7032 and connect it with the I/O subrack before
XD.2	Plug in BV 7032 of the following I/O subrack on the according I/O bus or plug in bus termination module F 7546 (at the last I/O subrack)

**Table 5: I/O Bus**

With installation of the assembly kit a conductive connection to the frame or a separate earth connection has to be installed according to the EMC requirements. Connection PE earth: Faston 6.3 x 0.8 mm. Pay attention for the manufacturers information concerning detaching and replugging of the Faston connectors!

Refer also to: Supply, feeding and distribution of the 24 V system voltage, see assembly kit, wiring diagram

### 3.6 Connections on the rear

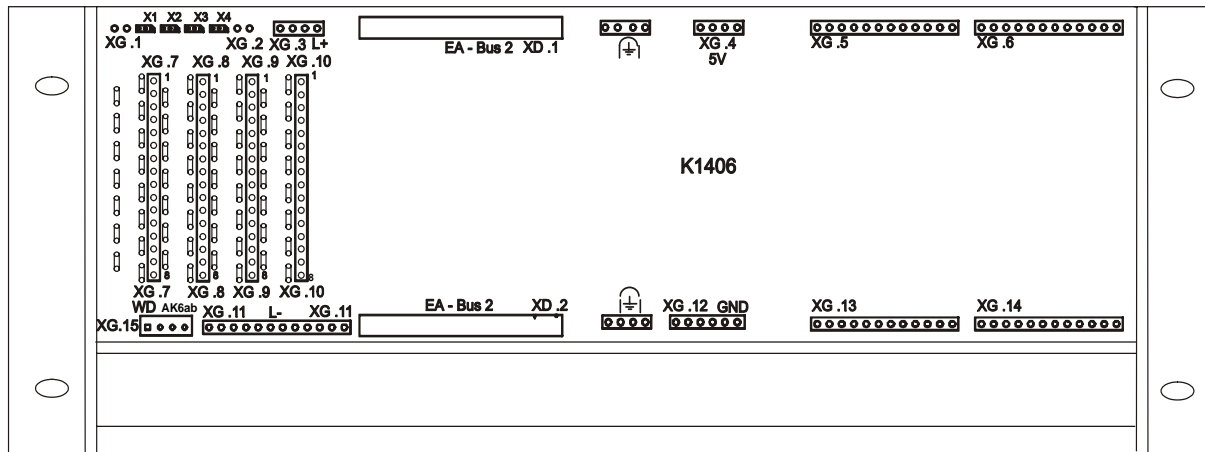


Figure 4: Connections on the rear of the I/O subrack K 1406

Connections on the rear of the I/O subrack K 1406 (refer also to: Supply, feeding and distribution of the 24 V system voltage, wiring diagram).

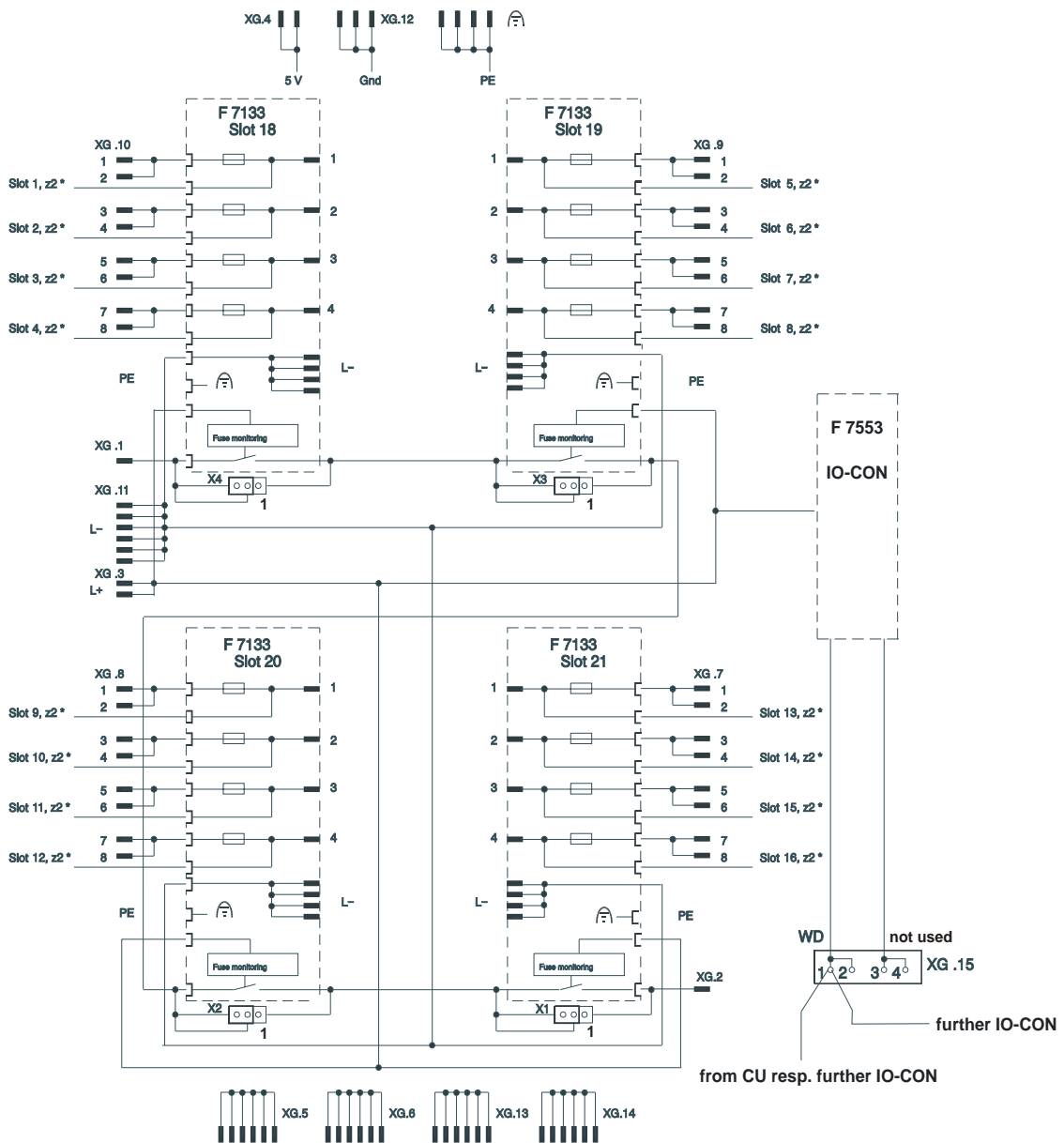
#### 3.6.1 Wiring by customer

<p>XG .1, XG .2</p> <p>XG .3</p> <p>XG .4</p> <p>XG .5</p> <p>XG .6</p> <p>XG .13</p> <p>XG .14</p> <p>XG .7</p> <p>XG .8</p> <p>XG .9</p> <p>XG .10</p> <p>XG .11</p> <p>XG.12</p> <p>XG .15 (1+2)</p> <p>XG .15 (3+4)</p> <p>XD .1, XD .2</p>	<p>Fuse monitoring (neutral contacts on current distribution module F 7133, not equipped F 7133 slot can be overridden by the jumpers X1...X4)</p> <p>■ = Slot equipped</p> <p>Supply EL+ for F 7133 and F 7553 Reference pole: XG .11 (L-)</p> <p>+ 5 V Reference pole: XG .12 (GND)</p> <p>Potential distributor, free disposal</p> <p>Potential distributor, free disposal</p> <p>Potential distributor, free disposal</p> <p>Potential distributor, free disposal</p> <p>L+ to F 7133, slot 21</p> <p>L+ to F 7133, slot 20</p> <p>L+ to F 7133, slot 19</p> <p>L+ to F 7133, slot 18</p> <p>Reference potential L-</p> <p>Reference pole GND</p> <p>WD (Watchdog signal)</p> <p>not used</p> <p>I/O bus connection</p>
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PE (earth)

### 3.7 Assembly kit, wiring diagram



\* Note: Fix related slots due to the connection via bus board

Figure 5: Assembly kit, wiring diagram

# 4 Side view assembly kit B 9302

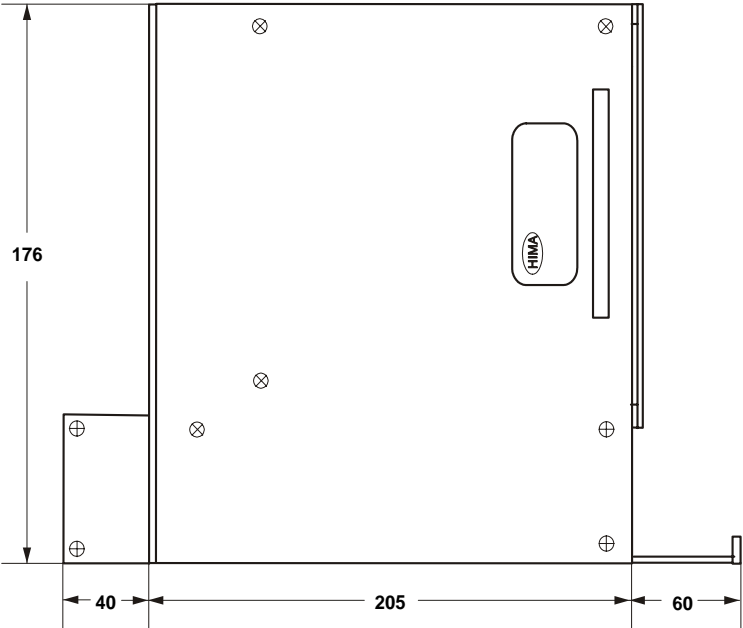


Figure 6: Side view