

# Installation Box

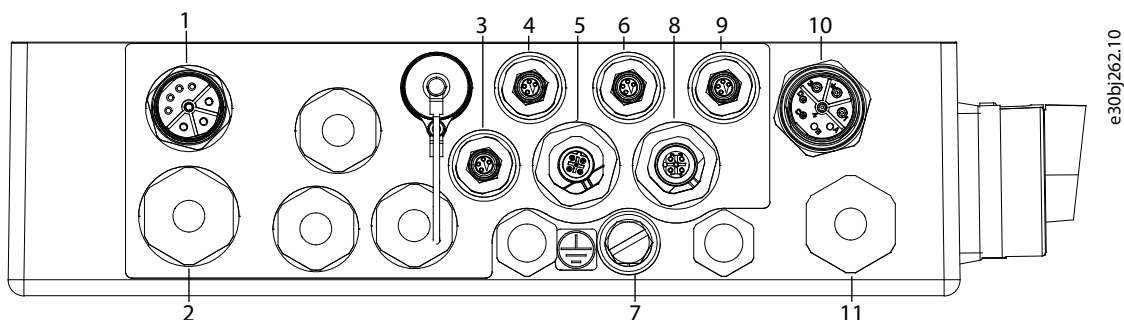
## VLT® Decentral Drive FCD 302

### 1 Introduction

#### 1.1 Items Supplied

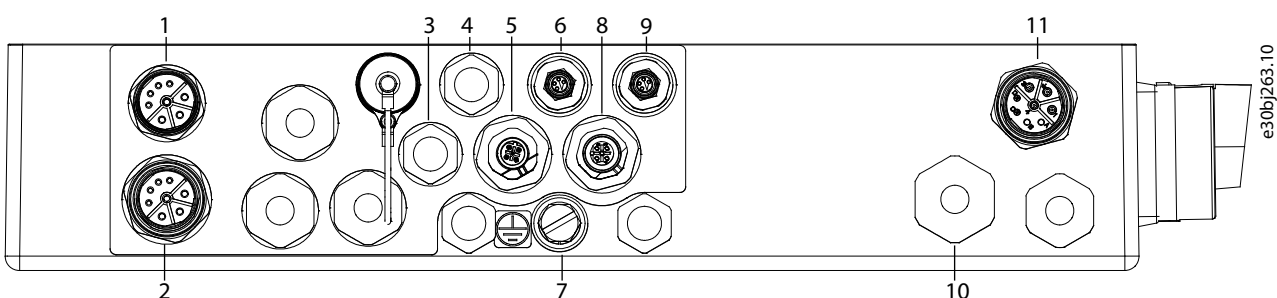
Depending on the code number, the following is supplied:

Installation box, small, with mains switch, brake support, brake chopper, 24 V DC support



1	X2	7	PE
2	X2.2	8	X52
3	X11	9	X14
4	X12	10	X1
5	X51	11	X1.1
6	X13		

Installation box, large, with mains switch, brake support, and 24 V DC support



1	X2	7	PE
2	X2.2	8	X52
3	X11	9	X14
4	X12	10	X1.1
5	X51	11	X11
6	X13		

## 1.2 Mechanical Dimensions

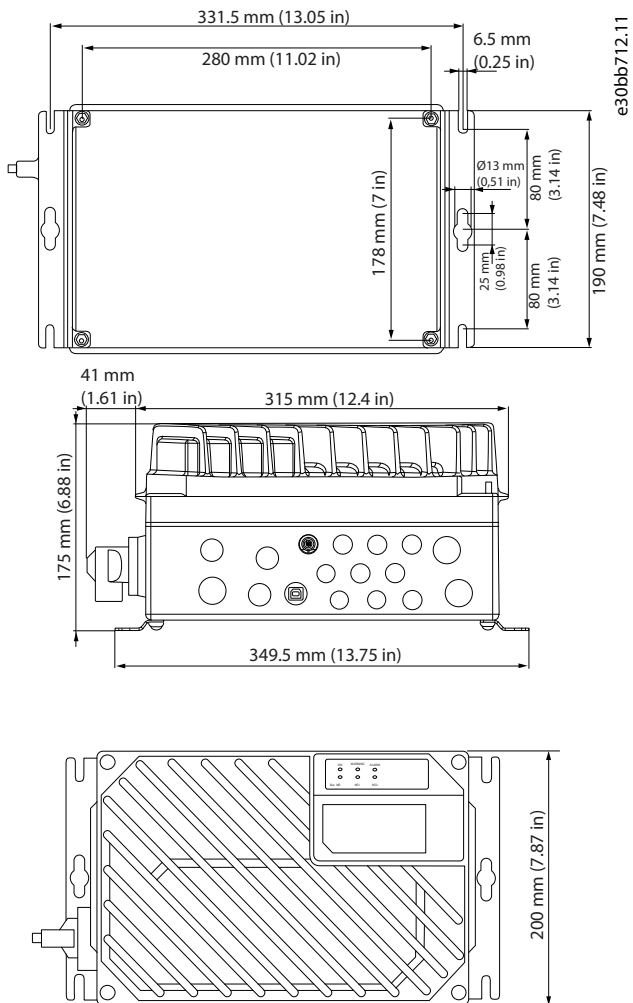


Illustration 1: Cable Entries and Hole Sizes (Small Unit)

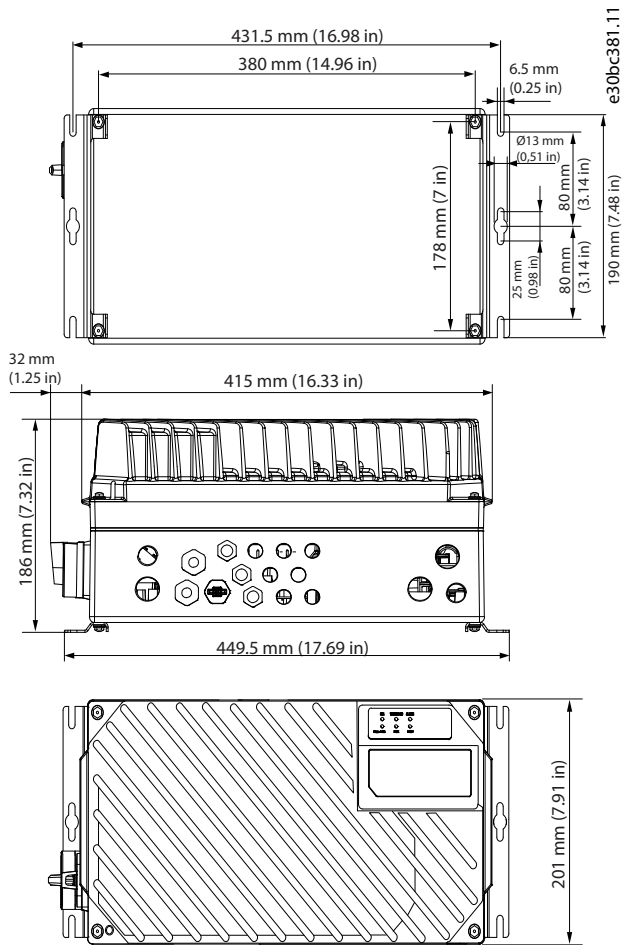


Illustration 2: Cable Entries and Hole Sizes (Large Unit)

Table 1: Mechanical Dimensions

Motor side	1xM20, 1xM25
Control side	2xM20, 9xM16
Mains side	2xM25

### 1.3 Code Numbers

Table 2: Code Numbers for Installation Box Configurations

Installation box configuration	Type code	Beumer code number
DB0: Small, w/mains switch	CRB302PXXXT4B66H1CRXMEXAACCXAXBXXXXDX	3026299
DB1: Small, w/mains switch	CRB302PXXXT4B66H1CRXMEXCACCCXAXBXXXXDX	3026301
DB4: Small, wo/mains switch	CRB302PXXXT4B66H1CRXMXXAACCCXAXBXXXXDX	3026305
DB5: Small, wo/mains switch	CRB302PXXXT4B66H1CRXMXXBACCCXAXBXXXXDX	3026307
DB6: Small, wo/mains switch	CRB302PXXXT4B66H1CRXMXXAACCCXAXBXXXXDX	3026308
DB7: Small, wo/mains switch	CRB302PXXXT4B66H1CRXMXXCACCCXAXBXXXXDX	-
DB2: Large, w/mains switch	CRB302PXXXT4B66H1CTXMEXAACCCXAXBXXXXDX	3026302

Installation box configuration	Type code	Beumer code number
DB3: Large, w/mains switch	CRB302PXXXT4B66H1CTXMEXABCCXAXBXXXXDX	3026304
DBx: Small, w/mains switch	CRB302PXXXT4B66H1CRXMEXXXXCXAXBXXXXDX	3026787
DBy: Small, wo/mains switch	CRB302PXXXT4B66H1CRXMXXXXXCXAXBXXXXDX	3026789
DBz: Large, w/mains switch	CRB302PXXXT4B66H1CTXMEXXXXCXAXBXXXXDX	3026790

Table 3: Available Plugs in Installation Box Configurations

Installation box configuration	Plug X									
	1	1.1	2	2.2	51	52	11	12	13	14
DB0: Small, w/mains switch										
DB1: Small, w/mains switch										
DB4: Small, wo/mains switch										
DB5: Small, wo/mains switch										
DB6: Small, wo/mains switch										
DB7: Small, wo/mains switch										
DB2: Large, w/mains switch										
DB3: Large, w/mains switch										
DBx: Small, w/mains switch										
DBy: Small, wo/mains switch										
DBz: Large, w/mains switch										

Table 4: Code Numbers for Drive Configurations

Drive configuration	Type code	Beumer code number
0.75 kW with PROFIBUS converter, mechanical brake, and 24 V DC	CRB302PK75T4B66H1SXXXXXXXXXXARBXXXXXD0	3026295
1.1 kW, with PROFIBUS converter, mechanical brake, and 24 V DC	CRB302P1K1T4B66H1SXXXXXXXXXXARBXXXXXD0	3026792
1.5 kW, with PROFIBUS converter, mechanical brake, and 24 V DC	CRB302P1K5T4B66H1SXXXXXXXXXXARBXXXXXD0	3026296
2.2 kW, with PROFIBUS converter, mechanical brake, and 24 V DC	CRB302P2K2T4B66H1SXXXXXXXXXXARBXXXXXD0	3026793
3.0 kW, with PROFIBUS converter, mechanical brake, and 24 V DC	CRB302P3K0T4B66H1SYXXXXXXXXXXARBXXXXXD0	3026298

## 2 Safety

### 2.1 Safety Instructions

#### ⚠ W A R N I N G ⚠

##### DISCHARGE TIME

The drive contains DC-link capacitors, which can remain charged even when the drive is not powered. High voltage can be present even when the warning indicator lights are off.

Failure to wait the specified time after power has been removed before performing service or repair work could result in death or serious injury.

- Stop the motor.
- Disconnect AC mains, permanent magnet type motors, and remote DC-link supplies, including battery back-ups, UPS, and DC-link connections to other drives.
- Wait for the capacitors to discharge fully. The minimum waiting time is 4 minutes and is also visible on the nameplate on the top of the drive.
- Before performing any service or repair work, use an appropriate voltage measuring device to make sure that the capacitors are fully discharged.

## 3 Plugs

### 3.1 X1 and X1.1 Mains in M23 Male

General ratings:

- Pins 1, 2, 3 and 4: 480 V AC, maximum 15 A
- Pins C and D: 30 V DC, maximum 3 A
- Front/screw mounting IP66, UL type 4
- Tightening torque: 1.5–2.0 Nm (13.3–17.7 in-lb)

Table 5: Wire/Connector Assignment for Plugs X1 and X1.1

Pin	Label	Wire mm <sup>2</sup> /AWG
1	L1	2.5/14
2	PE	
3	L3	
4	L2	
D	35	2.75/18
C	36	

- Mating part: Mains X1 (female)
- Phoenix code number: KK-0885/XX,XX
- XX,XX is the cable length in [m, cm]

### 3.2 X2 and X2.1 Motor Connection M23 Female

General ratings:

- Sockets 1, 2, 3 and 4: 480 V AC, maximum 15 A
- Sockets A and B: 30 V DC, maximum 1 A
- Sockets C and D: 240 V DC, maximum 2 A
- Front/screw mounting IP66, UL type 4
- Tightening torque: 1.5–2.0 Nm (13.3–17.7 in-lb)

Table 6: Wire/Connector Assignment for Plugs X2 and X2.1

Socket	Label	Wire mm <sup>2</sup> /AWG
1	U	2.5/14
4	V	
3	W	
2	PE	
A	31A	2.75/18
B	31B	
C	122	
D	123	

- Mating part: Motor X2 (male)
- Phoenix code number: KXC-K0341/XX,XX
- XX,XX is the cable length in [m, cm]

### 3.3 X11/X12/X13/X14 Photocell M8 Female

For non-used connectors. Keep blind plugs installed to connectors at all times to keep the enclosure tight.

General ratings:

- 30 V DC, maximum 1 A
- Front/screw mounting IP66, UL type 4
- Tightening torque: 0.1–0.2 Nm (0.9–1.8 in-lb)

**Table 7: Wire/Connector Assignment for Plugs X11–X14**

Pin	Label
1	Brown
2	White
3	Blue
4	Black

- Mating part: Sensor X11–X14 (male)
- Phoenix code number: SAC-4P-M 8MS/XX,XX-PUR/M8FS 34CP
- XX,XX is the cable length in [m, cm]

### 3.4 X51 PROFIBUS M12 Male

General ratings:

- 30 V DC, maximum 1 A
- Front/screw mounting IP66, UL type 4
- Tightening torque: 0.2–0.3 Nm (1.8–2.7 in-lb)

**Table 8: Wire/Connector Assignment for Plugs X11–X14**

Pin	Label
1	Brown
2	White
3	Blue
4	Black

- Mating part: PROFIBUS X52 and X51 (female/male)
- Phoenix code number: SAC-2P-MSB/XX,XX-910/FSB SCO CT
- XX,XX is the cable length in [m, cm]

### 3.5 X52 PROFIBUS M12 Female

For non-used connectors. Keep blind plugs installed to connectors at all times to keep the enclosure tight.

General ratings:

- 30 V DC, maximum 1 A
- Front/screw mounting IP66, UL type 4
- Tightening torque: 0.2–0.3 Nm (1.8–2.7 in-lb)

Table 9: Wire/Connector Assignment for Plugs X11–X14

Pin	Label
1	Brown
2	White
3	Blue
4	Black

- Mating part: PROFIBUS X52 and X51 (female/male)
- Phoenix code number: SAC-2P-MSB/XX,XX-910/FSB SCO CT
- XX,XX is the cable length in [m, cm]

### 3.6 LCP Connector

The LCP cable is only used during installation/commissioning. The plug on the LCP connector must be mounted after use. Also refer to the VLT® Decentral Drive FCD 302 Operating Guide.



## 4 Installation

### 4.1 Mounting the Installation Box

#### NOTICE

Potentially lethal voltage is present on the installation box.

- Mount the correct branch circuit protection fuses and the inverter before connecting the installation box to mains.

#### Procedure

1. Mount the installation box on a flat, solid surface.
2. Connect the PE terminal to ground.
3. Connect the motor cable to plug X2 on the installation box.
4. Connect the mains cable to plug X1 on the installation box.

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