

8 Technical Data of MOVIFIT® FDC-SNI

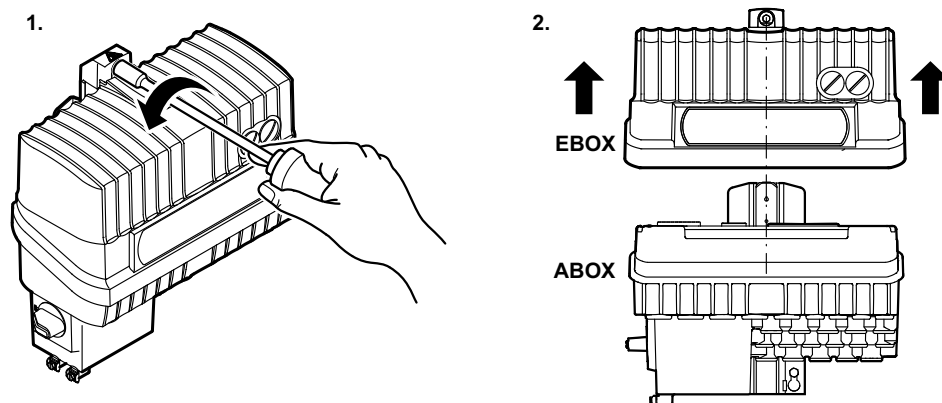
8.1 Type designation and housing concept

8.1.1 Characteristics

The MOVIFIT® FDC housing has the following characteristics:

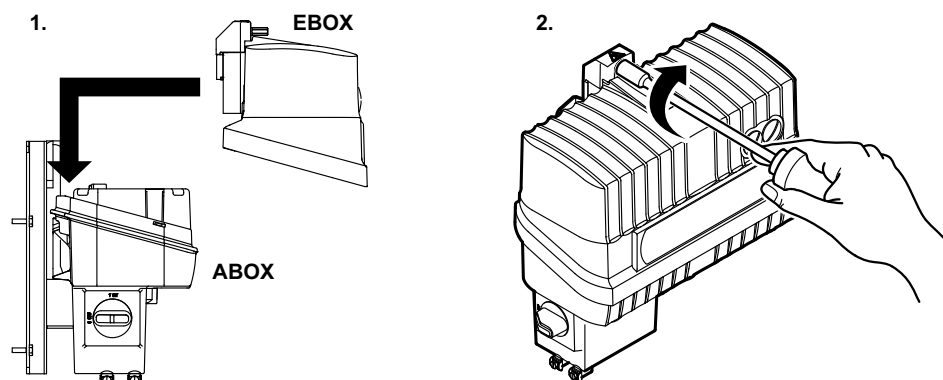
- Aluminum die-cast housing
 - High rigidity
 - IP65 version for industrial requirements
 - Optional design for wet areas with specially treated surface for the food industry
- Separation of connection unit (ABOX) and electronics (EBOX):
 - No damage to the electronics during installation and maintenance
 - Data backup of user parameters on the SD memory card of the EBOX
 - Fast replacement of electronics without wiring: Only one screw is required to connect the EBOX to the ABOX, see following figures.

Remove EBOX

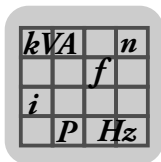


4880603531

Place EBOX on top of ABOX and screw it on



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8.1.2 Example type designation

Example EBOX

MT C 11 A 000 - 503 - R95xx - 00

EBOX variant

00 = Series

Memory card type

R95x = SD card type OMC41B-T0 (parameterizable)

R96x = SD card type OMH41B-T0 (programmable)

Connection type

3 = 3-phase (AC)

Supply voltage

50 = 380 V – 500 V

Unit power

000 = MTC variant (MOVIFIT® FDC)

Version A

Series

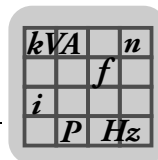
11 = Standard (IP65)

13 = Variant for wet areas (IP65)

Unit type

C = MOVIFIT® FDC

MT = MOVIFIT® unit series



Example: ABOX

MT A 11 A - 50 3 - S04 3 - M16 - 00 / M11

ABOX option

M11 = Stainless steel mounting rail

ABOX variant

00 = Series

Maintenance switch

M16 = Motor protection switch 15 A

M20 = Motor protection switch 20 A

Fieldbus

3 = PROFINET IO, EtherNet/IP, Modbus/TCP

Connection configuration

S04 = Standard ABOX

with terminals and cable bushings

S54 = Hybrid ABOX with M12 for I/Os + bus
and plug connector for MOVIGEAR®

S64 = Hybrid ABOX with M12 for I/Os,
push-pull RJ45 for bus
and plug connector for MOVIGEAR®

Supply phases

3 = 3-phase (AC)

Supply voltage

50 = 380 V – 500 V

A = Version

Series

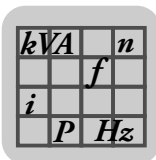
11 = Standard (IP65)

13 = Variant for wet areas (IP65)

Unit type

A = ABOX (connection box)

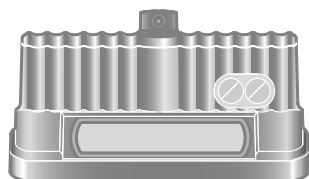
MT = MOVIFIT® unit series



8.1.3 Combination options of MOVIFIT® FDC-SNI

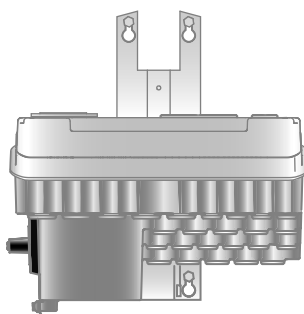
EBOX

MTC...-...-00



MOVIFIT® FDC
for controlling
MOVIGEAR® drive units

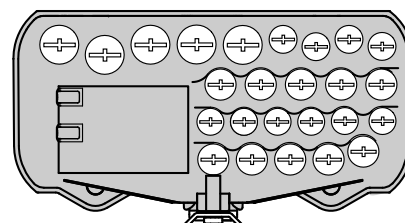
ABOX



ABOX

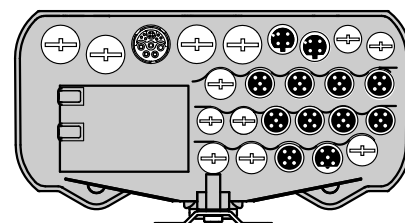
Variant

MTA...-S04.-...-0



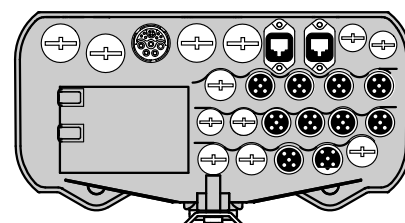
Standard ABOX
with terminals and cable bushings

MTA...-S54.-...-00



Hybrid ABOX
with M12 for I/Os and bus

MTA...-S64.-...-00



Hybrid ABOX
with M12 for I/Os and push-pull RJ45

8.2 Variant for use in wet areas

The following figure shows the MOVIFIT® variant for use in wet areas:



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8.2.1 Characteristics

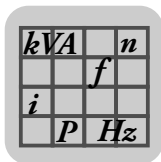
The variant for wet areas has the following characteristics:

- IP65 in accordance with EN 60529 (MOVIFIT® housing closed and all cable entries sealed according to the relevant degree of protection)
- Easy-to-clean housing (self-draining design)
- Surface with non-stick properties
- High impact resistance of the surface against mechanical damage
- Specifically treated mounting rail with anti-adhesive properties
- The variant for wet areas optimally supplements DRC drive units in ASEPTIC / ASEPTIC^{plus} design and MOVIGEAR® drive units with optional package for wet areas



INFORMATION

For detailed information, refer to the "MOVIFIT® FDC-SNI operating instructions.



Technical Data of MOVIFIT® FDC-SNI

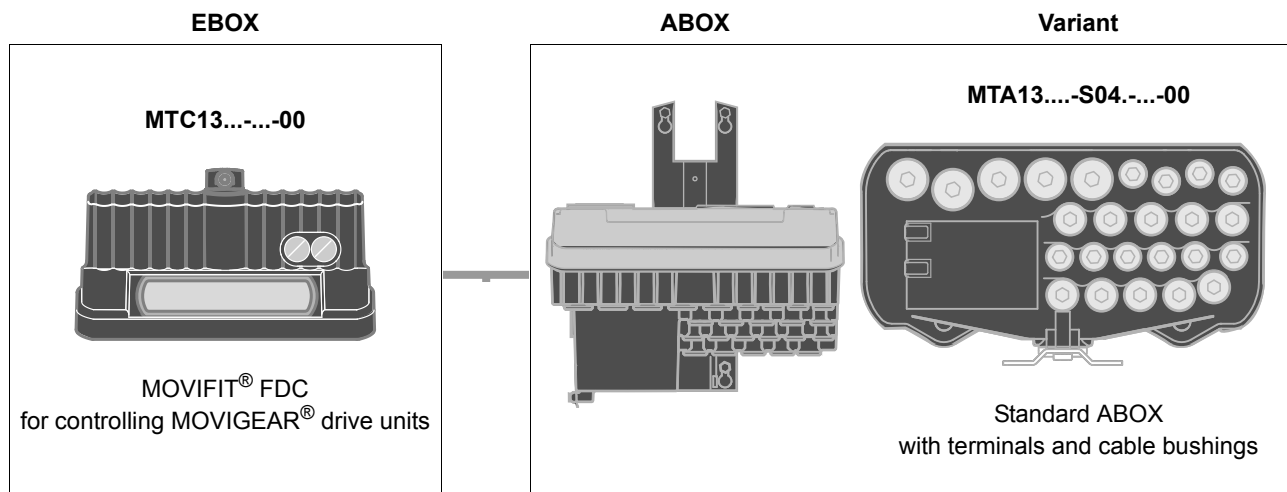
Variant for use in wet areas

8.2.2 Possible combinations in connection with the variant for wet areas



INFORMATION

The variant for wet areas is only available in connection with the standard ABOX with terminals and cable bushings.



In SEW-EURODRIVE publications, all illustrations of MOVIFIT® variants for wet areas are displayed as hatched (= specially treated surface).

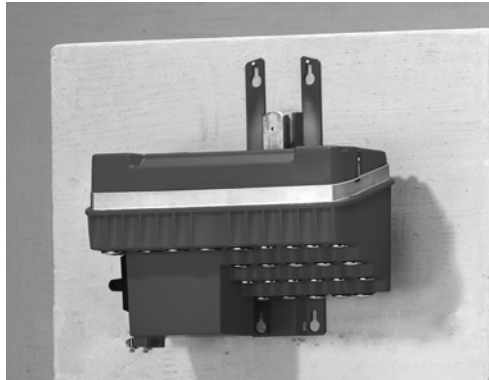
8.3 Flexible connection technology

8.3.1 Overview

The flexible connection technology of MOVIFIT® FDC-SNI allows the unit to be adjusted to suit various installation philosophies. This flexibility is made possible thanks to the fact that in addition to the standard version that has to be wired up, there are also prewired solutions with industry-standard connectors.

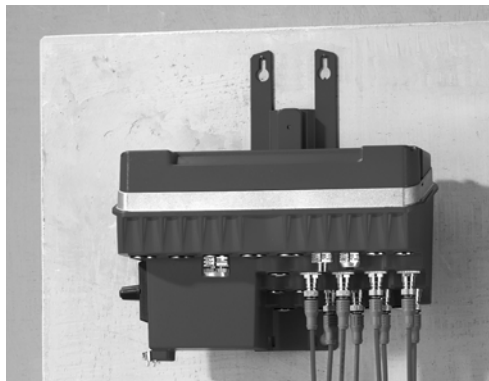
- **Standard ABOX**

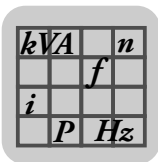
- with terminals and cable bushings



- **Hybrid ABOX**

- with M12 for I/Os and bus
- with M12 for I/Os and push-pull RJ45 for bus



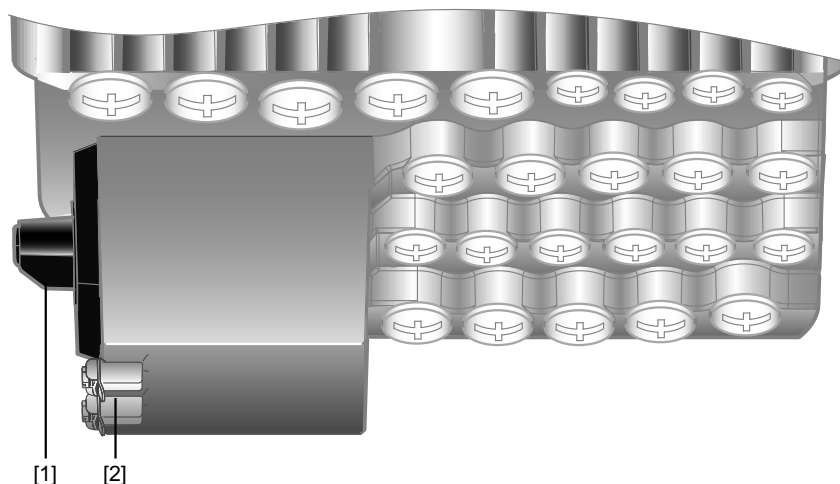


8.4 Available ABOXes

8.4.1 Standard ABOX "MTA...-S04-...-00"

Description

The following figure depicts the standard ABOX "MTA...-S04-...-00" with terminals and cable bushings:



3045820427

- [1] Maintenance switch
- [2] PE connection

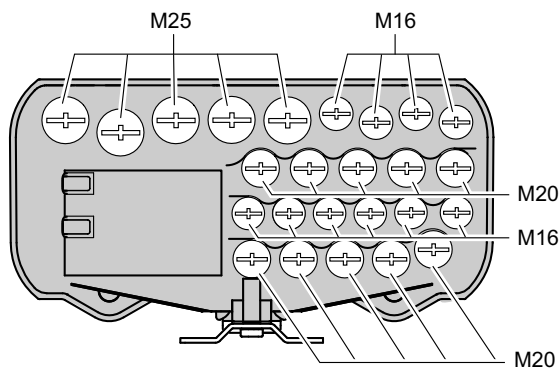
Variants

The standard ABOX is available in the following variants:

- MTA11A-503-**S04**-...-00: Standard ABOX for MOVIFIT® FDC (MTC)
 - Motor protection switch integrated as standard for line protection

The following figure depicts the screw fittings of the standard ABOX:

PROFINET MTA11A-503-S043-...-00
EtherNet/IP MTA11A-503-S043-...-00
Modbus/TCP MTA11A-503-S043-...-00



8.4.2 Hybrid ABOX "MTA...-S54....-00"

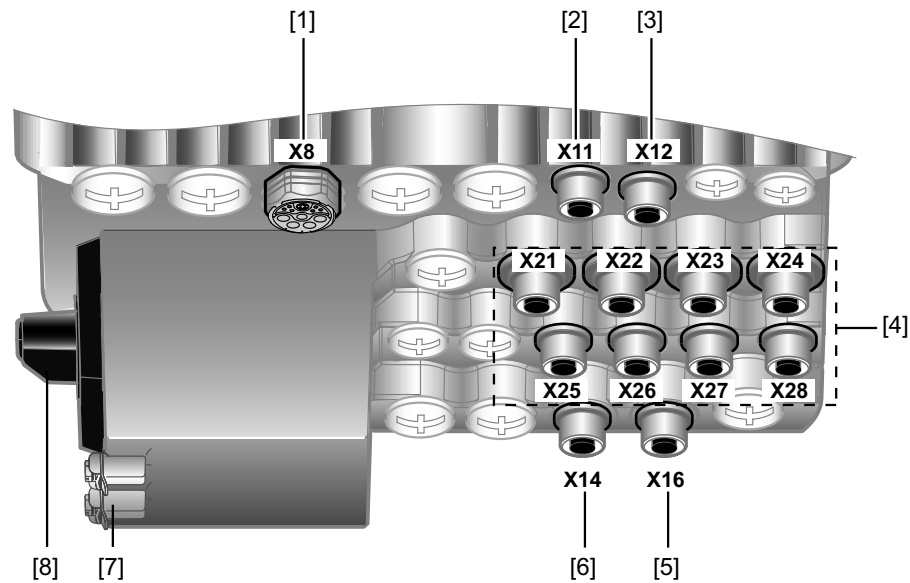


INFORMATION

- The hybrid ABOX is based on the standard ABOX "MTA...-S02....-00". The following therefore only describes the additional plug connectors in comparison with the Standard ABOX.

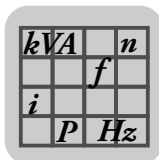
Description

The following figure depicts the hybrid ABOX with M12 plug connectors for connecting I/Os and bus:



3051482891

- [1] AC 400 V output (SNI cable for connecting the MOVIGEAR® drive units)
- [2] Ethernet interface, port 1
- [3] Ethernet interface, port 2
- [4] Binary inputs/outputs
- [5] RS485 interface – external
- [6] SBus (CAN) – external
- [7] PE connection
- [8] Maintenance switch



Technical Data of MOVIFIT® FDC-SNI

Available ABOXes

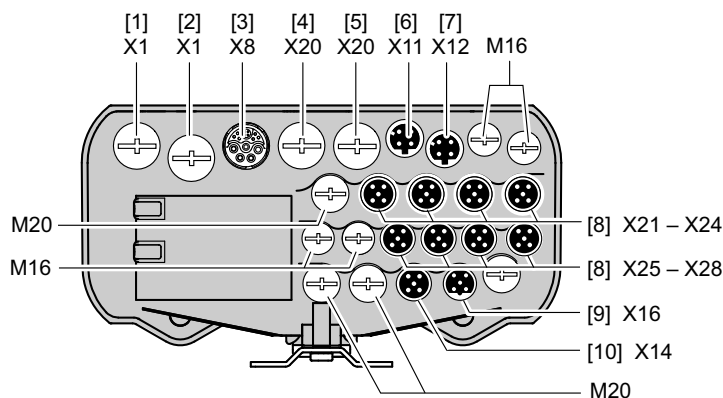
Variants

The hybrid ABOX is available in the following variants:

- MTA11A-503-S54-...-00: Hybrid ABOX for MOVIFIT® FDC (MTC)
 - Motor protection switch integrated as standard for line protection

The following figure shows the cable glands and plug connectors of the Hybrid ABOX:

PROFINET MTA11A-503-S543-...-00
EtherNet/IP MTA11A-503-S543-...-00
Modbus/TCP MTA11A-503-S543-...-00



3051956747

[1]	X1	AC 400 V input	(terminals underneath the M25 gland)
[2]	X1	Reserved	(M25 gland)
[3]	X8	AC 400 V output (SNI)	(M23 H-Tec, SEW P-insert 15-pole, female, coding 1)
[4]	X20	DC 24 V input	(terminals underneath the M25 gland)
[5]	X20	Reserved	(M25 gland)
[6]	X11	Ethernet interface, port 1	(M12, 4-pole, female, D-coded)
[7]	X12	Ethernet interface, port 2	(M12, 4-pole, female, D-coded)
[8]	X21 – X28	Binary inputs/outputs	(M12, 5-pole, female, A-coded)
[9]	X16	RS485 interface – external	(M12, 5-pole, female, B-coded)
[10]	X14	SBus (CAN) – external	(M12, 5-pole, female, A-coded)

kVA	n
f	
i	
P	H_z

8.4.3 Hybrid ABOX "MTA...-S64....-00"

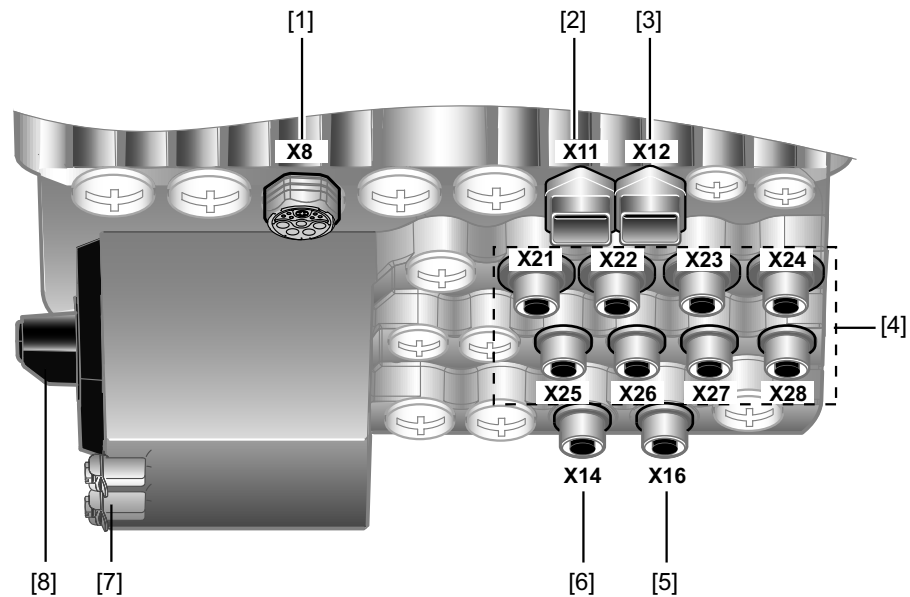


INFORMATION

- The hybrid ABOX is based on the standard ABOX "MTA...-S02....-00". The following therefore only describes the additional plug connectors in comparison with the Standard ABOX.

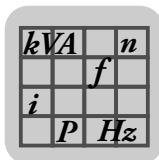
Description

The following figure shows the hybrid ABOX with M12 plug connectors for connecting I/Os and push-pull RJ45 plug connector for Ethernet connection:



3053262091

- [1] AC 400 V output (SNI cable for connecting the MOVIGEAR® drive units)
- [2] Ethernet interface, port 1
- [3] Ethernet interface, port 2
- [4] Binary inputs/outputs
- [5] RS485 interface – external
- [6] SBus (CAN) – external
- [7] PE connection
- [8] Maintenance switch



Technical Data of MOVIFIT® FDC-SNI

Available ABOXes

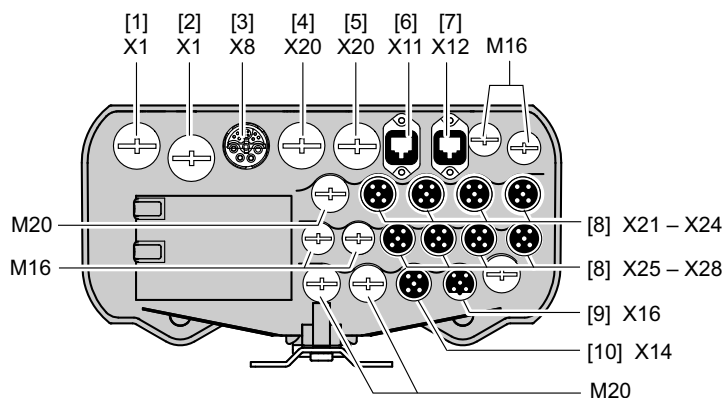
Variants

The hybrid ABOX is available in the following variants:

- MTA11A-503-S64-...-00: Hybrid ABOX for MOVIFIT® FDC (MTC)
 - Motor protection switch integrated as standard for line protection

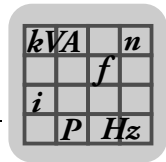
The following figure shows the cable glands and plug connectors of the Hybrid ABOX:

PROFINET MTA11A-503-S643-...-00
EtherNet/IP MTA11A-503-S643-...-00
Modbus/TCP MTA11A-503-S643-...-00



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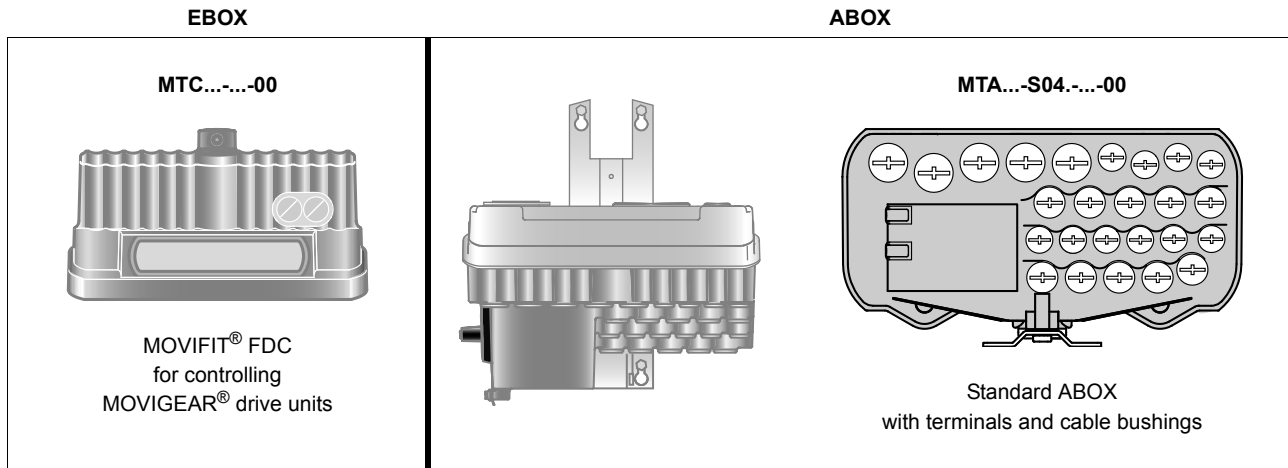
[1]	X1	AC 400 V input	(terminals underneath the M25 gland)
[2]	X1	Reserved	(M25 gland)
[3]	X8	AC 400 V output (SNI)	(M23 H-Tec, SEW P-insert 15-pole, female, coding 1)
[4]	X20	DC 24 V input	(terminals underneath the M25 gland)
[5]	X20	Reserved	(M25 gland)
[6]	X11	Ethernet interface, port 1	(Han® 3 A RJ45)
[7]	X12	Ethernet interface, port 2	(Han® 3 A RJ45)
[8]	X21 – X28	Binary inputs/outputs	(M12, 5-pole, female, A-coded)
[9]	X16	RS485 interface – external	(M12, 5-pole, female, B-coded)
[10]	X14	SBus (CAN) – external	(M12, 5-pole, female, A-coded)



8.5 Selection tables

8.5.1 Available combinations for MOVIFIT® FDC-SNI

MOVIFIT® FDC-SNI in connection with standard-ABOX MTA...-S04-...-00



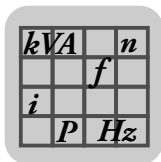
Performance class	Fieldbus	EBOX Type	ABOX Type
CCU standard (R95x)	PROFINET EtherNet/IP Modbus/TCP	MTC11A000-503-R95x-00	MTA11A-503-S043-M16-00 MTA11A-503-S043-M20-00
MOVI-PLC® standard (R96x)	PROFINET EtherNet/IP Modbus/TCP	MTC11A000-503-R96x-00	MTA11A-503-S043-M16-00 MTA11A-503-S043-M20-00

Accessories

Type	Figure	Content	Size	Part number
EMC cable gland (brass, nickel plated)		10 pcs	M16 x 1.5	1820 478 3
		10 pcs	M20 x 1.5	1820 479 1
		10 pcs	M25 x 1.5	1820 480 5
Screw plug for interfaces on the EBOX		1 piece		1 813 062 3

Option

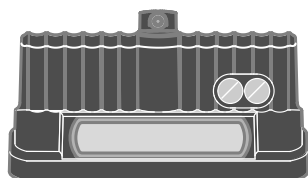
Option	Integrated in	Type
Stainless steel mounting rail	ABOX	/M11



MOVIFIT® FDC-SNI in connection with standard ABOX and design for wet areas

EBOX

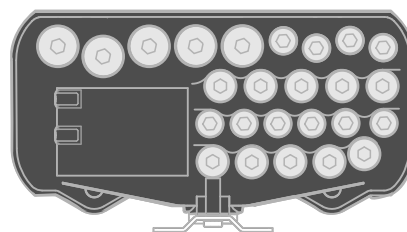
MTC13....-00
(variant for use in wet areas)



MOVIFIT® FDC
for controlling up to
10 MOVIGEAR® drive units

ABOX

MTA13....S04....-00
(variant for use in wet areas)



Standard ABOX
with terminals and cable bushings

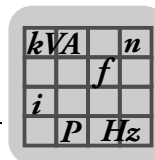
Performance class	Fieldbus	EBOX Type	ABOX Type
CCU standard (R95x)	PROFINET EtherNet/IP Modbus/TCP	MTC13A000-503-R95x-00	MTA13A-503-S043-M16-00 MTA13A-503-S043-M20-00
MOVI-PLC® standard (R96x)	PROFINET EtherNet/IP Modbus/TCP	MTC13A000-503-R96x-00	MTA13A-503-S043-M16-00 MTA13A-503-S043-M20-00

Accessories

Type	Figure	Content	Size	Part number
EMC cable gland (brass, nickel plated)		10 pcs	M16 x 1.5	1820 478 3
		10 pcs	M20 x 1.5	1820 479 1
		10 pcs	M25 x 1.5	1820 480 5
EMC cable gland (stainless steel)		10 pcs	M16 x 1.5	1821 636 6
		10 pcs	M20 x 1.5	1821 637 4
		10 pcs	M25 x 1.5	1821 638 2
Stainless steel screws plugs		10 pcs	M16 x 1.5	1820 223 3
		10 pcs	M20 x 1.5	1820 224 1
		10 pcs	M25 x 1.5	1820 226 8
Screw plug for interfaces on the EBOX		1 piece		1 813 062 3

Option

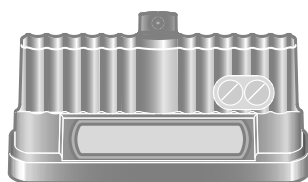
Option	Integrated in	Type
Stainless steel mounting rail	ABOX	/M11



MOVIFIT® FDC-SNI in connection with hybrid ABOX MTA...-S54.-...-00

EBOX

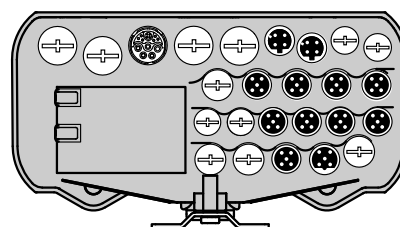
MTC...-...-00



MOVIFIT® FDC
for controlling
MOVIGEAR® drive units

ABOX

MTA...-S54.-...-00



Hybrid ABOX
with M12 for I/Os and bus

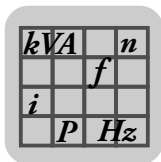
Performance class	Fieldbus	EBOX Type	ABOX Type
CCU standard (R95x)	PROFINET EtherNet/IP Modbus/TCP	MTC11A000-503-R95x-00	MTA11A-503-S543-M16-00 MTA11A-503-S543-M20-00
MOVI-PLC® standard (R96x)	PROFINET (Cu) EtherNet/IP (Cu) Modbus/TCP (Cu)	MTC11A000-503-R96x-00	MTA11A-503-S543-M16-00 MTA11A-503-S543-M20-00

Accessories

Type	Figure	Content	Part number
RJ45-M12 Ethernet adapter RJ45 (internal) M12 (external) 2 required for each unit.		1 piece	1 328 168 2
Screw plug for interfaces on the EBOX		1 piece	1 813 062 3

Option

Option	Integrated in	Type
Stainless steel mounting rail	ABOX	/M11

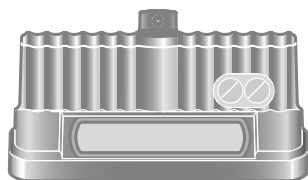


Technical Data of MOVIFIT® FDC-SNI Selection tables

MOVIFIT® FDC-SNI in connection with hybrid ABOX MTA...-S64-...-00

EBOX

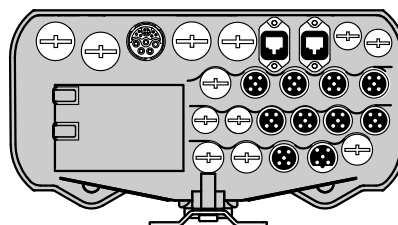
MTC...-...-00



MOVIFIT® FDC
for controlling
MOVIGEAR® drive units

ABOX

MTA...-S64-...-00



Hybrid ABOX
with M12 for I/Os and push-pull RJ45

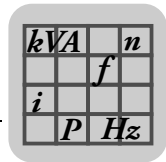
Performance class	Fieldbus	EBOX Type	ABOX Type
CCU standard (R95x)	PROFINET EtherNet/IP Modbus/TCP	MTC11A000-503-R95x-00	MTA11A-503-S643-M16-00 MTA11A-503-S643-M20-00
MOVI-PLC® standard (R96x)	PROFINET EtherNet/IP Modbus/TCP	MTC11A000-503-R96x-00	MTA11A-503-S643-M16-00 MTA11A-503-S643-M20-00

Accessories

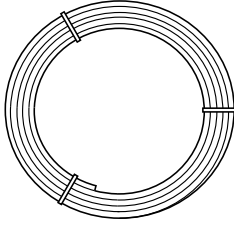
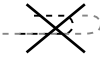
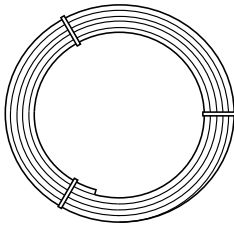
Type	Figure	Content	Part number
Ethernet closing plug for push-pull RJ45 socket		10 pcs	1 822 370 2
		30 pcs	1 822 371 0
RJ45-M12 Ethernet adapter RJ45 (internal) M12 (external) 2 required for each unit.		1 piece	1 328 168 2
Screw plug for interfaces on the EBOX		1 piece	1 813 062 3

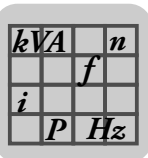
Option

Option	Integrated in	Type
Stainless steel mounting rail	ABOX	/M11

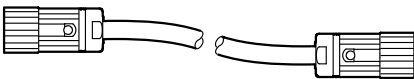
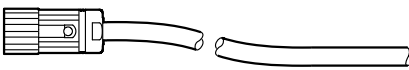
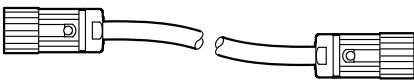
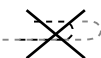
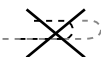


8.5.2 Hybrid cables for connecting MOVIFIT® FDC and drive unit

MOVIFIT® FDC	SNI connection cable	Length/routing	Cable cross section/cable type
Standard ABOX: MTA...-S04.-...-00	Part no. 1 330 330 9 Cable reel 30 m Cable reel 100 m Cable reel 200 m  Open cable end (not prefabricated)	Variable 	2.5 mm ² HELUKABEL TOPFLEX® – EMV- UV-2YSLCYK-J
	Part no. 1 330 550 6 Cable reel 30 m Cable reel 100 m Cable reel 200 m  Open cable end (not prefabricated)	Variable 	4 mm ² HELUKABEL TOPFLEX® – EMV- UV-2YSLCYK-J

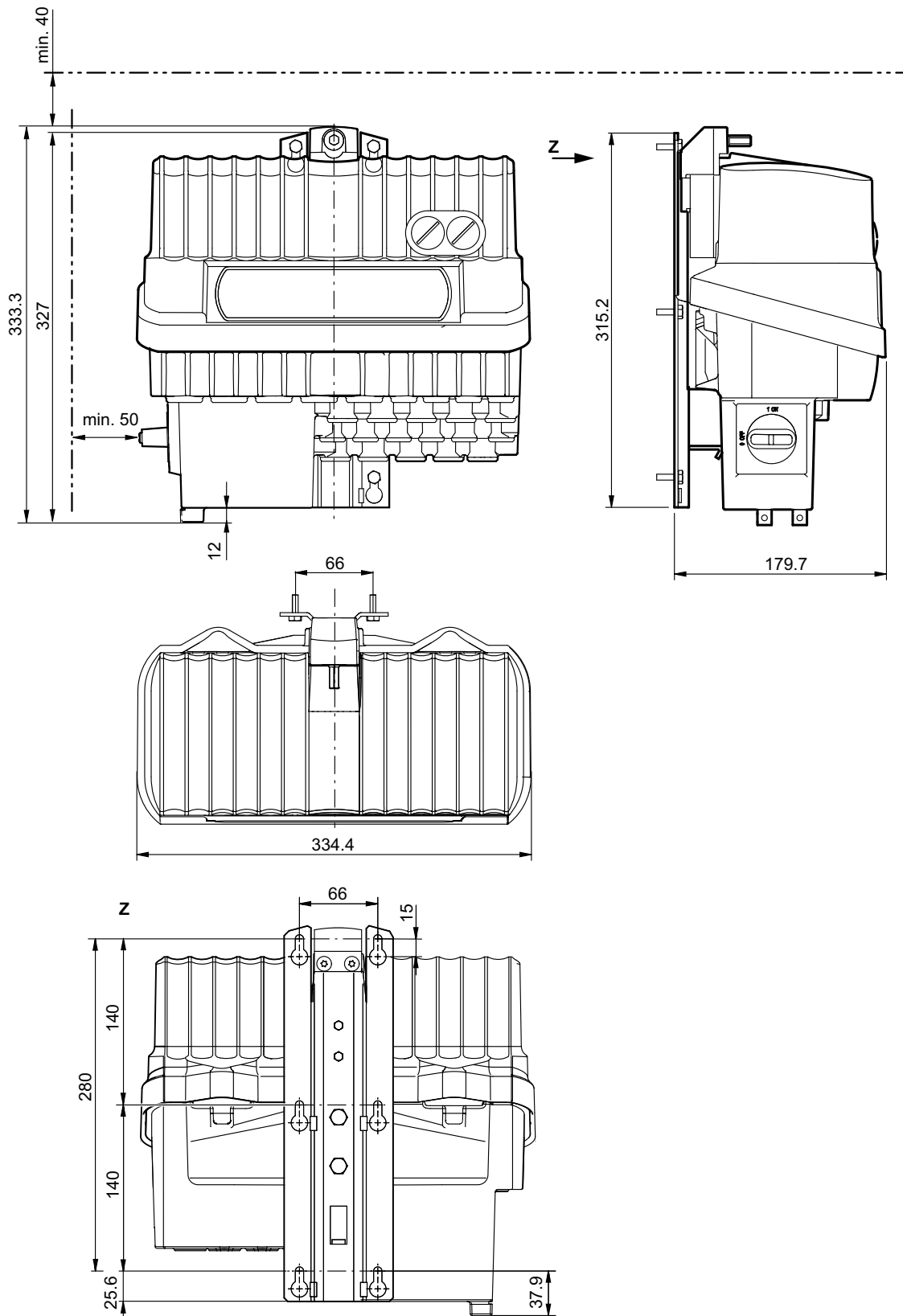


Technical Data of MOVIFIT® FDC-SNI Selection tables

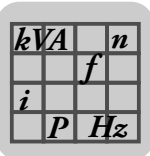
MOVIFIT® FDC	SNI connection cable	Length/routing	Cable cross section/cable type
Hybrid ABOX: MTA...-S54...-00 MTA...-S64...-00	Part number 1 812 750 9  M23, coding ring: Red	Variable 	2.5 mm ² HELUKABEL TOPFLEX® – EMV- UV-2YSLCYK-J
	Part number 1 812 751 7  M23, coding ring: Red	Variable 	2.5 mm ² HELUKABEL TOPFLEX® – EMV- UV-2YSLCYK-J
	Part number 1 812 752 5  M23, coding ring: Red	Variable 	4 mm ² HELUKABEL TOPFLEX® – EMV- UV-2YSLCYK-J
	Part number 1 812 753 3  M23, coding ring: Red	Variable 	4 mm ² HELUKABEL TOPFLEX® – EMV- UV-2YSLCYK-J

8.6 Dimension drawings

8.6.1 MOVIFIT® FDC with standard mounting rail



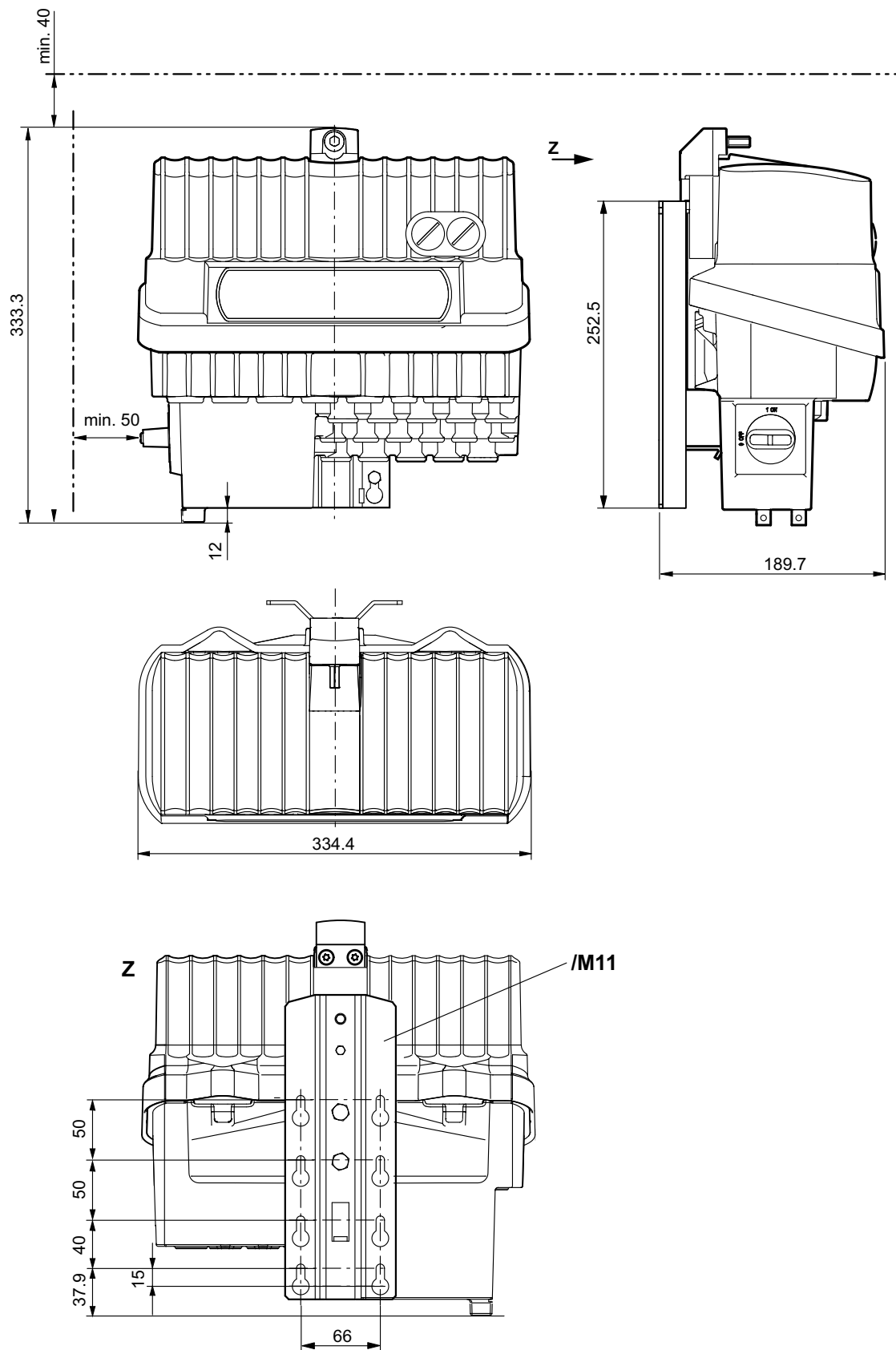
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Technical Data of MOVIFIT® FDC-SNI

Dimension drawings

8.6.2 MOVIFIT® FDC with optional stainless steel mounting rail M11



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