MEDIUM VOLTAGE PRODUCTS

UEMC 41

Motor Operating Device

Contents

UEMC 41
Motor Operating Device

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01
UEMC 41 drive design
1 – Gearbox,
2 – Motor,
3 – Drive cover,
4 – Microswitch (service lock),
5 – Shaft output for manual operating,
6 – Selector (for selecting drive mode – see more in point "Mechanical selector description"),
7 – Microswitch (for setting angle of rotation),
8 – Coupling bush,
9 – Locking coil (optional)

1. General information
The UEMC 41 – motor operating devices are intended for indoor mounting on medium voltage switch-disconnectors, disconnectors and earthing switches. The operating device is reliable in changing temperature and humidity conditions. Operation can be performed both electrically and manually by operating lever. Operating time is from 4 to 10 s depending on the type of device and loading conditions.

2. Standards
The motor operating device complies with: IEC 60335-1, IEC 62271-1; IEC 62271-102; IEC 62271-103.

3. Transport and storage
The motor operating device can be transported in any position. Drive should be stored indoors in a dry area.

4. Rated data

Characteristic		Value
Mechanical and electrical locking	-	Yes
Nominal torque	Nm	150
Max. torque	Nm	300
Max external dimensions (without control cabinet) HxWxD	mm	415x135x140
Auto blocking	-	Yes
Rotation angle adjustment	-	Yes
Default rotation angle setting	°	150
Rotation angle	°	from 0 to 300
Max. mechanical endurance	Cycles	5000
Supplying voltages	V	24VDC, 48VDC, 110/125 AC/DC, 220/230 AC/DC
Working temperature	°C	-40 +75
Weight (depends on versions)	kg	8,2-11

Rated voltage	Rated current	Max. peak current	Microswitch
24 VDC	12 A	40 A	S201 K8
48 VDC	6 A	20 A	S202 K4
60 VDC	5 A	17 A	S202 K4
110 VDC	2 A	5,5 A	S202 K2
220 VDC	1 A	3 A	S282 UCK 1
110 VAC	2 A	6 A	S202 K2
230 VAC	1 A	3 A	S202 K1

Contactors:
Closing power: 3W
Holding power: 3W
Minimum control signal time: 100 ms

5. Customer benefits
- Easy to use – compact design,
  - Wide range of applications and supplying voltages: 24, 48, 110/125, 220/230 VAC/VDC,
- Wide range of working temperature (from -40°C to +70°C),
- Easy adjusting of rotation angle in wide range from 0° up to 300°,
- Reliability:
  - high number of operation – up to 5000 cycles,
  - max. torque 300 Nm,
- Safety:
  - mechanical and electrical locking,
  - maintenance free (5000 cycles, 10 years)
- Low noise operation

6. Design
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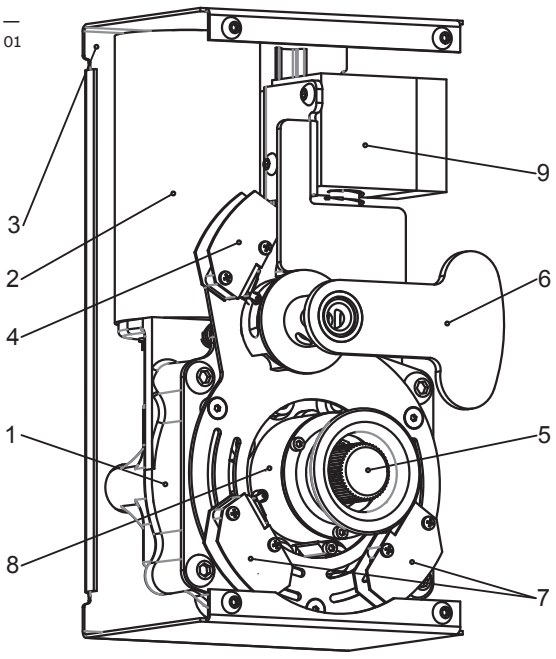
01



7. Mechanical selector description
There is a selector added to choose correct drive mode. This selector could be locked by padlock.

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02
Mechanical selector
possible selection

Note:

It is advice by manufacturer to put padlock after changing position for safety reasons.

Drive is equipped in mechanical and electrical locking systems. Mechanical locking is performed by changing the position of selector – there are three positions of mechanical lock:

- first one when lever is in vertical position (motor drive) there is not possible to operate the motor drive by operating handle;
- second position (drive blocked) when the lever is moved slightly to the right and there is not possible to operate motor drive by operating handle, the voltage supply is disconnected by mircoswitch and shaft of motor drive is mechanically locked;
- third position (manual drive) when the lever is in horizontal position and the voltage supply is disconnected by mircoswitch, shaft of motor drive is mechanically locked but there is possibility to operate manually of apparatus connected to motor drive.

There is optional accessory called locking coil – there blocks selector in any possible positions. Position of selector (See Drawing 1 item 6.) could be changed only in case when voltage is applied to locking coil. Moreover there is possibility to use padlock for each positions of selector.

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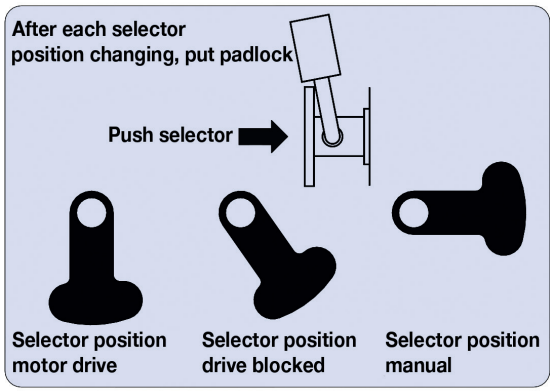
02



8. Ordering code

Motor drive can be order separately based on below code.

Type		Operation voltage		Control box		Locking coil		Type of connection with apparatus		Compatible switch
UEMC 41	/	.....	/	.....	/	.....	/	.....	/	.....
		24 V DC		ICB		W/O		A		NAL
		48 V DC		ECB		24 V DC		B		E/EB
		110 V DC		CC		48 V DC		C		OW III
		125 V DC				110 V DC		D		OWD
		220 V DC				125 V DC		W/O*		EK6
						220 V DC				OJON
		110 V AC								OJWN
		125 V AC				110 V AC				inne
		230 V AC				125 V AC				
						230 V AC				

Control box:
ICB: Internal Control Box,
ECB: External Control Box,
CC: Control components.

Type of connection with apparatus:
A – Front mounting motor with connection up to 40 degrees,
B – Front mounting motor with 90° connection,
C – Motor drive installed directly on the shaft (left side),
D – Motor installed on the wall,
W/O* – UEMC 41 drive with cardan joint without additional connection.

Example of ordering code:
UEMC 41 / 24 V DC / ICB / 230 V AC / A / NAL

UEMC 41 – drive with:

- Operation voltage 24 V DC,
- Internal control box,
- Locking coil voltage 220 V DC,
- Front mounting motor with connection up to 40 degrees,
- Compatible with NAL switch

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03
UEMC 41 drive with internal control box

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04
UEMC 41 drive with control components

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05
UEMC 41 drive with control components

ICU
(Internal Control Box)

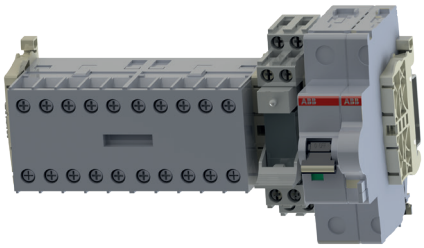
—
03

ECB
(External Control Box)

—
04

CC
(Control components to assembly by customer)

—
05



9. Connection kits

a. Connection A - Front mounting motor with connection up to 40°,

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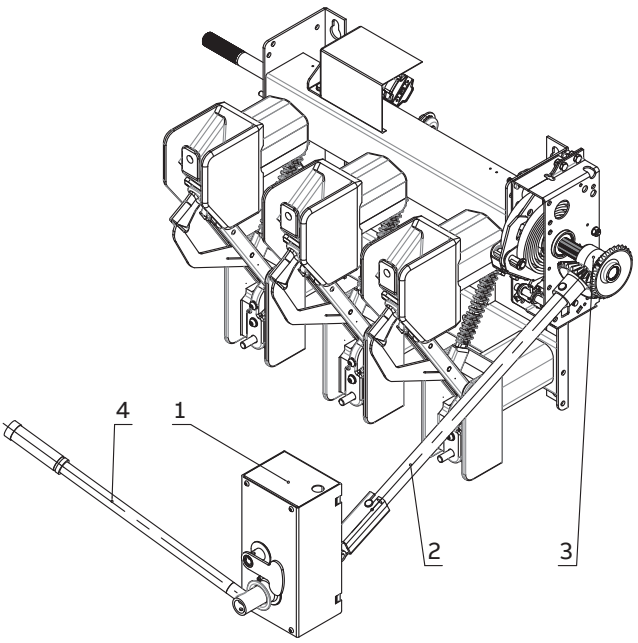
06
NAL mounted on the wall. Drive mounted on the front panel. Connection with cardanic joint.
Connection kit includes:
1 – UEMC 41 drive
2 – Connecting rod L=1,3 m*
3 – Bevel gear
4 – Manual operating handle
* Other lengths available on request



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07
Switch mounted on the wall. Drive mounted on the front panel. Connection with short shaft.
Connection kit includes:
1 – UEMC 41 drive
2 – Manual operating handle
3 – Vertical connecting rod L=2 m*
4 – Bevel gear
5 – Transmission 90° complete
6 – Connecting rod
* Other lengths available on request

b. Connection B – Front mounting motor with 90° connection.

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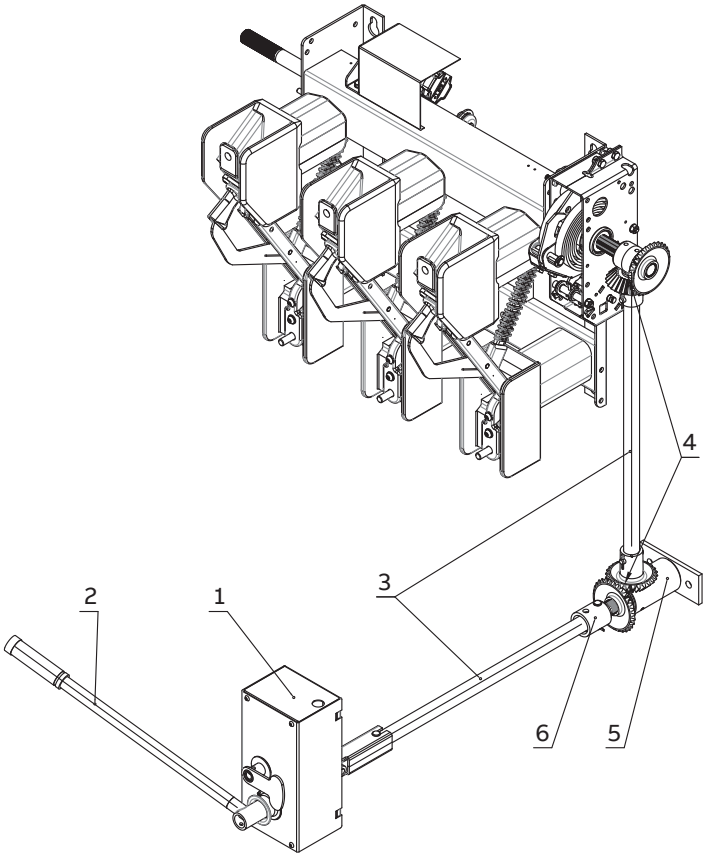
07



c. Connection C - Motor drive installed directly on the shaft (left side)

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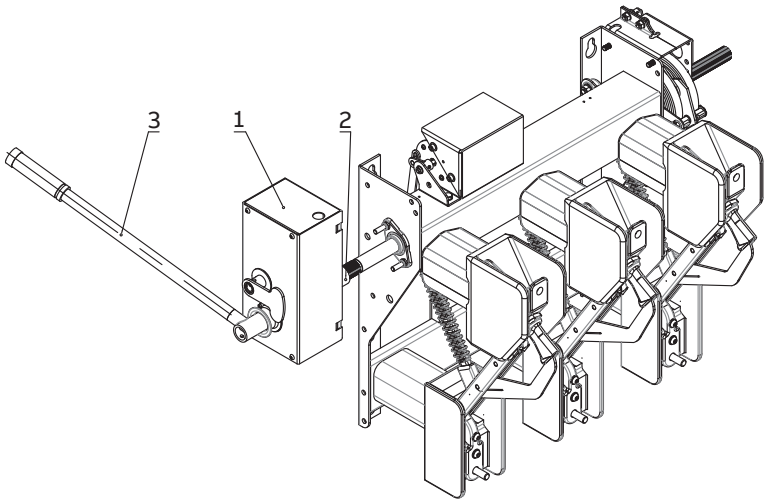
08
Motor drive mounted directly on the switch shaft on left hand side
Connection kit includes:
1 – UEMC 41 drive
2 – Jointing sleeve
3 – Manual operating handle



d. Connection D – Motor drive installed on the wall

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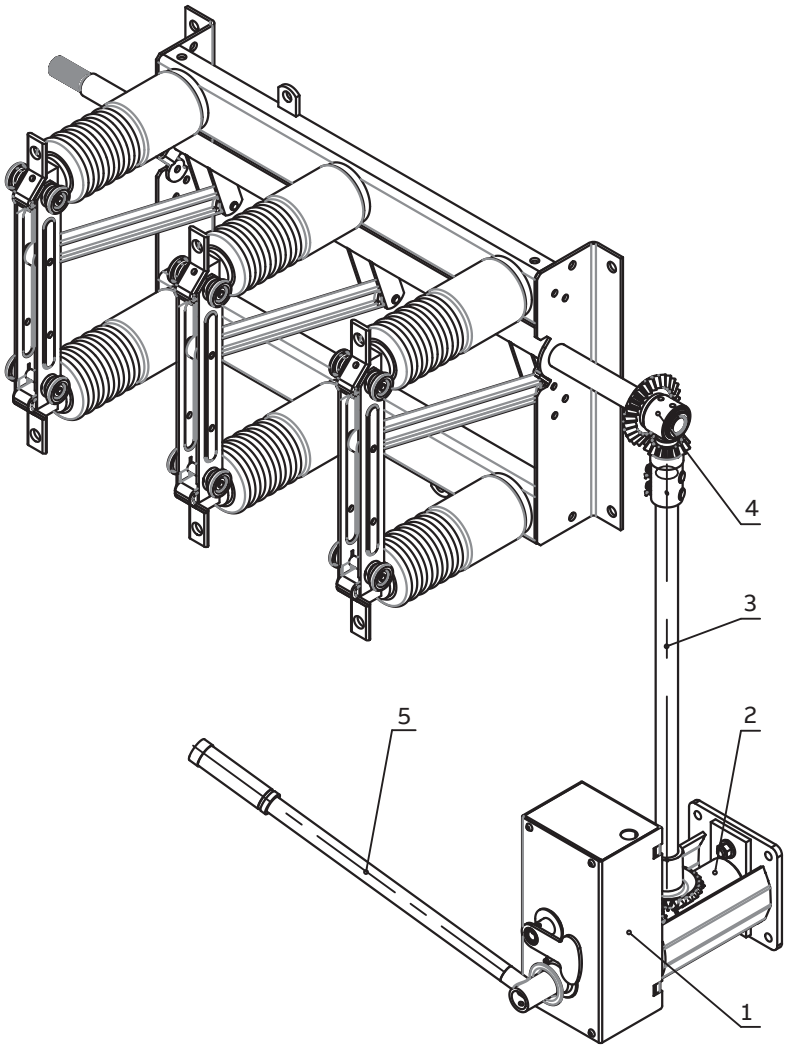
09
Example of switch with drive mounted on common wall with a switch.
Connection kit includes:
1 – UEMC 41 drive
2 – Support with bevel gear
3 – Connecting rod L=2 m*
4 – Bevel gear
* Other lengths available on request



10. Control box description

a. UEMC 41 / ... / ICB /... –drive with integrated control box

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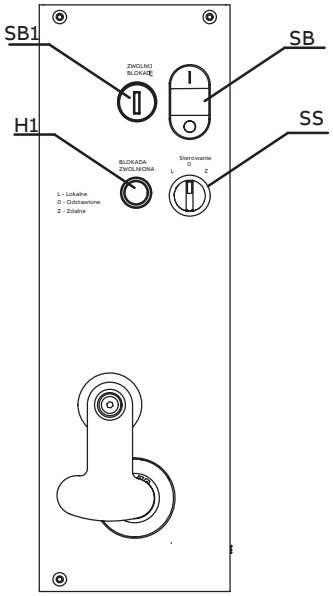
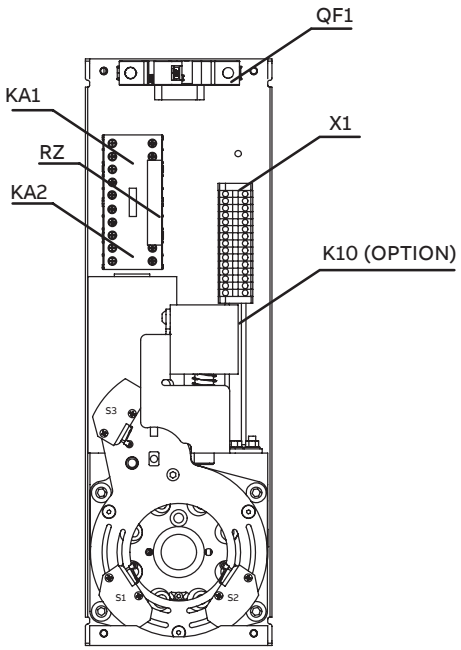
10
UEMC 41 – drive with integrated control box
KA1,KA2 – Contactors
SB – Pushbuttons (close/open)
SS – Local/Disabled/ Remote selector
RZ – Braking resistor
QF1 – MCB main power supply
X1 – Connection terminals
K10 – Lock coil
SB1 – Lock release button
H1 – Lock release





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11
External control box for UEMC 41
X0/X1/X2 – Connection terminal
KA1/KA2 – contactors
QF1 – Motor power supply MCB
S1 – MCB auxiliary
SB1 – Lock enable pushbutton
H1 – Lock enabled lamp
SS – selector switch
SB – close/ open pushbuttons.

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12
UEMC 41 – drive without integrated control box

b. UEMC 41 / ... / OCB /... –drive with external control box

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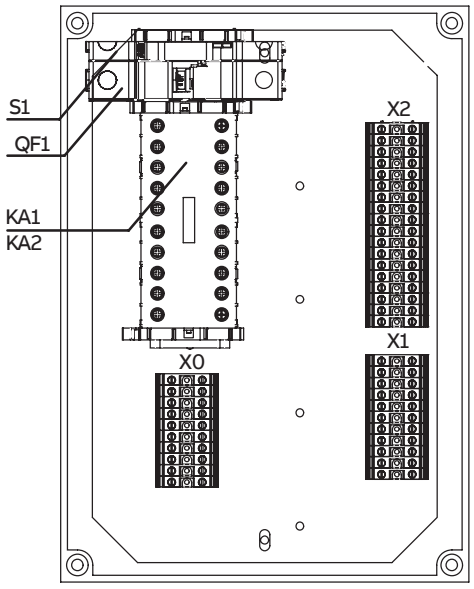
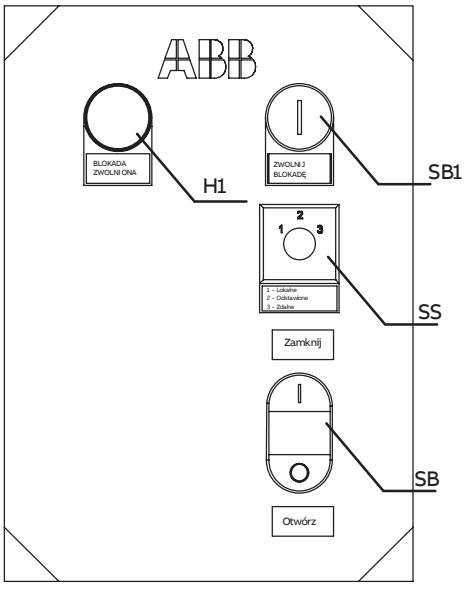
11





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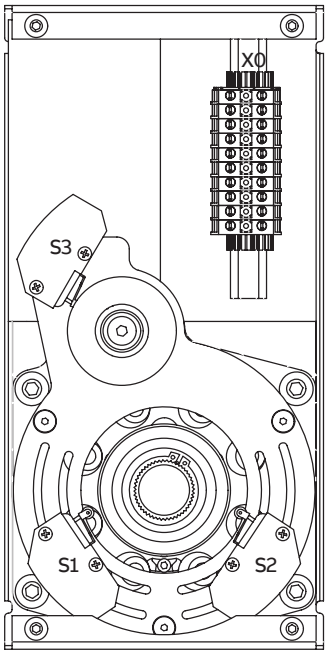

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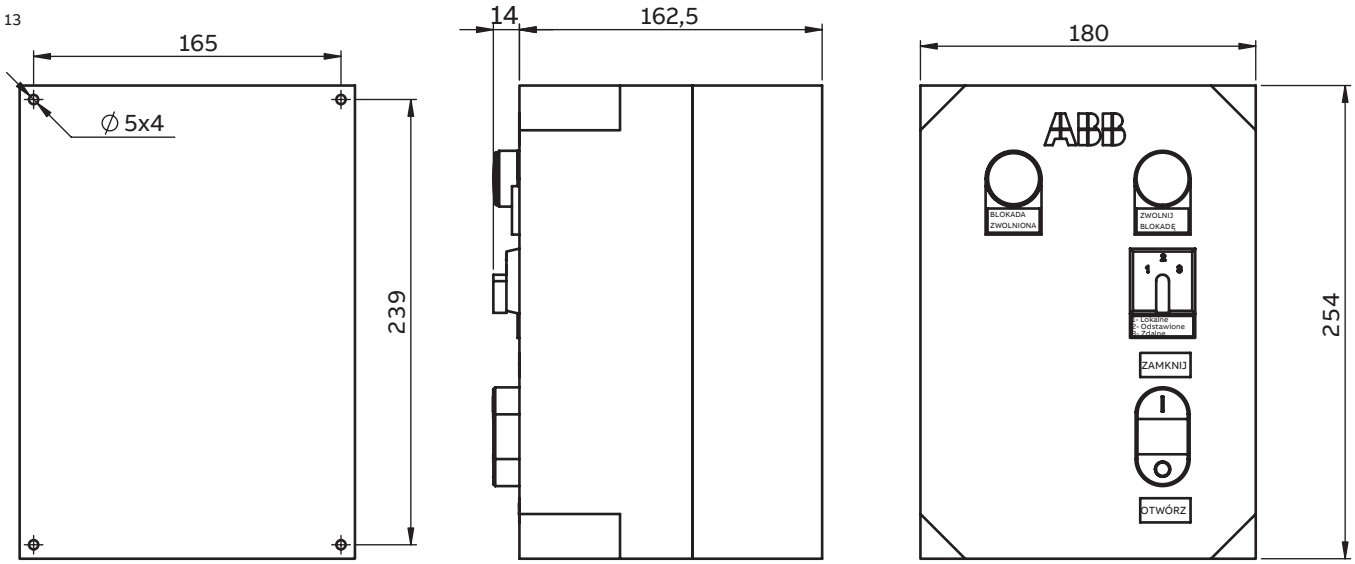

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13
UEMC 41 – drive with external control box

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14
UEMC 41 – drive without integrated control box (control components available separately).

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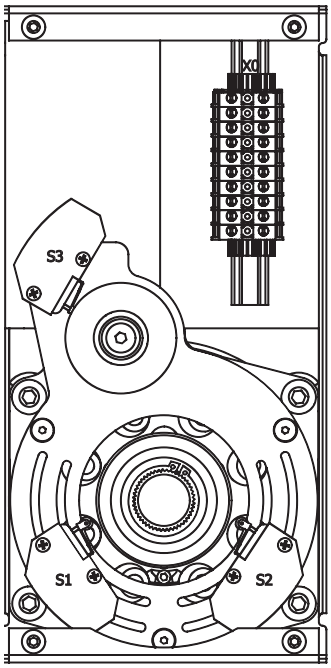
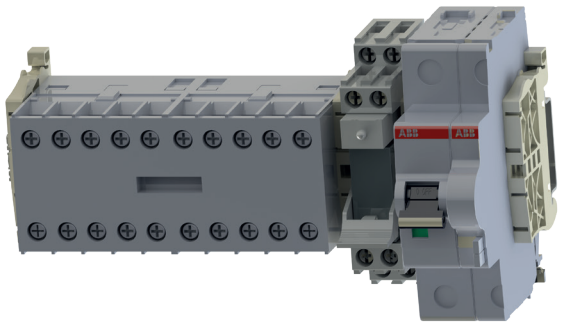
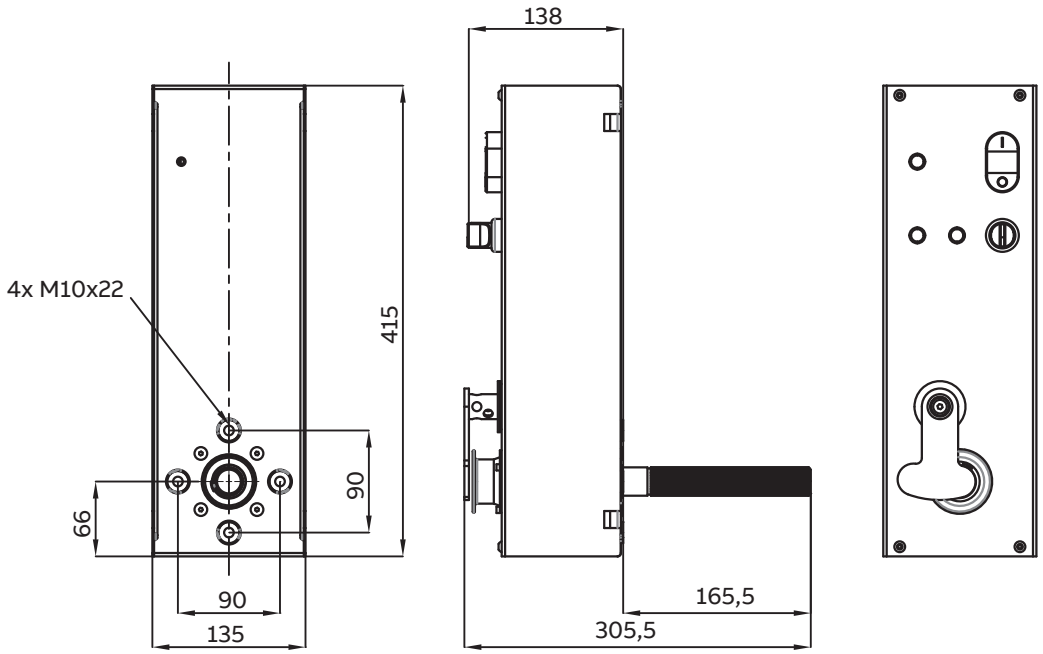
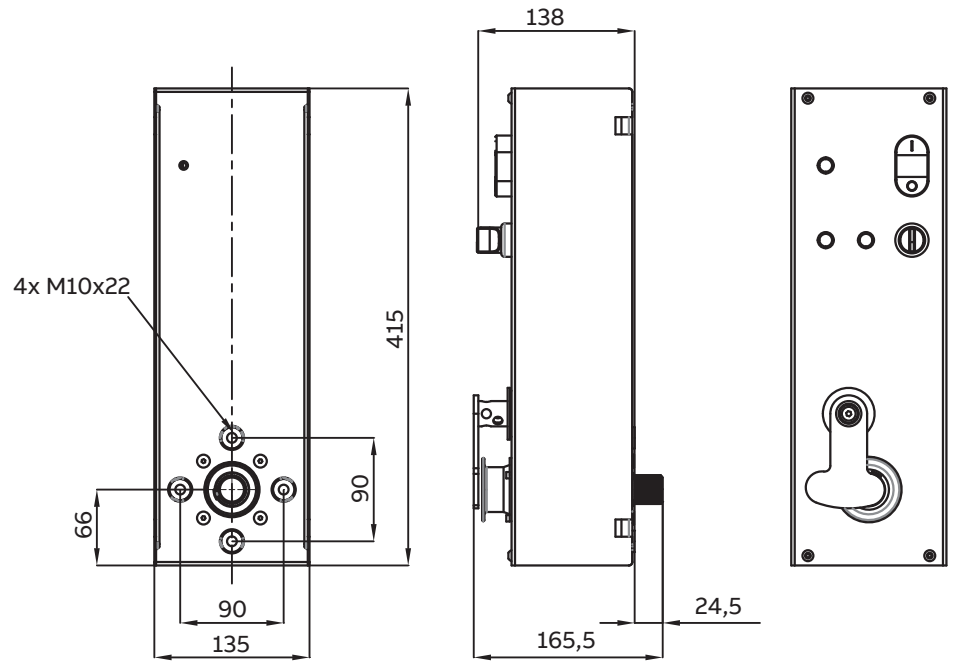
14





11. Dimensions

a. UEMC 41 / … / ICB /… - UEMC 41 with integrated control box

No	
1	— 15 
2	— 16 

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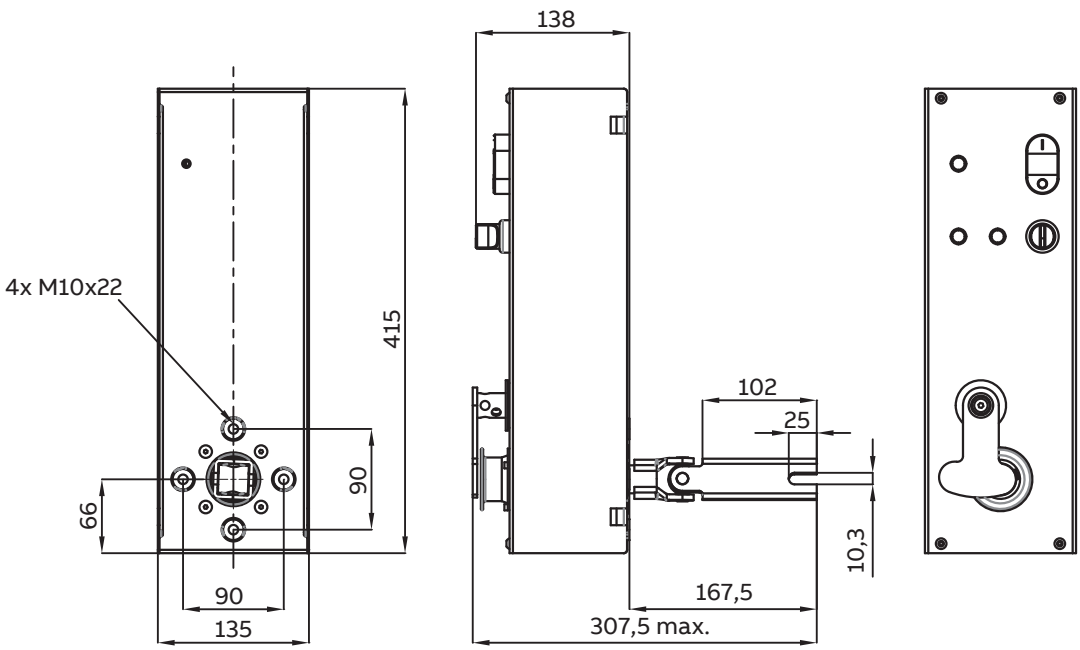
15
Drive with long shaft

—
16
Drive with short shaft

No	
3	— 17 

b. UEMC 41 / … / OCB /… and UEMC 41 / … / CC /… - UEMC 41 drive without integrated control box

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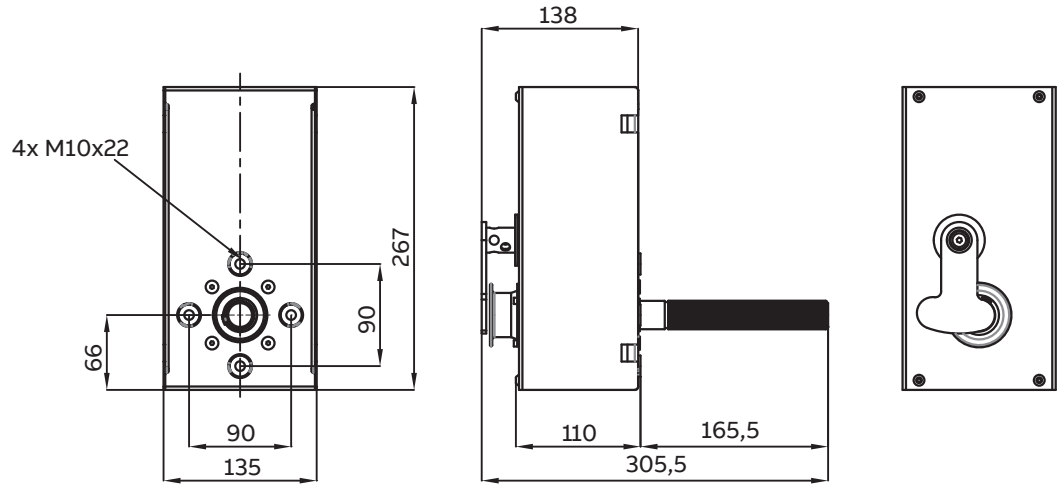
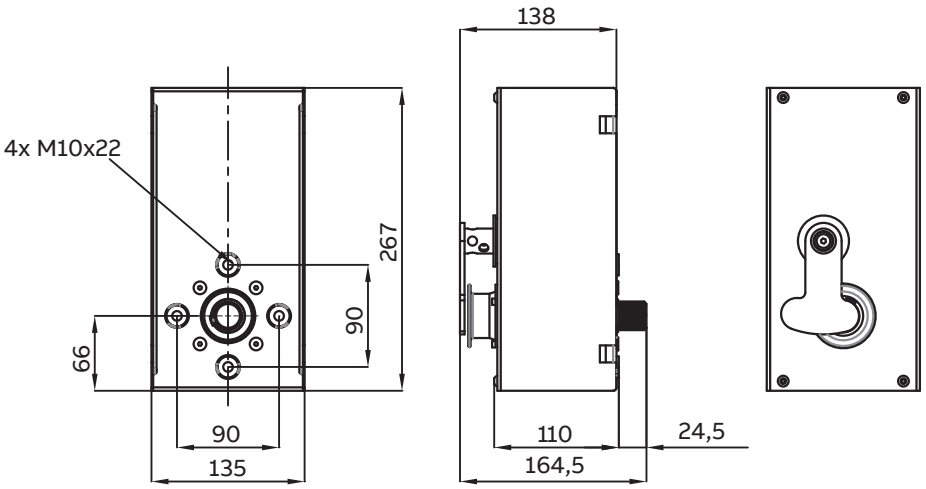
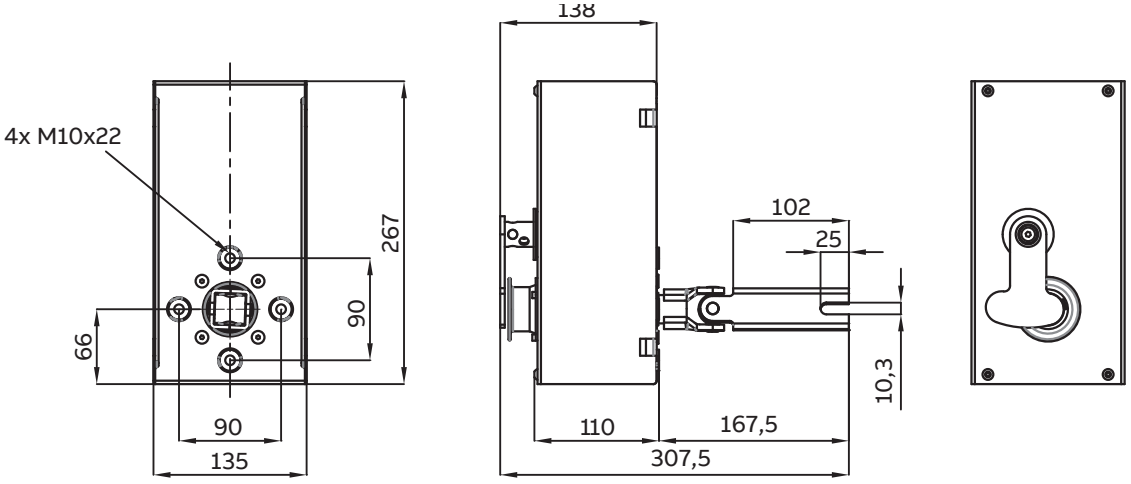
1	— 18 

— 17
Drive with cardan joint

— 18
Drive with long shaft

No	
2	— 19 
3	— 20 

—
19
Drive with short shaft

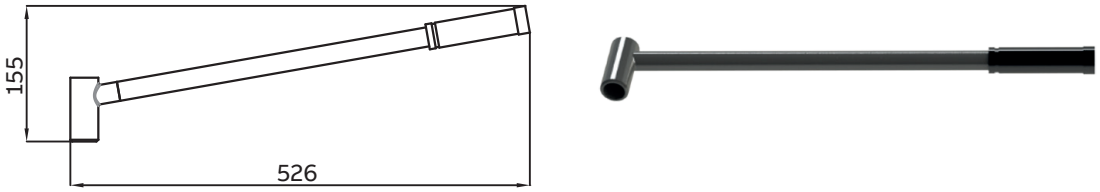
—
20
Drive with cardan joint

12. Accessories

—
21
Manual operating handle
1YMX053235M0001

—
22
Transmission
90° complete

—
21



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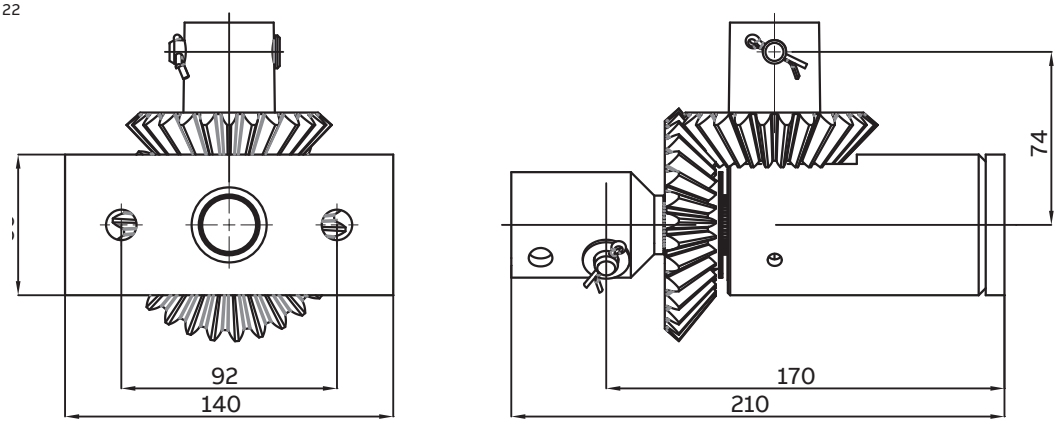
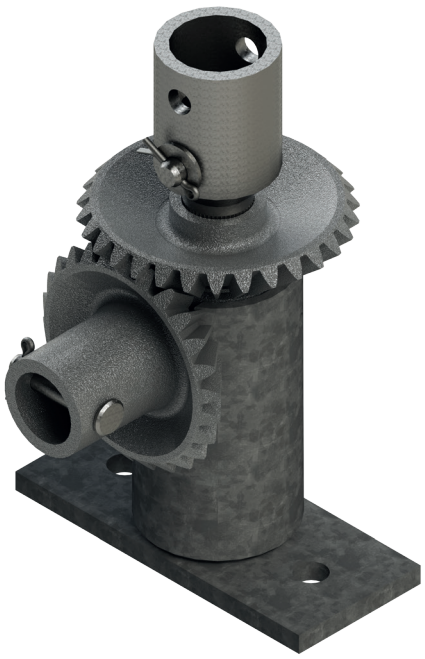
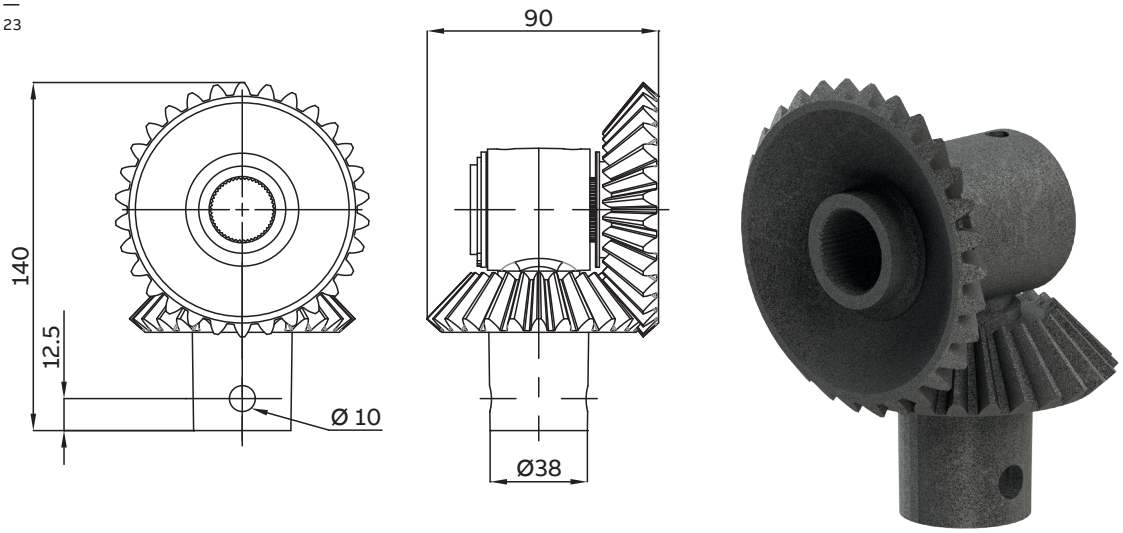




— 23
HE Bevel gear

— 24
NRK 2/1 or NRK 2/2 Bevel gear

— 23



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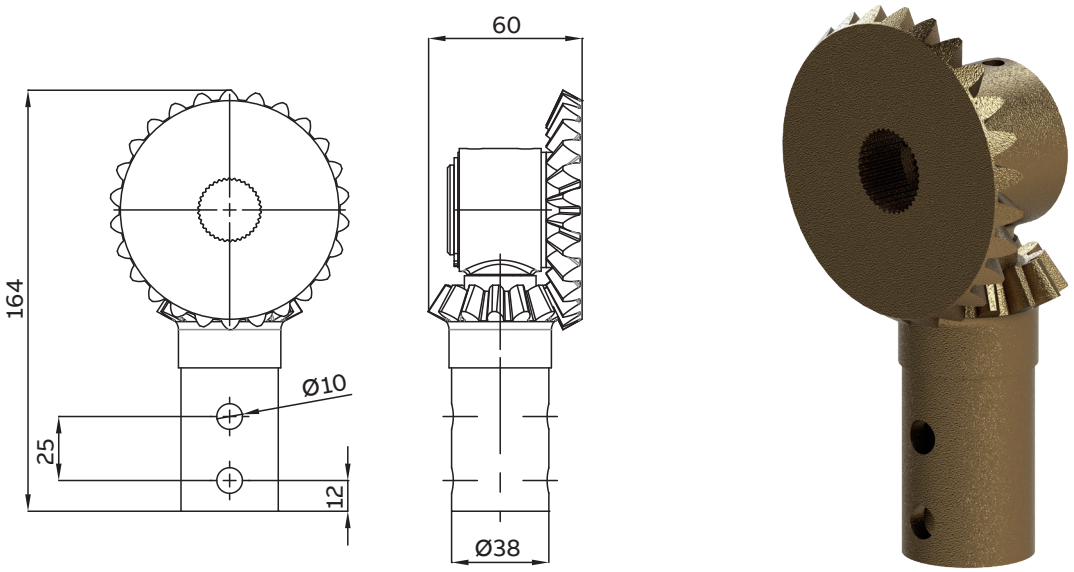

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