

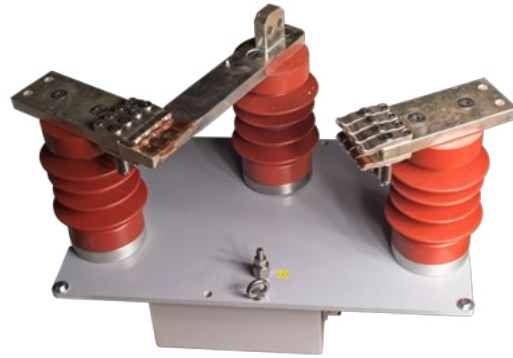
# Roof disconnectors

## ODEL

### APPLICATION

Roof disconnector ODEL is a single-pole device with motor drive. The device connects and disconnects without load. It is designed primarily for outdoor installation on the roof of electric traction vehicles. There are three basic versions of the connector ODEL:

- » changer-over switch: ODEL-P
- » disconnector: ODEL
- » disconnector-earthing switch: ODEL-U.



It can be used in vehicles designed for supply a voltage or different voltages capacity typical of the inter-voltage (DC 1.5 kV, 3 kV DC, AC 15 kV) and currents of different vehicles with values in the range of from 1000 to 4000 A. Roof disconnector for locomotives, trains and traction multiple units operates in DC and AC systems. In open, the disconnector provides isolation clearance in the air, which meets the requirements of the switches.

### ADVANTAGES

- » modular construction
- » built-in electric drive
- » the ability to maneuver manually
- » high technical parameters
- » auxiliary contact indicating the position of the device
- » built-in earthing switch
- » complies with the standards: IEC60077-1 /-2 /-4, IEC61373, EN50124-1; EN45545-2:2013, PN-EN 50155 and PN-EN 45545
- » mechanical durability: over 100 000 activations

## TECHNICAL DATA

	SYMBOL	UNIT	ODEL 3(25)-10	ODEL 3(25)-20	ODEL 3(25)-30	ODEL 3(25)-40
Rated voltage	Une	[kVdc]	3,6			
	Une	[kVac]	25			
Rated insulation voltage	Unm	[kVdc]	4,8			
Rated thermal current	Ith	[A]	1000	2000	3000	4000
Short-circuit withstand current	Icw	[kA]	25			
Time of short-circuit	t	[s]	0,25			
Rated surge voltage	Uni	[kV]	40			
<b>CONTROL CIRCUIT</b>						
Drive	motor					
Control voltage	Un	[Vdc]	24; 220			
	Un	[Vac]	230			
Power of the motor drive	P	[W]	90; 200; 300			
<b>AUXILIARY CONTACTS</b>						
Number of contacts	up to 2NO+2NC					
Auxiliary contacts	gold-plated, changeover					
Number of operations	10 <sup>6</sup>					
<b>OPERATING CONDITIONS</b>						
Installation location	outdoor					
Height	-	[m]	< 1400			
Ambient temperature	-	[°C]	-30 up to + 40 °C			
Mechanical durability	-	cycles	20 000			
Protection class	IP 00					
Tightness at installation	rubber gasket in the form of O-ring					

## MARKING

Type of the disconnecter – application	disconnecter	ODEL
	changer-over switch	ODEL-P
	disconnecter-earthing switch	ODEL-U
Rated operating voltage	up to 3,6 kV DC	3
	up to 25 kV AC	25
Thermal current in open air	1000 A	10
	2000 A	20
	3000 A	30
	4000 A	40
Operating voltage	24 V DC	1
	220 V DC	2
	230 V AC	3
Auxiliary contacts	1NO+ 1 NC gold-plated	1
	2NO+ 2 NC gold-plated	2

Type of device	ODEL-P	-	-	-	-
Rated operating voltage	-	3	-	-	-
Current	-	-	20	-	-
Operating voltage	-	-	-	1	-
Auxiliary contacts	-	-	-	-	1
Proper marking	ODEL-P	3	20	1	1

## EXAMPLE OF ORDER

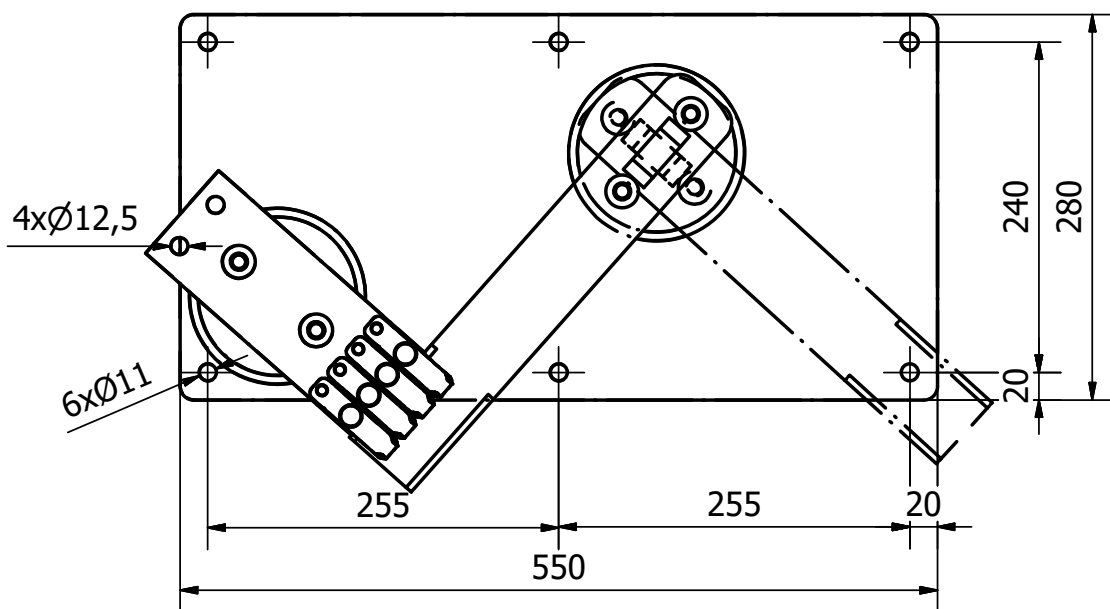
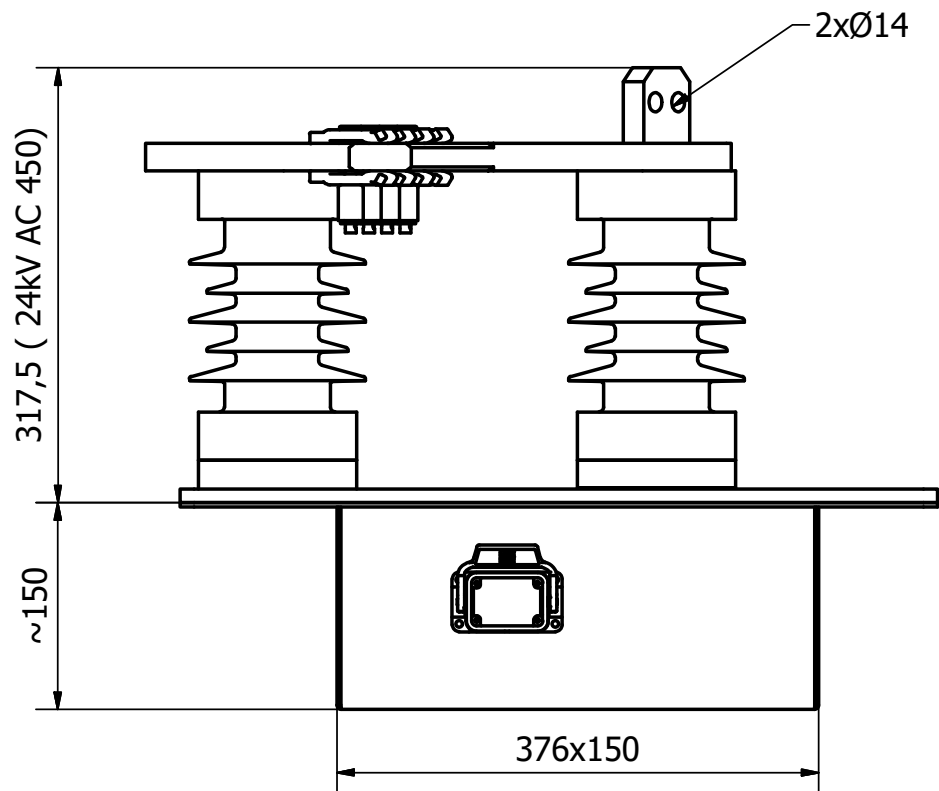
### ODEL-P 3.20.1.1

» Roof changer-over, operating voltage 3,6 kV DC, 2000 A, operating voltage 24V DC with auxiliary contacts, gold-plated 1NO + 1 NC

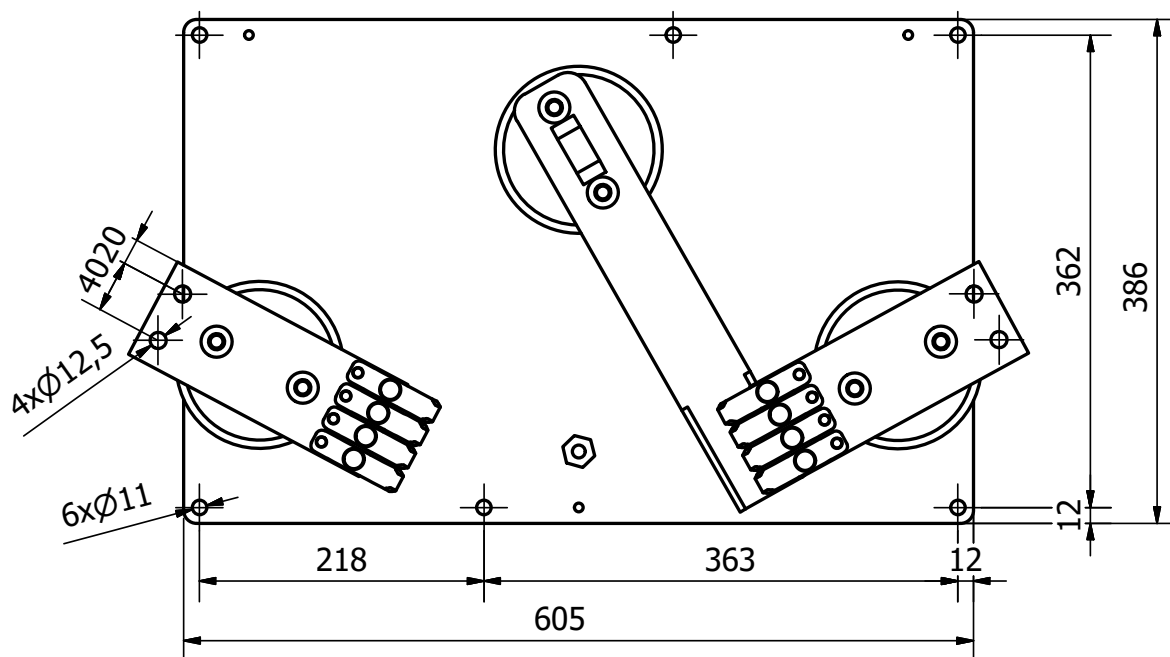
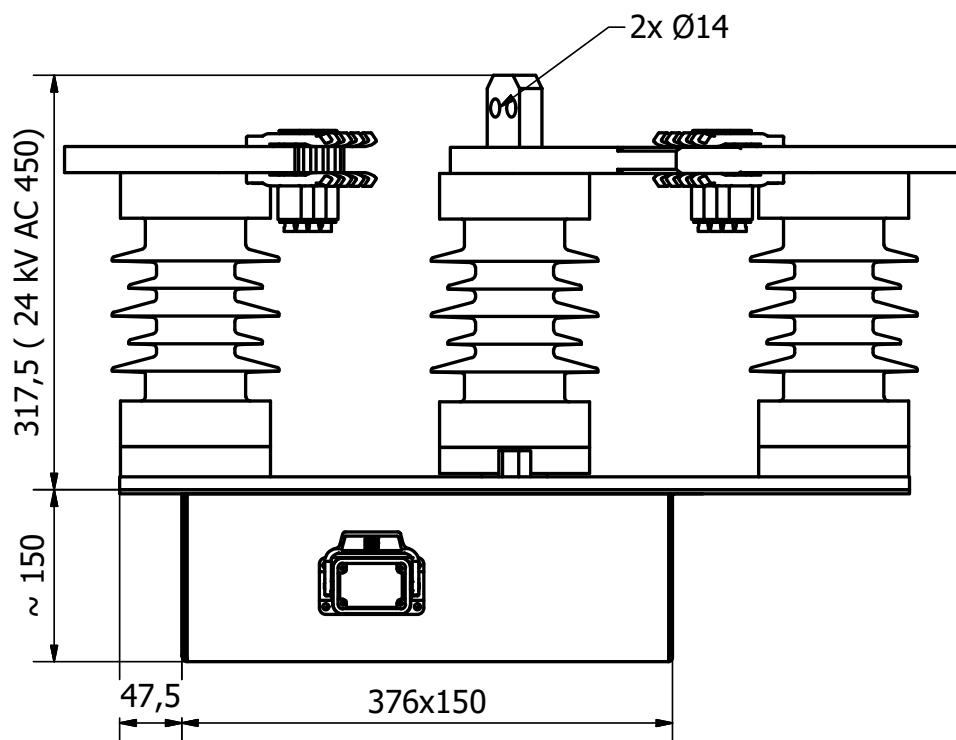
### ODEL 25.20.3.2

» Roof disconnecter, operating voltage 25 kV AC, current 2000 A, operating voltage 230 V AC with auxiliary contacts, gold-plated 2NO + 2 NC

Due to technical reasons you can not combine some options and configuration in marking.



Dimensions of OD-EL 3-20



Dimensions of OD-EL 3-20P