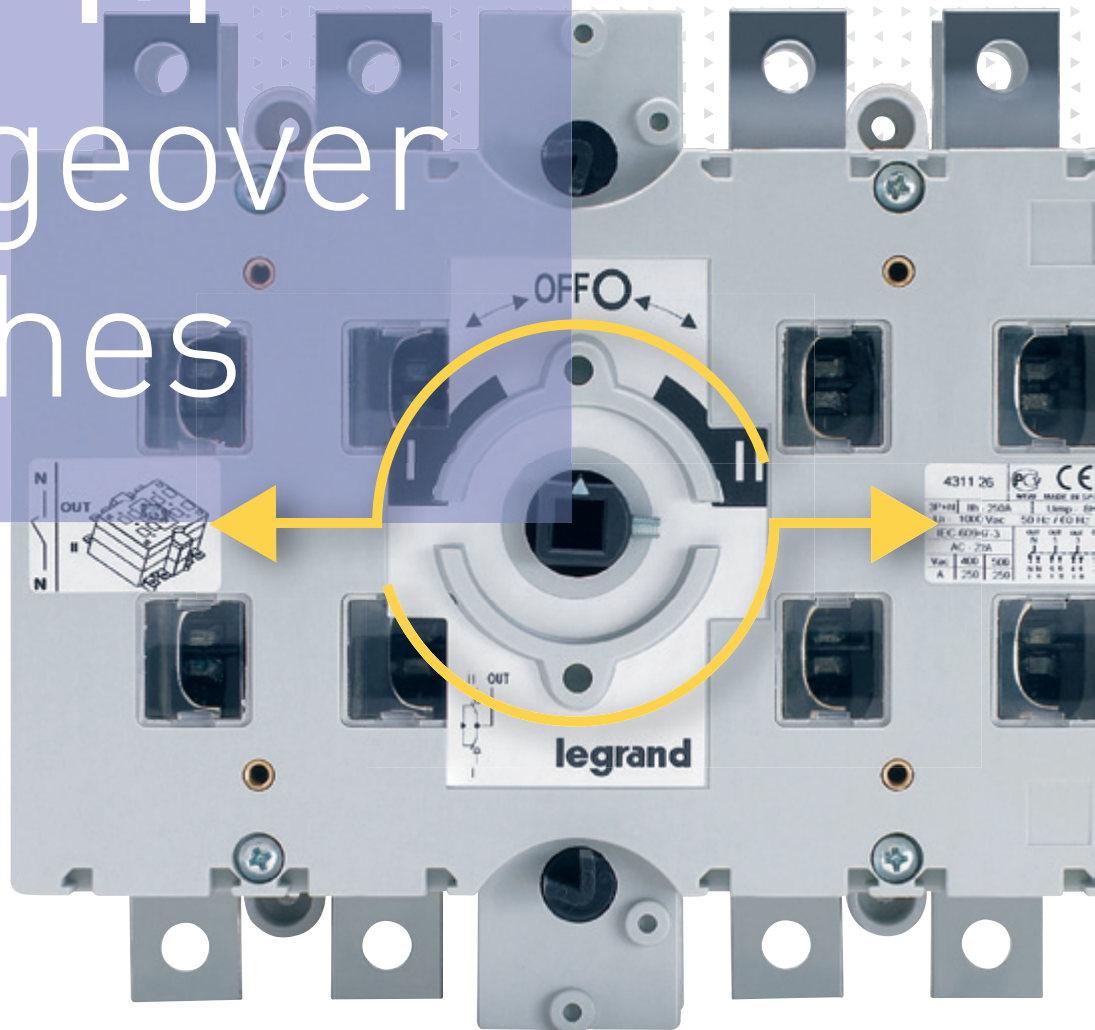


# DCX-M changeover switches



[--> CATALOGUE PAGES INSIDE](#)

THE **GLOBAL SPECIALIST**  
IN ELECTRICAL AND DIGITAL BUILDING INFRASTRUCTURES

 **legrand**<sup>®</sup>



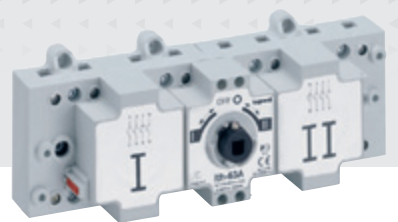
FOR  
COMMERCIAL  
BUILDINGS  
AND...

**DCX-M**

Quality & design

CONFORM TO  
EN/IEC 60947-3

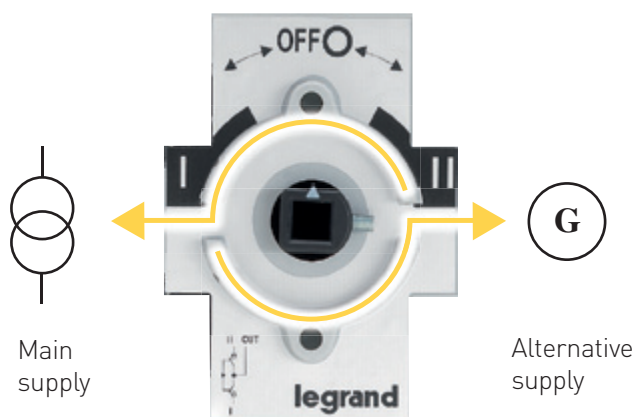
The new DCX-M range of changeover switches has been designed according to IEC 60947-3 standard for its use in low voltage installations for commercial and industrial buildings. Compact design allows space saving inside electrical switchboard.



In = 63 A

## A replacement power supply always available

The new range meets the requirements of manual supply invertors for transfers between the main supply and the alternative supply.

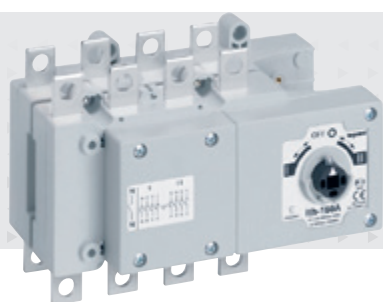


## A wide range accessories\*

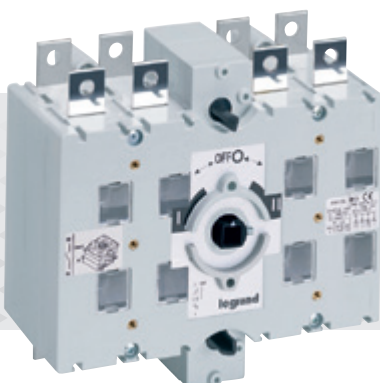
- Direct handles
- External handles
- Extended shafts
- Locking devices
- Auxiliary contacts
- Bridging links
- Protective plates
- Mounting kits for integration into XL<sup>3</sup> enclosures



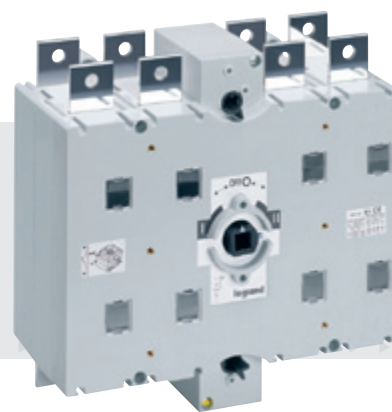
\*For details see attached catalogue pages



In = 160 A



In = 250 A



In = 630 A

## A complete range of changeover switches from 63 to 1600 A - 3P and 3P+N

Size 1	Size 2	Size 3	Size 4	Size 5	Size 6
		200 A			
	100 A	250 A			
40 A	125 A	315 A	630 A	1000 A	
63 A	160 A	400 A	800 A	1250 A	1600 A
Cage terminals	Lugs	Lugs	Lugs	Lugs	Lugs



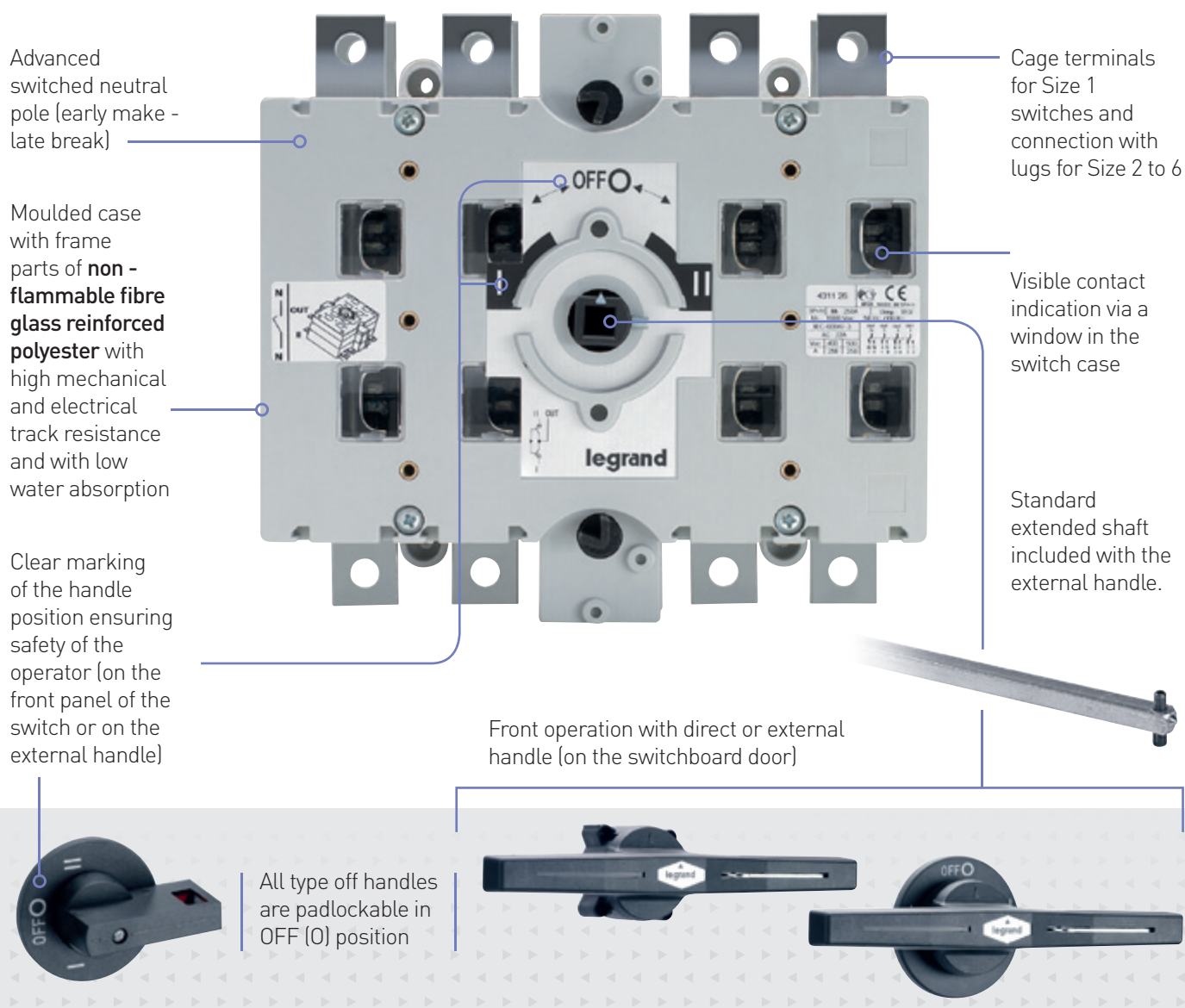
...INDUSTRIAL  
BUILDINGS

# DCX-M

## Safety, reliability & flexibility

EXCELLENT  
BEHAVIOUR IN  
ANY SITUATION

DCX-M range offers a high level of security and reliability particularly adapted for the most demanding environments and guaranteed by its electrical and mechanical performance.



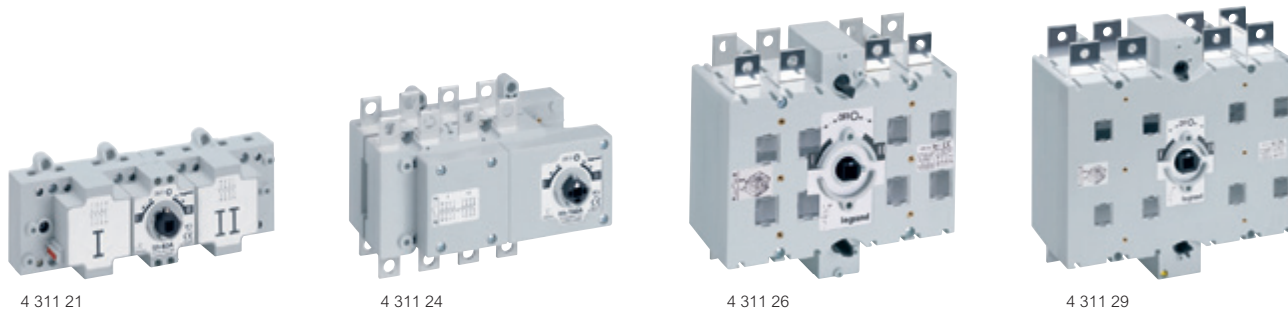
## DCX-M switches can handle any situation in electrical circuits without any risk for the operator:

- Excellent **thermal and dielectric properties** of insulating materials adjacent to current - carrying parts: Dielectric strength, electrical track resistance and dimensional stability at high temperatures.
- Knife - type contacts with self - wiping action on the contact surfaces, providing: Increased contact pressure under heavy starting currents or with short - circuit conditions Shock and vibration proof contacts.

- On - Load switching of AC (inductive and capacitive) and DC (size 1 and 2 switches) loads up to 1000 V.
- Rated breaking current of up to 8 times the rated operational current and high making and withstanding currents: short circuit currents Up to 100 kA
- Uninterrupted duties in extreme temperature conditions as well as the polluted environment of any industrial process.

# DCX-M changeover switches

from 40 to 1600 A



Technical characteristics **p. 8 to 13**

Conform to EC EN 60947-3

Moulded case design with frame parts of non - flammable glass fibre reinforced polyester with high mechanical and electrical track resistance and with low water absorption

Knife - type contacts with self - wiping action on the contact surfaces, providing:

- under heavy starting currents or with short - circuit conditions, the contact pressure is increased
- shock and vibration proof contacts

Four breaking points per pole with two double - break contacts

Pack		Cat.Nos		Changeover switches				Changeover switches (continued)	
		3P	3P+N	Size 1		Connection		Size 5	
1	4 311 00	4 311 20	40 A	I - O - II					
1	4 311 01	4 311 21	63 A	I - O - II					
				<b>Size 2</b>					
1	4 311 02	4 311 22	100 A	I - O - II					
1	4 311 03	4 311 23	125 A	I - O - II					
1	4 311 04	4 311 24	160 A	I - O - II					
				<b>Size 3</b>					
1	4 311 05	4 311 25	200 A	I - O - II					
1	4 311 06	4 311 26	250 A	I - O - II					
1	4 311 07	4 311 27	315 A	I - O - II					
1	4 311 08	4 311 28	400 A	I - O - II					
				<b>Size 4</b>					
1	4 311 09	4 311 29	630 A	I - O - II					
1	4 311 10	4 311 30	800 A	I - O - II					
								<b>Size 6</b>	
								Connection with lugs	
1	4 311 11	4 311 31	1000 A	I - O - II					
1	4 311 12	4 311 32	1250 A	I - O - II					
1	4 311 13	4 311 33	1600 A	I - O - II					

# DCX-M changeover switches

## auxiliaries and accessories



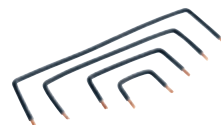
4 311 40



4 311 42



4 311 55



4 311 60



4 311 61

Pack	Cat.Nos	Direct handles
1	4 311 45	Black rotary handles For DCX-M between 40 A and 160 A
1	4 311 46	For DCX-M between 200 A and 400 A
1	4 311 47	For DCX-M 630 A and 800 A
1	4 311 48	For DCX-M 1000 A and 1250 A
1	4 311 49	For DCX-M 1600 A

Pack	Cat.Nos	External handles
1	4 311 40	Black rotary handles Supplied with standard rod For DCX-M between 40 A and 160 A
1	4 311 41	For DCX-M between 200 A and 400 A
1	4 311 42	For DCX-M 630 A and 800 A
1	4 311 43	For DCX-M 1000 A and 1250 A
1	4 311 44	For DCX-M 1600 A

Pack	Cat.Nos	Extended shafts
1	4 311 50	Replace the standard rods supplied with the external handles, when required by the door distance For DCX-M between 40 A and 160 A
1	4 311 51	For DCX-M between 200 A and 400 A
1	4 311 52	For DCX-M 630 A and 800 A
1	4 311 53	For DCX-M 1000 A and 1250 A

Pack	Cat.Nos	Safety key lock devices
<b>Simple lock devices</b>		
1	4 311 70	For DCX-M between 40 A and 160 A
1	4 311 71	For DCX-M between 200 A and 400 A
1	4 311 72	For DCX-M 630 A and 800 A
1	4 311 73	For DCX-M 1000 A and 1250 A
1	4 311 74	For DCX-M 1600 A
<b>Double lock devices</b>		
1	4 311 75	For DCX-M between 40 A and 160 A
1	4 311 76	For DCX-M between 200 A and 400 A
1	4 311 77	For DCX-M 630 A and 800 A
1	4 311 78	For DCX-M 1000 A and 1250 A
1	4 311 79	For DCX-M 1600 A

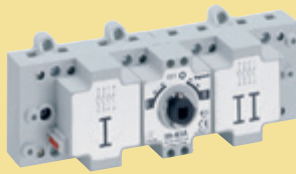
Pack	Cat.Nos	Auxiliary contacts
<b>For DCX-M between 40 and 1250 A</b>		
1	4 311 55	1 NO + 1 NC
1	4 311 56	2 NO + 2 NC
<b>For DCX-M 1600 A</b>		
1	4 311 57	1 NO + 1 NC
1	4 311 58	2 NO + 2 NC

Pack	Cat.Nos	Bridging links
1	4 311 60	For DCX-M 40 A and 63 A
1	4 311 61	For DCX-M 100 A and 125 A
1	4 311 62	For DCX-M 1600 A

Pack	Cat.Nos	Rear protective plates
1	4 311 65	For DCX-M between 200 A and 400 A
1	4 311 66	For DCX-M 630 A and 800 A
1	4 311 67	For DCX-M 1000 A and 1250 A

Pack	Cat.Nos	Mounting kits for DCX-M
Kit comprising plate and faceplate for fixing DCX-M		
<b>For vertical mounting in XL<sup>3</sup> 800 and XL<sup>3</sup> 4000 enclosures</b>		
1	0 211 20	For DCX-M 40 A and 63 A
1	0 211 21	For DCX-M 100 A and 160 A
1	0 211 22	For DCX-M 200 A and 400 A
<b>For horizontal mounting in XL<sup>3</sup> 800 and XL<sup>3</sup> 4000 enclosures</b>		
1	0 211 27	For DCX-M 100 A and 160 A
1	0 211 28	For DCX-M 200 A and 400 A
<b>For vertical mounting in XL<sup>3</sup> 4000 enclosures</b>		
1	0 211 23	For DCX-M 630 A and 800 A
1	0 211 24	For DCX-M 1000 A and 1250 A
1	0 211 25	For DCX-M 1600 A
<b>For horizontal mounting in XL<sup>3</sup> 4000 enclosures</b>		
1	0 211 29	For DCX-M 630 A and 800 A

## DCX-M handles and accessories selection chart



Changeover switch I-O-II

Direct handle

External handle

A	Size	Connection	Changeover switch I-O-II		Direct handle	External handle		
			3P	4P		Cat.Nos	L (mm)	D (mm)
40	1	cage terminals	4 311 00	4 311 20	4 311 45	4 311 40	137	90 - 180
63	1	cage terminals	4 311 01	4 311 21	4 311 45	4 311 40	137	90 - 180
100	2	lugs	4 311 02	4 311 22	4 311 45	4 311 40	137	161 - 250
125	2	lugs	4 311 03	4 311 23	4 311 45	4 311 40	137	161 - 250
160	2	lugs	4 311 04	4 311 24	4 311 45	4 311 40	137	161 - 250
200	3	lugs	4 311 05	4 311 25	4 311 46	4 311 41	161	158 - 254
250	3	lugs	4 311 06	4 311 26	4 311 46	4 311 41	161	158 - 254
315	3	lugs	4 311 07	4 311 27	4 311 46	4 311 41	161	158 - 254
400	3	lugs	4 311 08	4 311 28	4 311 46	4 311 41	161	158 - 254
630	4	lugs	4 311 09	4 311 29	4 311 47	4 311 42	151	187 - 255
800	4	lugs	4 311 10	4 311 30	4 311 47	4 311 42	151	187 - 255
1000	5	lugs	4 311 11	4 311 31	4 311 48	4 311 43	125	215 - 264
1250	5	lugs	4 311 12	4 311 32	4 311 48	4 311 43	125	215 - 264
1600	6	lugs	4 311 13	4 311 33	4 311 49	4 311 44	204	413 - 573



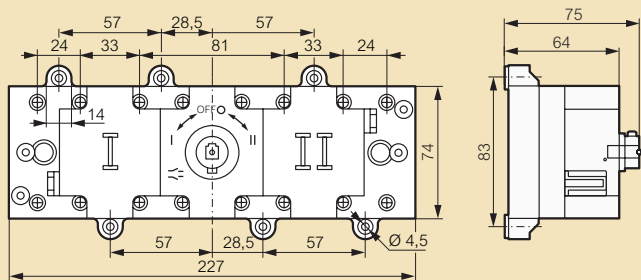
Auxiliary contacts		Bridging links	Shaft extensions			Rear protective plate	Safety lock device	
1 NO + 1 NC	2 NO + 2 NC		Cat. Nos	L (mm)	D (mm)		Simple	Double
4 311 55	4 311 56	4 311 60	4 311 50	187	90 - 240	-	4 311 70	4 311 75
4 311 55	4 311 56	4 311 60	4 311 50	187	90 - 240	-	4 311 70	4 311 75
4 311 55	4 311 56	4 311 61	4 311 50	187	161 - 306	-	4 311 70	4 311 75
4 311 55	4 311 56	4 311 61	4 311 50	187	161 - 306	-	4 311 70	4 311 75
4 311 55	4 311 56	-	4 311 50	187	161 - 306	-	4 311 70	4 311 75
4 311 55	4 311 56	-	4 311 51	305	158 - 414	4 311 65	4 311 71	4 311 76
4 311 55	4 311 56	-	4 311 51	305	158 - 414	4 311 65	4 311 71	4 311 76
4 311 55	4 311 56	-	4 311 51	305	158 - 414	4 311 65	4 311 71	4 311 76
4 311 55	4 311 56	-	4 311 51	305	158 - 414	4 311 65	4 311 71	4 311 76
4 311 55	4 311 56	-	4 311 52	290	187 - 405	4 311 66	4 311 72	4 311 77
4 311 55	4 311 56	-	4 311 52	290	187 - 405	4 311 66	4 311 72	4 311 77
4 311 55	4 311 56	-	4 311 53	275	215 - 414	4 311 67	4 311 73	4 311 78
4 311 55	4 311 56	-	4 311 53	275	215 - 414	4 311 67	4 311 73	4 311 78
4 311 57	4 311 58	4 311 62	consult us	consult us	consult us	-	4 311 74	4 311 79

## DCX-M changeover switches

### dimensions

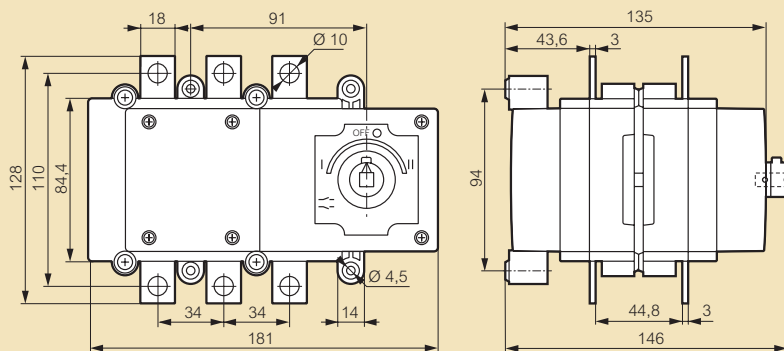
#### ■ Size 1

3P Cat.Nos 4 311 00/01 and 3P+N Cat.Nos 4 311 20/21

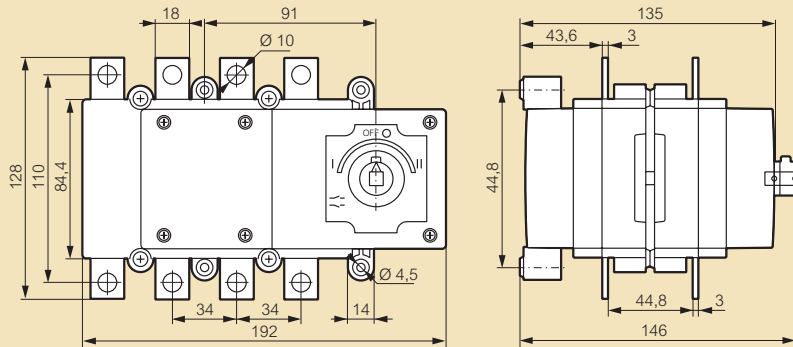


#### ■ Size 2

3P Cat.Nos 4 311 02/03/04

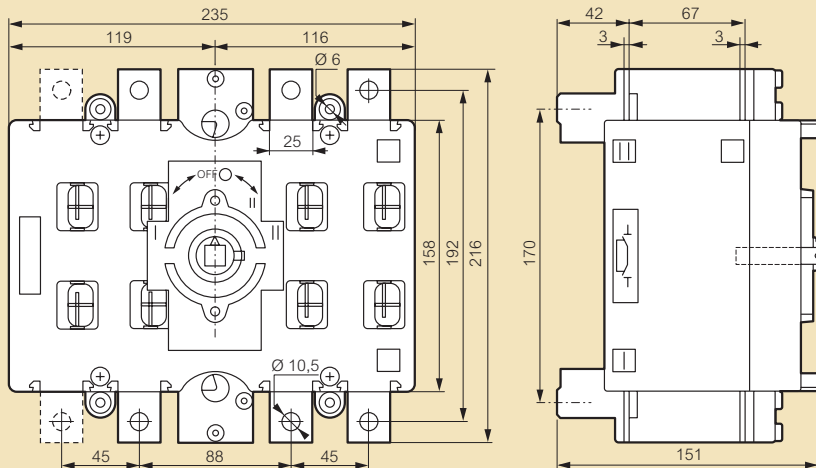


3P+N Cat.Nos 4 311 22/23/24



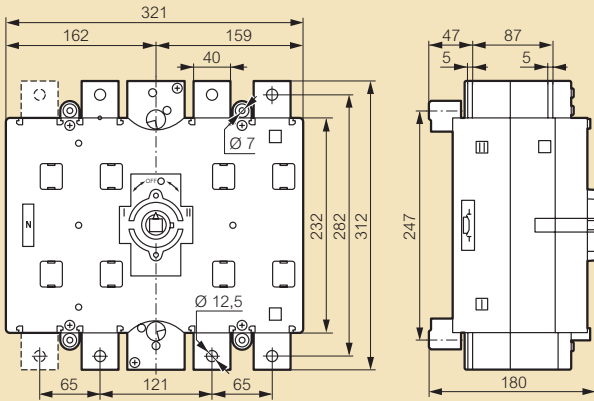
#### ■ Size 3

3P Cat.Nos 4 311 05/06/07/08 and 3P+N Cat.Nos 4 311 25/26/27/28



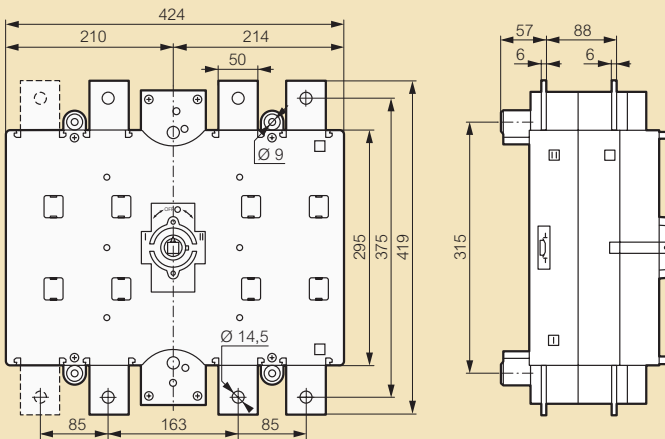
■ **Size 4**

3P Cat.Nos 4 311 09/10 and 3P+N Cat.Nos 4 311 29/30



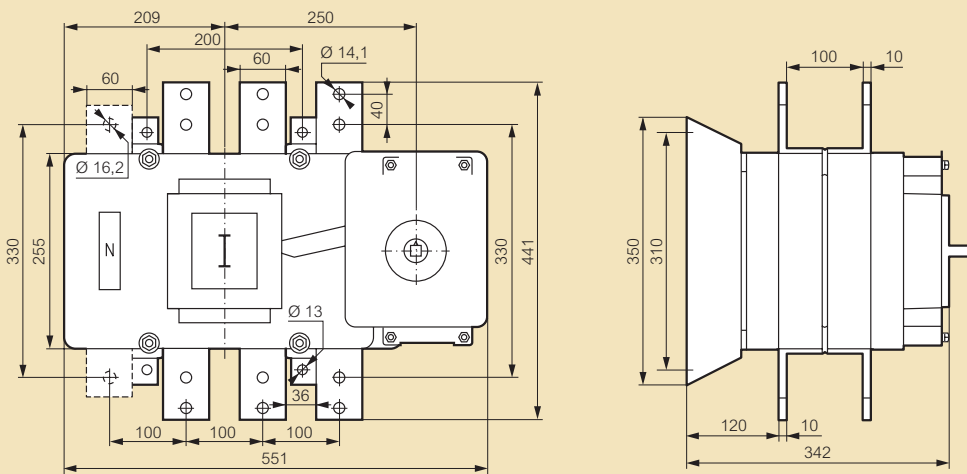
■ **Size 5**

3P Cat.Nos 4 311 11/12 and 3P+N Cat.Nos 4 311 31/32



■ **Size 6**

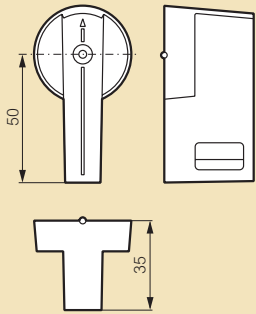
3P Cat.No 4 311 13 and 3P+N Cat.No 4 311 33



**DCX-M direct handles**  
dimensions

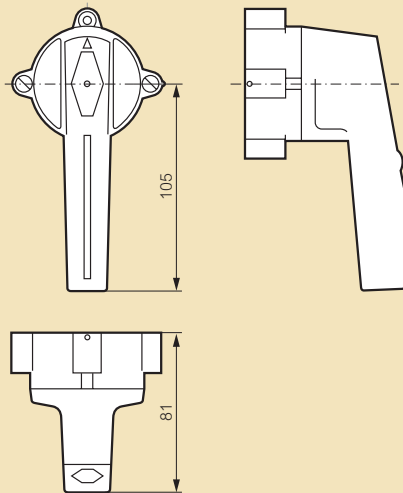
■ For DCX-M 40 to 160 A

Cat. No 4 311 45



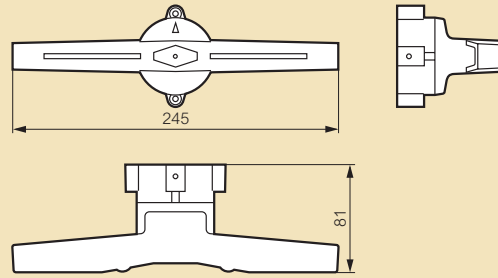
■ For DCX-M 200 to 400 A

Cat. No 4 311 46



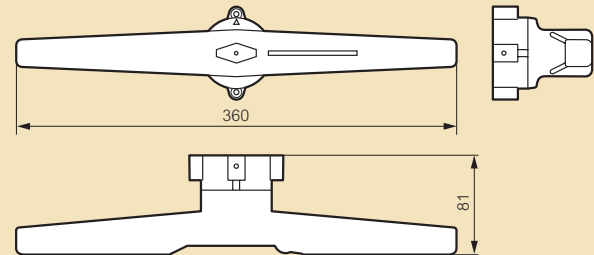
■ For DCX-M 630 and 800 A

Cat. No 4 311 47



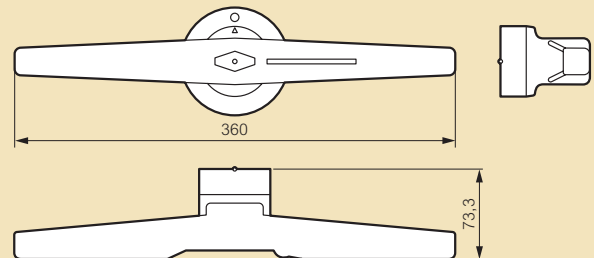
■ For DCX-M 1000 and 1250 A

Cat. No 4 311 48



■ For DCX-M 1600 A

Cat. No 4 311 49

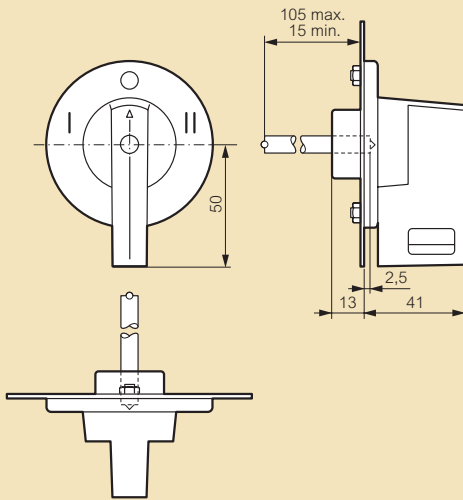


# DCX-M external handles

## dimensions

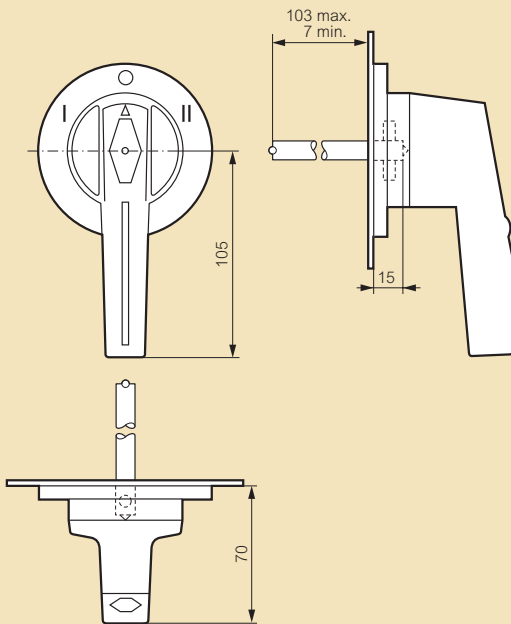
### ■ For DCX-M 40 to 160 A

Cat. No 4 311 40



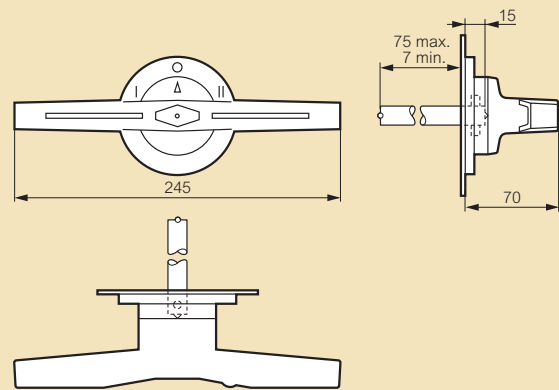
### ■ For DCX-M 200 to 400 A

Cat. No 4 311 41



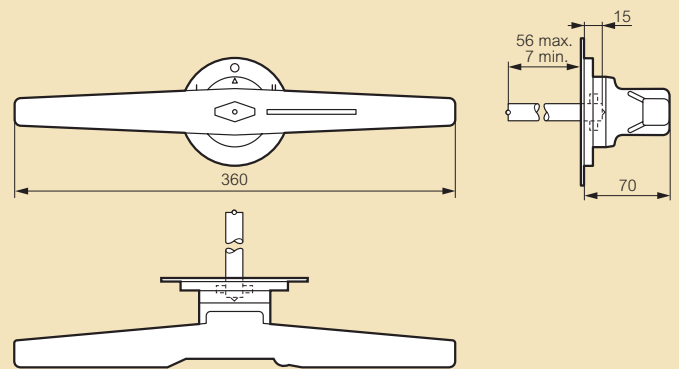
### ■ For DCX-M 630 and 800 A

Cat. No 4 311 42



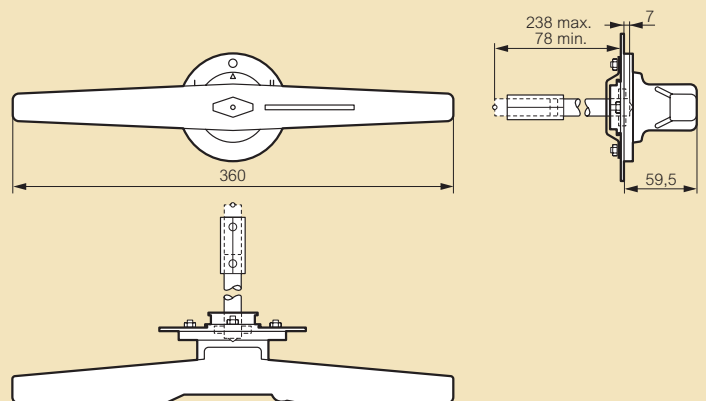
### ■ For DCX-M 1000 and 1250 A

Cat. No 4 311 43



### ■ For DCX-M 1600 A

Cat. No 4 311 44



## DCX-M technical characteristics

### ■ Technical characteristics

According to IEC / EN 60947-3			40 A	63 A	100 A	125 A	160 A	200 A	250 A		
Rated thermal current Ith (A)	Ambient temperature	40 °C	50	63	100	125	160	200	250		
		50 °C	50	63	100	125	160	-	-		
		65 °C	35	44	90	90	110	-	-		
Rated thermal current in enclosure Ithe (A)			-	-	-	-	-	200	250		
Rated insulation voltage Ui (V)			800	800	1000	1000	1000	1000	1000		
Rated dielectric strength (V)			50 Hz 1 min.			3500	3500	4000	4000	6000	6000
Rated impulse withstand voltage Uimp (kV)			8	8	8	8	8	8	8		
AC rated operational current <sup>(1)</sup> at 50/60 Hz Ie (A)	400 V	AC21A	50	63	100	125	160	200	250		
		AC22A	50	63	100	125	160	200	250		
		AC23A	50	63	100	125	160	160	180		
	500 V	AC21A	50	63	100	125	160	200	250		
		AC22A	50	63	100	125	160	200	250		
		AC23A	40	50	80	100	125	125	150		
	690 V	AC20A	50	63	100	125	160	-	-		
		AC21A	50	63	100	125	160	200	250		
		AC22A	40	50	100	100	125	160	200		
	800 V	AC23A	25	32	60	80	80	80	100		
		AC20A	-	-	100	125	160	200	250		
		AC21A	-	-	100	125	160	-	-		
1000 V	AC20A	-	-	100	125	160	-	-			
DC rated operational current <sup>(2)</sup> Ie (A)	48 V	DC23A (II)	80	100	200	200	200	-	-		
		DC21A (II)	63	63	160	160	160	-	-		
	110 V	DC23A (I)	40	63	100	125	160	-	-		
		DC21A (I)	40	63	100	125	160	-	-		
	230 V	DC23A (I)	40	63	100	125	125	-	-		
		DC21A (I)	20	25	50	63	63	-	-		
	400 V	DC23A (I)	-	-	-	-	-	-	-		
		DC20A (II)	80	125	200	250	250	-	-		
	500 V	DC23A (I)	-	-	-	-	-	-	-		
		AC23A	15.9	20	31.5	39.8	50.9	-	-		
AC rated operational power <sup>(3)</sup> Pe (kW)	3 x 230 V	AC23A	27.7	34.9	54.7	69.2	88.6	80	90		
	3 x 400 V	AC23A	27.7	34.6	61.6	69.2	88.6	78	94		
	3 x 500 V	AC23A	23.9	30.5	56.6	76.4	76.4	69	86		
	3 x 690 V	AC23A	22.5	28.3	45	56.2	72	83	104		
Rated capacitor power (kVAr)			400 V	22.5	28.3	45	56.2	72	83	104	
Rated breaking capacity (A)			400 V	AC23	400	504	800	1000	1280	1280	1440
Rated making capacity (A)			400 V	AC23	500	630	1000	1250	1600	1600	1800

### Short-circuit behaviour

			40 A	63 A	100 A	125 A	160 A	200 A	250 A
Short - circuit making capacity <sup>(4)</sup> - peak value Icm (kA)			5	5	13	13	13	12	12
Short - time withstand current - 1 sec Icw (kA ms)			3	3	7	7	7	8	8
Conditional short - circuit current rms value <sup>(5)</sup> (kA ms)			100	100	100	100	100	-	-
Maximum cut - off current (peak value)			10	10	17	17	20	-	-
Maximum power dissipation I <sup>2</sup> t (A <sup>2</sup> /s x 10 <sup>3</sup> )			54.7	54.7	55	55	198	-	-
Minimum number of mechanical operations <sup>(6)</sup> (Cycles)			30000	30000	30000	30000	30000	10000	10000
Minimum number of electrical operations <sup>(6)</sup> (Cycles)	400 V	AC23	1500	1500	1000	1000	1000	-	-
		AC22A	-	-	-	-	-	1000	1000
Maximum weight (kg)	3 P	4 P	0.8	0.8	1.8	1.8	1.8	4.8	4.8
		4 P	0.8	0.8	2	2	2	5.3	5.3

### Connecting capacity

			40 A	63 A	100 A	125 A	160 A	200 A	250 A	
Rigid cable	Cu	mm <sup>2</sup>	25	25	95	95	95	240	240	
		Thickness / Wid	mm	-	-	5 / 25	5 / 25	5 / 25	2 x 5 / 30	2 x 5 / 30
Tightening torque			Nm	2	2	4 / 13	4 / 13	4 / 13	24	24

1: Other voltages and / or utilization categories: please consult us

2: For series (I) or Parallel (II) connection of 4P switches, see diagrams

3: Indicative values; current values vary from one motor manufacturer to another

4: Without limiting protective device (short - circuit maintained 50... 100 ms)

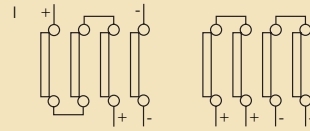
5: With a protective device limiting the cut - off current and the joule integral to the indicated values

6: Please consult us for more operations

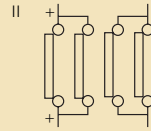
7: Rated operational current AC22B

	315 A	400 A	630 A	800 A	1000 A	1250 A	1600 A
	315	400	630	800	1000	1250	1600
	-	-	-	-	-	-	1600
	-	-	-	-	-	-	1600
	315	400	630	800	1000	1250	-
	1000	1000	1000	1000	1000	1000	1000
	6000	6000	8000	8000	8000	8000	10000
	8	8	12	12	12	12	12
	315	400	630	800	1000	1250	1600
	315 <sup>(7)</sup>	400 <sup>(7)</sup>	630	800 <sup>(7)</sup>	1000	1250 <sup>(7)</sup>	1600
	200	250	500	630	1000	1250	1000
	315	400	630	800	1000	1250	1600
	315	400 <sup>(7)</sup>	630	800 <sup>(7)</sup>	1000	1250 <sup>(7)</sup>	1250
	160	200	315	400	800	1000	900
	-	-	-	-	-	-	1600
	315	400	630	800	1000	1250	1600
	250	315 <sup>(7)</sup>	500	630 <sup>(7)</sup>	800	1000 <sup>(7)</sup>	1000
	125	160	250	315	630	800	630
	315	400	630	800	1000	1250	1600
	-	-	630	800	1000	1250	1600
	-	-	-	-	-	-	2000
	-	-	-	-	-	-	1600
	-	-	-	-	-	-	1600
	-	-	-	-	-	-	1600
	-	-	-	-	-	-	1000
	-	-	-	-	-	-	1600
	-	-	-	-	-	-	800
	-	-	-	-	-	-	2500
	-	-	-	-	-	-	800
	-	-	-	-	-	-	318.6
	100	125	250	315	501	626	554.2
	100	125	197	250	501	626	623.5
	108	138	216	272	544	691	602.3
	131	166	262	333	416	520	450.3
	1600	2000	4000	4000	8000	10000	8000
	2000	2500	5000	5000	10000	12500	10000

**Series connection of 4P switches up to up to 160 A (DC)**



**Parallel connection of 4P switches up to up to 160 A (DC)**





	315 A	400 A	630 A	800 A	1000 A	1250 A	1600 A
	12	12	20	20	32	32	75
	8	8	13	13	25	25	50
	-	-	-	-	-	-	-
	-	-	-	-	-	-	-
	-	-	-	-	-	-	-
	10000	10000	10000	10000	10000	10000	10000
	-	-	-	-	-	-	500
	1000	200 <sup>(7)</sup>	1000	100 <sup>(7)</sup>	500	100 <sup>(7)</sup>	-
	5	5	11.5	11.9	22.5	24.3	42.9
	5.5	5.5	12.6	13.2	25	27.3	47.3

	315 A	400 A	630 A	800 A	1000 A	1250 A	1600 A
	240	240	2 x 240	2 x 240	-	-	-
	2 x 5 / 30	2 x 5 / 30	2 x 6 / 45	2 x 6 / 45	2 x 10 / 60	2 x 10 / 60	2 x 7 / 80
	24	24	45	45	55	55	55



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