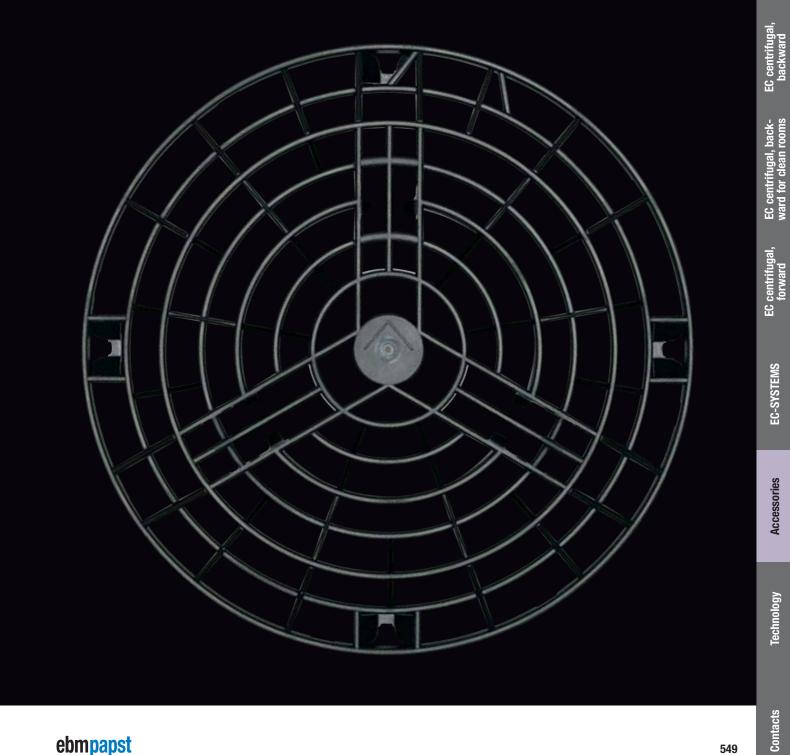
Inlet nozzles	550
Guard grilles	553
Lead connections, capacitors	558
Terminal boxes, air filters	562
Speed setting, motor protection switch, third-party accessories	564



AC centrifugal, forward

### Inlet nozzles

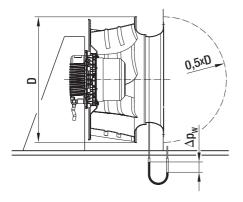
Vers. 1 Vers. 2 Vers. 3

- Material: Galvanised sheet steel

Inlet nozzles for back	Inlet nozzles for backward curved centrifugal fans														
Part no.	Size <sup>(1)</sup>		Vers.	k	m	n	0	q	r <sub>1</sub>	r <sub>2</sub>	r <sub>3</sub>	s	t	u	
96120-2-4013	120	(P)	1	146.0	94.4	_	18.0	0.80	16.0	_	_	134.0	4x4.5	126.0	
09566-2-4013	133	(P)	1	129.0	87.0	_	13.0	1.00	8.0	_	_	118.0	4x4.5	103.0	
09576-2-4013	175/190	) (P)	1	170.0	125.5	_	14.0	1.25	10.0	_	_	158.0	4x4.5	146.0	
09609-2-4013	220	(P)	2	252.0	155.0	_	21.0	0.80	22.0	_	_	_	_	199.0	
96358-2-4013	225	(P)	1	223.0	146.0	_	28.0	1.50	25.0	_	_	210.0	4x4.5	196.0	
96359-2-4013	250	(P/S)	1	255.0	164.5	_	31.0	1.50	28.0	_	_	240.0	4x4.5	221.0	
96360-2-4013	270/280	) (S)	1	280.0	182.5	_	35.0	1.50	31.0	_	_	260.0	4x4.5	245.0	
97512-2-4013	310	(P)	3	300.0	192.0	_	53.0	1.00	30.0	60.0	_	_	_	257.0	
31050-2-4013	310	(A)	1	300.0	211.0	208.1	48.0	1.25	18.0	55.5	35.0	280.0	4x4.5	256.0	
31051-2-4013	310 <sup>(2)</sup>	(A)	1	300.0	211.0	209.2	27.5	1.25	10.0	32.0	20.0	280.0	4x4.5	236.0	
51357-2-4013	330/355	5 (P)	1	350.0	224.0	_	60.0	1.50	54.0	28.0	_	325.0	4x4.5	284.0	
35560-2-4013	355	(A)	1	350.0	240.0	236.4	60.0	1.50	22.5	70.0	44.0	325.0	4x4.5	296.0	
35561-2-4013	355 <sup>(2)</sup>	(A)	1	350.0	240.0	238.0	30.0	1.50	11.0	35.0	22.0	325.0	4x4.5	267.0	
54476-2-4013	400	(A)	1	370.0	257.0	_	66.0	1.50	22.0	50.0	90.0	345.0	4x4.5	322.0	
54478-2-4013	450	(A)	1	413.0	287.0	_	71.0	1.50	25.0	55.0	100.0	390.0	6x9	362.0	
63045-2-4013	450	(A)	1	450.0	289.0	284.5	75.0	1.50	28.0	87.0	49.0	425.0	6x9	360.0	
54480-2-4013	500	(A)	1	520.0	323.0	_	79.0	1.50	28.0	65.0	115.0	430.0	6x9	408.0	
63072-2-4013	500	(A)	1	470.0	342.0	337.0	75.0	2.00	28.0	87.0	55.0	445.0	6x9	412.0	
63071-2-4013	560	(A)	1	515.0	385.0	380.0	82.0	2.00	30.0	95.0	60.0	490.0	6x9	461.0	
63070-2-4013	630	(A)	1	634.0	433.0	427.0	98.5	2.00	37.0	14.0	72.0	600.0	6x10.5	525.0	

(1) size with key for impeller material: (P) = plastic, (S) = sheet steel, (A) = aluminium (2) short inlet nozzle

### Inlet nozzles with pressure-measuring point for air flow measurement



### Air flow measurement:

The differential pressure approach compares the static pressure before the inlet nozzle with the static pressure inside the inlet nozzle.

Air flow can be calculated on the basis of the differential pressure (difference in pressure of the static pressures) in keeping with the following equation:

 $\dot{V} = k \cdot \sqrt{\Delta p_W}$   $\dot{V}$  in [m<sup>3</sup>/h] and  $\Delta p_W$  in [Pa]

If constant air flow control is used, then the nozzle pressure has to be kept constant:  $\Delta p_W = \dot{V}^2: k^2$ 

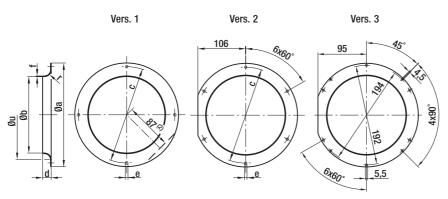
k takes into account the specific nozzle characteristics.

1 or 4 pressure measuring points are spaced along the circumference of the inlet nozzle. Connection on the customer side is accomplished via a premounted T tube connector. This tube connector is suited for pneumatic hoses with an internal diameter of 4 mm.

Inlet nozzles with meas	Inlet nozzles with measuring device to determine air flow for backward curved centrifugal fans												
Part no. with 1 nozzle	Part no. with 4 nozzles (Piezometer ring)	Size	k-value	For additional information, refer to p. 550	Er gontrifued								
		_	_		- 8								
		_	_		- [								
		-	_		-								
		_	_		- =								
	96400-2-4013	250	68	96359-2-4013	For contribution								
<del>-</del>	96410-2-4013	280	80	96360-2-4013	- È								
	90410-2-4013	200	00	90300-2-4013	- 1								
					_ 8								
31100-2-4013	31080-2-4013	310	120	31050-2-4013	_ <u></u>								
31110-2-4013	31090-2-4013	310	103	31051-2-4013									
35600-2-4013	35580-2-4013	355	155	35560-2-4013									
35610-2-4013	35590-2-4013	355	138	35561-2-4013	-								
54515-2-4013	54500-2-4013	400	183	54476-2-4013									
54514-2-4013	54510-2-4013	450	217	54478-2-4013	- 5								
64015-2-4013	64005-2-4013	450	214	63045-2-4013	П								
54518-2-4013	54516-2-4013	500	265	54480-2-4013	П								
64025-2-4013	64002-2-4013	500	283	63072-2-4013	П								
64030-2-4013	64001-2-4013	560	350	63071-2-4013	1								
64040-2-4013	64000-2-4013	630	480	63070-2-4013									
subject to alterations													

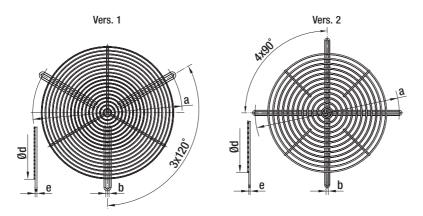
## Inlet nozzles

- Material: Galvanised sheet steel



Part no.	Size	Vers.	a	b	С	d	е	f	r	u	
09560-2-4013	076/085 (1)	1	92.0	63.4	84.0	6.0	3x4.2	0.80	6.8	_	
09563-2-4013	097 (1)	1	116.0	80.0	108.0	10.0	3x4.5	0.80	10.0	_	
09566-2-4013	108	1	129.0	87.0	118.0	13.0	4x4.5	1.00	8.0	_	
09569-2-4013	120	1	142.0	100.0	132.0	9.0	4x4.5	1.00	8.0	_	
09572-2-4013	133	1	150.0	112.0	142.0	12.0	4x4.5	1.00	10.0	_	
09576-2-4013	140/146	1	170.0	125.5	158.0	14.0	4x4.5	1.25	10.0	_	
09588-2-4013	160	1 (2)	185.0	130.0	175.0	17.0	4x4.5	0.75	12.0	_	
09597-2-4013	180	3	210.0	149.0	_	28.0	_	1.25	25.0	_	
09605-2-4013	200/225	2	230.0	175.0	213.0	24.0	6x5.5	1.25	20.0	203.0	
25010-2-4013	250 <sup>(3)</sup>	1	300.0	193.0	285.0	51.5	6x7	1.50	27.3	_	
28010-2-4013	280 <sup>(3)</sup>	1	336.0	228.0	315.0	58.5	6x7	1.50	36.5	296.0	
31010-2-4013	310 <sup>(3)</sup>	1	374.0	257.0	350.0	62.5	6x9	1.50	39.5	327.0	
35510-2-4013	355 <sup>(3)</sup>	1	413.0	289.0	390.0	71.5	6x9	1.50	43.5	372.0	
40010-2-4013	400 <sup>(3)</sup>	1	456.0	325.0	430.0	79.5	6x9	1.50	45.5	414.0	
45010-2-4013	450 <sup>(3)</sup>	1	530.0	365.0	510.0	91.5	6x9	1.50	49.5	459.0	

## Guard grille

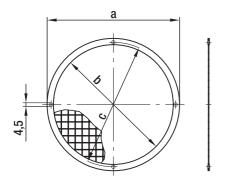


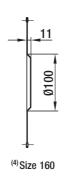
 Material: Steel wire, plastic coated, silver-metallic gloss

Guard grille for backy	ward curved centri	tugal tans (accor	ding to EN 294)

Part no.	Size	Vers.	а	b	d	е	
78130-2-4039	310	1	280.0	4.5	230.0	2.8	
78132-2-4039	400	1	345.0	4.5	310.0	2.8	
78136-2-4039	450	2	425.0	8.5	350.0	3.8	
78139-2-4039	500	2	445.0	8.5	410.0	3.8	
78137-2-4039	560	2	490.0	8.5	430.0	3.8	
78138-2-4039	630	2	600.0	8.5	490.0	3.8	

## Guard grille





 Material: Welded grille made of galvanised steel, frame made of tinned sheet iron 0.4 mm thick

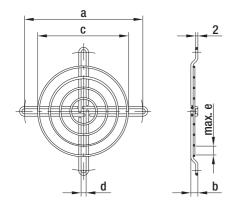
Guard grilles for ce	entrifugal	blowers	with	single	ınlet	
Part no	Cizo			2	h	

Part no.	Size	a	b	С	
09489-2-4039	076 / 085 <sup>(3)</sup>	90.0	74.0	84.0	
09490-2-4039	108	126.0	110.0	118.0	
09494-2-4039	120	140.0	124.0	132.0	
09492-2-4039	140/146	168.0	152.0	158.0	
09503-2-4039	160 <sup>(4)</sup>	183.0	170.0	175.0	
09493-2-4039	180 (5)	205.0	189.0	194.0	

subject to alterations

(3) 3 drilled holes staggered by 120°

(5) not suitable for G2E180-EH03-01



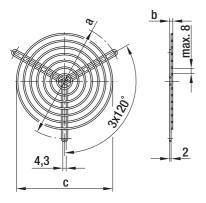
- Material: Steel wire

#### **Guard grilles for centrifugal blowers with single inlet**

dadia giinoo ioi ooni	agai bioiroio	min omg					
Part no.	Size	а	b	С	d	е	Coating
09603-2-4039	076 / 085	101.0	6.0	79.0	4.3	8.0	plastic coated, silver-metallic gloss
98214-2-4039	108	120.0	3.5	88.0	4.3	8.0	plastic coated, silver-metallic gloss
25028-2-4039	140/146	162.0	8.5	139.0	4.3	8.0	galvanised, chromatised in blue
17729-2-4039	160	175.0	3.5	139.0	4.6	7.0	galvanised, chromatised in blue
09526-2-4039	180 <sup>(6)</sup>	194.0	39.5	164.0	4.3	8.0	phosphated, plastic coated in RAL no. 9005

subject to alterations (6) only suitable for G2E180-EH03-01

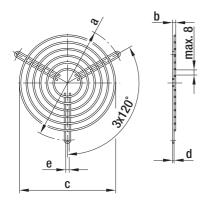
### Guard grille



- Material: Steel wire

### Guard grilles for centrifugal blowers with dual inlet

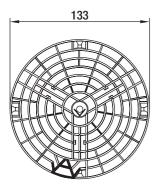
Part no.	Size	a	b	C	Coating
83319-2-4039	097 <sup>(1)</sup>	96.0	3.5	71.0	phosphated, plastic coated in RAL no. 9005
09485-2-4039	097 (2)	114.0	3.5	88.0	phosphated, plastic coated in RAL no. 9005
09500-2-4039	133/146	145.0	4.0	122.0	phosphated, plastic coated in RAL no. 9005
31003-2-4039	180	192.0	9.5	174.0	phosphated, plastic coated in RAL no. 9005
95644-2-4039	200	250.0	5.0	206.0	plastic coated, silver-metallic gloss
subject to alterations	(1) for D2E097-CH	(2) for D2E097-B*			

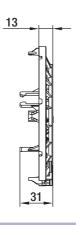


 Material: Phosphated steel wire, plastic coated, silver-metallic gloss

#### Guard grilles for centrifugal blowers with dual inlet (versions with EW motor)

### Guard grille





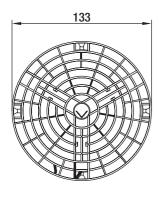
- Material: PA plastic 6.6 GV25 V0, black
- Special feature: Triangular, raised contour
- Suitable for:

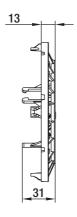
D2E140-HR; D2E146-KA; D2E146-KB; D2E146-HR; D2E146-HS; D2E146-HT; D4E146-LV

**Guard grilles for blowers with dual inlet** with plastic housing (cable exit side of blower) **Part no.** 

34265-2-2929

subject to alterations





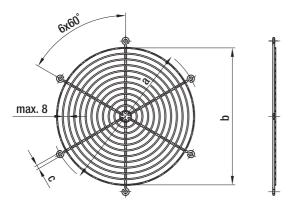
- Material: PA plastic 6.6 GV25 V0, black
- Special feature: Outer two rings are closed
- Suitable for:

D2E140-HR; D2E146-KA; D2E146-KB; D2E146-HR; D2E146-HS; D2E146-HT; D4E146-LV; K4E146-AB

**Guard grilles for blowers with dual inlet** with plastic housing (side of blower opposite cable exit) **Part no.** 

38182-2-2929

## Guard grille

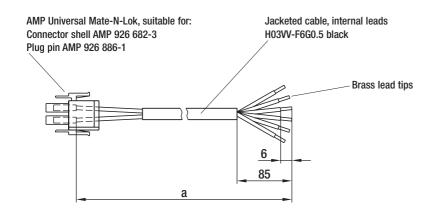


 Material: Phosphated steel wire, plastic coated in RAL no. 9005, black

Guard	grilles	(e.g. fo	r axial 1	fans)
-------	---------	----------	-----------	-------

	winar rarroj					
Part no.	Size	а	b	С		
00540 0 4000	000	050.0	007.0	0.0		
09513-2-4039	200	250.0	227.0	6.0		
09518-2-4039	250	295.0	265.0	7.0		
09532-2-4039	300	380.0	323.0	9.0		

### **Connection leads**



#### - Suitable for:

D2E140-HR; D2E146-KA; D2E146-KB; D2E146-HR; D2E146-HS; D2E146-HT; D2E160-FI; D2E160-FK

#### - Plug assignment:

1 = Step 1 (white)

2 = Step 2 (red)

3 = Step 3 (grey)

4 = Step 4 (black)

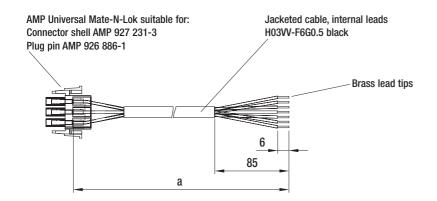
5 = N (blue)

6 = PE (green/yellow)

#### Lead connections for centrifugal blowers

Part no.	a
21956-4-1040	300.0
21957-4-1040	450.0
21937-4-1040	430.0
21958-4-1040	650.0
	000.0
21959-4-1040	1000.0

subject to alterations



#### - Suitable for:

D4E146-LV; K4E146-AB

#### - Plug assignment:

1 = Step 1 (white)

2 = Step 2 (red)

3 = Step 3 (grey)

4 = Step 4 (orange)

5 = Step 5 (black)

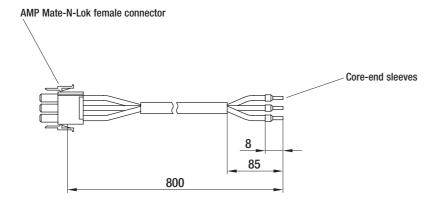
8 = N (blue)

9 = PE (green/yellow)

### Lead connections for centrifugal blowers

Leau confidentions for	Centunuyan biowers
Part no.	а
21810-4-1012	450.0
21811-4-1012	1050.0
21812-4-1012	1300.0
21813-4-1012	1600.0
21814-4-1012	2300.0

### **Connection leads**



#### - Plug assignment:

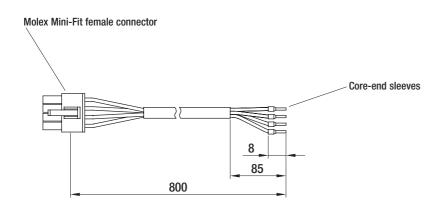
1 = N (black 2) 2 = L (black 1) 3 = PE (green/yellow)

#### Line lead for EC centrifugal fans (clean room technology)

Part no.

#### 22243-4-1029

subject to alterations



#### Plug assignment:

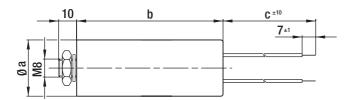
1 = RSB (white) 2 = RSA (yellow) 3 = +15 V (red) 4 = 0 V (blue)

Control line for EC centrifugal fans (clean room technology)

Part no.

#### 22242-4-1029

### Capacitors

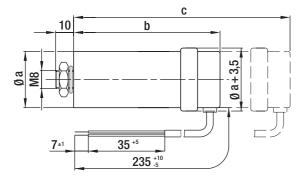


- Material: Housing made of Thermoplast
- Connection lead: Multi-lead PVC cable 0.5 mm² with brass lead tips
- Approval: VDE according to DIN EN 60252 (VDE 0560/8)
- Calculated life time:

400 V; -25 to +85°C; 30,000 hrs; class A 450 V; -25 to +85°C; 10,000 hrs; class B

MKP motor capacit	tors (without fuse)			
Part no.	Capacity	а	<b>b</b> (max.)	С
02100-4-7320	1.0 μF	25-28	58.0	235.0
99282-4-7320	1.5 μF	25-28	58.0	235.0
99283-4-7320	2.0 μF	25-28	58.0	235.0
02103-4-7320	2.5 μF	25-28	70.0	235.0
68462-4-7320	3.0 µF	25-28	70.0	235.0
99284-4-7320	4.0 μF	28-32	58.0	235.0
02101-4-7320	5.0 μF	30-36	70.0	235.0
99285-4-7320	6.0 μF	30-36	70.0	235.0
66788-4-7320	7.0 µF	30-36	72.0	100.0
99286-4-7320	8.0 µF	35-40	72.0	235.0
99287-4-7320	10.0 μF	35-40	72.0	200.0
66786-4-7320	12.0 μF	40.0	72.0	100.0
30457-4-7320	14.0 μF	40-45	92.0	150.0
50090-4-7320	16.0 µF	35-40	95.0	100.0
90034-4-7320	20.0 μF	40.0	95.0	235.0
90025-4-7320	25.0 μF	40.0	120.0	235.0
subject to alterations				

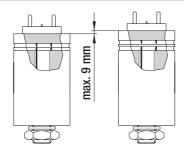
### **Capacitors**



- Material: Plastic cap, aluminium cup
- Designation: FPU or P2 according to IEC 252 (non-flammable, non-explosive, circuit-breaking)
- Approval: VDE according to DIN EN 60252 (VDE 0560/8)
- Calculated life time:

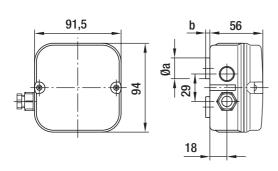
420 V; -25 to +85°C; 30,000 hrs; class A 470 V; -25 to +85°C; 10,000 hrs; class B 500 V; -25 to +85°C; 3,000 hrs; class C

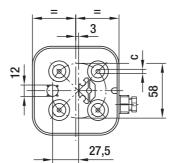
	rs FPU or P2 (w	itii iuooj					
Part no.	Capacity	a b	(max.) <b>c</b> (m	max.)			
02151-4-7320	1.0 µF	25-30	77.0 92	92.0			
02155-4-7320	1.5 µF	25.0	77.0 92	92.0			
02156-4-7320	2.0 µF	25.0	77.0 92	92.0			
02159-4-7320	2.5 µF	30.0	71.0 92	92.0			
02160-4-7320	3.0 µF	30.0	71.0 92	92.0			
02161-4-7320	4.0 μF	25-30 1	104.0 135	35.0			
02162-4-7320	5.0 μF	25-30 1	104.0 113	13.0			
02163-4-7320	6.0 µF	30.0 1	101.0 110	10.0			
02164-4-7320	7.0 µF	30-35 1	101.0 110	10.0			
02165-4-7320	8.0 μF	30-35 1	102.0 111	11.0			
02166-4-7320	10.0 μF	35.0	96.0 110	10.0			
02167-4-7320	12.0 μF	35.0	96.0 110	10.0			
90026-4-7320	14.0 µF	40.0 1	130.0 139	39.0			
02168-4-7320	16.0 µF	40.0	96.0 130	30.0			
02169-4-7320	20.0 μF	40.0 1	116.0 130	30.0			
02170-4-7320	25.0 μF	40-45 1	116.0 130	30.0			



- Pull-off protector: The housing expands by max. 9 mm. The protector responds to overload by the generated excess pressure snapping off the internal lead in a predetermined breaking point.
- Mounting: c is the overall dimension of the capacitor which has to be taken into account when mounting the part. The capacitor design, however, depends on the manufacturer. The expansion (9 mm) is either added to dimension b, or it is already integrated in the capacitor.

### Terminal box

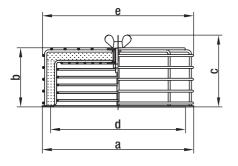




- Material: ABS
- Description: Two-piece terminal box for AC motors of size 068 or 074, terminal strip with 4- or 7-pole. Suitable for installation of capacitor with 10 μF max.
- Type of protection: IP 54

Terminal box				
Part no.	AC motor	a	b	С
64442-1-7612	068 (4 poles)	22.0	5.0	4.3
64444-1-7612	068 (7 poles)	22.0	5.0	4.3
64443-1-7612	074 (4 poles)	12x14.5	10.5	5.5
64445-1-7612	074 (7 poles)	12x14.5	10.5	5.5

### Air filter



- Material: Steel wire / sheet steel, plastic coated in RAL no. 9005, black
- Filter: Viledon filter type R: PSB / 29 0S (according to DIN 24185)
  Separation capacity: < 86 %</li>
  Efficiency: < 20 %</li>
  Dust binding capacity: 650 g/m²

Air filters for	centrifugal	hlowers	(with die-	-cast	aluminium	housing)

7 till Tillicold Toll dollatinag	jai biotioio (iiiai i	aro odot di	aiiiiiiiii	modom	9)			
Part no.	Size	a	b	С	d	е	Spare filter	
95777-1-5171	108/120	142.0	66.0	83.0	118-132	145.0	95779-1-5171	
95778-1-5171	140/146/160	185.0	74.0	91.0	158-175	185.0	95780-1-5171	
95347-1-5171	180	210.0	74.0	91.0	194.0	185.0	95780-1-5171	

### Speed setting, 3-phase (with 5 steps)

for wall assembly

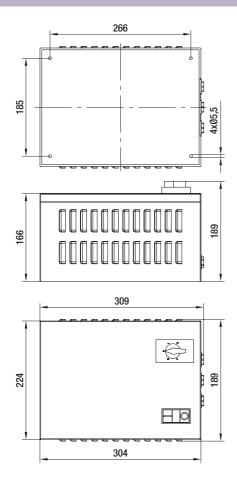


Voltage steps: 3~ 400 / 280 / 230 / 180 / 140 VAC

- **Type of protection:** IP 20 (with vertical installation)



Nominal data		Nominal voltage	Frequency	Current draw	Mass	
Туре		VAC	Hz	Α	kg	
TCD 020-AA01 -05	3~	400	50/60	2.0	9.5	
TCD 040-AA01 -05	3~	400	50/60	4.0	13.9	
TCD 070-AA01 -05	3~	400	50/60	7.0	19.7	



Accessories

### Speed setting, single-phase (with 5 steps)

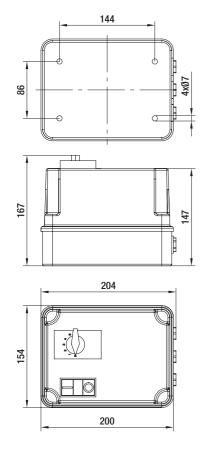
for wall assembly



Voltage steps: 1~ 230 / 160 / 145 / 130 / 105 VAC

Type of protection: IP 40





# Motor protection switch, 3-phase

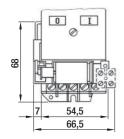
for assembly inside a cabinet

- Technical features: Input for TOP

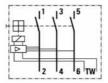


Nominal data		Nominal voltage	Frequency	Current draw	Mass	
Туре		VAC	Hz	Α	kg	Auxiliary contactor
TPD 250-AB01 -01	3~	400	50/60	25.0	0.3	without auxiliary contactor
TPD 250-AB01 -02	3~	400	50/60	25.0	0.3	with break contact
TPD 250-AB01 -03	3~	400	50/60	25.0	0.3	with make contact

subject to alterations



#### - Electr. connection:



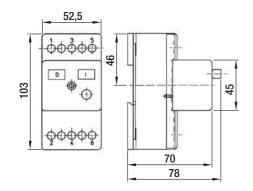
### $Motor\ protection\ switch,\ {\tt single-phase}$

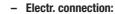
for assembly inside a cabinet

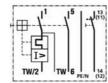
- Technical features: Input for TOP



Nominal data		Nominal voltage	Frequency	Current draw	Wass	Auxiliary contactor	Er contrituer
					_	·	
TPE 100-AB01 -01	3~	230	50/60	10.0	0.3	without auxiliary contactor	2
TPE 100-AB01 -02	3~	230	50/60	10.0	0.3	with break contact	-
TPE 100-AB01 -03	3~	230	50/60	10.0	0.3	with make contact	Ì







### $\begin{tabular}{ll} \textbf{Motor-protection switch, single phase and three-phase} \end{tabular}$

for wall assembly

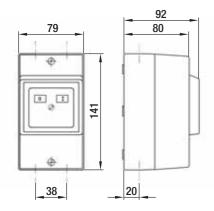
- Technical features: Input for TOP

- Type of protection: IP 55

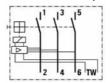


Nominal data Type		Nominal voltage	Frequency	Current draw	Mass	Auxiliary contactor
21.						
TPD 250-AA01 -01	3~	400	50/60	25.0	0.6	without auxiliary contactor
TPD 250-AA01 -02	3~	400	50/60	25.0	0.6	with break contact
TPD 250-AA01 -03	3~	400	50/60	25.0	0.6	with make contact
TPE 100-AA01 -01	1~	230	50/60	10.0	0.6	without auxiliary contactor
TPE 100-AA01 -02	1~	230	50/60	10.0	0.6	with break contact
TPE 100-AA01 -03	1~	230	50/60	10.0	0.6	with make contact

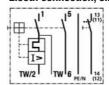
subject to alterations



- Electr. connection, three-phase:



- Electr. connection, single-phase:



### Star-delta switch / repair switch

Third-party accessories from Möller Electric GmbH



for wall installation

More information: www.moeller.net

Star-delta switch (ava	anable from Moller Electric Gillon)		
Designation	Installation		
T0-4-8410/I1	Wall installation		
T0-4-8410/E	Cabinet installation	í	

subject to alterations



for wall installation

More information: www.moeller.net

Repair switch, lockable	(available from	Möller Electric	GmbH)

Repair switch, lockab	Repair switch, lockable (available from Möller Electric GmbH)			
Designation	Installation			
T0-2-8900/I1/SVB-SW	Wall installation			
T0-2-8900/EA/SVB-SW	Cabinet installation			

