

Dimensional drawings

Main spindle motors

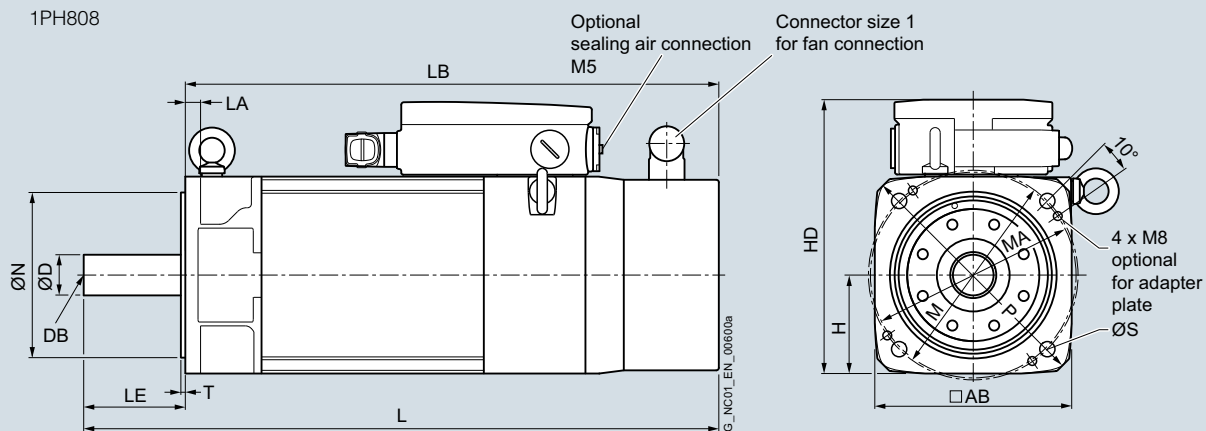
SIMOTICS M-1PH8 Premium Performance asynchronous motors > SH 80 – Forced ventilation – Solid shaft

Dimensional drawings

For motor Dimensions in mm (inches)

Shaft height	Type	IEC AB	H	HD	L	LA	LB	M	N	P	S	T	Shaft extension DE		
													D	DB	LE
1PH8 Premium Performance, type of construction IM B5, forced ventilation, solid shaft															
80	1PH8081	155 (6.10)	77.5 (3.05)	213.5 (8.41)	375 (14.75)	12 (0.45)	325 (12.80)	165 (6.50)	130 (5.12)	200 (7.87)	12 (0.47)	3.5 (0.14)	24 (0.94)	M6	50 (1.97)
	1PH8083				425 (16.73)		375 (14.75)								
	1PH8087				475 (18.70)		425 (16.73)								

1PH808

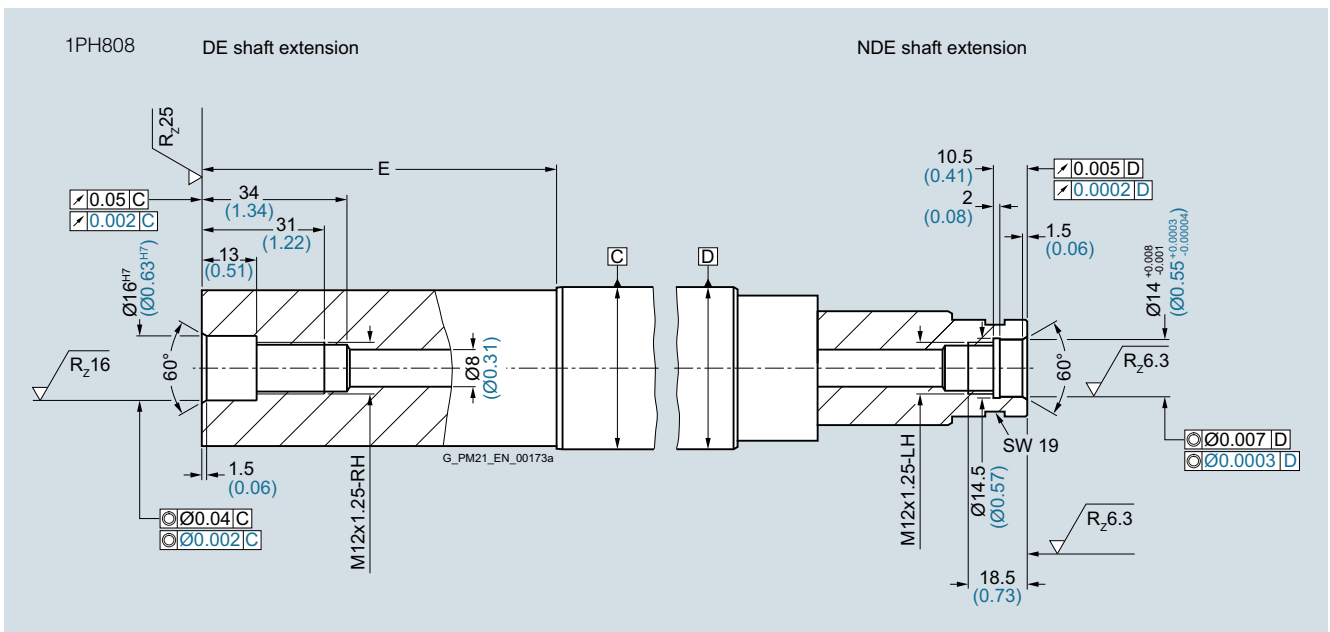
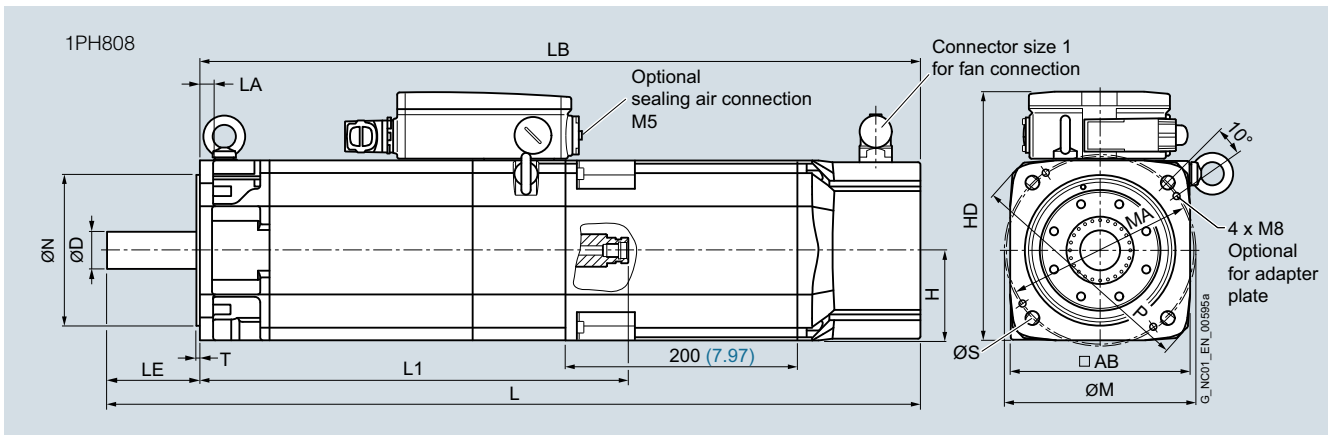


SIMOTICS M-1PH8 Premium Performance asynchronous motors > SH 80 – Forced ventilation – Hollow shaft

Dimensional drawings

For motor Dimensions in mm (inches)

Shaft height	Type	IEC	AB	H	HD	L	LA	LB	L1	M	MA	N	P	S	T	Shaft extension DE		
																D	E	LE
1PH8 Premium Performance, type of construction IM B5, forced ventilation, hollow shaft																		
80	1PH8081		155 (6.10)	77.5 (3.05)	213.5 (8.41)	575 (22.64)	12 (0.45)	525 (20.67)	269.3 (10.60)	165 (6.50)	162 (6.38)	130 (5.12)	200 (7.87)	12 (0.47)	3.5 (0.14)	24 (0.94)	50 (1.97)	50 (1.97)
	1PH8083					625 (24.61)		575 (22.64)	319.3 (12.57)									
	1PH8087					675 (26.57)		625 (24.61)	369.3 (14.54)									



Dimensional drawings

Main spindle motors

SIMOTICS M-1PH8 asynchronous motors > SH 80 – Forced ventilation

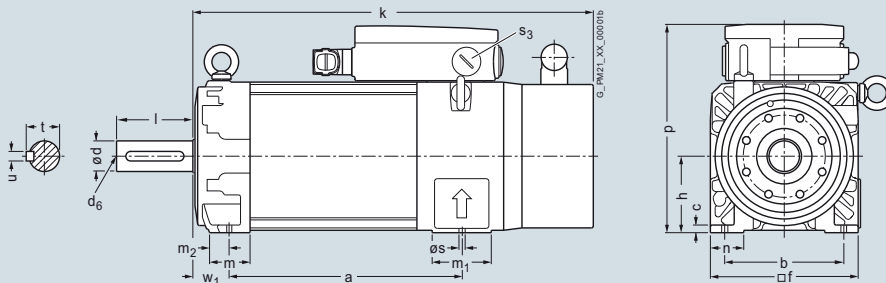
Dimensional drawings

For motor Dimensions in mm (inches)

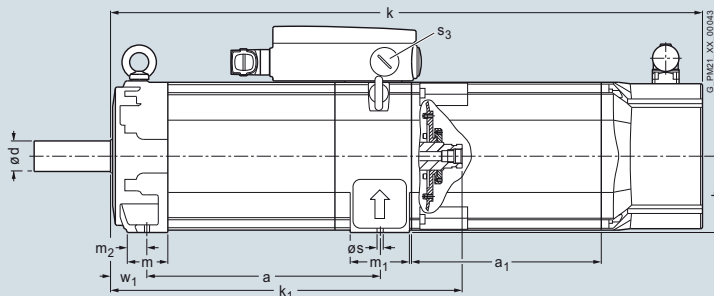
Shaft height	Type	DIN IEC	a B	b A	c HA	f AB	h H	k LB	m BA	m ₁ -	m ₂ -	n AA	p HD	p ₁ -	s K	s ₃ -	w ₁ C
1PH8 type of construction IM B3, forced ventilation																	
80	1PH8083		194 (7.64)	125 (4.92)	8 (0.31)	155 (6.10)	80 (3.15)	375 (14.76)	42 (1.65)	62 (2.44)	20 (0.79)	35 (1.38)	216 (8.5)	253.5 (9.98)	10 (0.39)	M25x1.5	38 (1.50)
	1PH8087		244 (9.61)					425 (16.73)									

Shaft height	Type	DIN IEC	Shaft extension DE				Version with hollow shaft										
			d D	l E	d ₆ -	t GA	u F	k LB	k ₁ -								
80	1PH8083		32 (1.26)	80 (3.15)	M12	35 (1.39)	10 (0.39)	575 (22.64)	319.3 (12.57)								
	1PH8087							625 (24.61)	369.3 (14.54)								

1PH808



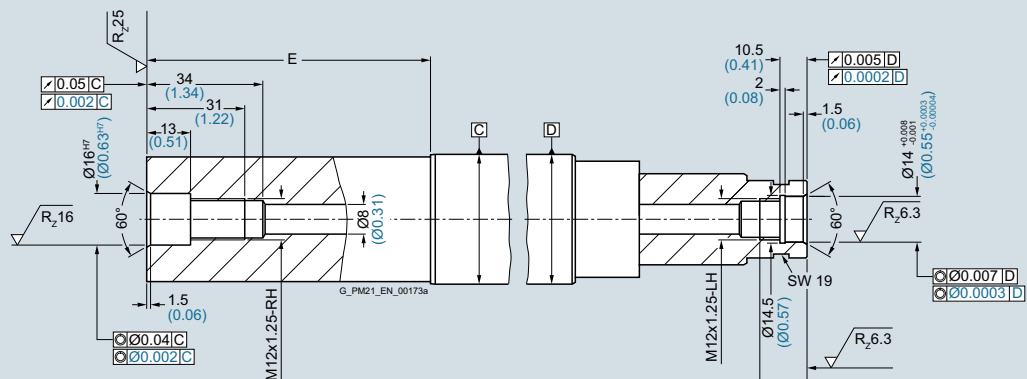
Version with hollow shaft



Hollow shaft

DE shaft extension

NDE shaft extension



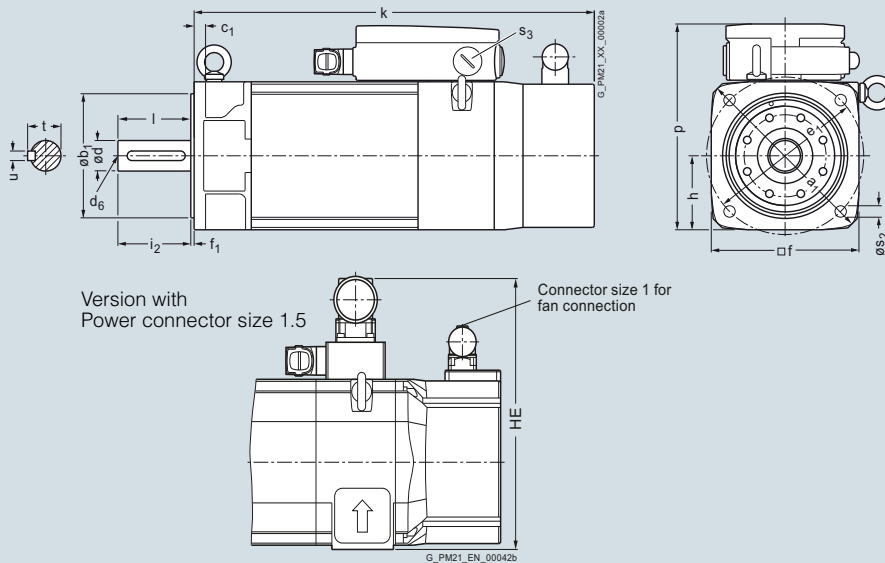
Dimensional drawings

For motor Dimensions in mm (inches)

Shaft height	Type	DIN IEC	a ₁ P	b ₁ N	c ₁ LA	e ₁ M	f AB	f ₁ T	h H	k LB	p HD	p ₁ -	s ₂ -	s ₃ -
1PH8 type of construction IM B5, forced ventilation														
80	1PH8083		200 (7.87)	130 (5.12)	12 (0.47)	165 (6.50)	155 (6.10)	3.5 (0.14)	77.5 (3.05)	375 (14.76)	213.5 (8.41)	251 (9.88)	12 (0.47)	M25x1.5
	1PH8087									425 (16.73)				

Shaft height	Type	DIN IEC	Shaft extension DE						Version with hollow shaft	
			d D	l E	d ₆ -	i ₂ E	t GA	u F	k LB	k ₁ -
80	1PH8083		32 (1.26)	80 (3.15)	M12	80 (3.15)	35 (1.38)	10 (0.39)	575 (22.64)	319.3 (12.57)
	1PH8087								625 (24.61)	369.3 (14.54)

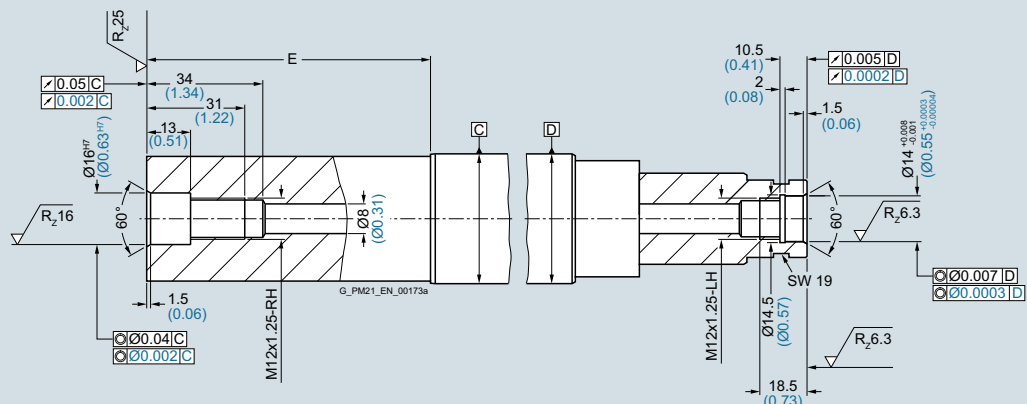
1PH808



Hollow shaft

DE shaft extension

NDE shaft extension



Dimensional drawings

Main spindle motors

SIMOTICS M-1PH8 asynchronous motors > SH 100/SH 132 – Forced ventilation

Dimensional drawings

For motor		Dimensions in mm (inches)															
Shaft height	Type	DIN IEC	a B	b A	c HA	f AB	h H	k LB	m BA	m ₁ –	m ₂ –	n AA	p HD	p ₁ –	p ₂ –	p ₃ –	
1PH8 type of construction IM B3, forced ventilation																	
100	1PH8101		167 (6.57)	160 (6.30)	11 (0.43)	196 (7.72)	100 (3.94)	369.5 (14.55)	49 (1.93)	74 (2.91)	24 (0.94)	40 (1.57)	252 (9.92)	294 (11.6)	198 (7.80)	276.5 (10.89)	
	1PH8103		202.5 (7.97)					405 (15.94)									
	1PH8105		262 (10.31)					464.5 (18.29)									
	1PH8107		297.5 (11.71)					500 (19.69)									
132	1PH8131		220.5 (8.68)	216 (8.50)	15 (0.59)	260 (10.24)	132 (5.2)	439 (17.28)	57 (2.24)	93 (3.66)	27 (1.06)	52 (2.05)	317.5 (12.50)	347 (13.66)	262 (10.31)	357.5 (14.07)	
	1PH8133		265.5 (10.45)					484 (19.06)									
	1PH8135		310.5 (12.22)					529 (20.83)									
	1PH8137		350.5 (13.80)					569 (22.40)									

Shaft height	Type	DIN IEC	Shaft extension DE										Version with hollow shaft				
			s K	s ₃ –	s ₄ –	w ₁ C	d D	l E	d ₆ –	t GA	u F	k LB	k ₁ –	p HD	p ₃ –	s ₃ –	
100	1PH8101		12 (0.47)	M32×1.5	M20×1.5	43 (1.69)	38 (1.50)	80 (3.15)	M12	41 (1.61)	10 (0.39)	569.5 (22.42)	312.3 (12.30)	266.5 (10.49)	276.5 (10.89)	M32×1.5	
	1PH8103											605 (23.82)	347.8 (13.69)				
	1PH8105											664.5 (26.16)	407.3 (16.04)				
	1PH8107											700 (27.56)	442.8 (17.43)				
132	1PH8131		12 (0.47)	M40×1.5	M20×1.5	53 (2.09)	48 (1.89)	110 (4.33)	M16	51.5 (2.03)	14 (0.55)	639 (25.16)	372.8 (14.68)	347.5 (13.68)	357.5 (14.07)	M50×1.5	
	1PH8133											684 (26.93)	417.8 (16.45)				
	1PH8135											729 (28.70)	462.8 (18.22)				
	1PH8137											769 (30.28)	502.8 (19.80)				

Dimensional drawings

Main spindle motors

SIMOTICS M-1PH8 asynchronous motors > SH 100 – Forced ventilation

Dimensional drawings

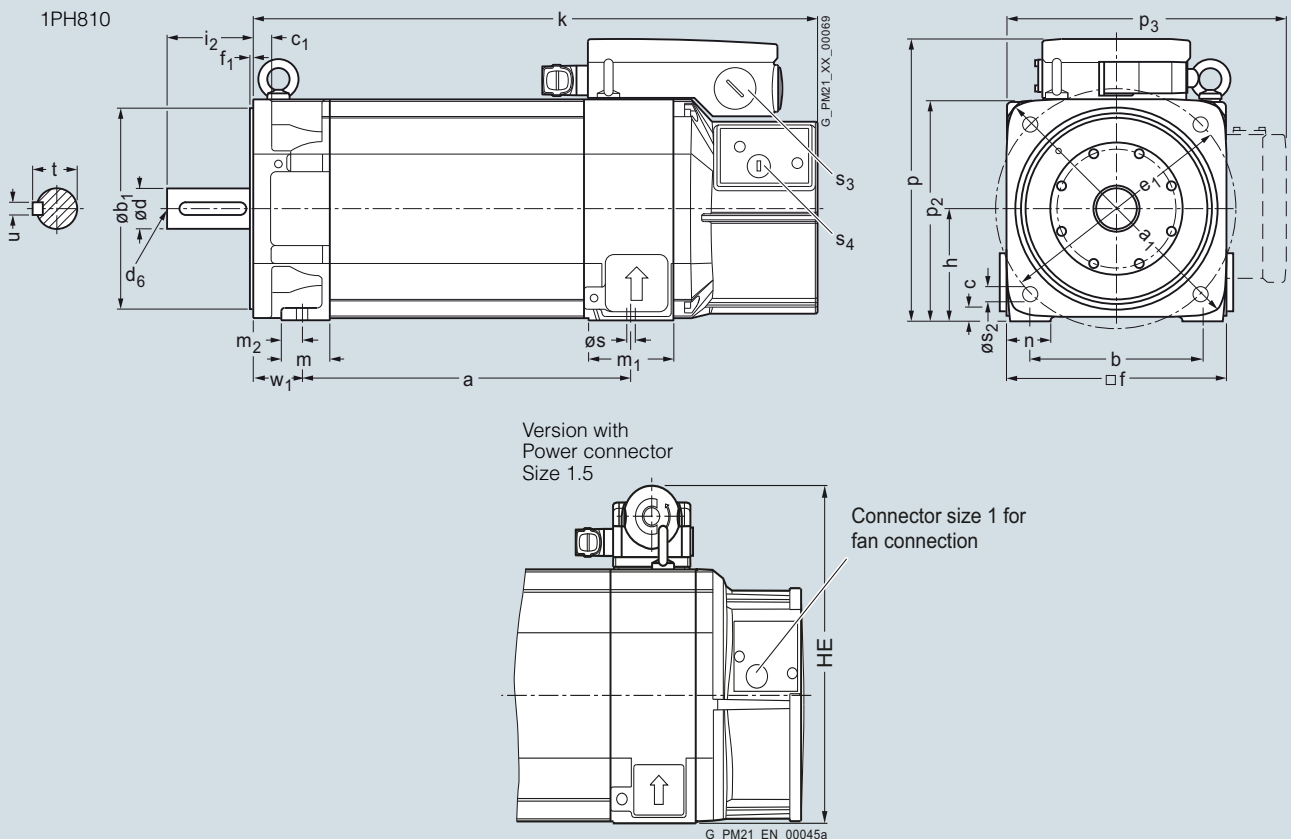
For motor Dimensions in mm (inches)

Shaft height	Type	DIN IEC	a B	a ₁ P	b A	b ₁ N	c HA	c ₁ LA	e ₁ M	f AB	f ₁ T	h H	k LB	m BA	m ₁ -	m ₂ -	n AA	p HD	- HE
--------------	------	---------	-----	------------------	-----	------------------	------	-------------------	------------------	------	------------------	-----	------	------	------------------	------------------	------	------	------

1PH8 type of construction IM B35, forced ventilation

100	1PH8101	167 (6.57)	250 (9.84)	160 (6.30)	180 (7.09)	11 (0.43)	16 (0.63)	215 (8.46)	196 (7.72)	4 (0.16)	100 (3.94)	369.5 (14.55)	44 (1.73)	74 (2.91)	19 (0.75)	40 (1.57)	252 (9.92)	294 (11.57)	
	1PH8103	202.5 (7.97)										405 (15.94)							
	1PH8105	262 (10.31)										464.5 (18.29)							
	1PH8107	297.5 (11.71)										500 (19.69)							

Shaft height	Type	DIN IEC	Shaft extension DE										Version with hollow shaft						
			p ₂ -	p ₃ -	s K	s ₂ -	s ₃ -	s ₄ -	w ₁ C	d D	l L	d ₆ -	i ₂ E	t GA	u F	k LB	k ₁ -	p HD	p ₃ -
100	1PH8101	198 (7.80)	276.5 (10.89)	12 (0.47)	14 (0.55)	M32x1.5	M20x1.5	43 (1.69)	38 (1.50)	80 (3.15)	M12	80 (3.15)	41 (1.61)	10 (0.39)	569.5 (22.42)	312.3 (12.30)	266.5 (10.49)	276.5 (10.89)	M32x1.5
	1PH8103													605 (23.82)	347.8 (13.69)				
	1PH8105													664.5 (26.16)	407.3 (16.04)				
	1PH8107													700 (27.56)	442.8 (17.43)				



Dimensional drawings

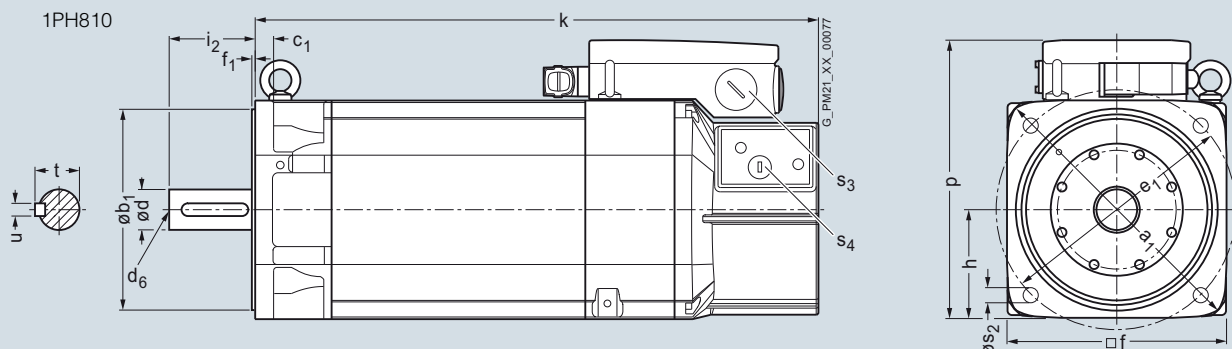
For motor Dimensions in mm (inches)

Shaft height	Type	DIN IEC	a ₁ P	b ₁ N	c ₁ LA	e ₁ M	f AB	f ₁ T	h H	k LB	p HD	- HE
--------------	------	---------	------------------	------------------	-------------------	------------------	------	------------------	-----	------	------	------

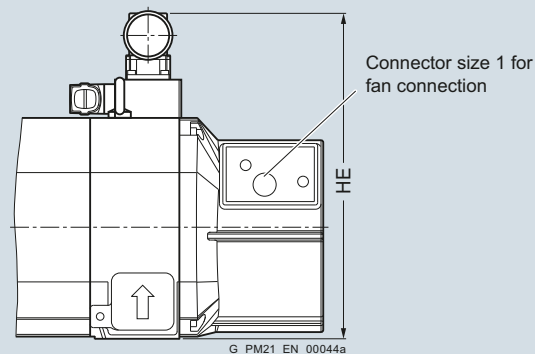
1PH8 type of construction IM B5, forced ventilation

100	1PH8101		250 (9.84)	180 (7.09)	16 (0.63)	215 (8.46)	196 (7.72)	4 (0.16)	98 (3.86)	369.5 (14.55)	250 (9.84)	292 (11.50)
	1PH8103									405 (15.94)		
	1PH8105									464.5 (18.29)		
	1PH8107									500 (19.69)		

Shaft height	Type	DIN IEC	Shaft extension DE				Version with hollow shaft								
			s ₂ -	s ₃ -	s ₄ -	d D	l L	d ₆ -	i ₂ E	t GA	u F	k LB	k ₁ -	p HD	s ₃ -
100	1PH8101		14 (0.55)	M32×1.5	M20×1.5	38 (1.50)	80 (3.15)	M12	80 (3.15)	41 (1.61)	10 (0.39)	569.5 (22.42)	312.3 (12.30)	264.5 (10.41)	M32×1.5
	1PH8103											605 (23.82)	347.8 (13.69)		
	1PH8105											664.5 (16.16)	407.3 (16.04)		
	1PH8107											700 (17.56)	442.8 (17.43)		



Version with
Power connector
Size 1.5



Dimensional drawings

Main spindle motors

SIMOTICS M-1PH8 asynchronous motors > SH 132 – Forced ventilation

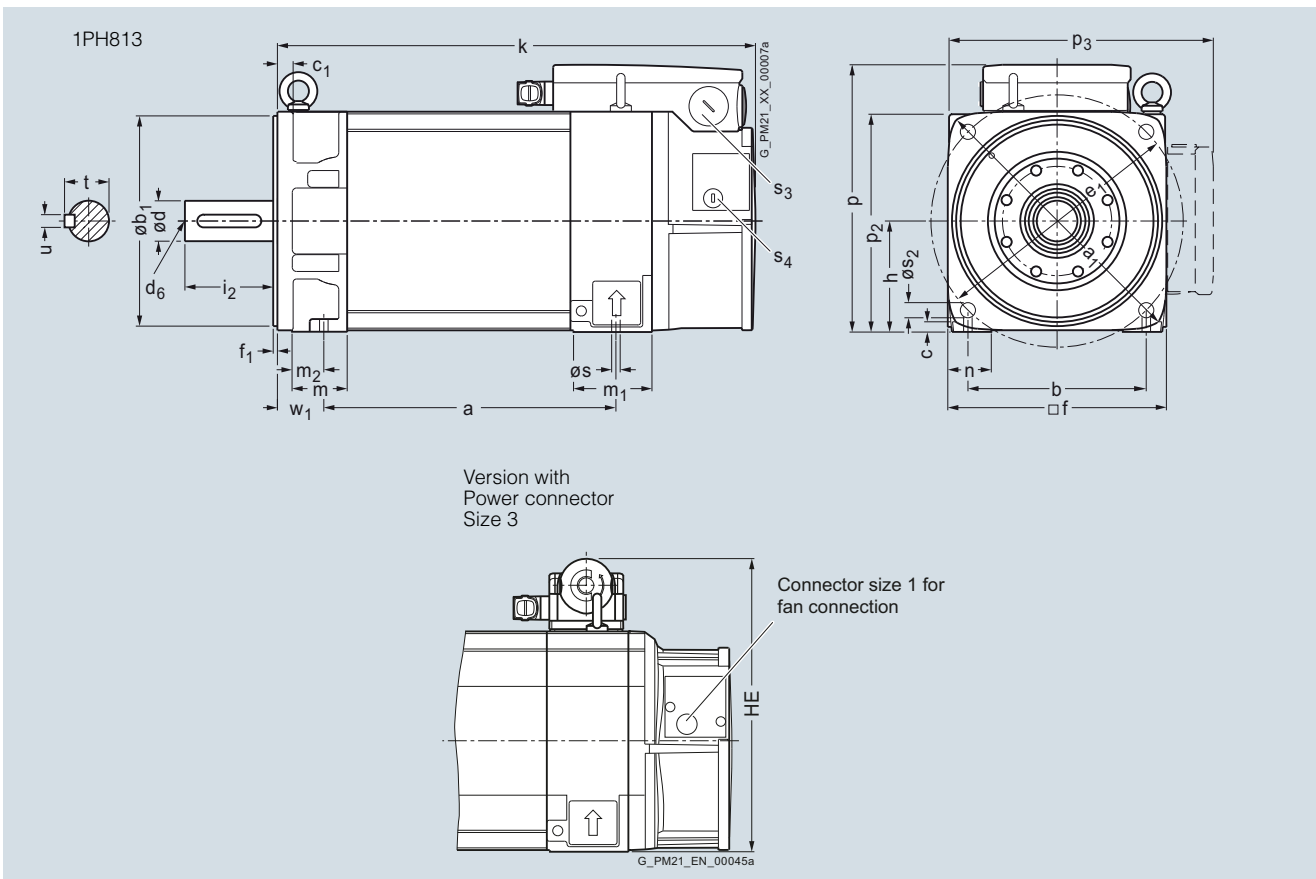
Dimensional drawings

For motor Dimensions in mm (inches)

Shaft height	Type	DIN IEC	a B	a ₁ P	b A	b ₁ N	c HA	c ₁ LA	e ₁ M	f AB	f ₁ T	h H	k LB	m BA	m ₁ –	m ₂ –	n AA	p HD	– HE
1PH8 type of construction IM B35, forced ventilation																			
132	1PH8131		220.5 (8.68)	340 (13.39)	216 (8.50)	250 (9.84)	15 (0.59)	18 (0.71)	300 (11.81)	260 (10.24)	5 (0.20)	132 (5.20)	439 (17.28)	65 (2.56)	93 (3.66)	35 (1.38)	52 (2.05)	317.5 (12.50)	347 (13.66)
	1PH8133		265.5 (10.45)										484 (19.06)						
	1PH8135		310.5 (12.22)										529 (20.83)						
	1PH8137		350.4 (13.80)										569 (22.40)						

Shaft height	Type	DIN IEC	Shaft extension DE											Version with hollow shaft						
			p ₂ –	p ₃ –	s K	s ₂ –	s ₃ –	s ₄ –	w ₁ C	d D	l L	d ₆ –	i ₂ E	t GA	u F	k LB	k ₁ –	p HD	p ₃ –	s ₃ –
132	1PH8131		262 (10.31)	357.5 (14.07)	12 (0.47)	18 (0.71)	M40×1.5	M20×1.5	53	48 (2.09)	110 (4.33)	M16	110 (4.33)	51.5 (2.03)	14 (0.55)	639 (25.16)	372.8 (14.68)	347.5 (13.68)	357.5 (14.07)	M50×1.5
	1PH8133														684 (26.93)	417.8 (16.45)				
	1PH8135														729 (28.70)	462.8 (18.22)				
	1PH8137														769 (30.28)	502.8 (19.80)				

6



Dimensional drawings

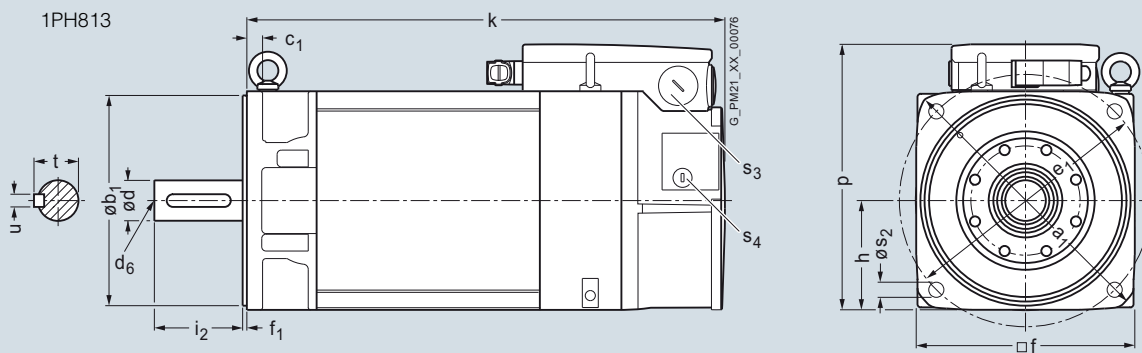
For motor Dimensions in mm (inches)

Shaft height	Type	DIN IEC	a ₁ P	b ₁ N	c ₁ LA	e ₁ M	f AB	f ₁ T	h H	k LB	p HD	- HE
--------------	------	---------	------------------	------------------	-------------------	------------------	------	------------------	-----	------	------	------

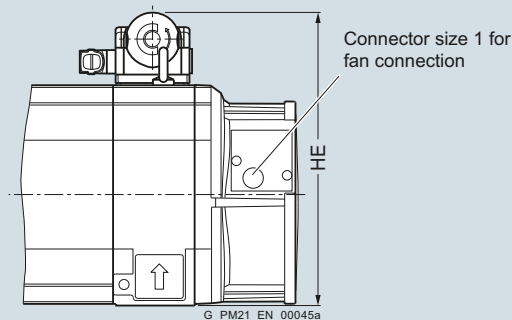
1PH8 type of construction IM B5, forced ventilation

132	1PH8131		340 (13.39)	250 (9.84)	18 (0.71)	300 (11.81)	260 (10.24)	5 (0.20)	130 (5.12)	439 (17.28)	315.5 (12.42)	345 (13.58)
	1PH8133									484 (19.06)		
	1PH8135									529 (20.83)		
	1PH8137									569 (22.40)		

Shaft height	Type	DIN IEC	Shaft extension DE				Version with hollow shaft								
			s ₂ -	s ₃ -	s ₄ -	d D	l L	d ₆ -	i ₂ E	t GA	u F	k LB	k ₁ -	p HD	s ₃ -
132	1PH8131		18 (0.71)	M40x1.5	M20x1.5	48 (1.89)	110 (4.33)	M16	110 (4.33)	51.5 (2.03)	14 (0.55)	639 (25.16)	372.8 (14.68)	345.5 (13.60)	M50x1.5
	1PH8133											684 (26.93)	417.8 (16.45)		
	1PH8135											729 (28.70)	462.8 (18.22)		
	1PH8137											769 (30.28)	502.8 (19.80)		



Version with Power connector Size 3



Dimensional drawings

Main spindle motors

SIMOTICS M-1PH8 asynchronous motors > SH 160 – Forced ventilation

Dimensional drawings

For motor Dimensions in mm (inches)

Shaft height	Type	DIN IEC	a B	a ₁ P	b A	b ₁ N	c HA	c ₁ LA	e ₁ M	f AB	f ₁ T	h H	k LB	m BA	m ₁ -	m ₂ -	n AA
--------------	------	---------	-----	------------------	-----	------------------	------	-------------------	------------------	------	------------------	-----	------	------	------------------	------------------	------

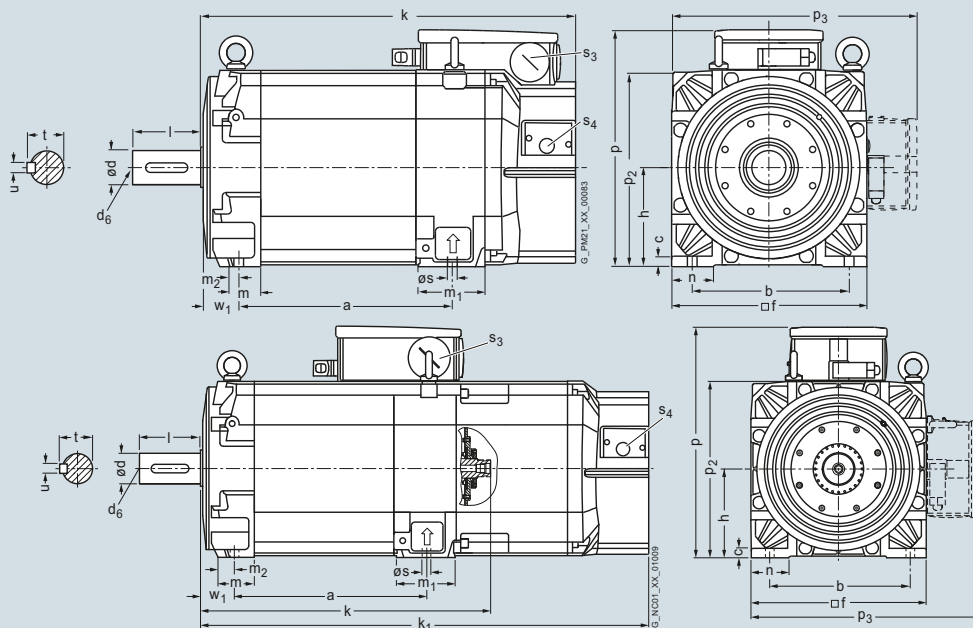
1PH8 type of construction IM B3, forced ventilation

160	1PH8163		346.5 (13.64)	-	254 (10.00)	-	17 (0.67)	23 (0.91)	-	314 (12.36)	-	160 (6.30)	610.5 (24.04)	64 (2.52)	99.5 (3.92)	28 (1.10)	70 (2.76)
	1PH8165		406.5 (16.00)										670.5 (26.40)				

Shaft height	Type	DIN IEC	Shaft extension DE										Version with hollow shaft				
			p HD	p ₁ -	p ₂ -	p ₃ -	s K	s ₂ -	s ₃ -	s ₄ -	w ₁ Cv	d D	d ₆ -	l E	t GA	u F	k LB

160	1PH8163		382.5 (15.06)	-	317 (12.48)	412.5 (16.24)	14 (0.55)	-	M50x1.5	M20x1.5	61 (2.40)	55 (2.17)	M20	110 (4.33)	59 (2.32)	16 (0.63)	810.5 (31.91)	520.8 (20.50)	415.5 (16.36)	M63x1.5
	1PH8165															870.5 (34.27)	580.8 (22.87)			

1PH816

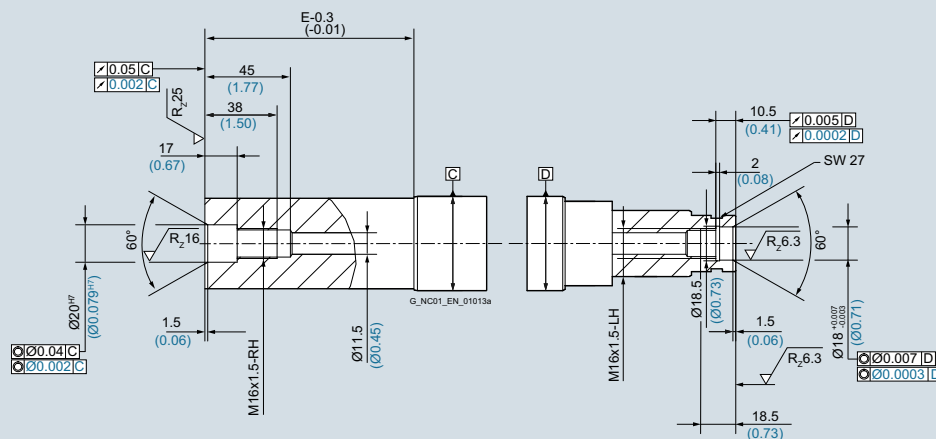


Version with hollow shaft

Hollow shaft

DE shaft extension

NDE shaft extension



Dimensional drawings

For motor Dimensions in mm (inches)

Shaft height	Type	DIN IEC	a B	a ₁ P	b A	b ₁ N	c HA	c ₁ LA	e ₁ M	f AB	f ₁ T	h H	k LB	m BA	m ₁ -	m ₂ -	n AA
--------------	------	---------	-----	------------------	-----	------------------	------	-------------------	------------------	------	------------------	-----	------	------	------------------	------------------	------

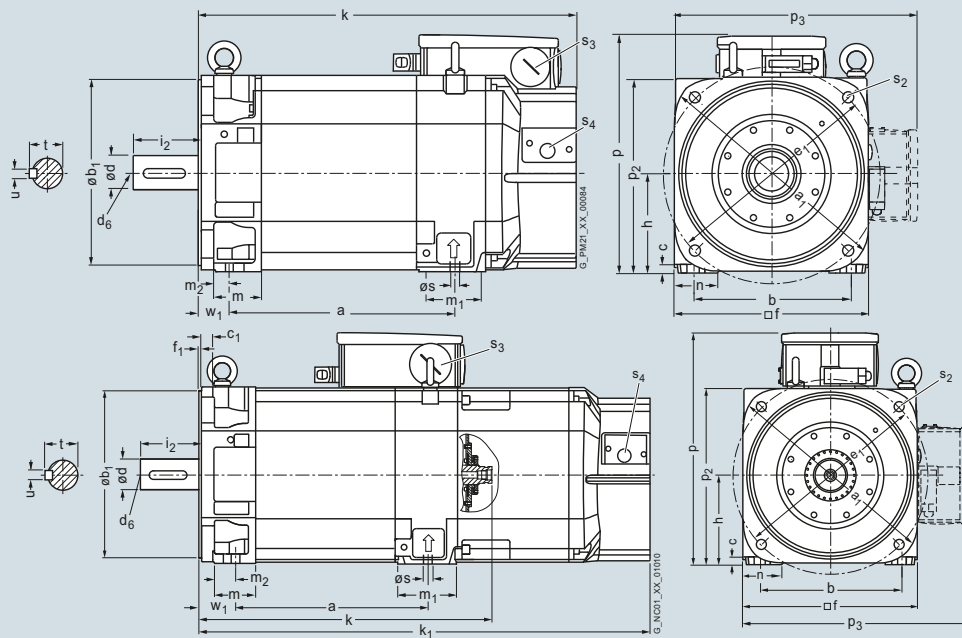
1PH8 type of construction IM B5/IM B35, forced ventilation

160	1PH8163		346.5 (13.64)	393 (15.47)	254 (10.00)	300 (11.81)	17 (0.67)	-	350 (13.78)	314 (12.36)	5 (0.20)	160 (6.30)	610.5 (24.04)	55 (2.17)	99.5 (3.92)	19 (0.75)	70 (2.76)
	1PH8165		406.5 (16.00)										670.5 (26.40)				

Shaft height	Type	DIN IEC	Shaft extension DE										Version with hollow shaft				
			p HD	p ₁ -	p ₂ -	p ₃ -	s K	s ₂ -	s ₃ -	s ₄ -	w ₁ C	d D	d ₆ -	i ₂ E	t GA	u F	k LB

160	1PH8163		382.5 (15.06)	-	317 (12.48)	412.5 (16.24)	14 (0.55)	18 (0.71)	M50x1.5	M20x1.5	61 (2.40)	55 (2.17)	M20	110 (4.33)	59 (2.32)	16 (0.63)	810.5 (31.91)	520.8 (20.50)	415.5 (16.36)	M63x1.5
	1PH8165																870.5 (34.27)	580.8 (22.87)		

1PH816

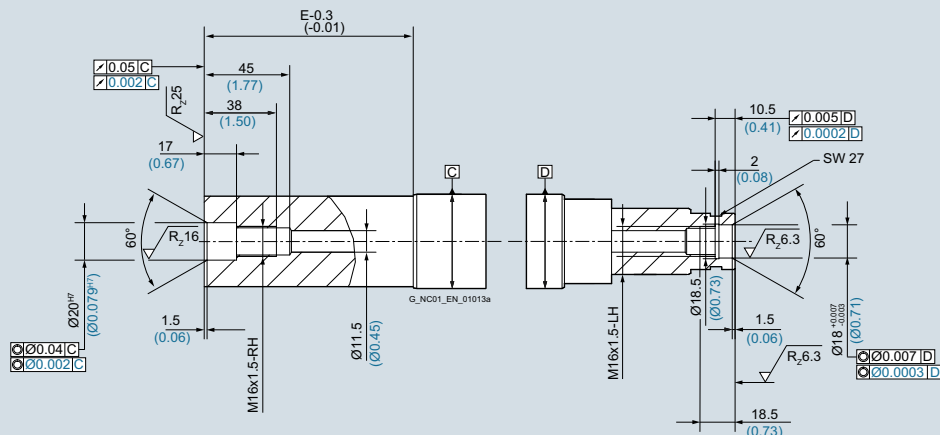


Version with hollow shaft

Hollow shaft

DE shaft extension

NDE shaft extension



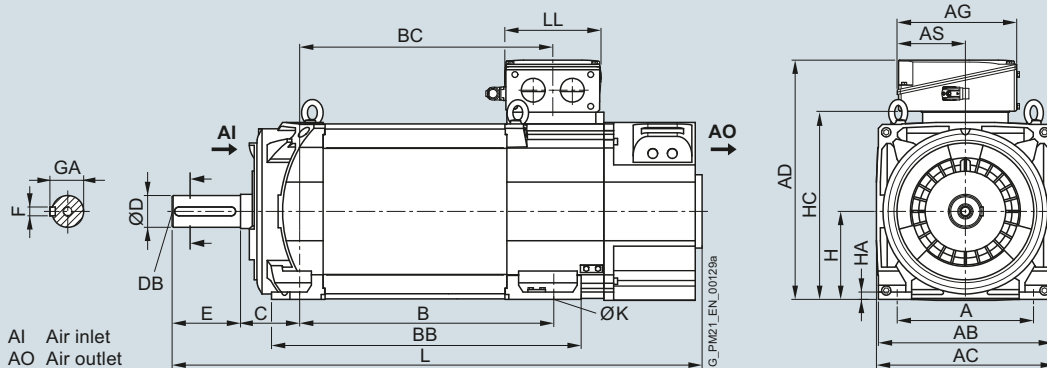
Dimensional drawings

Main spindle motors

SIMOTICS M-1PH8 asynchronous motors > SH 180 – Forced ventilation

Dimensional drawings

For motor		Dimensions in mm (inches)															
Shaft height	Type	IEC A	AB	AC	B	BB	C	D	DB	E	F	GA	H	HA	HC	K	L
1PH8 type of construction IM B3, forced ventilation – direction of air flow DE → NDE																	
180	1PH8184	279 (10.98)	356 (14.02)	364 (14.33)	430 (16.93)	545 (21.46)	121 (4.76)	65 (2.56)	M20	140 (5.51)	18 (0.71)	69 (2.72)	180 (7.09)	15 (0.59)	383 (15.08)	14.5 (0.57)	995 (39.17)
	1PH8186				520 (20.47)	635 (25.00)											1085 (42.72)
Terminal box		Dimensions in mm (inches)															
Shaft height	Type	IEC AD	AG	AS	BC	LL											
Terminal box type 1XB7 322																	
180	1PH8184	490 (19.29)	245 (9.65)	140 (5.51)	429 (16.89)	196 (7.72)											
	1PH8186				519 (20.43)												
Terminal box type 1XB7 422																	
180	1PH8184	533 (20.98)	281 (11.06)	176 (6.93)	429 (16.89)	233 (9.17)											
	1PH8186				519 (20.43)												
Terminal box type 1XB7 700																	
180	1PH8184	586 (23.07)	297 (11.69)	156 (6.14)	429 (16.89)	310 (12.20)											
	1PH8186				519 (20.43)												



Dimensional drawings

For motor Dimensions in mm (inches)

Shaft height	Type	IEC A	AB	AC	B	BB	C	D	DB	E	F	GA	H	HA	HC	K	L
--------------	------	-------	----	----	---	----	---	---	----	---	---	----	---	----	----	---	---

1PH8 type of construction IM B3, forced ventilation – direction of air flow NDE → DE

180	1PH8184	279 (10.98)	356 (14.02)	364 (14.33)	430 (16.93)	545 (21.46)	121 (4.76)	65 (2.56)	M20	140 (5.51)	18 (0.71)	69 (2.72)	180 (7.09)	15 (0.59)	383 (15.08)	14.5 (0.57)	1047 (41.22)
	1PH8186				520 (20.47)	635 (25.00)											1137 (44.76)

Terminal box Dimensions in mm (inches)

Shaft height	Type	IEC AD	AG	AS	BC	LL
--------------	------	--------	----	----	----	----

Terminal box type 1XB7 322

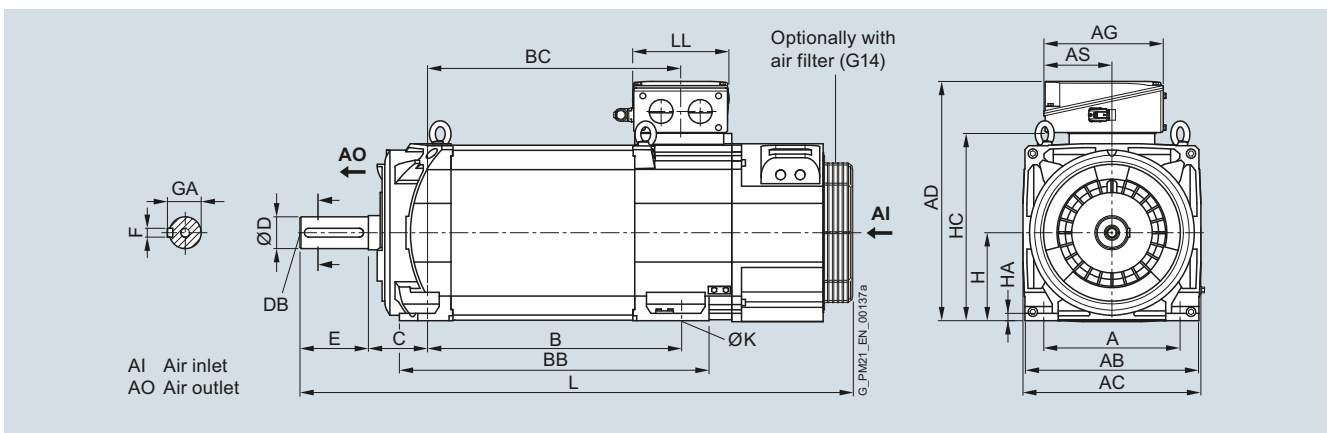
180	1PH8184	490 (19.29)	245 (9.65)	140 (5.51)	429 (16.89)	196 (7.72)
	1PH8186				519 (20.43)	

Terminal box type 1XB7 422

180	1PH8184	533 (20.98)	281 (11.06)	176 (6.93)	429 (16.89)	233 (9.17)
	1PH8186				519 (20.43)	

Terminal box type 1XB7 700

180	1PH8184	586 (23.07)	297 (11.69)	156 (6.14)	429 (16.89)	310 (12.20)
	1PH8186				519 (20.43)	



Dimensional drawings

Main spindle motors

SIMOTICS M-1PH8 asynchronous motors > SH 180 – Forced ventilation

Dimensional drawings

For motor Dimensions in mm (inches)

Shaft height	Type	IEC A	AB	AC	B	BB	C	D	DB	E	F	GA	H	HA	HC	K	L	M	N	P	S
--------------	------	-------	----	----	---	----	---	---	----	---	---	----	---	----	----	---	---	---	---	---	---

1PH8 type of construction IM B35, forced ventilation – direction of air flow DE → NDE, flange A400 (option K90)

180	1PH8184	279 (10.98)	356 (14.02)	364 (14.33)	430 (16.93)	545 (21.46)	121 (4.76)	65 (2.56)	M20	140 (5.51)	18 (0.71)	69 (2.72)	180 (7.09)	15 (0.59)	383 (15.08)	14.5 (0.57)	995 (39.17)	350 (13.78)	300 (11.81)	400 (15.75)	18.5 (0.73)
	1PH8186				520 (20.47)	635 (25.00)											1085 (42.72)				

Terminal box Dimensions in mm (inches)

Shaft height	Type	IEC AD	AG	AS	BC	LL
--------------	------	--------	----	----	----	----

Terminal box type 1XB7 322

180	1PH8184	490 (19.29)	245 (9.65)	140 (5.51)	429 (16.89)	196 (7.72)
	1PH8186				519 (20.43)	

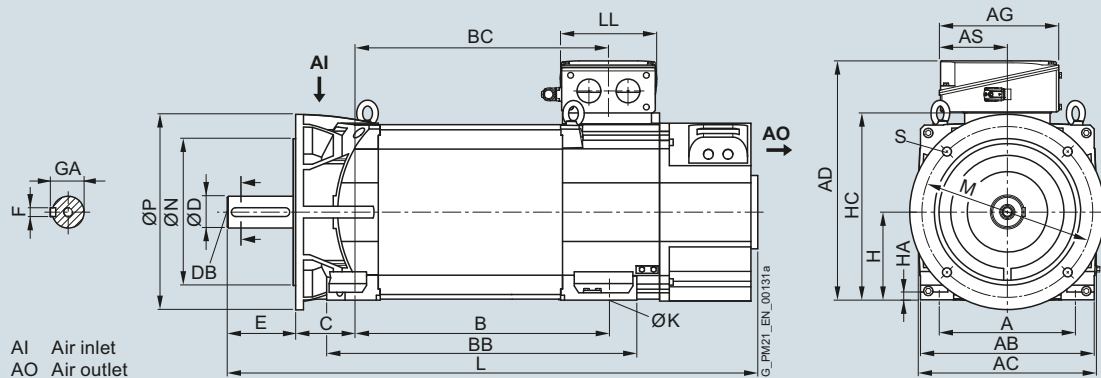
Terminal box type 1XB7 422

180	1PH8184	533 (20.98)	281 (11.06)	176 (6.93)	429 (16.89)	233 (9.17)
	1PH8186				519 (20.43)	

Terminal box type 1XB7 700

180	1PH8184	586 (23.07)	297 (11.69)	156 (6.14)	429 (16.89)	310 (12.20)
	1PH8186				519 (20.43)	

6



Dimensional drawings

For motor Dimensions in mm (inches)

Shaft height	Type	IEC A	AB	AC	B	BB	C	D	DB	E	F	GA	H	HA	HC	K	L	M	N	P	S
--------------	------	-------	----	----	---	----	---	---	----	---	---	----	---	----	----	---	---	---	---	---	---

1PH8 type of construction IM B35, forced ventilation – direction of air flow NDE → DE, flange A400

180	1PH8184	279 (10.98)	356 (14.02)	364 (14.33)	430 (16.93)	545 (21.46)	121 (4.76)	65 (2.56)	M20	140 (5.51)	18 (0.71)	69 (2.72)	180 (7.09)	15 (0.59)	383 (15.08)	14.5 (0.57)	1047 (41.22)	350 (13.78)	300 (11.81)	400 (15.75)	18.5 (0.73)
	1PH8186				520 (20.47)	635 (25.00)												1137 (44.76)			

Terminal box Dimensions in mm (inches)

Shaft height	Type	IEC AD	AG	AS	BC	LL
--------------	------	--------	----	----	----	----

Terminal box type 1XB7 322

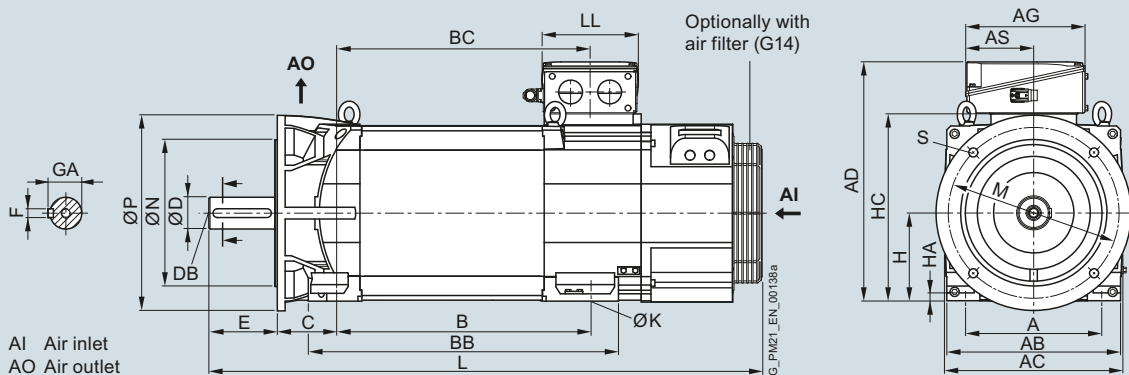
180	1PH8184	490 (19.29)	245 (9.65)	140 (5.51)	429 (16.89)	196 (7.72)
	1PH8186				519 (20.43)	

Terminal box type 1XB7 422

180	1PH8184	533 (20.98)	281 (11.06)	176 (6.93)	429 (16.89)	233 (9.17)
	1PH8186				519 (20.43)	

Terminal box type 1XB7 700

180	1PH8184	586 (23.07)	297 (11.69)	156 (6.14)	429 (16.89)	310 (12.20)
	1PH8186				519 (20.43)	



Dimensional drawings

Main spindle motors

SIMOTICS M-1PH8 asynchronous motors > SH 180 – Forced ventilation

Dimensional drawings

For motor Dimensions in mm (inches)

Shaft height	Type	IEC A	AB	AC	B	BB	C	D	DB	E	F	GA	H	HA	HC	K	L	M	N	P	S
--------------	------	-------	----	----	---	----	---	---	----	---	---	----	---	----	----	---	---	---	---	---	---

1PH8 type of construction IM B35, forced ventilation – direction of air flow DE → NDE, flange A450

180	1PH8184	279 (10.98)	356 (14.02)	364 (14.33)	430 (16.93)	545 (21.46)	121 (4.76)	65 (2.56)	M20	140 (5.51)	18 (0.71)	69 (2.72)	180 (7.09)	15 (0.59)	383 (15.08)	14.5 (0.57)	995 (39.17)	400 (15.75)	350 (13.78)	450 (17.72)	18.5 (0.73)
	1PH8186				520 (20.47)	635 (25.00)											1085 (42.72)				

Terminal box Dimensions in mm (inches)

Shaft height	Type	IEC AD	AG	AS	BC	LL
--------------	------	--------	----	----	----	----

Terminal box type 1XB7 322

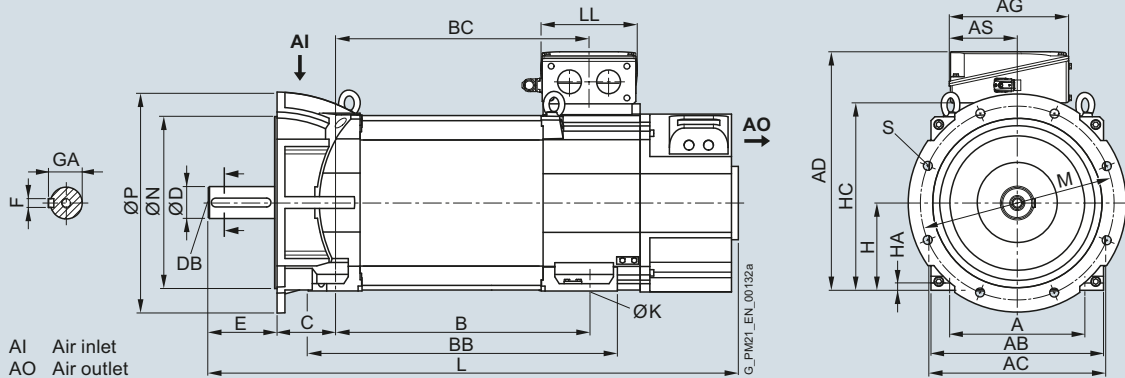
180	1PH8184	490 (19.29)	245 (9.65)	140 (5.51)	429 (16.89)	196 (7.72)
	1PH8186				519 (20.43)	

Terminal box type 1XB7 422

180	1PH8184	533 (20.98)	281 (11.06)	176 (6.93)	429 (16.89)	233 (9.17)
	1PH8186				519 (20.43)	

Terminal box type 1XB7 700

180	1PH8184	586 (23.07)	297 (11.69)	156 (6.14)	429 (16.89)	310 (12.20)
	1PH8186				519 (20.43)	



Dimensional drawings

For motor Dimensions in mm (inches)

Shaft height	Type	IEC A	AB	AC	B	BB	C	D	DB	E	F	GA	H	HA	HC	K	L	M	N	P	S
--------------	------	-------	----	----	---	----	---	---	----	---	---	----	---	----	----	---	---	---	---	---	---

1PH8 type of construction IM B35, forced ventilation – direction of air flow NDE → DE, flange A450

180	1PH8184	279 (10.98)	356 (14.02)	364 (14.33)	430 (16.93)	545 (21.46)	121 (4.76)	65 (2.56)	M20	140 (5.51)	18 (0.71)	69 (2.72)	180 (7.09)	15 (0.59)	383 (15.08)	14.5 (0.57)	1047 (41.22)	400 (15.75)	350 (13.78)	450 (17.72)	18.5 (0.73)
	1PH8186				520 (20.47)	635 (25.00)												1137 (44.76)			

Terminal box Dimensions in mm (inches)

Shaft height	Type	IEC AD	AG	AS	BC	LL
--------------	------	--------	----	----	----	----

Terminal box type 1XB7 322

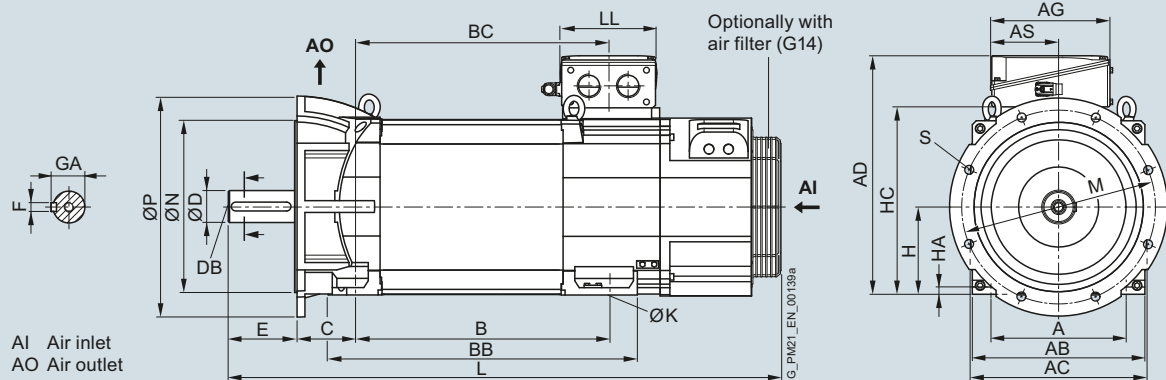
180	1PH8184	490 (19.29)	245 (9.65)	140 (5.51)	429 (16.89)	196 (7.72)
	1PH8186				519 (20.43)	

Terminal box type 1XB7 422

180	1PH8184	533 (20.98)	281 (11.06)	176 (6.93)	429 (16.89)	233 (9.17)
	1PH8186				519 (20.43)	

Terminal box type 1XB7 700

180	1PH8184	586 (23.07)	297 (11.69)	156 (6.14)	429 (16.89)	310 (12.20)
	1PH8186				519 (20.43)	



Dimensional drawings

Main spindle motors

SIMOTICS M-1PH8 asynchronous motors > SH 225 – Forced ventilation

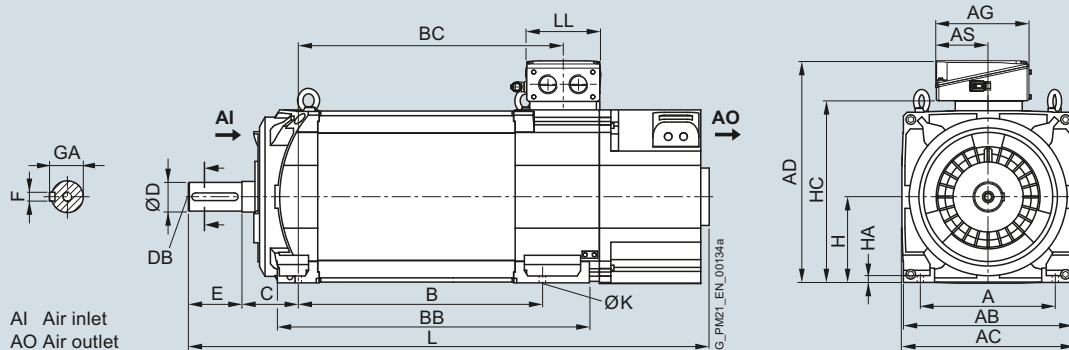
Dimensional drawings

For motor		Dimensions in mm (inches)															
Shaft height	Type	IEC A	AB	AC	B	BB	C	D	DB	E	F	GA	H	HA	HC	K	L
1PH8 type of construction IM B3, forced ventilation – direction of air flow DE → NDE																	
225	1PH8224	356 (14.02)	446 (17.56)	454 (17.87)	445 (17.52)	625 (24.61)	149 (5.87)	75 (2.95)	M20	140 (5.51)	20 (0.79)	79.5 (3.13)	225 (8.86)	18 (0.71)	475 (18.70)	18.5 (0.73)	1171 (46.10)
	1PH8226				545 (21.46)	725 (28.54)											1271 (40.04)
	1PH8228				635 (25.00)	815 (32.09)											1361 (53.58)

Terminal box		Dimensions in mm (inches)				
Shaft height	Type	IEC AD	AG	AS	BC	LL
Terminal box type 1XB7 322						
225	1PH8224	582 (22.91)	245 (9.65)	140 (5.51)	481 (18.94)	196 (7.72)
	1PH8226				581 (22.87)	
	1PH8228				671 (26.42)	

Terminal box type 1XB7 422						
225	1PH8224	625 (24.61)	281 (11.06)	176 (6.93)	481 (18.94)	233 (9.17)
	1PH8226				581 (22.87)	
	1PH8228				671 (26.42)	

Terminal box type 1XB7 700						
225	1PH8224	678 (26.69)	297 (11.69)	156 (6.14)	481 (18.94)	310 (12.20)
	1PH8226				581 (22.87)	
	1PH8228				671 (26.42)	



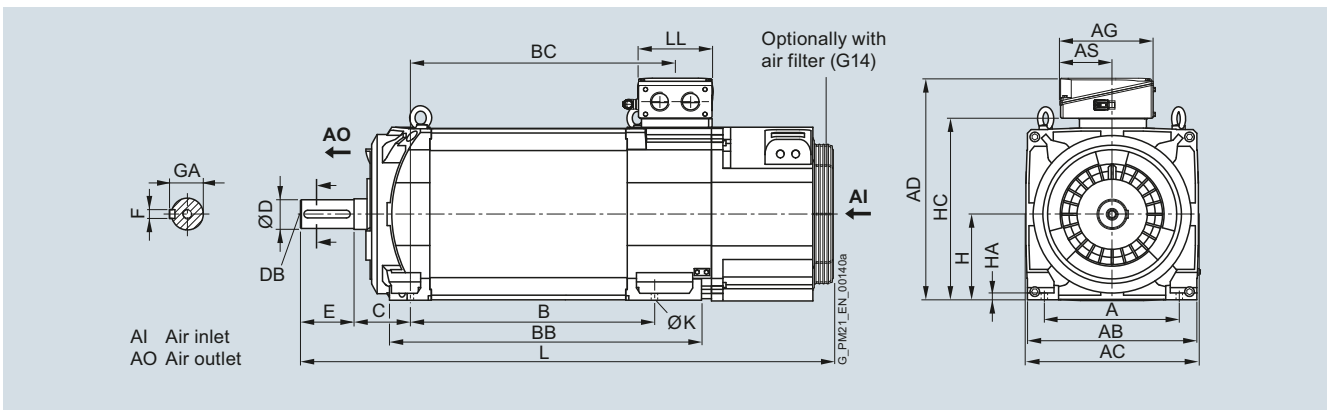
Dimensional drawings

For motor		Dimensions in mm (inches)															
Shaft height	Type	IEC A	AB	AC	B	BB	C	D	DB	E	F	GA	H	HA	HC	K	L
1PH8 type of construction IM B3, forced ventilation – direction of air flow NDE → DE																	
225	1PH8224	356	446	454	445	625	149	75	M20	140	20	79.5	225	18	475	18.5	1206 (889.5)
		(14.02)	(17.56)	(17.87)	(17.52)	(24.61)	(5.87)	(2.95)		(5.51)	(0.79)	(3.13)	(8.86)	(0.71)	(18.70)	(0.73)	(47.48)
	1PH8226				545	725											1306 (51.42)
					(21.46)	(28.54)											(47.48)
	1PH8228				635	815											1396 (54.96)
					(25.00)	(32.09)											(54.96)

Terminal box		Dimensions in mm (inches)					
Shaft height	Type	IEC AD	AG	AS	BC	LL	
Terminal box type 1XB7 322							
225	1PH8224	582 (22.91)	245 (9.65)	140 (5.51)	481 (18.94)	196 (7.72)	
	1PH8226				581 (22.87)		
	1PH8228				671 (26.42)		

Terminal box type 1XB7 422		Dimensions in mm (inches)					
Shaft height	Type	IEC AD	AG	AS	BC	LL	
225	1PH8224	625 (24.61)	281 (11.06)	176 (6.93)	481 (18.94)	233 (9.17)	
	1PH8226				581 (22.87)		
	1PH8228				671 (26.42)		

Terminal box type 1XB7 700		Dimensions in mm (inches)					
Shaft height	Type	IEC AD	AG	AS	BC	LL	
225	1PH8224	678 (26.69)	297 (11.69)	156 (6.14)	481 (18.94)	310 (12.20)	
	1PH8226				581 (22.87)		
	1PH8228				671 (26.42)		



Dimensional drawings

Main spindle motors

SIMOTICS M-1PH8 asynchronous motors > SH 225 – Forced ventilation

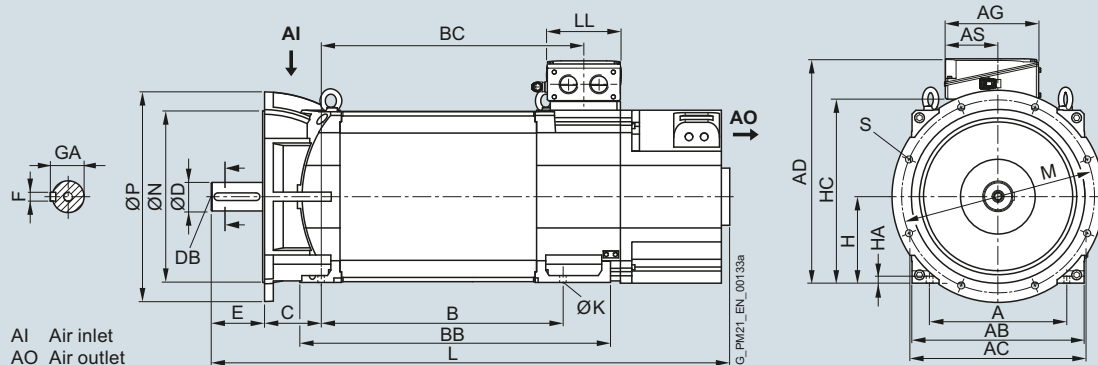
Dimensional drawings

For motor Dimensions in mm (inches)

Shaft height	Type	IEC A	AB	AC	B	BB	C	D	DB	E	F	GA	H	HA	HC	K	L	M	N	P	S
1PH8 type of construction IM B35, forced ventilation – direction of air flow DE → NDE, flange A550																					
225	1PH8224	356 (14.02)	446 (17.56)	454 (17.87)	445 (17.52)	625 (24.61)	149 (5.87)	75 (2.95)	M20	140 (5.51)	20 (0.79)	79.5 (3.13)	225 (8.86)	18 (0.71)	475 (18.70)	18.5 (0.73)	1171 (46.10)	500 (19.69)	450 (17.72)	550 (21.65)	18.5 (0.73)
	1PH8226				545 (21.46)	725 (28.54)												1271 (50.04)			
	1PH8228				635 (25.00)	815 (32.09)												1361 (53.58)			

Terminal box Dimensions in mm (inches)

Shaft height	Type	IEC AD	AG	AS	BC	LL
Terminal box type 1XB7 322						
225	1PH8224	582 (22.91)	245 (9.65)	140 (5.51)	481 (18.94)	196 (7.72)
	1PH8226				581 (22.87)	
	1PH8228				671 (26.42)	
Terminal box type 1XB7 422						
225	1PH8224	625 (24.61)	281 (11.06)	176 (6.93)	481 (18.94)	233 (9.17)
	1PH8226				581 (22.87)	
	1PH8228				671 (26.42)	
Terminal box type 1XB7 700						
225	1PH8224	678 (26.69)	297 (11.69)	156 (6.14)	481 (18.94)	310 (12.20)
	1PH8226				581 (22.87)	
	1PH8228				671 (26.42)	



Dimensional drawings

For motor Dimensions in mm (inches)

Shaft height	Type	IEC A	AB	AC	B	BB	C	D	DB	E	F	GA	H	HA	HC	K	L	M	N	P	S
--------------	------	-------	----	----	---	----	---	---	----	---	---	----	---	----	----	---	---	---	---	---	---

1PH8 type of construction IM B35, forced ventilation – direction of air flow NDE → DE, flange A550

225	1PH8224	356 (14.02)	446 (17.56)	454 (17.87)	445 (17.52)	625 (24.61)	149 (5.87)	75 (2.95)	M20	140 (5.51)	20 (0.79)	79.5 (3.13)	225 (8.86)	18 (0.71)	475 (18.70)	18.5 (0.73)	1206 (47.48)	500 (19.69)	450 (17.72)	550 (21.65)	18.5 (0.73)
	1PH8226				545 (21.46)	725 (28.54)											1306 (51.42)				
	1PH8228				635 (25.00)	815 (32.09)											1396 (54.96)				

Terminal box Dimensions in mm (inches)

Shaft height	Type	IEC AD	AG	AS	BC	LL
--------------	------	--------	----	----	----	----

Terminal box type 1XB7 322

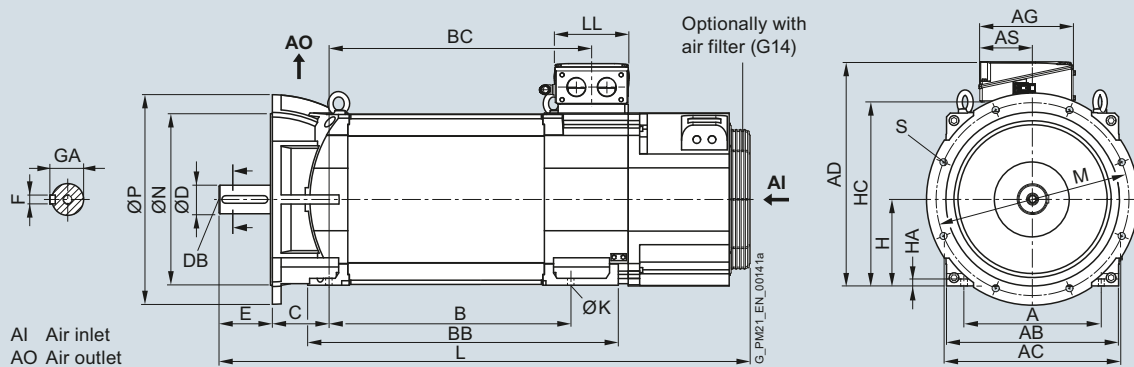
225	1PH8224	582 (22.91)	245 (9.65)	140 (5.51)	481 (18.94)	196 (7.72)
	1PH8226				581 (22.87)	
	1PH8228				671 (26.42)	

Terminal box type 1XB7 422

225	1PH8224	625 (24.61)	281 (11.06)	176 (6.93)	481 (18.94)	233 (9.17)
	1PH8226				581 (22.87)	
	1PH8228				671 (26.42)	

Terminal box type 1XB7 700

225	1PH8224	678 (26.69)	297 (11.69)	156 (6.14)	481 (18.94)	310 (12.20)
	1PH8226				581 (22.87)	
	1PH8228				671 (26.42)	



Dimensional drawings

Main spindle motors

SIMOTICS M-1PH8 asynchronous motors > SH 280 – Forced ventilation

Dimensional drawings

For motor Dimensions in mm (inches)

Shaft height	Type	IEC A	AB	AC	B	BB	C	D	DB	E	F	GA	H	K	L	Q	QA	R	SA	Y
--------------	------	-------	----	----	---	----	---	---	----	---	---	----	---	---	---	---	----	---	----	---

1PH8 type of construction IM B3, forced ventilation – direction of air flow NDE → DE

280	1PH8284	457 (17.99)	560 (22.05)	582 (22.91)	684 (26.93)	840 (33.07)	190 (7.48)	95 (3.74)	M24	170 (6.69)	25 (0.98)	100 (3.94)	280 (11.02)	24 (0.94)	1316 (51.81)	489 (19.25)	560 (22.05)	700 (27.56)	1146 (45.12)	1042 (41.02)
	1PH8286				794 (31.26)	950 (37.40)									1426 (56.14)	599 (23.58)			1256 (49.45)	
	1PH8288				924 (36.38)	1080 (42.52)									1556 (61.26)	729 (28.70)			1386 (54.57)	

Terminal box Dimensions in mm (inches)

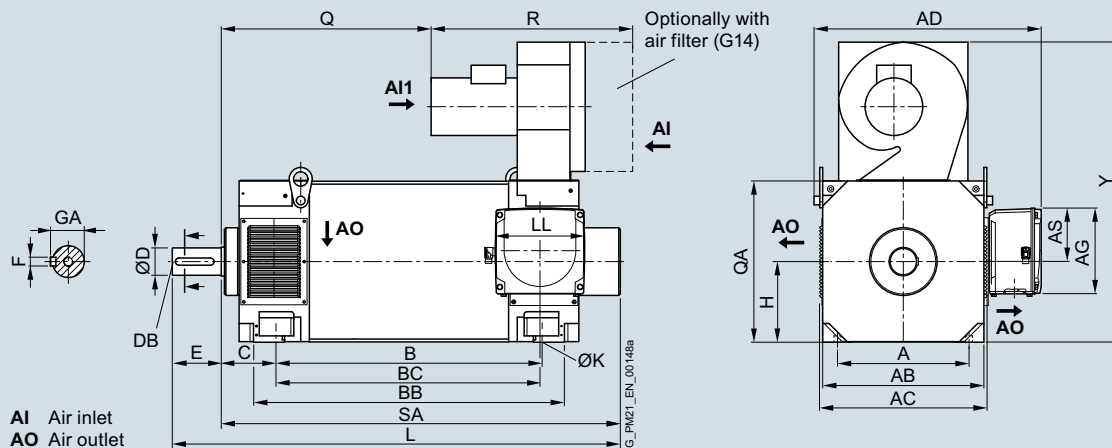
Shaft height	Type	IEC AD	AG	AS	BC	LL
--------------	------	--------	----	----	----	----

Terminal box type 1XB7 700

280	1PH8284	789 (31.06)	297 (11.69)	186 (7.32)	677 (26.65)	310 (12.20)
	1PH8286				787 (30.98)	
	1PH8288				917 (36.10)	

Terminal box type 1XB7 712

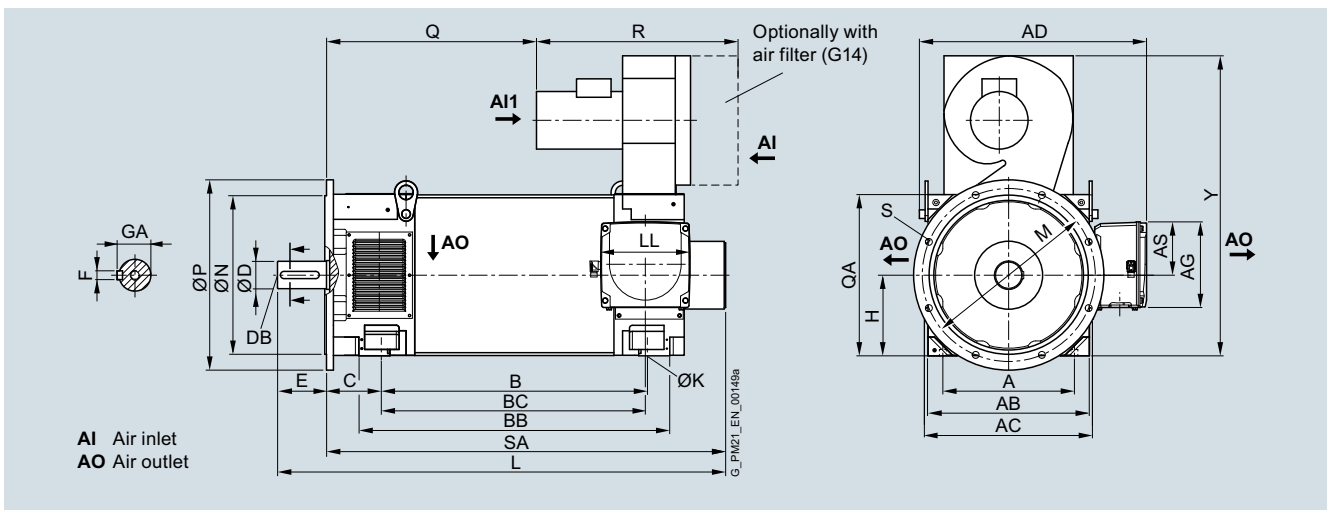
280	1PH8284	836 (32.91)	371 (14.61)	201 (7.91)	691 (27.20)	370 (14.57)
	1PH8286				801 (31.54)	
	1PH8288				931 (36.65)	



Dimensional drawings

For motor		Dimensions in mm (inches)											
Shaft height	Type	IEC A	AB	AC	B	BB	C	D	DB	E	F	GA	H
1PH8 type of construction IM B35, forced ventilation – direction of air flow NDE → DE, flange A660													
280	1PH8284	457 (17.99)	560 (22.05)	582 (22.91)	684 (26.93)	840 (33.07)	190 (7.48)	95 (3.74)	M24	170 (6.69)	25 (0.98)	100 (3.94)	280 (11.02)
	1PH8286				794 (31.26)	950 (37.40)							
	1PH8288				924 (36.38)	1080 (42.52)							
		K	L	M	N	P	Q	QA	R	S	SA	Y	
	1PH8284	24 (0.94)	1316 (51.81)	600 (23.62)	550 (21.65)	660 (25.98)	489 (19.25)	560 (22.05)	700 (27.56)	24 (0.94)	1146 (45.12)	1042 (41.02)	
	1PH8286		1426 (56.14)				599 (23.58)				1256 (49.45)		
	1PH8288		1556 (61.26)				729 (28.70)				1386 (54.57)		

Terminal box		Dimensions in mm (inches)				
Shaft height	Type	IEC AD	AG	AS	BC	LL
Terminal box type 1XB7 700						
280	1PH8284	789 (31.06)	297 (11.69)	186 (7.32)	677 (26.65)	310 (12.20)
	1PH8286				787 (30.98)	
	1PH8288				917 (36.10)	
Terminal box type 1XB7 712						
280	1PH8284	836 (32.91)	371 (14.61)	201 (7.91)	691 (27.20)	370 (14.57)
	1PH8286				801 (31.54)	
	1PH8288				931 (36.65)	



Dimensional drawings

Main spindle motors

SIMOTICS M-1PH8 asynchronous motors > SH 80 to SH 132 – Water cooling

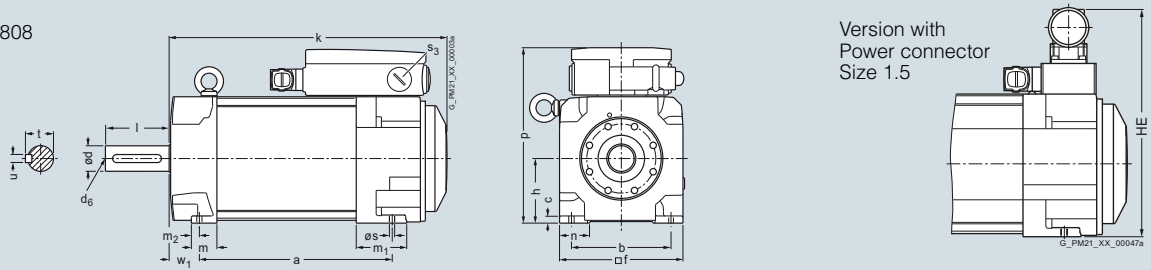
Dimensional drawings

For motor		Dimensions in mm (inches)													
Shaft height	Type	DIN IEC	a B	b A	c HA	f AB	h H	k LB	Standard/ Advanced/ Performance	High Performance/ hollow shaft encoder		m BA	m ₁ –	m ₂ –	n AA
										without hollow shaft	with hollow shaft				
1PH8 type of construction IM B3, water cooling															
80	1PH8083		194 (7.64)	125 (4.92)	8 (0.31)	155 (6.10)	80 (3.15)	301.5 (11.87)		306.3 (12.06)	319.3 (12.57)	37 (1.46)	63.5 (2.50)	15 (0.59)	35 (1.38)
	1PH8087		244 (9.61)					351.5 (13.84)		356.3 (14.03)	369.3 (14.54)				
100	1PH8101		167 (6.57)	160 (6.30)	11 (0.43)	196 (7.72)	100 (3.94)	289.5 (11.40)		294.5 (11.59)	312.3 (12.30)	44 (1.73)	68 (2.68)	19 (0.75)	43 (1.69)
	1PH8103		202.5 (7.97)					325 (12.80)		330 (12.99)	347.8 (13.69)				
	1PH8105		262 (10.31)					384.5 (15.14)		389.5 (15.33)	407.3 (16.04)				
	1PH8107		297.5 (11.71)					420 (16.54)		425 (16.73)	442.8 (17.43)				
132	1PH8131		220.5 (8.68)	216 (8.50)	15 (0.59)	260 (10.24)	132 (5.20)	347.5 (13.68)		355 (13.98)	372.8 (14.68)	43 (1.69)	81 (3.19)	13 (0.51)	43 (1.69)
	1PH8133		265.5 (10.45)					392.5 (15.45)		400 (15.75)	417.8 (16.45)				
	1PH8135		310.5 (12.22)					437.5 (17.22)		445 (17.52)	462.8 (18.22)				
	1PH8137		350.5 (13.80)					477.5 (18.80)		485 (19.09)	502.8 (19.80)				
	1PH8138		350.5 (13.80)					477.5 (18.80)		485 (19.09)	502.8 (19.80)				

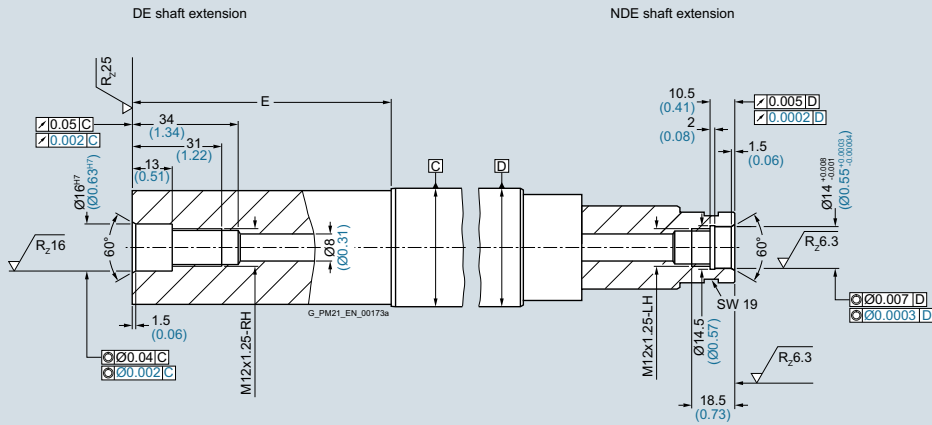
Shaft height	Type	DIN IEC	Shaft extension DE											
			p HD	– HE	p ₂ –	p ₃ –	s K	s ₃ –	w ₁ C	d D	d ₆ –	t GA	u F	l E
80	1PH8083		216 (8.50)	253.5 (9.98)	–	–	10 (0.39)	M25×1.5	38 (1.50)	32 (1.26)	M12	35 (1.38)	10 (0.39)	80 (3.15)
	1PH8087													
100	1PH8101		266.5 (10.49)	294 (11.57)	198 (7.80)	276.5 (10.89)	12 (0.47)	M32×1.5	43 (1.69)	38 (1.50)	M12	41 (1.61)	10 (0.39)	80 (3.15)
	1PH8103													
	1PH8105													
	1PH8107													
132	1PH8131		347.5 (13.68)	347 (13.66)	262 (10.31)	357.5 (14.07)	12 (0.47)	M50×1.5	53 (2.09)	48 (1.89)	M16	51.5 (2.03)	14 (0.55)	110 (4.33)
	1PH8133													
	1PH8135													
	1PH8137													
	1PH8138													

Dimensional drawings

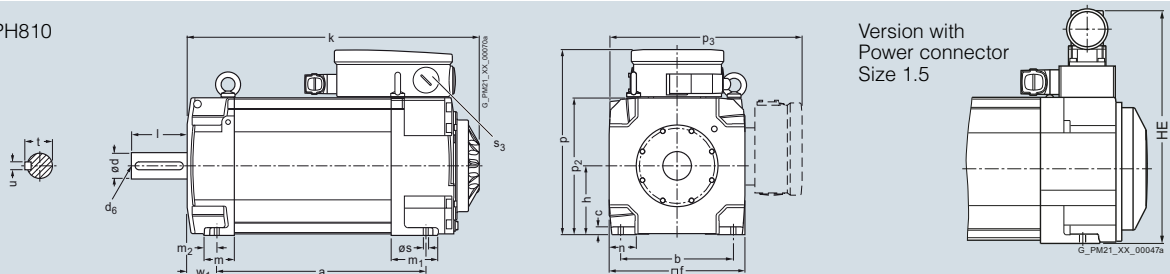
1PH808



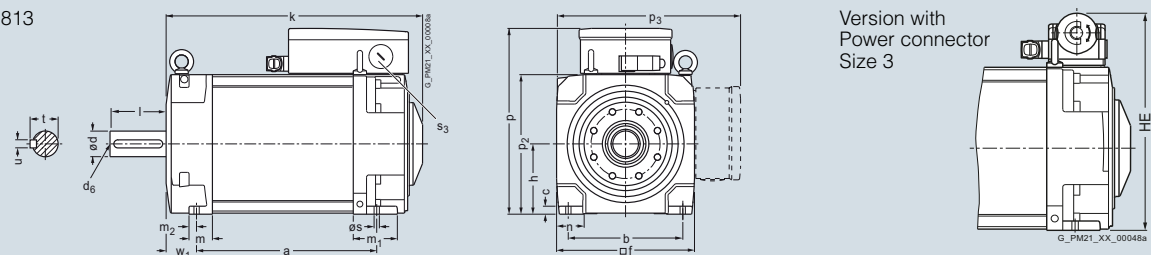
Hollow shaft
1PH808



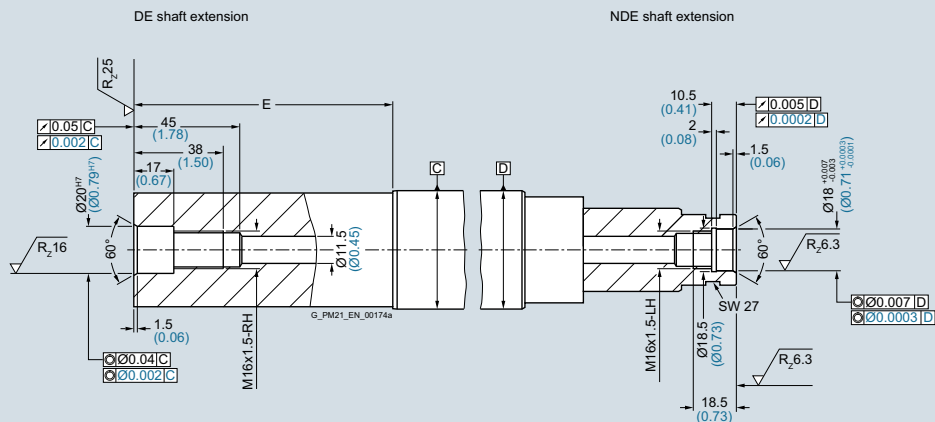
1PH810



1PH813



Hollow shaft
1PH810
1PH813



Dimensional drawings

Main spindle motors

SIMOTICS M-1PH8 asynchronous motors > SH 80 to SH 132 – Water cooling

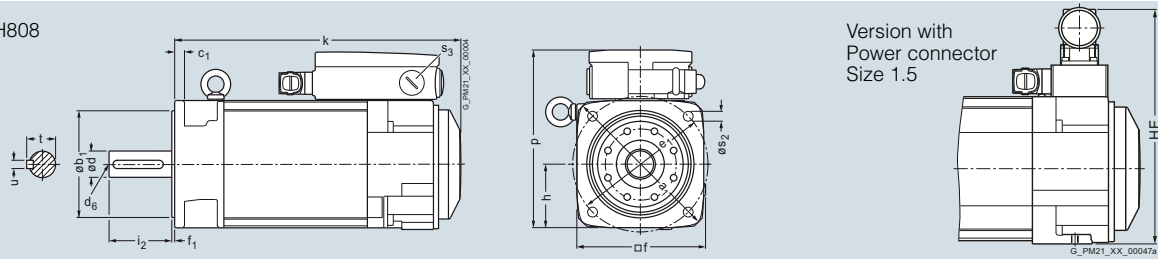
Dimensional drawings

For motor		Dimensions in mm (inches)									Standard/ Advanced/ Performance	High Performance/ hollow shaft encoder	
Shaft height	Type	DIN IEC	a ₁ P	b ₁ N	c ₁ LA	e ₁ M	f AB	f ₁ T	h H	k LB	k LB	without hollow shaft	with hollow shaft
1PH8 type of construction IM B5, water cooling													
80	1PH8083		199 (7.83)	130 (5.12)	12 (0.47)	165 (6.50)	155 (6.10)	3.5 (0.14)	77.5 (3.05)	301.5 (11.87)	306.3 (12.06)	319.3 (12.57)	
	1PH8087									351.5 (13.84)	356.3 (14.03)	369.3 (14.51)	
100	1PH8101		250 (9.84)	180 (7.09)	16 (0.63)	215 (8.46)	196 (7.72)	4 (0.16)	98 (3.86)	289.5 (11.40)	294.5 (11.59)	312.3 (12.30)	
	1PH8103									325 (12.80)	330 (12.99)	347.8 (13.69)	
	1PH8105									384.5 (15.14)	389.5 (15.33)	407.3 (16.04)	
	1PH8107									420 (16.54)	425 (16.73)	442.8 (17.43)	
132	1PH8131		340 (13.39)	250 (9.84)	18 (0.71)	300 (11.81)	260 (10.24)	5 (0.20)	130 (5.12)	347.5 (13.68)	355 (13.98)	372.8 (14.68)	
	1PH8133									392.5 (15.45)	400 (15.75)	417.8 (16.45)	
	1PH8135									437.5 (17.22)	445 (17.52)	462.8 (18.22)	
	1PH8137									477.5 (18.80)	485 (19.09)	502.8 (19.80)	
	1PH8138									477.5 (18.80)	485 (19.09)	502.8 (19.80)	

Shaft height	Type	DIN IEC	Shaft extension DE								
			p HD	– HE	s ₂ –	s ₃ –	d D	d ₆ –	i ₂ E	t GA	u F
80	1PH8083		213.5 (8.41)	251 (9.88)	12 (0.47)	M25×1.5	32 (1.25)	M12	80 (3.15)	35 (1.38)	10 (0.39)
	1PH8087										
100	1PH8101		264.5 (10.41)	292 (11.50)	14 (0.55)	M32×1.5	38 (1.50)	M12	80 (3.15)	41 (1.61)	10 (0.39)
	1PH8103										
	1PH8105										
	1PH8107										
132	1PH8131		345.5 (13.6)	345 (13.58)	18 (0.71)	M50×1.5	48 (1.89)	M16	110 (4.33)	51.5 (2.03)	14 (0.55)
	1PH8133										
	1PH8135										
	1PH8137										
	1PH8138										

Dimensional drawings

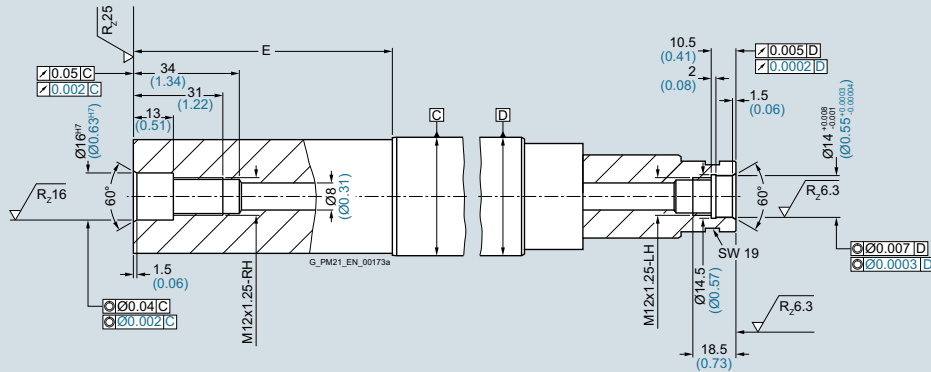
1PH808



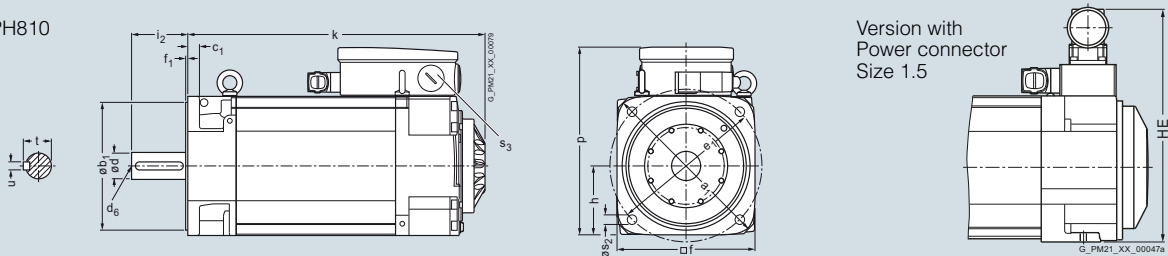
Hollow shaft
1PH808

DE shaft extension

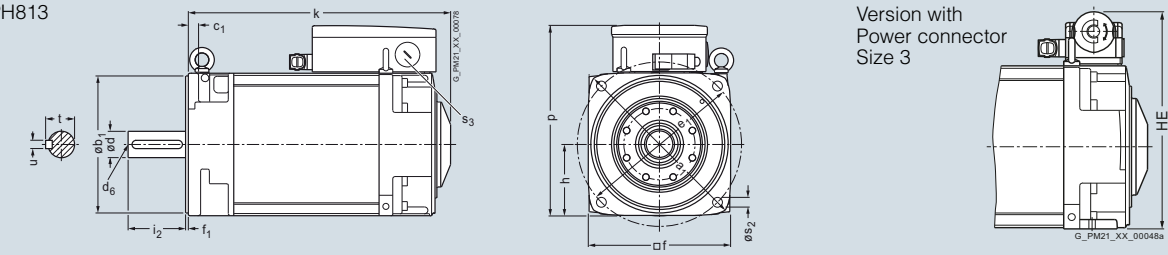
NDE shaft extension



1PH810



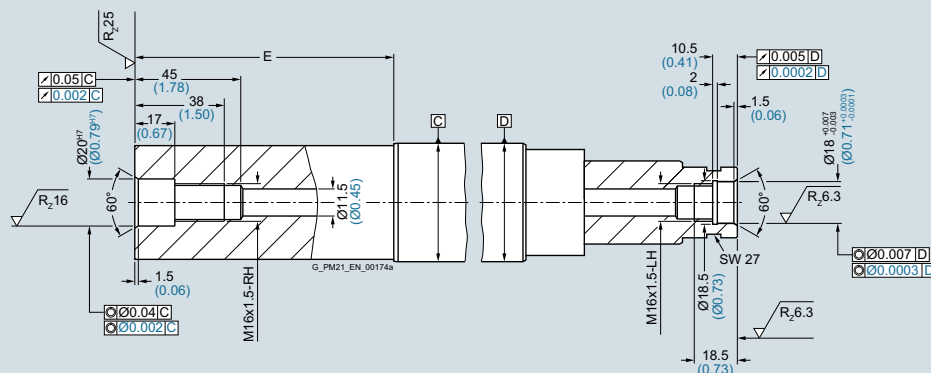
1PH813



Hollow shaft
1PH810
1PH813

DE shaft extension

NDE shaft extension



Dimensional drawings

Main spindle motors

SIMOTICS M-1PH8 asynchronous motors > SH 100/SH 132 – Water cooling

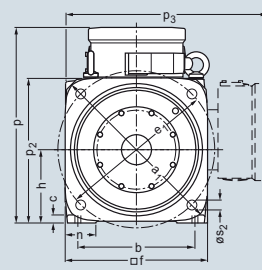
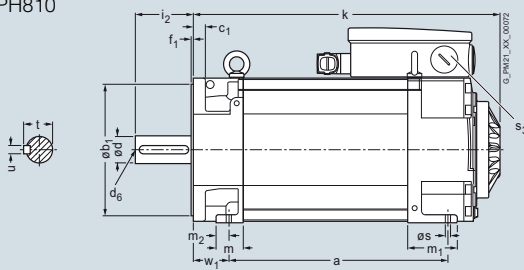
Dimensional drawings

For motor		Dimensions in mm (inches)													Standard/ Advanced/ Performance		High Performance	
Shaft height	Type	DIN IEC	a B	a ₁ P	b A	b ₁ N	c HA	c ₁ LA	e ₁ M	f AB	f ₁ T	h H	k LB	k LB	k LB	m BA		
1PH8 type of construction IM B35, water cooling																		
100	1PH8101		167 (6.57)	250 (9.84)	160 (6.30)	180 (7.09)	11 (0.43)	16 (0.63)	215 (8.46)	196 (7.72)	4 (0.16)	100 (3.94)	289.5 (11.40)	294.5 (11.59)	312.3 (12.30)	37 (1.46)		
	1PH8103		202.5 (7.97)										325 (12.80)	330 (12.99)	347.8 (13.69)			
	1PH8105		262 (10.31)										384.5 (15.14)	389.5 (15.33)	407.3 (16.04)			
	1PH8107		297.5 (11.71)										420 (16.54)	425 (16.73)	442.8 (17.43)			
132	1PH8131		220.5 (8.68)	340 (13.39)	216 (8.50)	250 (9.84)	15 (0.59)	18 (0.71)	300 (11.81)	260 (10.24)	5 (0.20)	132 (5.20)	347.5 (13.68)	355 (13.98)	372.8 (14.68)	42 (1.65)		
	1PH8133		265.5 (10.45)										392.5 (15.45)	400 (15.75)	417.8 (16.45)			
	1PH8135		310.5 (12.22)										437.5 (17.22)	445 (17.52)	462.8 (18.22)			
	1PH8137		350.5 (13.80)										477.5 (18.80)	485 (19.09)	502.8 (19.80)			
	1PH8138		350.5 (13.80)										477.5 (18.80)	485 (19.09)	502.8 (19.80)			

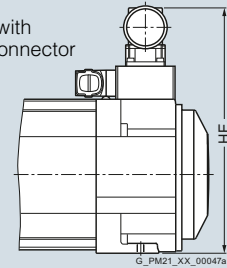
Shaft height	Type	DIN IEC														Shaft extension DE				
			m ₁	m ₂	n AA	p HD	– HE	p ₂	p ₃	s K	s ₂	s ₃	w ₁ C	d D	d ₆	i ₂ E	t GA	u F		
100	1PH8101		68 (2.68)	12 (0.47)	43 (1.69)	266.5 (10.49)	294 (11.57)	198 (7.80)	276.5 (10.89)	12 (0.47)	14 (0.55)	M32×1.5	43 (1.69)	38 (1.50)	M12	80 (3.15)	41 (1.61)	10 (0.39)		
	1PH8103																			
	1PH8105																			
	1PH8107																			
132	1PH8131		81 (3.19)	12 (0.47)	43 (1.69)	347.5 (13.68)	347 (13.66)	262 (10.31)	357.5 (14.07)	12 (0.47)	18 (0.71)	M50×1.5	53 (2.09)	48 (1.89)	M16	110 (4.33)	51.5 (2.03)	14 (0.55)		
	1PH8133																			
	1PH8135																			
	1PH8137																			
	1PH8138																			

Dimensional drawings

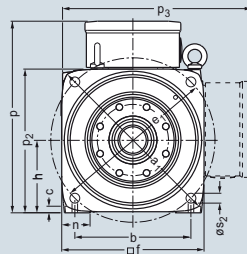
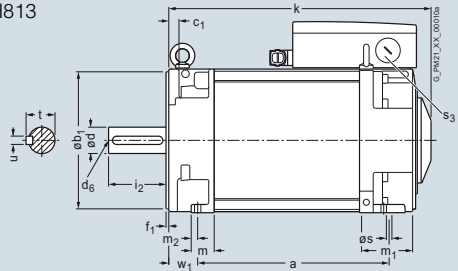
1PH810



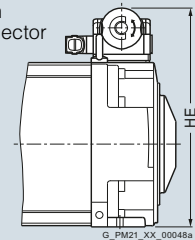
Version with
Power connector
Size 1.5



1PH813



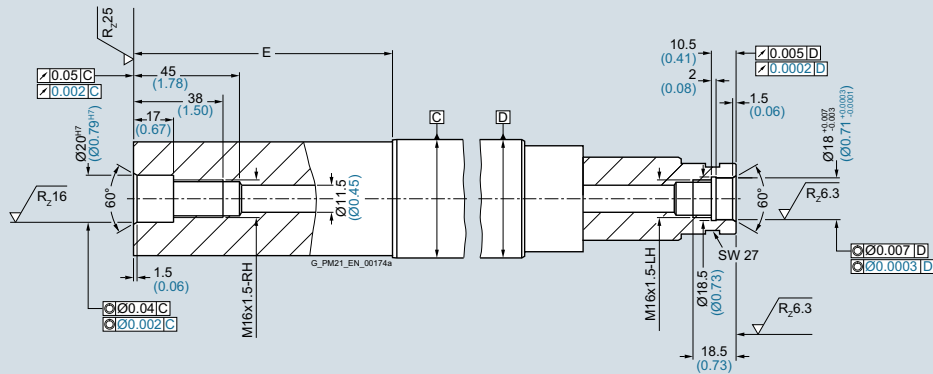
Version with
Power connector
Size 3



Hollow shaft
1PH810
1PH813

DE shaft extension

NDE shaft extension



Dimensional drawings

Main spindle motors

SIMOTICS M-1PH8 asynchronous motors > SH 160 – Water cooling

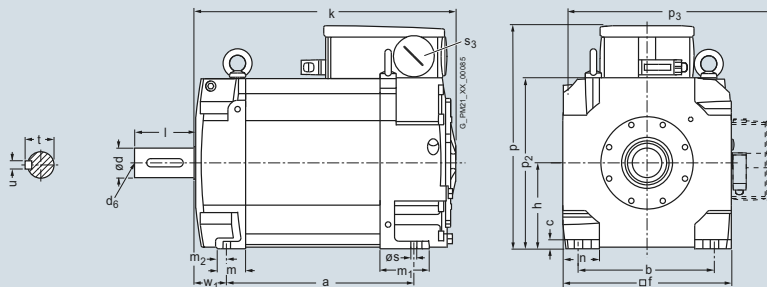
Dimensional drawings

For motor Dimensions in mm (inches)

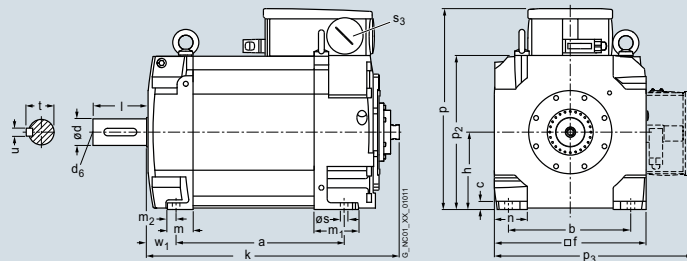
Shaft height	Type	DIN IEC	a B	a ₁ P	b A	b ₁ N	c HA	c ₁ LA	e ₁ M	f AB	f ₁ T	h H	k LB	m BA	m ₁ -	m ₂ -	n AA
1PH8 type of construction IM B3, water cooling																	
160	1PH8163		346.5 (13.64)	-	254 (10.00)	-	17 (0.67)	23 (0.91)	-	314 (12.36)	-	160 (6.30)	488.5 (19.23)	53 (2.09)	91 (3.58)	17 (0.67)	70 (2.76)
	1PH8165		406.5 (16.00)										548.5 (21.59)				
	1PH8166																

Shaft height	Type	DIN IEC	Shaft extension DE													Version with hollow shaft	
			p HD	p ₁ -	p ₂ -	p ₃ -	s K	s ₂ -	s ₃ -	s ₄ -	w ₁ C	d D	d ₆ -	l E	t GA	u F	k LB
160	1PH8163		415.5 (16.36)	-	317 (12.48)	412.5 (16.24)	14 (0.55)	-	M63 × 1.5	-	61 (2.40)	55 (2.17)	M20	110 (4.33)	59 (2.32)	16 (0.63)	520.8 (20.50)
	1PH8165																580.8 (22.87)
	1PH8166																580.8 (22.87)

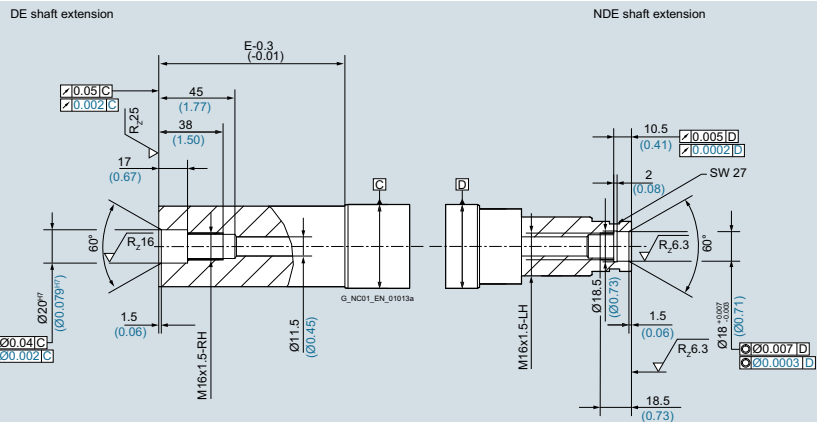
1PH816



Version with hollow shaft



Hollow shaft



6

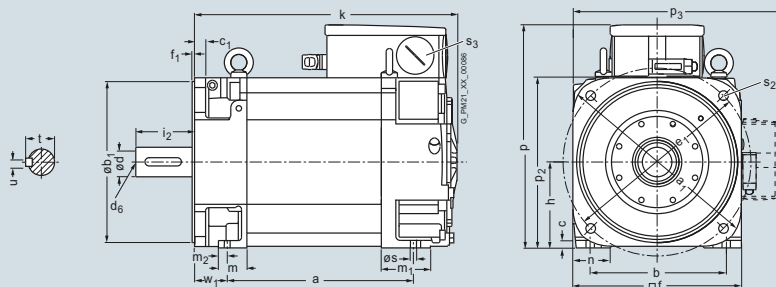
Dimensional drawings

For motor Dimensions in mm (inches)

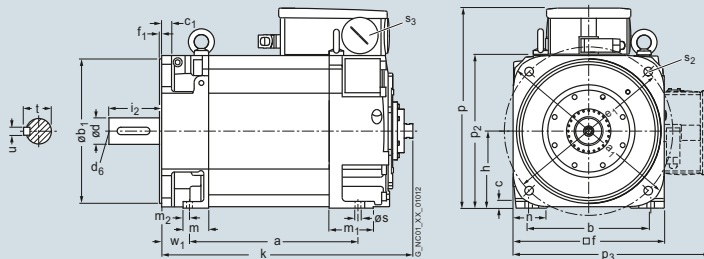
Shaft height	Type	DIN IEC	a B	a ₁ P	b A	b ₁ N	c HA	c ₁ LA	e ₁ M	f AB	f ₁ T	h Hv	k LB	m BA	m ₁ -	m ₂ -	n AA
1PH8 type of construction IM B5/IM B35, water cooling																	
160	1PH8163		346.5 (13.64)	393 (15.47)	254 (10.00)	300 (11.81)	17 (0.67)	-	350 (13.78)	314 (12.36)	5 (0.20)	160 (6.30)	488.5 (19.23)	53 (2.09)	91 (3.58)	17 (0.67)	70 (2.76)
	1PH8165		406.5 (16.00)										548.5 (21.59)				
	1PH8166																

Shaft height	Type	DIN IEC	Shaft extension DE											Version with hollow shaft			
			p HD	p ₁ -	p ₂ -	p ₃ -	s K	s ₂ -	s ₃ -	s ₄ -	w ₁ C	d D	d ₆ -	i ₂ E	t GA	u F	k LB
160	1PH8163		415.5 (16.36)	-	317 (12.48)	412.5 (16.24)	14 (0.55)	18 (0.71)	M63 × 1.5	-	61 (2.40)	55 (2.17)	M20	110 (4.33)	59 (2.32)	16 (0.63)	520.8 (20.50)
	1PH8165															580.8 (22.87)	
	1PH8166															580.8 (22.87)	

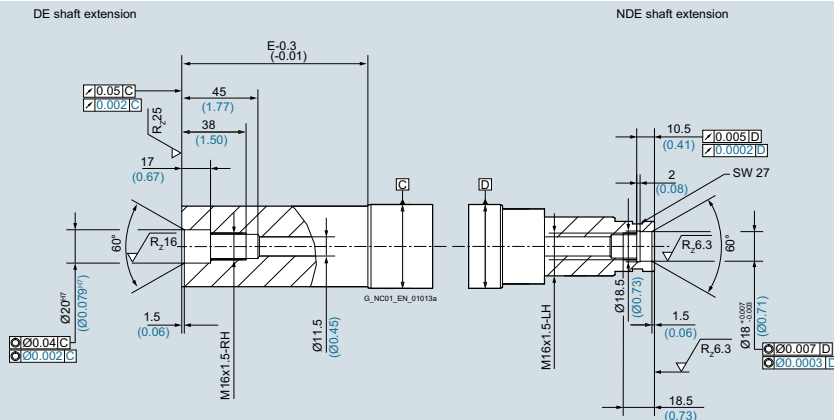
1PH816



Version with hollow shaft



Hollow shaft



Dimensional drawings

Main spindle motors

SIMOTICS M-1PH8 asynchronous motors > SH 180 – Water cooling

Dimensional drawings

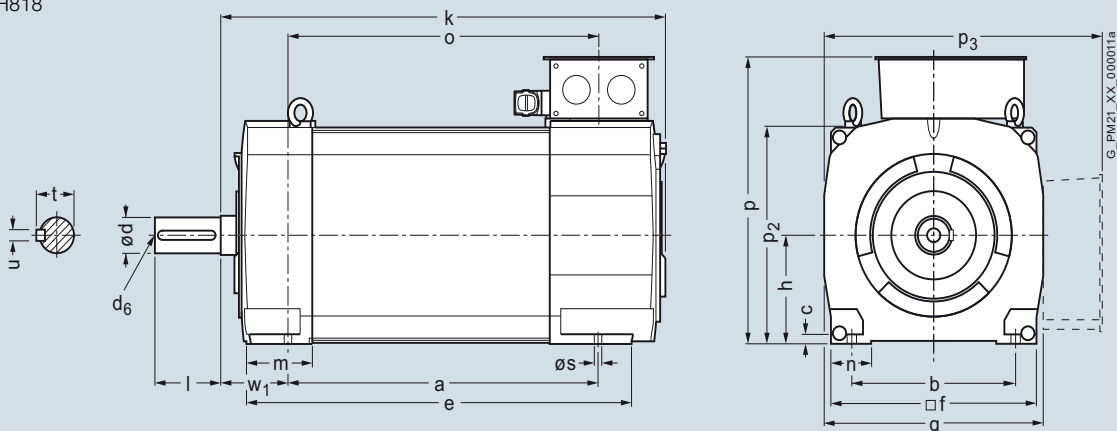
For motor Dimensions in mm (inches)

Shaft height	Type	DIN IEC	a B	b A	c HA	f AB	g AC	h H	k LB	m BA	n AA	p ₂ –	s K	w ₁ C
180	1PH8184		430 (16.93)	279 (10.98)	15 (0.59)	356 (14.02)	384 (15.12)	180 (7.09)	670 (26.38)	138 (5.43)	73 (2.87)	372 (14.65)	14.5 (0.57)	121 (4.76)
	1PH8186		520 (20.47)						760 (29.92)					

1PH8 types of construction IM B3/IM V5, water cooling

Shaft height	Type	DIN IEC	Shaft extension DE					Terminal box type											
			d D	d ₆ –	l E	t GA	u F	1XB7322				1XB7422				1XB7700			
							p HD	p ₃ –	r LL	x ₁ AG	p HD	p ₃ –	r LL	x ₁ AG	p HD	p ₃ –	r LL	x ₁ AG	
180	1PH8184		65m6	M20	140 (5.51)	69 (2.72)	18 (0.71)	484 (19.06)	485 (19.09)	197 (7.76)	258 (10.16)	539 (21.22)	540 (21.26)	230 (9.06)	303 (11.93)	588 (23.15)	574 (22.60)	310 (12.20)	295 (11.61)
	1PH8186																		

1PH818

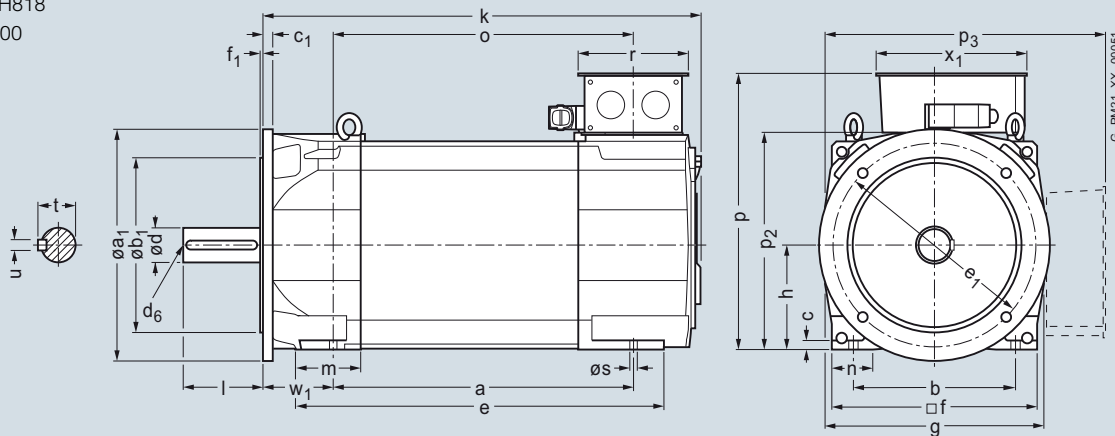


Dimensional drawings

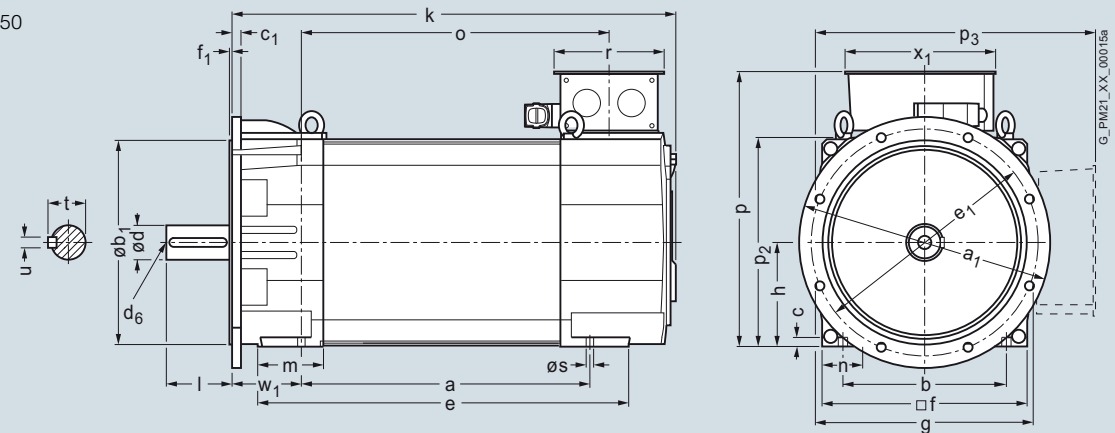
For motor		Dimensions in mm (inches)																		
Shaft height	Type	DIN IEC	D400			D450			D400			D450			f AB	f ₁ T	g AC	h H	k LB	m BA
			a B	a ₁ P	b A	b ₁ N	c HA	c ₁ LA	e ₁ M											
1PH8 types of construction IM B5/IM B35/IM V15, water cooling																				
180	1PH8184		430 (16.93)	400 (15.75)	450 (17.72)	279 (10.98)	300 (11.81)	350 (13.78)	15 (0.59)	16 (0.63)	350 (13.78)	400 (15.75)	356 (14.02)	5 (0.20)	384 (15.12)	180 (7.09)	670 (26.38)	123 (4.84)		
	1PH8186		520 (20.47)															760 (29.92)		

Shaft height	Type	DIN IEC	Shaft extension DE									Terminal box type	
			n AA	p ₂ -	s K	w ₁ C	d D	d ₆ -	l E	t GA	u F	Dimensions as for types of construction IM B3/IM V5	
180	1PH8184		73 (2.87)	372 (14.65)	14.5 (0.57)	121 (4.76)	65m6	M20	140 (5.51)	69 (2.72)	18 (0.71)		
	1PH8186												

1PH818
D400



D450



Dimensional drawings

Main spindle motors

SIMOTICS M-1PH8 asynchronous motors > SH 225 – Water cooling

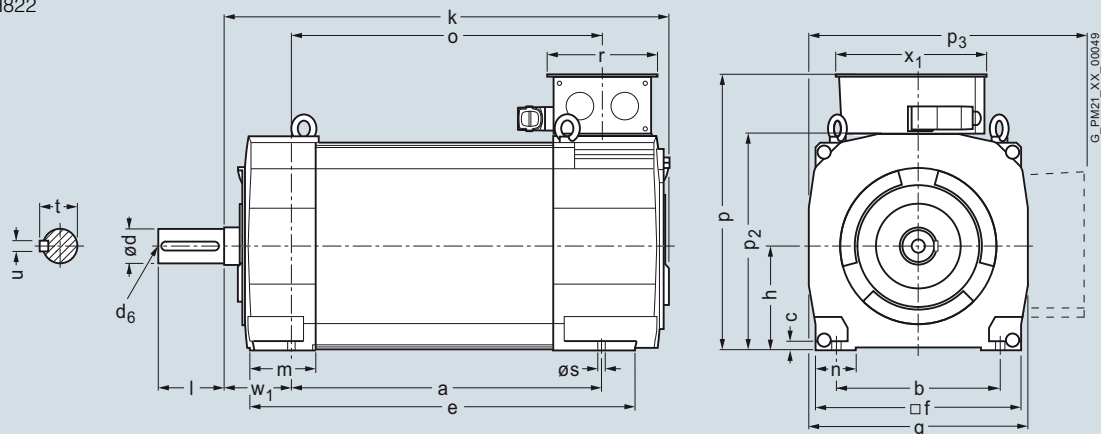
Dimensional drawings

For motor Dimensions in mm (inches)

Shaft height	Type	DIN IEC	a B	b A	c HA	f AB	g AC	h H	k LB	m BA	n AA	p ₂ -	s K	w ₁ C
1PH8 types of construction IM B3/IM V5, water cooling														
225	1PH8224		445 (17.52)	356 (14.02)	18 (0.71)	446 (17.56)	474 (18.66)	225 (8.86)	775 (30.51)	154 (6.06)	88 (3.46)	462 (18.19)	18.5 (0.73)	149 (5.87)
	1PH8226		545 (21.46)						875 (34.45)					
	1PH8228		635 (25.0)						965 (37.99)					

Shaft height	Type	DIN IEC	Shaft extension DE					Terminal box type											
			d D	d ₆ -	l E	t GA	u F	1XB7322				1XB7422				1XB7700			
								p HD	p ₃ -	r LL	x ₁ AG	p HD	p ₃ -	r LL	x ₁ AG	p HD	p ₃ -	r LL	x ₁ AG
225	1PH8224		75m6	M20	140 (5.51)	79.5 (3.13)	20 (0.79)	579 (22.80)	577 (22.72)	197 (7.76)	258 (10.16)	634 (24.96)	632 (24.88)	230 (9.06)	303 (11.93)	683 (26.89)	666 (26.22)	310 (12.20)	295 (11.61)
	1PH8226																		
	1PH8228																		

1PH822



G_PIM21_XX_00049

Dimensional drawings

For motor Dimensions in mm (inches)

Shaft height	Type	DIN IEC	a B	a ₁ P	b A	b ₁ N	c HA	c ₁ LA	e ₁ M	f AB	f ₁ T	g AC	h H	k LB	m BA	n AA	p ₂ -	w ₁ C
1PH8 types of construction IM B5/IM B35/IM V15 D550, water cooling																		
225	1PH8224		445 (17.52)	550 (21.65)	356 (14.02)	450 (17.72)	18 (0.71)	20 (0.79)	500 (19.69)	446 (17.56)	5 (0.20)	474 (18.66)	225 (8.86)	770 (30.31)	144 (5.67)	88 (3.46)	462 (18.19)	149 (5.87)
	1PH8226		545 (21.46)											872 (34.33)				
	1PH8228		635 (25.00)											962 (37.87)				

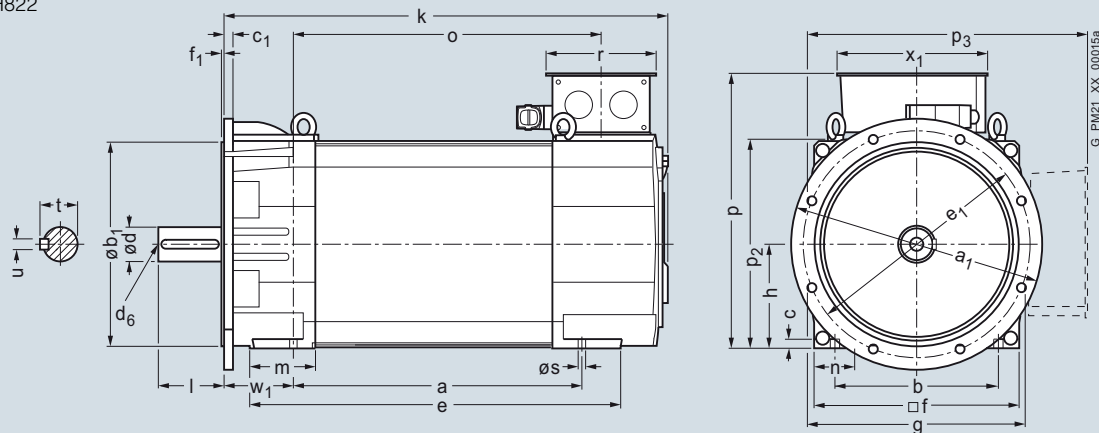
Shaft extension DE

Terminal box type

Dimensions as for types of construction IM B3/IM V5

Shaft height	Type	DIN IEC	d D	d ₆ -	l E	t GA	u F
225	1PH8224		75m6	M20	140 (5.51)	79.5 (3.13)	20 (0.79)
	1PH8226						
	1PH8228						

1PH822



Dimensional drawings

Main spindle motors

SIMOTICS M-1PH8 asynchronous motors > SH 280 – Water cooling

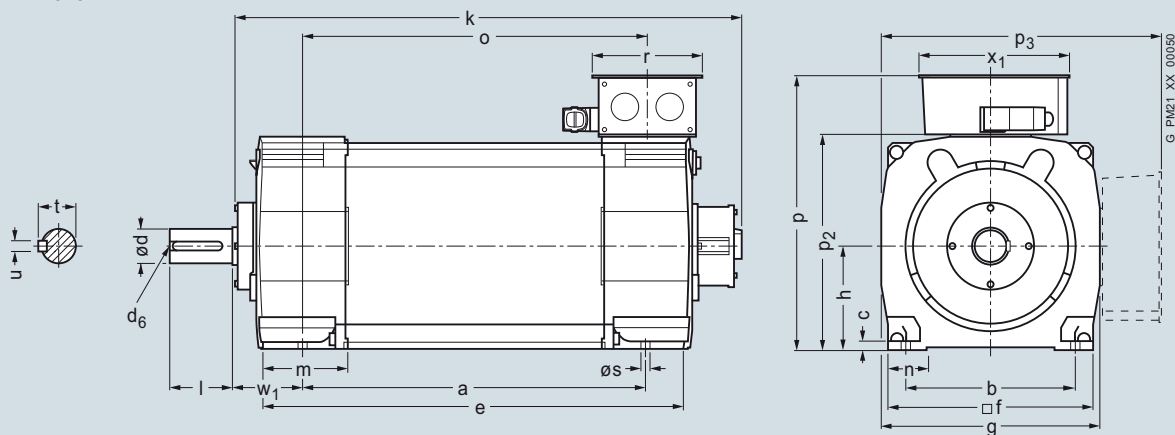
Dimensional drawings

For motor Dimensions in mm (inches)

Shaft height	Type	DIN IEC														Shaft extension DE					
			a B	b A	c LA/HA	f AB	g AC	h H	k LB	m BA	n AA	p ₂ –	s K	w ₁ C	d D	d ₆ –	l E	t GA	u F		
1PH8 types of construction IM B3/IM V5, water cooling																					
280	1PH8284		684 (26.93)	457 (17.99)	21 (0.83)	556 (21.89)	588 (23.15)	280 (11.02)	1134 (44.65)	220 (8.66)	105 (4.13)	574 (22.60)	24 (0.94)	190 (7.48)	95m6	M24	170 (6.69)	100 (3.94)	25 (0.98)		
	1PH8286		794 (31.26)						1244 (48.98)												
	1PH8288		924 (36.38)						1374 (54.09)												

Shaft height	Type	DIN IEC	Terminal box type															
			1XB7322				1XB7422				1XB7700				1XB7712			
			p HD	p ₃ –	r LL	x ₁ AG	p HD	p ₃ –	r LL	x ₁ AG	p HD	p ₃ –	r LL	x ₁ AG	p HD	p ₃ –	r LL	x ₁ AG
280	1PH8284		709 (27.91)	716 (28.19)	197 (7.76)	258 (10.16)	724 (28.5)	731 (28.78)	230 (9.06)	303 (11.93)	770 (30.31)	777 (30.59)	310 (12.2)	318 (12.52)	820 (32.28)	827 (32.56)	377 (14.84)	370 (14.57)
	1PH8286																	
	1PH8288																	

1PH828



Dimensional drawings

For motor Dimensions in mm (inches)

Shaft height	Type	DIN IEC	a B	a ₁ P	b A	b ₁ N	c HA	c ₁ LA	e ₁ M	f AB	f ₁ T	g AC	h H	i ₂ EB	k LB	m BA	n AA	p ₂ -	s K
1PH8 types of construction IM B5/IM B35/IM V15 D660, water cooling																			
280	1PH8284		684 (26.93)	660 (25.98)	457 (17.99)	550 (21.65)	21 (0.83)	24 (0.94)	600 (23.62)	556 (21.89)	6 (0.24)	588 (23.15)	280 (11.02)	140 (5.51)	1134 (44.65)	220 (8.66)	105 (4.13)	574 (22.60)	24 (0.94)
	1PH8286		794 (31.26)												1244 (48.98)				
	1PH8288		924 (36.38)												1374 (54.09)				

Shaft extension DE

Terminal box type

Dimensions as for types of construction IM B3/IM V5

Shaft height	Type	DIN IEC	m BA	n AA	s K	w ₁ C	d D	d ₆ -	l E	t GA	u F
280	1PH8284		220 (8.66)	105 (4.13)	24 (0.94)	190 (7.48)	95m6	M24	170 (6.69)	100 (3.94)	25 (0.98)
	1PH8286										
	1PH8288										

1PH828

