



Drive selection

Technical data DC permanent magnet motors

Description

DC permanent magnet motors have a torque-speed characteristic with shunt characteristics. Thanks to a particular dimensioning of the armature winding (copper filling factor) there is only a low speed reduction under load.

The magnetic flux necessary to generate the torque is produced by permanent magnets. A special field excitation winding and thus an element that would cause additional heat loss is not required. This means that the efficiency of a DC permanent magnet motor is better than the efficiency of a comparable field-wound DC motor. As permanent magnets are smaller than a comparable field winding, a DC permanent magnet motor is approximately one frame size smaller than a field-wound DC motor with the same rated power.

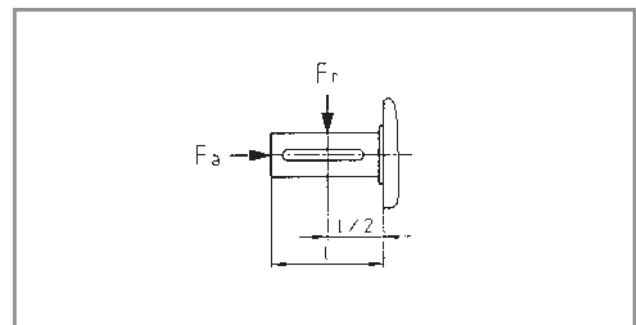


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General data

Motor type	13.120.00.0.0.0
Enclosure	IP54
Thermal class (VDE 530)	F
Motor protection	Thermal contact (normally-closed contact)
Cooling	naturally ventilated
Temperature range	0 to +40 °C
Site altitude	Up to 1000 m a.m.s.l.
Electrical connection	Cable / terminal box Note options in the tables
Bearing	Deep-groove ball bearing
Operating mode (VDE 530)	S1

DC permanent magnet motor

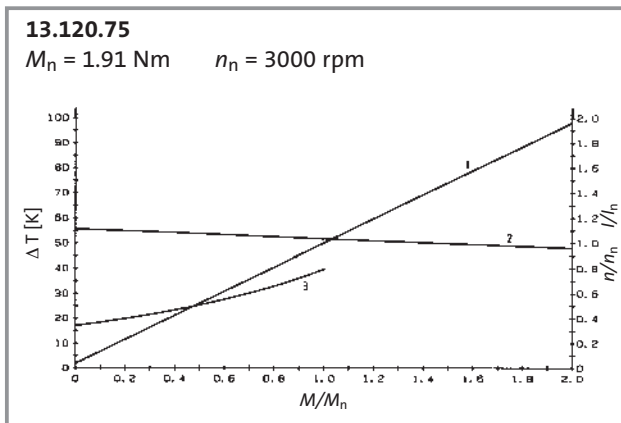
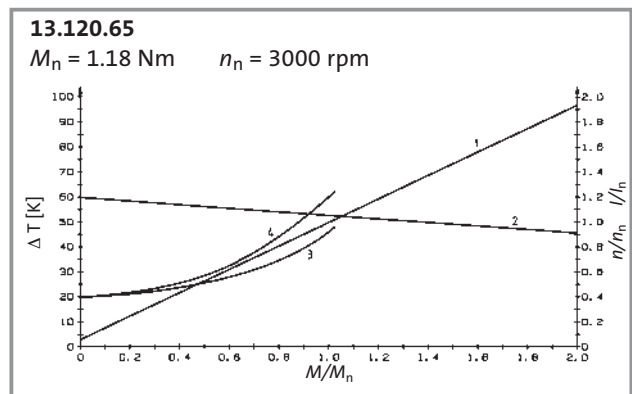
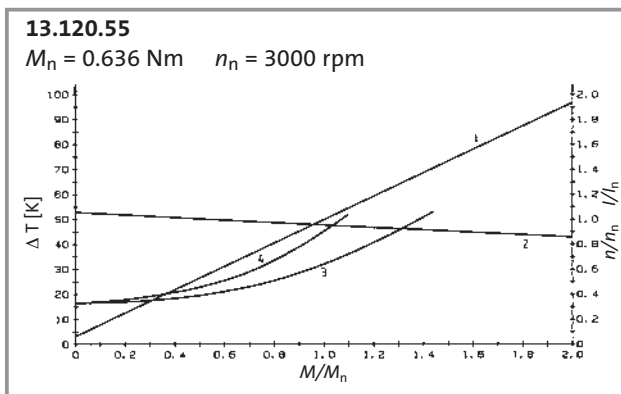
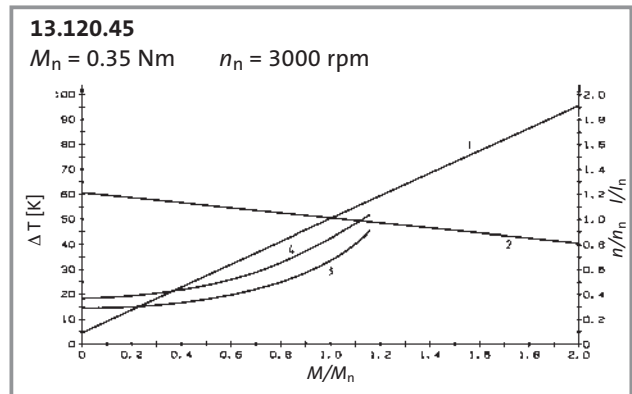
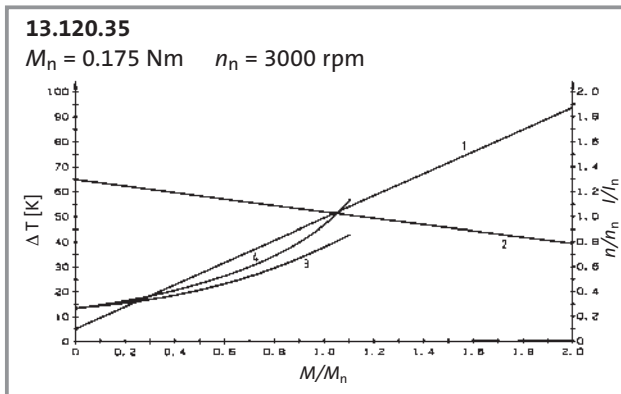


Rated data

Motor type	13.120.35		13.120.45		13.120.55		13.120.65		13.120.75	
Rated power (W)	55		110		200		370		540	600
Rated torque (Nm)	0.07		0.35		0.64		1.08		1.7	1.9
Rated armature voltage (V)	24	180	24	180	24	180	24	180	24	160
Rated current (A)	3.7	0.46	6.7	0.86	11.8	1.4	18.6	2.5	27	4.5
Max. demagnetisation current (A)	41	5	44	6	71	9	90	11.2	130	20
Armature resistance (Ω)	1.3	71	0.47	27.5	0.09	9.8	0.09	4.6	0.06	1.9
Armature inductance (mH)	1.8	98	1.4	52	0.54	31.5	0.4	25	9	0.26
Rated speed (rpm)	3000		3000		3000		3000		3000	
Moment of inertia (kgcm ²)	0.458		1.03		3.8		10.69		16.8	
Max. radial force (N) F_r	220		320		340		580		570	
Max. axial force (N) F_a	200		280		280		330		460	



Characteristics



Explanations

- 1: Armature current (mean value) as function of torque
- 2: Speed as function of torque at rated voltage
- 3: Housing temperature increase as function of torque at $F_F = 1$ for 160 V and 180 V motors

4: As 3, for 24 V motors

M/M_n , I/I_n , n/n_n : standardised values referred to the rated value

For a detailed dimensioning of the drives please consult your Lenze sales representative.



Drive selection

DC permanent magnet motors

Selection table Type 13.120.□□.□.□.□

Motor type	P _N W	U V	n ₂ rpm	M ₂ Nm	Design A-side	Selection (tick as required)
13.120.35.0.3.0	55	24 or 180	3000	0.07	B3	
13.120.35.0.2.0					B14	
13.120.45.0.2.□	110	24 or 180	3000	0.35	B14	
13.120.45.1.2.□					IEC56 B14C80	
13.120.45.0.3.□					B3	
13.120.55.1.3.□	200	24 or 180	3000	0.64	IEC56 B3	
13.120.55.1.2.□					IEC56 B14C80	
13.120.55.1.2.□					IEC63 B14C90	
13.120.65.1.3.□	370	24 or 180	3000	1.08	IEC63 B3	
13.120.65.1.2.□					IEC63 B14C90	
13.120.65.1.2.□					IEC63 B14C120	
13.120.65.1.2.□					IEC71 B14C105	
13.120.75.1.3.□	540	24	3000	1.71	IEC71 B3	
13.120.75.1.2.□					IEC71 B14C105	
13.120.75.1.3.□	600	160	3000	1.91	IEC71 B3	
13.120.75.1.2.□					IEC71 B14C105	

Additional order information

B-side design	0 = no built-on accessories	
	1 = with spring-applied brake	frame size 45-75 only
	4 = with DC tacho	frame size 45-75 only
	5 = with AC tacho	frame size 45-75 only
	6 = for tacho attachment	frame size 45-75 only
	7 = for brake attachment	frame size 45-75 only
Rated armature voltage	24 V	
	160 V	frame size 75 only
	180 V	frame size 35-65 only
Brake supply voltage	24 V DC	
	205 V DC only with armature voltage of 160 V or 180 V	
Electrical connection	Cable	
	Terminal box with motor frame size 45-75 only	
Position of electrical connection B3		2 3 4 5
Position of electrical connection B14		2

Type code see pages 1-3 to 1-6.

Mounting position see cover fold-out.



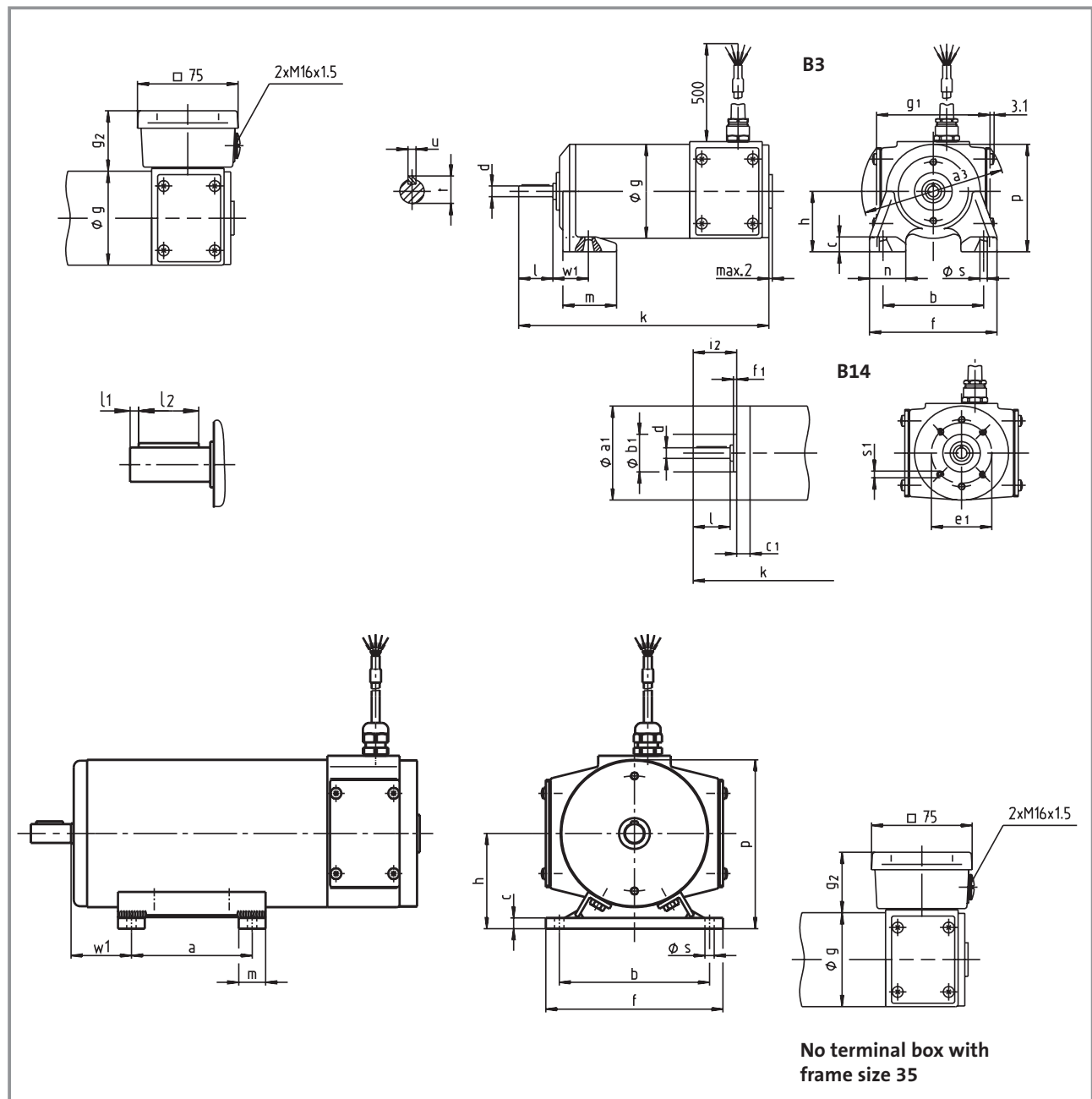
Selection table Type 13.12□.□□.□.□.□

Motor type	P _N W	U V	n ₂ rpm	M ₂ Nm	Design A-side for gearbox attachment	Selection (tick as required)
13.120.35.9.2.0	55	24 or 180	3000	0.07	B14 for SPL42	
13.121.35.2.2.0					B14 for SSN25	
13.121.35.2.5.0					B3/B14 for SSN25	
13.121.45.3.2.□	110	24 or 180	3000	0.35	B14 for SSN31	
13.121.45.3.5.□					B3/B14 for SSN31	
13.121.55.3.2.□	200	24 or 180	3000	0.64	B14 for SSN31	
13.121.55.3.5.□					B3/B14 for SSN31	
13.121.65.5.2.□	370	24 or 180	3000	1.08	B14 for SSN40	
13.121.65.5.5.□					B3/B14 for SSN40	
13.121.75.5.2.□	540	24	3000	1.71	B14 for SSN40	
13.121.75.5.5.□					B3/B14 for SSN40	
13.121.75.5.2.□	600	160	3000	1.91	B14 for SSN40	
13.121.75.5.5.□					B3/B14 for SSN40	

Additional order information

B-side design	0 = no built-on accessories	
	1 = with spring-applied brake	frame size 45-75 only
	4 = with DC tachometer	frame size 45-75 only
	5 = with AC tachometer	frame size 45-75 only
	6 = for tachometer attachment	frame size 45-75 only
	7 = for brake attachment	frame size 45-75 only
Rated armature voltage	24 V	
	160 V	frame size 75 only
	180 V	
Brake supply voltage	24 V DC	
	205 V DC only with armature voltage of 160 V or 180 V	
Electrical connection	Cable	
	Terminal box (not frame size 35)	
Position of electrical connection B3/B14		2 3 4 5
Position of electrical connection B14		2

Dimensions Type 13.120.□□.□.□.□





Dimensions Type 13.120.□□.□.□.□

Motor type	Frame size	a	a ₁	a ₃	b j7	b ₁	c	c ₁	d	e ₁
13.120.35.0.□.□	B3	—	—	79	55	—	8	—	7h6	—
	B14		50.5		—	28	—	8		40
13.120.45.□.□.□	B3	—	—	107	75	—	11	—	8h6	—
	B14		69		—	28	—	12		45
	IEC56 B14C80		80		—	50	—	14		65
13.120.55.□.□.□	IEC56 B3	—	—	115	90	—	13	—	9k6	—
	IEC56 B14C80		80		—	50	—	17		65
	IEC63 B14C90		90		—	60	—	15	11k6	75
	IEC63 B14C120		120			80				100
13.120.65.□.□.□	IEC63 B3	—	—	140	100	—	15	—	11k6	—
	IEC63 B14C90		98		—	60	—	18.5		75
	IEC63 B14C120		120			80		16.5	14k6	100
	IEC71 B14C105		105		—	70	—	16.5		85
13.120.75.□.□.□	IEC71 B3	90	—	154	112	—	8	—	14k6	—
	IEC71 B14C105	—	110		—	70	—	14.5		85

Motor type	f max.	f ₁	g	g ₁	g ₂	h	i ₂	k	l ^{*)}	l ₁	l ₂	m	n	p	s	s ₁	t	u	w ₁	Weight approx. kg
13.120.35.0.□.□	71	—	54	62	—	32	—	172	31			24	20	59	5.5	—	—	—	18	1.4
	—	2.5				—	33.5					—	—	—	M4	—				
13.120.45.□.□.□	96	—	70	84.5	45	45	—	186.5	29			40	28	80	5.5	—	—	—	23	2.4
	—	2.5				—	32.5					—	—	—	M4	—				
							20									178			20	
13.120.55.□.□.□	112	—	80	95	45	56	—	213	20	3.5	14	60	34	96	6.5	—	10.2	3	36	3.7
	—	2.5				—	20					—	—	—	—	M5			—	
	—	2.5				—	23	216	23	3	16	—	—	—	—	M5	12.5	4	—	
13.120.65.□.□.□	137	—	98	115	45	63	—	259.5	23	3	16	67	42	112	9	—	12.5	4	40	8
	—	2.5				—	23					—	—	—	—	M5			—	
	—	3				—	30	266.5	30	4	20	—	—	—	—	M6			—	
13.120.75.□.□.□	132	—	110	132	46	71	—	288	30	4	20	20		126	7	—	16	5	45	10.2
	—	2.5				—	30					—	—	—	—	M6			—	

*) Motors 13.120.35 / 45 do not have a shaft collar.

Dimensions in mm



Drive selection

DC worm geared motors

Selection table Type SSN25-1PVC□-035C21

Motor type	P _N W	n ₂ rpm	M ₂ Nm	c	i	Selection (tick as required)
13.121.35.2.□.0	55	600	0.70	10.07	5	
		375	1.00	7.26	8	
		300	1.30	6.53	10	
		200	1.70	4.60	15	
		150	2.00	4.06	20	
		100	2.50	3.06	30	
		75	3.00	2.39	40	
		60	3.20	1.96	50	
		50	3.50	1.83	60	

Additional order information

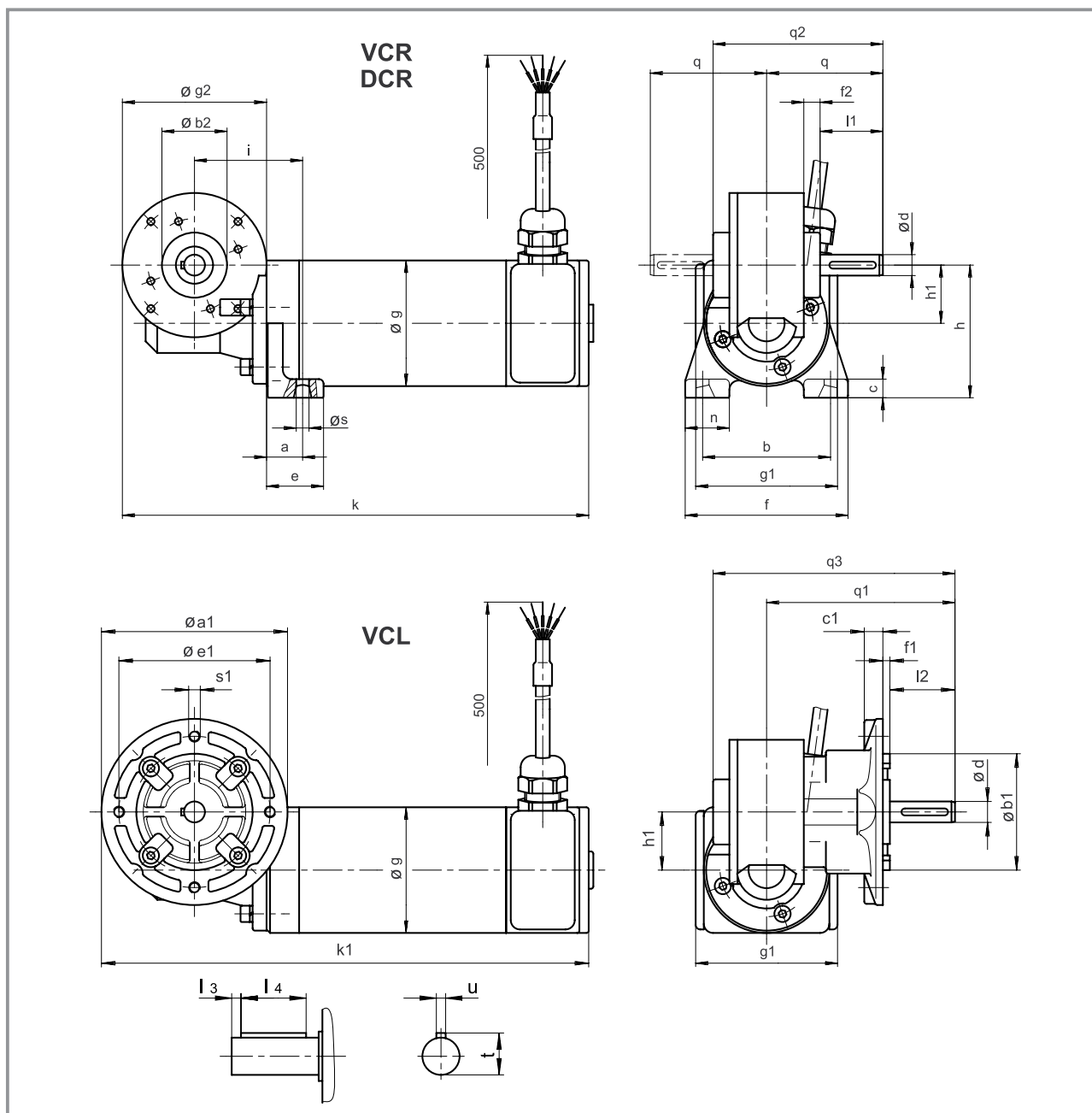
Motor type	2 = B14	
	5 = B3/B14	
Rated armature voltage	24 V	
	180 V	
Electrical connection	Cable	
Gearbox type	VCR	
	VCL	
	DCR	
Shaft position on type VCR		3 5
Flange/shaft position on type VCL		3 5
Mounting position		A B C D E F
Position of electrical connection		2 3 4 5

Type code see pages 1-3 to 1-6.

Mounting position see cover fold-out.



Dimensions Type SSN25-1PVCD-035C21



Geared motor	a B3	a ₁ B14 Ø	b B3	b ₁ B14 j7	b ₂ B3 h11	c B3	c ₁ B14	d h6	e B3	e ₁ B14	f B3	f ₁ B14	f ₂ B3	g	g ₁	g ₂ B3	h B3 Ø	h ₁
SSN25-1PVCD-035C21	15.5	80	55	50	28	8	8	9	24.5	65	71	3	7	54	62	62	57	25

Geared motor	i B3	k B3	k ₁ B14	l ₁ B3	l ₂ B14	l ₃	l ₄	n B3	q B3	q ₁ B14	q ₂ B3	q ₃ B14	s B3	s ₁ B14	t	u	Weight approx. kg
SSN25-1PVCD-035C21	46.5	200	209.5	27	28	3	20	20	50	81	73	104	5.5	M5	10.2	3	1.95

Dimensions in mm



Drive selection

DC worm geared motors

Selection table Type SSN31-1P□□□-045C21

Motor type	P _N W	n ₂ rpm	M ₂ Nm	c	i	Selection (tick as required)
13.121.45.3.□.□	110	600	1.50	9.41	5	
		429	2.00	6.88	7	
		300	2.70	5.09	10	
		200	3.90	4.02	15	
		150	4.80	3.01	20	
		120	5.30	2.62	25	
		100	6.20	2.42	30	
		79	7.60	2.01	38	
		60	8.00	1.61	50	
		55	10.00	1.50	55	
		40	9.50	1.06	75	
		30	11.00	0.83	100	

Additional order information

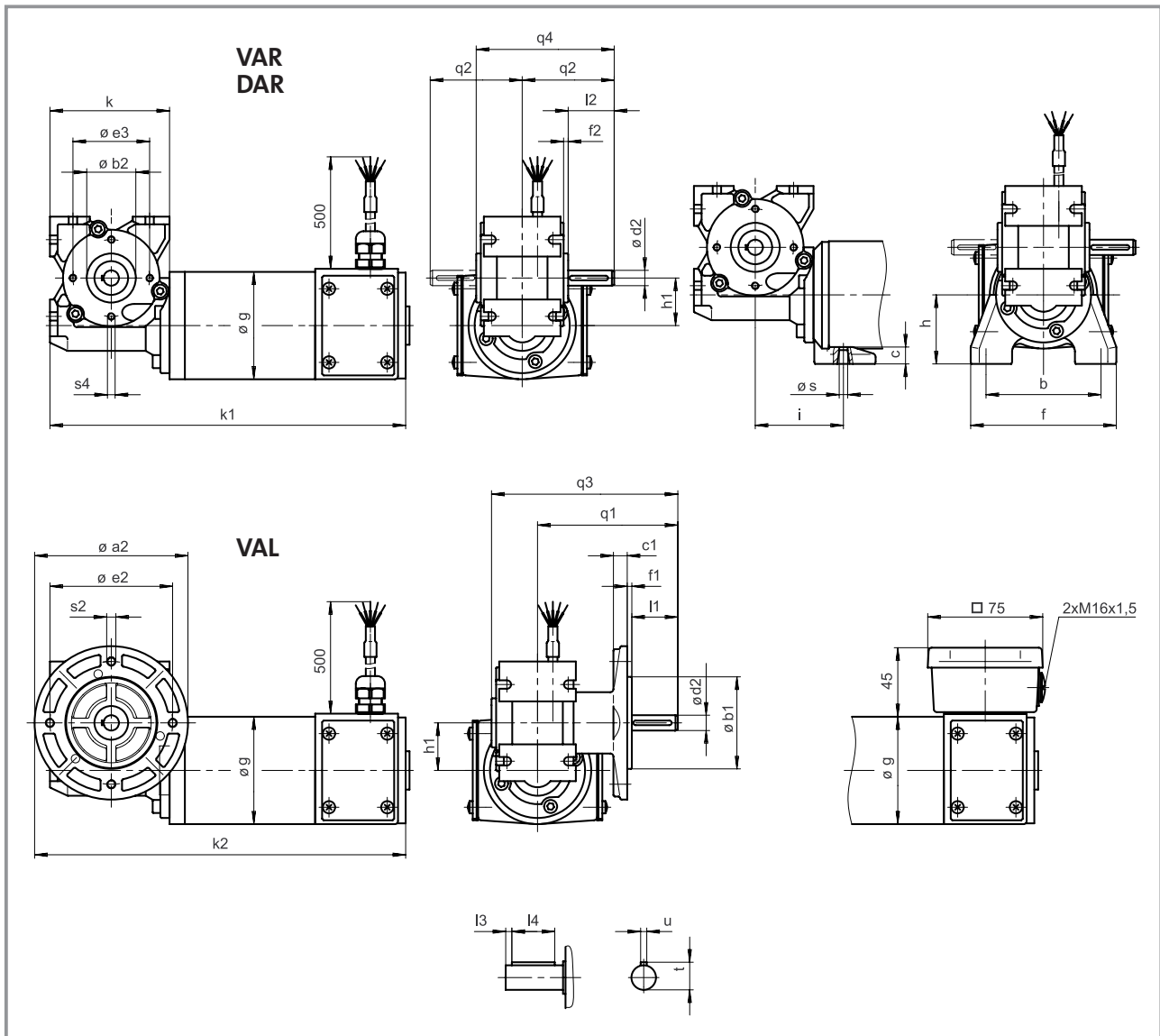
Motor type	2 = B14		
	5 = B3/B14		
B-side design	0 = no built-on accessories		
	1 = with spring-applied brake		
	4 = with DC tachometer		
	5 = with AC tachometer		
	6 = for tachometer attachment		
	7 = for brake attachment		
Rated armature voltage:	24 V		
	180 V		
Brake supply voltage	24 V DC		
	205 V DC only with armature voltage of 180 V		
Electrical connection	Cable		
	Terminal box		
Gearbox type	VAR	Shaft D = 10x30 mm	
		Shaft D = 12x40 mm	
	DAR	Shaft D = 10x30 mm	
		Shaft D = 12x40 mm	
	VAL	Shaft D = 10x30 mm Flange D = 100 mm	
		Shaft D = 12x40 mm Flange D = 120 mm	
	HAR		
Shaft position on gearbox type VAR			3 5
Flange/shaft position on gearbox type VAL			3 5
Mounting position			A B C D E F
Position of electrical connection			2 3 4 5

Type code see pages 1-3 to 1-6.

Mounting position see cover fold-out.



Dimensions Type SSN31-1PVA□-045C21

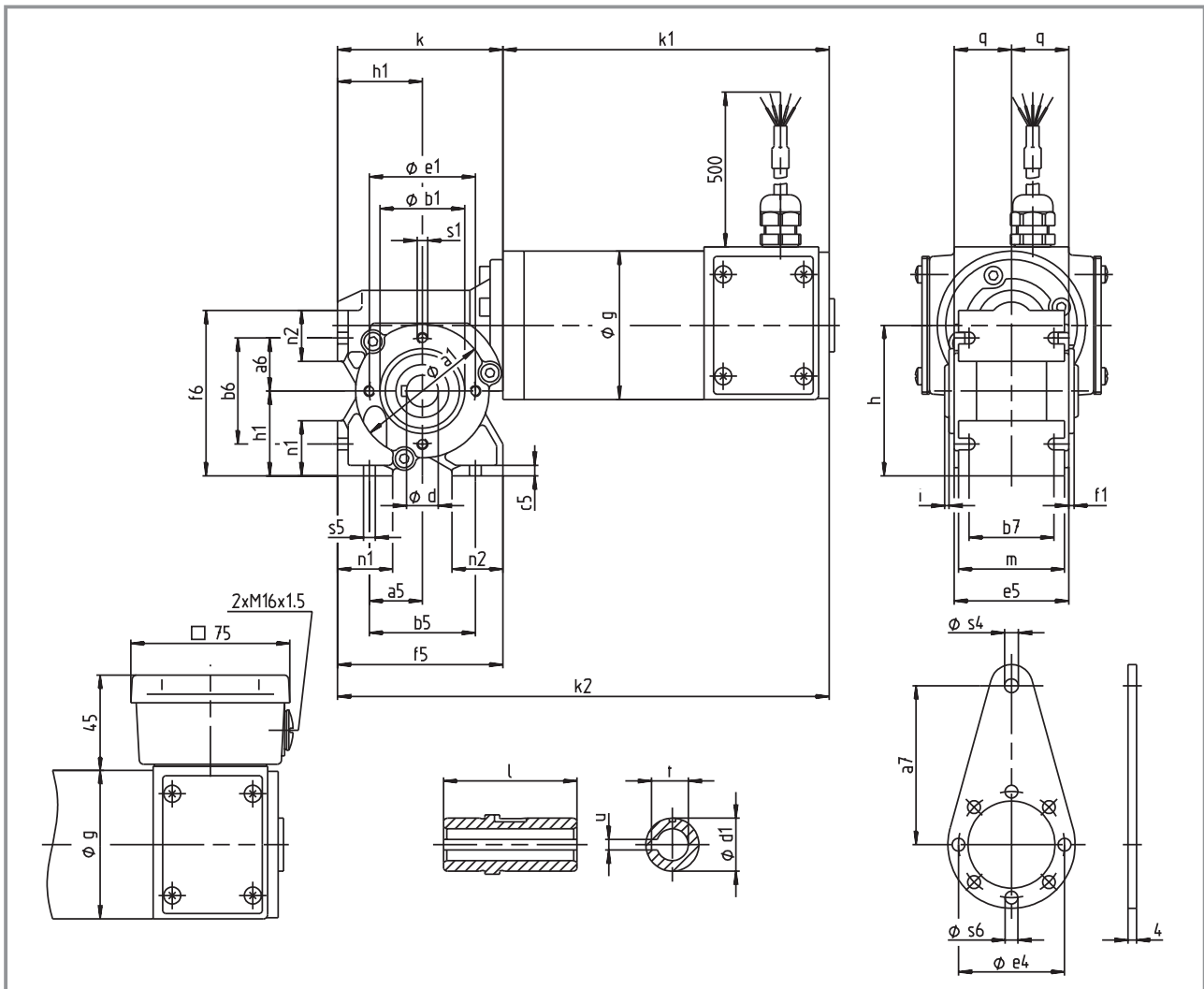


Geared motor	a ₂	b	b ₁ j7	b ₂ h8	c	c ₁	d ₂ h6	e ₂	e ₃	f	f ₁	f ₂	g	h	h ₁	i
SSN31-1PVA□-045C21	100	75	60	32	11	9	10	80	50	95	3	3	70	45	31	57.5
	120	75	80	32	11	9	12	100	50	95	3	3	70	45	31	57.5

Geared motor	k	k ₁	k ₂	l ₁	l ₂	l ₃	l ₄	q ₁	q ₂	q ₃	q ₄	s	s ₂	s ₄	t	u	Weight approx. kg
SSN31-1PVA□-045C21	78	232	242	30	30	4	25	91.5	60	121.5	90	5.5	M6	M5	11.2	3	3.0
	78	232	252	40	40	4	28	101.5	70	131.5	100	5.5	M6	M5	13.5	4	3.2

Dimensions in mm

Dimensions Type SSN31-1PHAR-045C21



Geared motor	a ₁	a ₅	a ₆	a ₇	b ₁ h ₈	b ₅	b ₆	b ₇	c ₅	d H ₇	d ₁	e ₁	e ₄	e ₅	f ₁	f ₅	f ₆	g
SSN31-1PHAR-045C21	63	25	25	75	40	50	50	40	5	15	25	50	50	54	2.5	78	78	70

Geared motor	h	h ₁	i	k	k ₁	k ₂	l	m	n ₁	n ₂	q	s ₁	s ₄	s ₅	s ₆	t	u	Weight approx. kg
SSN31-1PHAR-045C21	71	40	2	78	154	232	63	50	26	24	27	M5	6.5	5.5	6	17.3	5	3.0

Dimensions in mm

Drive selection

DC worm geared motors

Selection table Type SSN31-1P□□□-056C21

KMAT 456906

Motor type	P _N W	n ₂ rpm	M ₂ Nm	c	i	Selection (tick as required)
13.121.55.3.□.□	200	600	2.70	5.05	5	
		430	3.70	3.78	7	
		300	4.90	2.84	10	
		200	7.00	2.25	15	
		150	8.80	1.70	20	
		120	9.80	1.43	25	
		100	11.30	1.32	30	
		80	13.90	1.05	38	
		60	13.00	0.88	50	
		55	15.00	0.82	55	
		40	11.00	0.64	75	
		30	11.00	0.45	100	

Additional order information

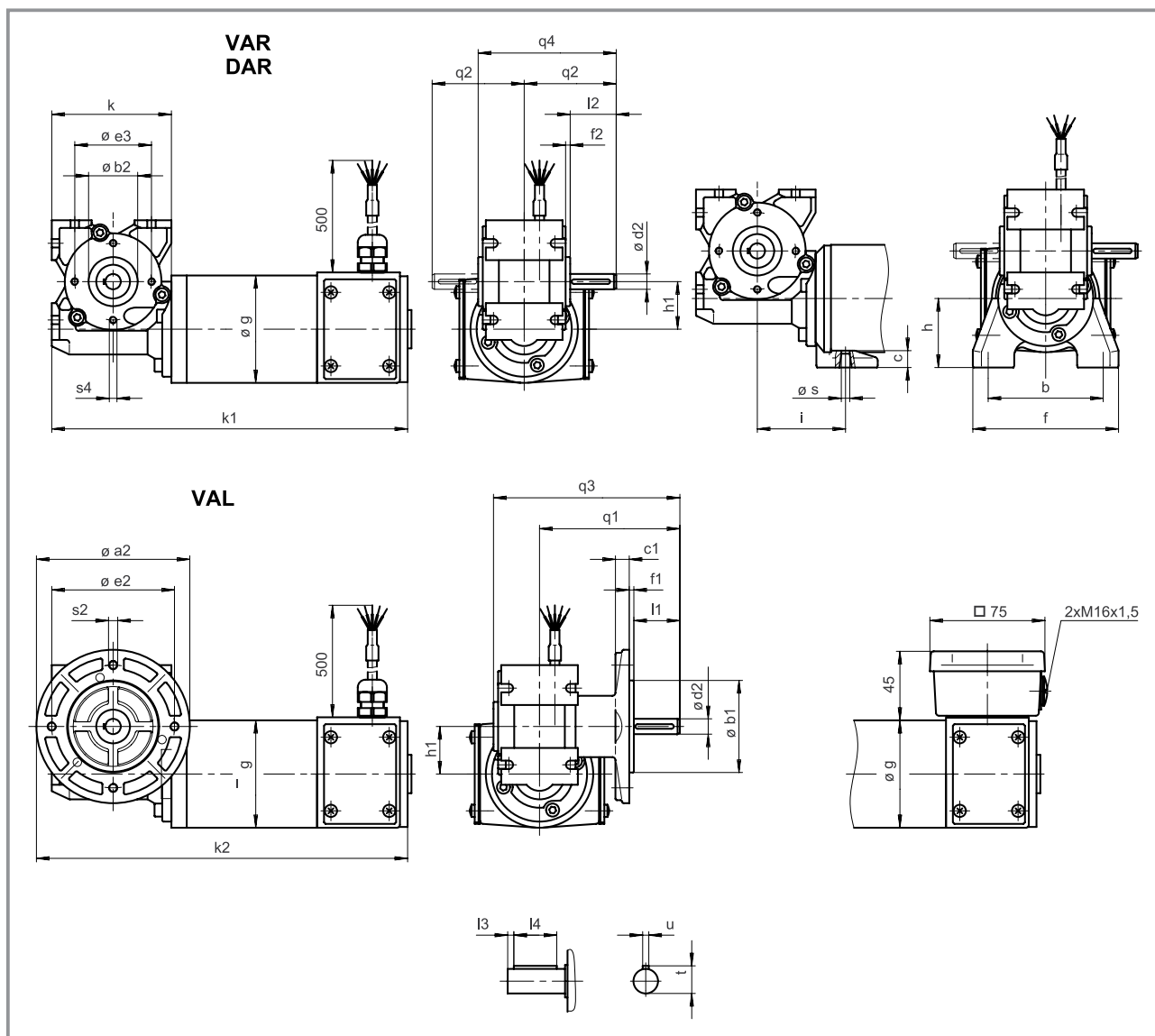
Motor type	2 = B14		
	5 = B3/B14		
B-side design	0 = no built-on accessories		
	1 = with spring-applied brake		
	4 = with DC tachometer		
	5 = with AC tachometer		
	6 = for tachometer attachment		
	7 = for brake attachment		
Rated armature voltage:	24 V		
	180 V		
Brake supply voltage	24 V DC		
	205 V DC only with armature voltage of 180 V		
Electrical connection	Cable		
	Terminal box		
Gearbox type	VAR	Shaft D = 10x30 mm	
		Shaft D = 12x40 mm	
	DAR	Shaft D = 10x30 mm	
		Shaft D = 12x40 mm	
	VAL	Shaft D = 10x30 mm Flange D = 100 mm	
		Shaft D = 12x40 mm Flange D = 120 mm	
HAR			
Shaft position on gearbox type VAR			3 5
Flange/shaft position on gearbox type VAL			3 5
Mounting position			A B C D E F
Position of electrical connection			2 3 4 5

Type code see pages 1-3 to 1-6.

Mounting position see cover fold-out.



Dimensions Type SSN31-1PVA□-056C21

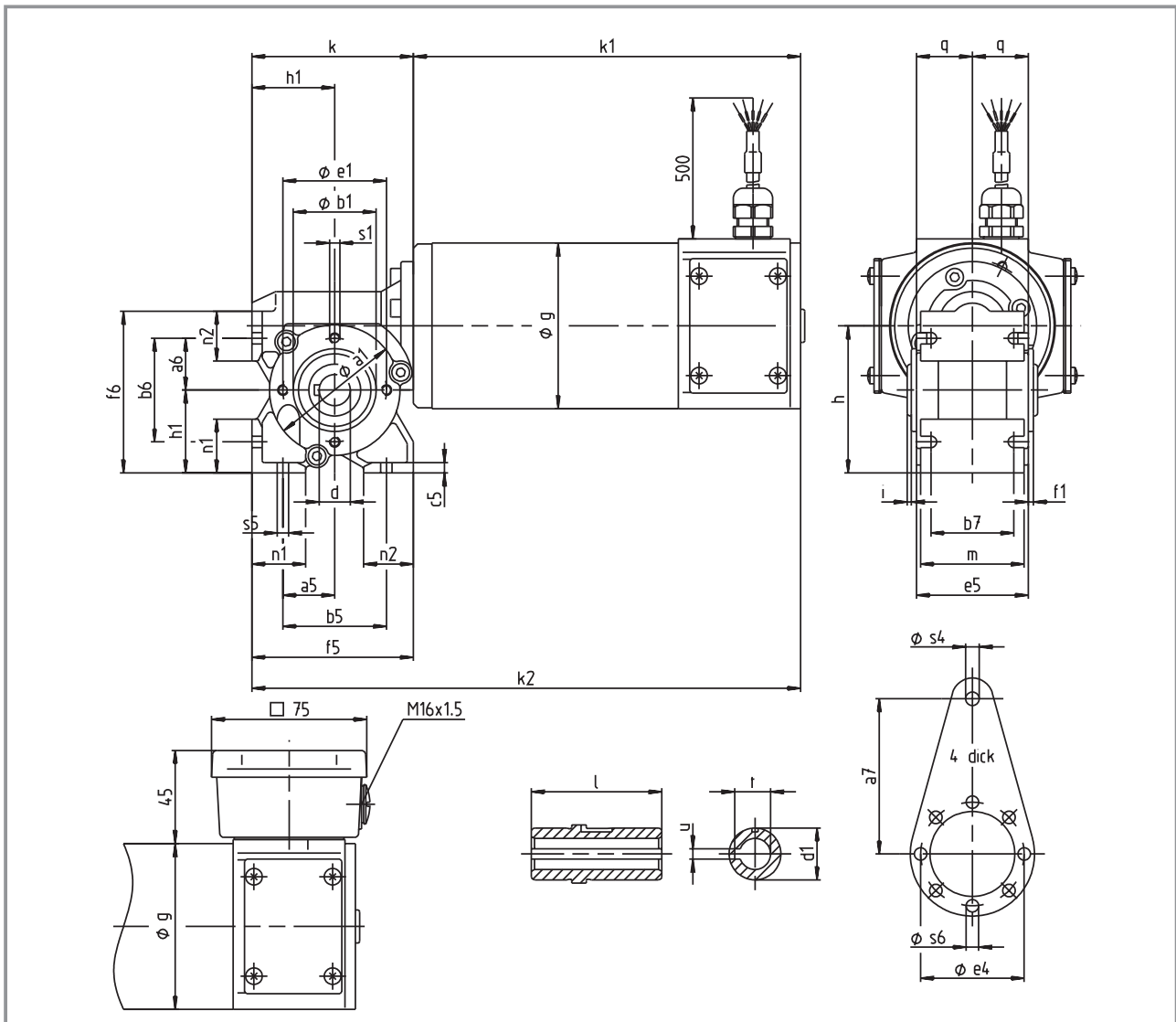


Geared motor	a ₂	b	b ₁ j7	b ₂ h8	c	c ₁	d ₂ h6	e ₂	e ₃	f	f ₁	f ₂	g	h	h ₁	i
SSN31-1PVA□-056C21	100	90	60	32	13	9	10	80	50	110	3	3	80	56	31	68
	120	90	80	32	13	9	12	100	50	110	3	3	80	56	31	68

Geared motor	k	k ₁	k ₂	l ₁	l ₂	l ₃	l ₄	q ₁	q ₂	q ₃	q ₄	s	s ₂	s ₄	t	u	Weight approx. kg
SSN31-1PVA□-056C21	78	265	275	30	30	4	25	91.5	60	121.5	90	6.5	M6	M5	11.2	3	4.4
	78	265	285	40	40	4	28	101.5	70	131.5	100	6.5	M6	M5	13.5	4	4.5

Dimensions in mm

Dimensions Type SSN31-1PHAR-056C21



Geared motor	a ₁	a ₅	a ₆	a ₇	b ₁ h8	b ₅	b ₆	b ₇	c ₅	d H7	d ₁	e ₁	e ₄	e ₅	f ₁	f ₅	f ₆	g
SSN31-1PHAR-056C21	63	25	25	75	40	50	50	40	5	15	25	50	50	54	2.5	78	78	80

Geared motor	h	h ₁	i	k	k ₁	k ₂	l	m	n ₁	n ₂	q	s ₁	s ₄	s ₅	s ₆	t	u	Weight approx. kg
SSN31-1PHAR-056C21	71	40	2	78	187	265	63	50	26	24	27	M5	6.5	5.5	6	17.3	5	4.4

Dimensions in mm



Drive selection

DC worm geared motors

Selection table Type SSN40-1P□□□-063C21

Motor type	P _N W	n ₂ rpm	M ₂ Nm	c	i	Selection (tick as required)
13.121.65.5.□.□	370	444	6.70	5.22	6.75	
		300	9.60	3.64	10	
		200	13.00	2.52	15	
		150	16.70	2.03	20	
		120	18.80	1.54	25	
		100	21.90	1.65	30	
		75	26.40	1.29	40	
		60	31.80	1.01	50	
		50	23.00	0.85	60	
		38	24.00	0.65	80	

Additional order information

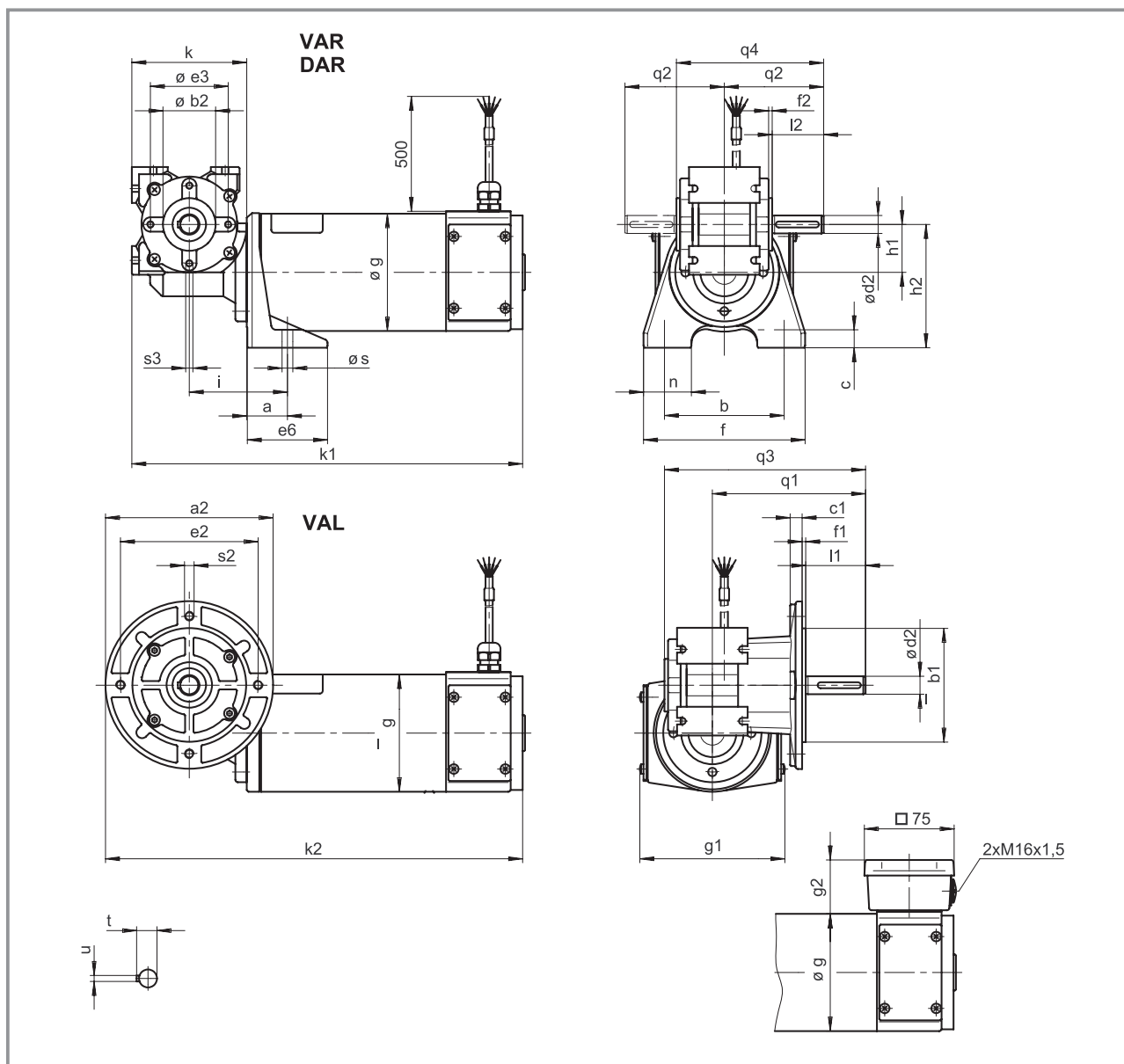
Motor type	2 = B14 5 = B3/B14	
B-side design	0 = no built-on accessories 1 = with spring-applied brake 4 = with DC tachometer 5 = with AC tachometer 6 = for tachometer attachment 7 = for brake attachment	
Rated armature voltage:	24 V 180 V	
Brake supply voltage	24 V DC 205 V DC only with armature voltage of 180 V	
Electrical connection	Cable Terminal box	
Gearbox type	VAR DAR VAL HAR	
Shaft position on gearbox type VAR		3 5
Flange/shaft position on gearbox type VAL		3 5
Mounting position		A B C D E F
Position of electrical connection		2 3 4 5

Type code see pages 1-3 to 1-6.

Mounting position see cover fold-out.



Dimensions Type SSN40-1PVA□-063C21

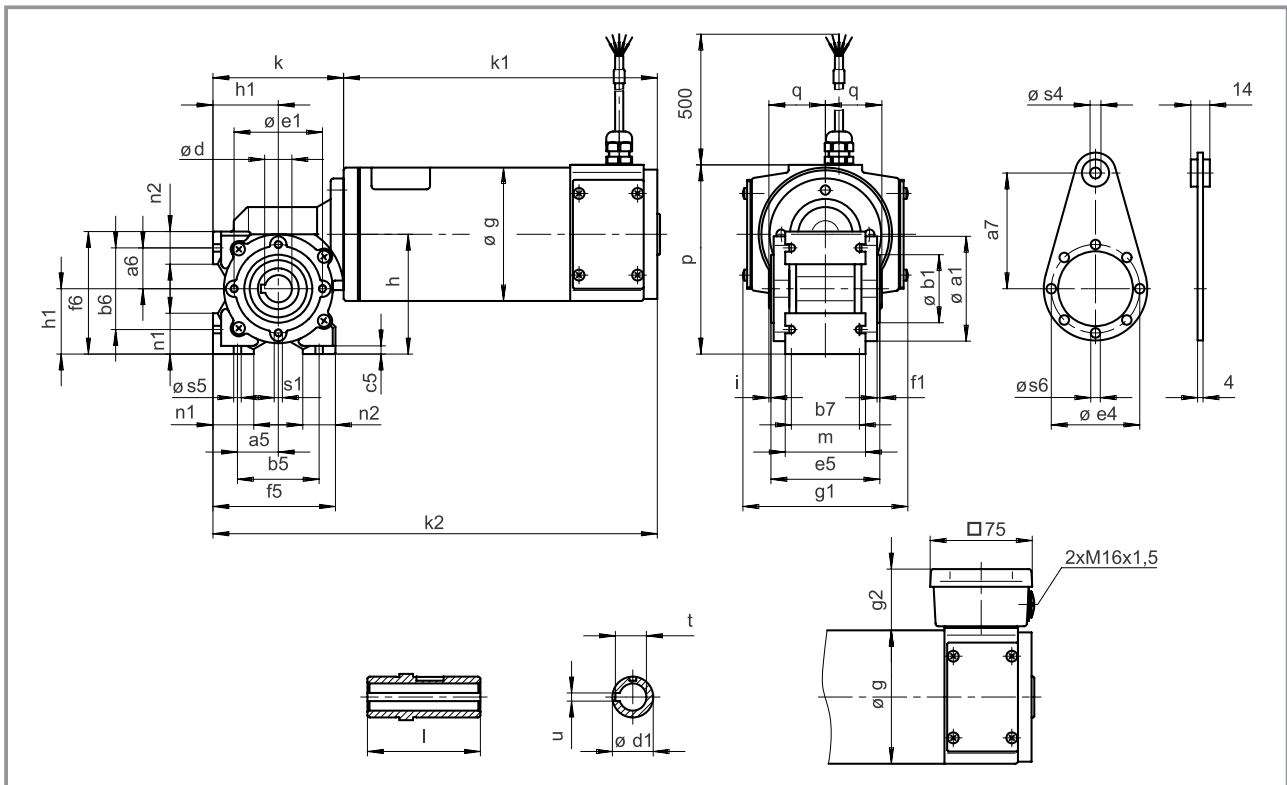


Geared motor	a	a ₂	a ₃	b	b ₁ j7	b ₂ h10	c	c ₁	d ₂ h6	e ₂	e ₃	e ₆	f	f ₁	f ₂	g	g ₁	g ₂	h ₁	h ₂
SSN40-1PVA□-063C21	34	140	—	100	95	44	15	10	15	115	65	67.5	137	3	3	98	121	45	40	103

Geared motor	i	k	k ₁	k ₂	l ₁	l ₂	m ₁	n	q ₁	q ₂	q ₃	q ₄	s	s ₂	s ₃	t	u	Weight approx. kg
SSN40-1PVA□-063C21	82	96	327	349	50	43	—	42	128	83	168	123	9	M8	M6	17	5	9.5

Dimensions in mm

Dimensions Type SSN40-1PHAR-063C21



Geared motor	a ₁	a ₅	a ₆	a ₇	b ₁ h ₈	b ₅	b ₆	b ₇	c ₅	d H7	d ₁	e ₁	e ₄	e ₅	f ₁	f ₅	f ₆	g	g ₁	g ₂
SSN40-1PHAR-063C21	77	30	30	85	50	60	60	50	6	20	30	65	65	80	2	90	90	98	121	45

Geared motor	h	h ₁	i	k	k ₁	k ₂	l	m	n ₁	n ₂	p	q	s ₁	s ₄	s ₅	s ₆	t	u	Weight approx. kg
SSN40-1PHAR-063C21	88	48	1.5	96	231	327	83	59	30	24	139	41.5	M6	8	5.5	7	22.8	6	9.5

Dimensions in mm

Drive selection

DC worm geared motors

Selection table Type SSN40-1P□□□-071C21

Motor type	P _N W	n ₂ rpm	M ₂ Nm	c	i	Selection (tick as required)
13.121.75.5.□.□	540 24 V	444	9.60	3.63	6.75	
		300	13.70	2.54	10	
		200	18.80	1.75	15	
		150	24.00	1.41	20	
		120	27.20	1.07	25	
		100	31.60	1.04	30	
		75	34.00	0.89	40	
		60	32.00	0.69	50	
		50	23.00	0.59	60	
		38	24.00	0.45	80	
13.121.75.5.□.□	600 160 V	444	10.80	3.23	6.75	
		300	15.40	2.26	10	
		200	21.20	1.56	15	
		150	27.00	1.25	20	
		120	29.00	0.95	25	
		100	35.50	1.01	30	
		75	34.00	0.79	40	
		60	32.00	0.62	50	
		50	23.00	0.53	60	
		38	24.00	0.40	80	

Additional order information

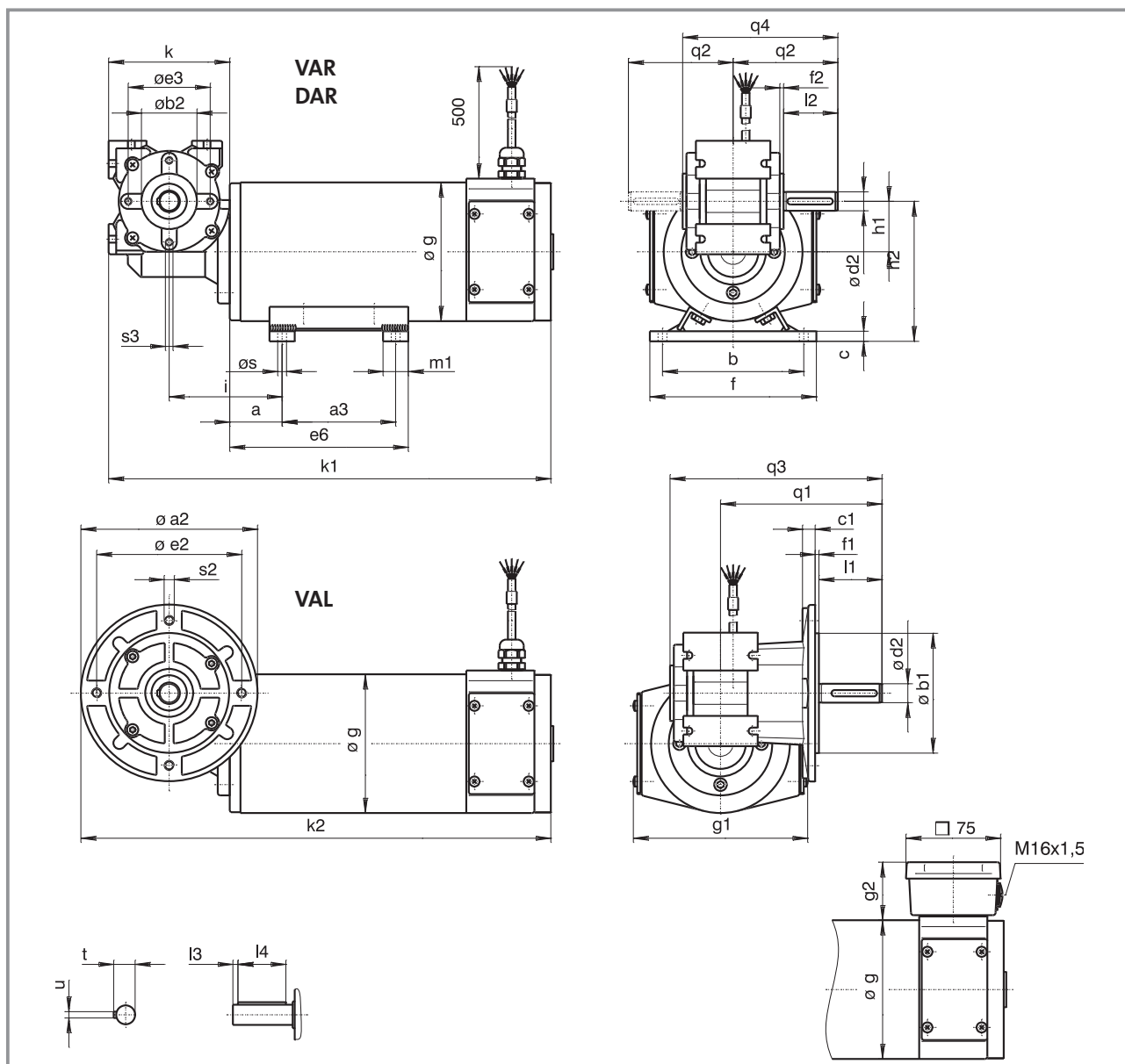
Motor type	2 = B14	
	5 = B3/B14	
B-side design	0 = no built-on accessories	
	1 = with spring-applied brake	
	4 = with DC tachometer	
	5 = with AC tachometer	
	6 = for tachometer attachment	
	7 = for brake attachment	
Rated armature voltage:	24 V	
	160 V	
Brake supply voltage	24 V DC	
	205 V DC only with armature voltage of 160 V	
Electrical connection	Cable	
	Terminal box	
Gearbox type	VAR	
	DAR	
	VAL	
	HAR	
Shaft position on gearbox type VAR		3 5
Flange/shaft position on gearbox type VAL		3 5
Mounting position		A B C D E F
Position of electrical connection		2 3 4 5

Type code see pages 1-3 to 1-6.

Mounting position see cover fold-out.



Dimensions Type SSN40-1PVA□-071C21

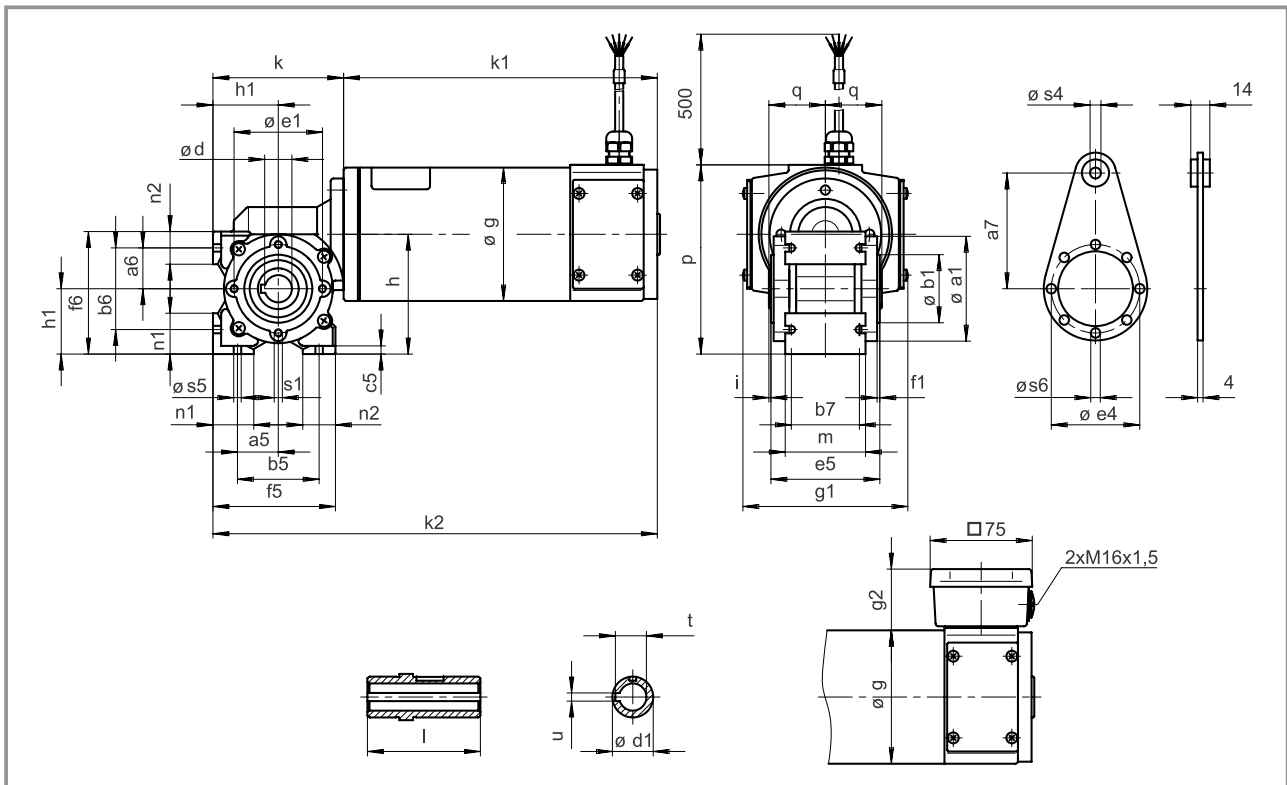


Geared motor	a	a ₂	a ₃	b	b ₁ j7	b ₂ h10	c	c ₁	d ₂ h6	e ₂	e ₃	e ₆	f	f ₁	f ₂	g	g ₁	g ₂	h ₁	h ₂
SSN40-1PVA□-071C21	41.5	140	90	112	95	44	8	10	15	115	65	141.5	132	3	3	110	138	46	40	111

Geared motor	i	k	k ₁	k ₂	l ₁	l ₂	m ₁	n	q ₁	q ₂	q ₃	q ₄	s	s ₂	s ₃	t	u	Weight approx. kg
SSN25-1PVCD-071C21	89.5	96	351	373	50	43	20	—	128	83	168	123	7	M8	M6	17	5	11.7

Dimensions in mm

Dimensions Type SSN40-1PHAR-071C21



Geared motor	a ₁	a ₅	a ₆	a ₇	b ₁ h ₈	b ₅	b ₆	b ₇	c ₅	d H7	d ₁	e ₁	e ₄	e ₅	f ₁	f ₅	f ₆	g	g ₁	g ₂
SSN40-1PHAR-071C21	77	30	30	85	50	60	60	50	6	20	30	65	65	80	2	90	90	110	138	46

Geared motor	h	h ₁	i	k	k ₁	k ₂	l	m	n ₁	n ₂	p	q	s ₁	s ₄	s ₅	s ₆	t	u	Weight approx. kg
SSN40-1PHAR-071C21	88	48	1.5	96	255	351	83	59	30	24	146	41.5	M6	8	5.5	7	22.8	6	11.7

Dimensions in mm



Drive selection

DC planetary geared motors

Selection table Type SPL42-□PVCr-035C21

Motor type	P _N W	n ₂ rpm	M ₂ Nm	c	i	Selection (tick as required)
13.120.35.9.2.0	55	811	0.50	5.96	3.7	
		444	0.90	3.27	6.75	
		218	1.80	4.28	13.73	
		120	3.30	2.35	25.01	
		66	6.00	1.29	45.56	
		59	6.30	2.48	50.89	
		32	11.40	1.36	92.7	
		18	15.00	0.75	168.84	

Additional order information

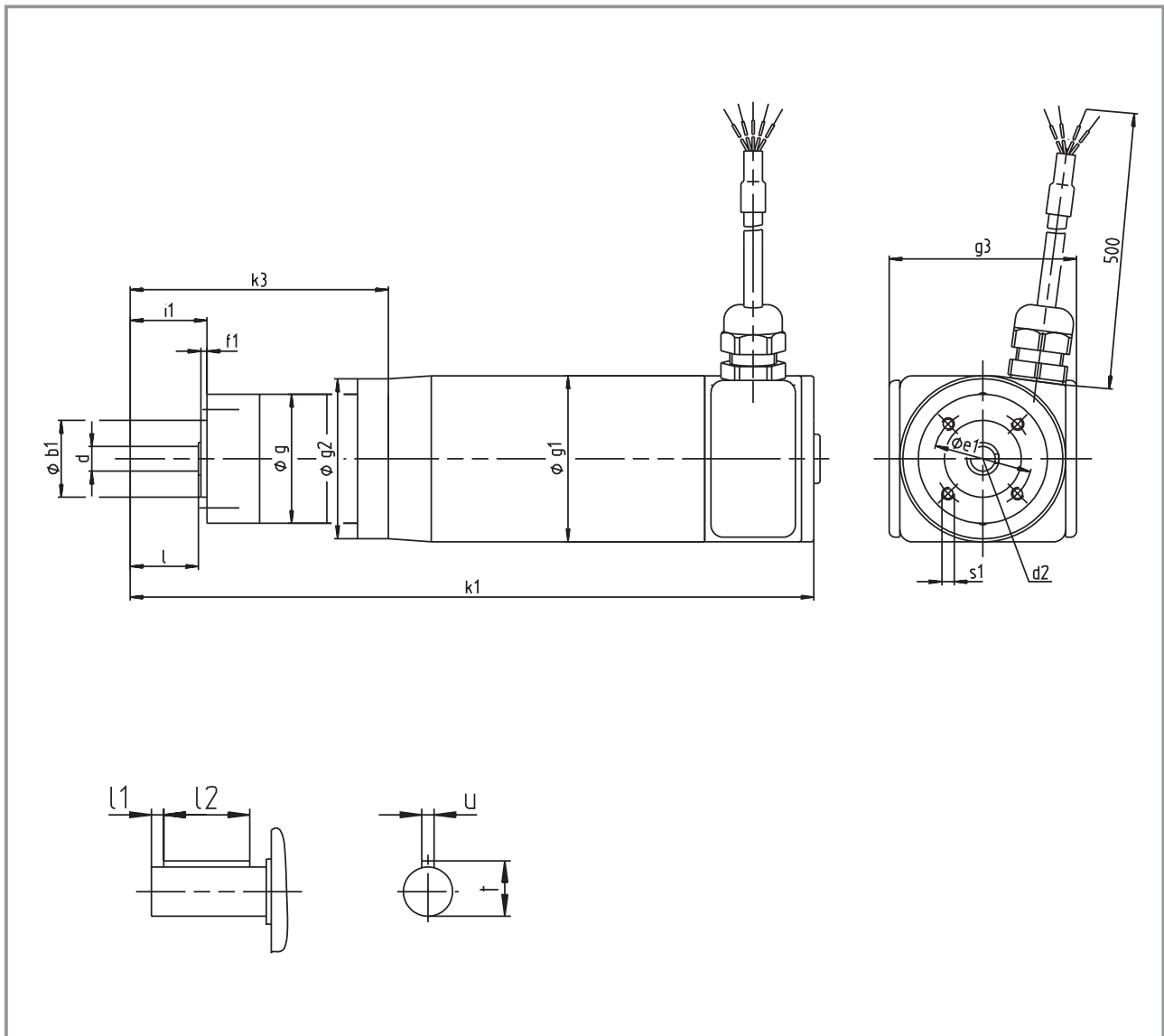
Rated armature voltage:	24 V	
	180 V	
Electrical connection	Cable	
Position of electrical connection		2

Type code see pages 1-3 to 1-6.

Mounting position see cover fold-out.



Dimensions Type SPL42-□PVCR-035C21



Geared motor	Ratio i	b ₁ h10	d g6	d ₂	e ₁	f ₁	g	g ₁	g ₂	g ₃	i ₁	k ₁	k ₃	l	l ₁	l ₂	s ₁	t	u	Weight approx. kg
SPL42-□PVCR-035C21	3.7	25	8	M3	32	2	42	54	52	62	25	223	84	22.2	3	16	M4 x10	9.2	3	1.8
	14 ... 46											236	97							1.9
	51 ... 169											249	110							2.0

Dimensions in mm



Drive selection

DC planetary geared motors

Selection table Type SPL52-□PVCR-045C21

Motor type	P _N W	n ₂ rpm	M ₂ Nm	c	i	Selection (tick as required)
13.120.45.1.2.□	110	811	1.03	3.86	3.7	
		444	1.87	2.02	6.75	
		218	3.60	3.33	13.73	
		120	6.56	1.83	25.01	
		66	11.95	1.01	45.56	
		59	12.46	2.01	50.89	
		32	22.71	1.00	92.7	
		18	25.00	0.60	168.84	

Additional order information

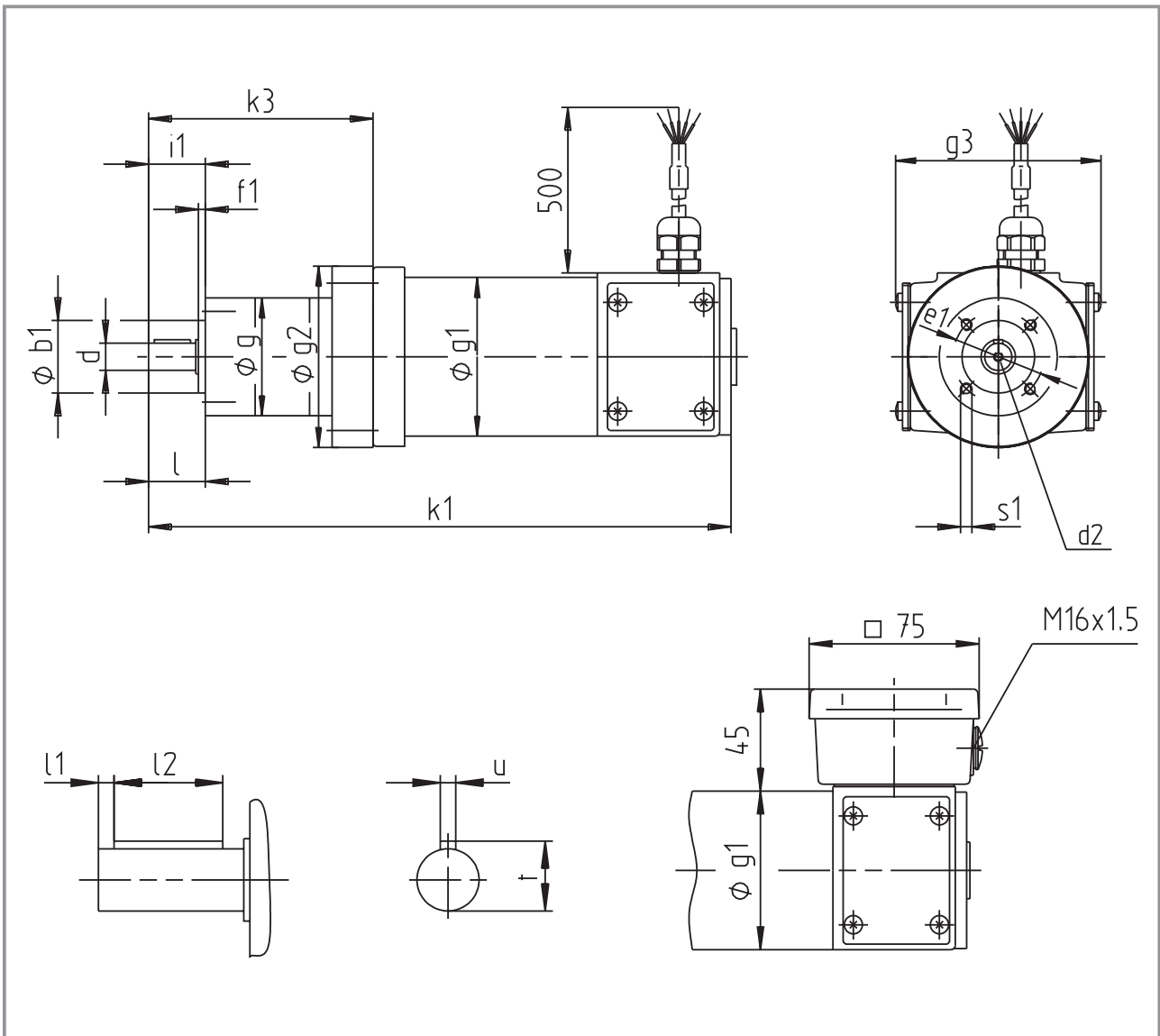
B-side design	0 = no built-on accessories	
	1 = with spring-applied brake	
	4 = with DC tachometer	
	5 = with AC tachometer	
	6 = for tachometer attachment	
	7 = for brake attachment	
Rated armature voltage	24 V	
	180 V	
Brake supply voltage	24 V DC	
	205 V DC only with armature voltage of 180 V	
Electrical connection	Cable	
	Terminal box	
Position of electrical connection		2

Type code see pages 1-3 to 1-6.

Mounting position see cover fold-out.



Dimensions Type SPL52-□PVCR-045N21



Geared motor	Ratio i	b ₁ h8	d h7	d ₂	e ₁	f ₁	g	g ₁	g ₂	g ₃	i ₁	k ₁	k ₃	l	l ₁	l ₂	s ₁	t	u	Weight approx. kg
SPL52-□PVCR-045N21	3.7	32	12	M4	40	3	52	70	80	91	25	257	99	20.8	2.5	16	M5 x10	13.5	4	3.4
	14 ... 46											271	113							3.6
	51 ... 169											285	127							3.8

Dimensions in mm



Drive selection

DC planetary geared motors

Selection table Type SPL62-□PVCR-056N21

Motor type	P _N W	n ₂ rpm	M ₂ Nm	c	i	Selection (tick as required)
13.120.55.1.2.□	200	811	1.90	4.22	3.7	
		444	3.40	2.31	6.75	
		218	6.59	3.79	13.73	
		120	12.00	2.08	25.01	
		86	18.20	1.49	34.97	
		66	20.40	1.04	45.56	
		59	22.80	2.09	50.89	
		42	31.80	1.57	71.06	
		30	44.50	1.02	99.5	
		24	50.00	0.90	123.97	

Selection table Type SPL81-□PVCR-063N21

Motor type	P _N W	n ₂ rpm	M ₂ Nm	c	i	Selection (tick as required)
13.120.65.1.2.□	370	811	3.49	5.73	3.7	
		444	6.36	3.04	6.75	
		218	12.05	4.94	13.73	
		120	22.03	2.71	25.01	
		86	30.94	1.94	34.97	
		66	40.32	1.49	45.56	
		59	42.03	2.85	50.89	
		42	58.77	2.04	71.06	
		30	82.08	1.46	99.5	
		24	102.00	1.07	123.97	

Additional order information

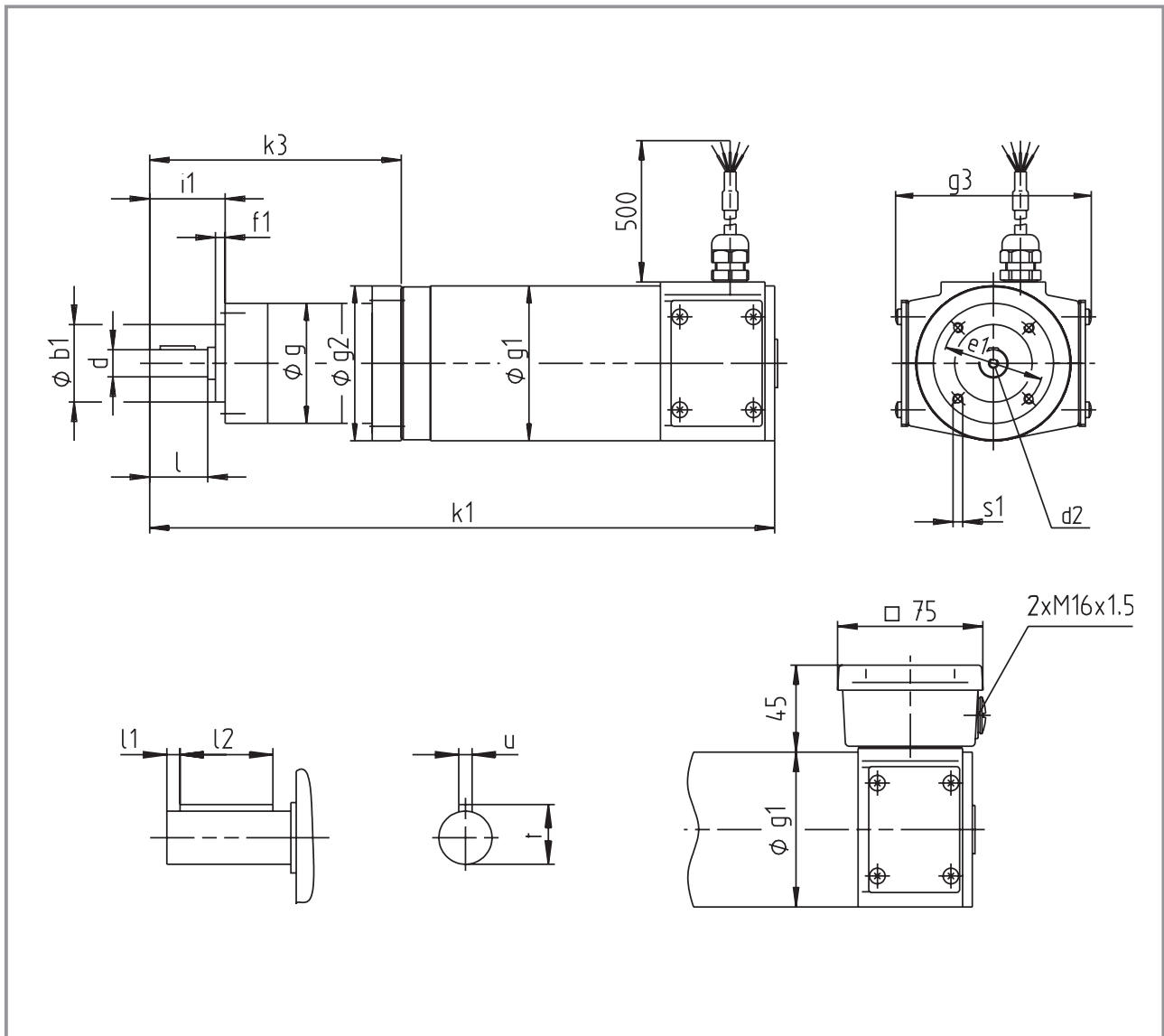
B-side design	0 = no built-on accessories	
	1 = with spring-applied brake	
	4 = with DC tachometer	
	5 = with AC tachometer	
	6 = for tachometer attachment	
	7 = for brake attachment	
Rated armature voltage	24 V	
	180 V	
Brake supply voltage	24 V DC	
	205 V DC only with armature voltage of 180 V	
Electrical connection	Cable	
	Terminal box	
Position of electrical connection		2

Type code see pages 1-3 to 1-6.

Mounting position see cover fold-out.



Dimensions Type SPL[62...81]-□PVCr-[056...063]N21



Geared motor	Ratio i	b_1 j7	d h7	d_2	e_1	f_1	g	g_1	g_2	g_3	i_1	k_1	k_3	l	l_1	l_2	s_1	t	u	Weight approx. kg
SPL62-□PVCr-056N21	3.7	40	14	M5	52	5	62	80	80	101	39	308	115	30	5.5	18	M5 x10	16	5	4.6
	14 ... 46											324	131							5.0
	51 ... 124											340	147							5.4
SPL81-□PVCr-063N21	3.7	50	19	M6	65	5	81	98	90	121	49	381	144	40	6	28	M6 x12	21.5	6	10.0
	14 ... 46											402	165							10.8
	51 ... 124											424	187							11.5

Dimensions in mm



Drive selection

DC planetary geared motors

Selection table Type SPL81-□PVCR-071N21

Motor type	P _N W	n ₂ rpm	M ₂ Nm	c	i	Selection (tick as required)
13.120.75.1.2.□	24 V	540	811	5.03	3.97	3.7
		444	9.00	2.08	6.75	
		218	17.50	3.43	13.73	
		120	31.88	1.88	25.01	
		86	44.58	1.35	34.97	
		66	58.08	1.03	45.56	
		59	60.55	1.98	50.89	
		42	84.68	1.42	71.06	
		30	118.00	1.01	99.5	
		24	120.00	0.81	123.97	
13.120.75.1.2.□	160 V	600	811	5.65	3.54	3.7
		444	9.00	1.94	6.75	
		218	19.66	3.05	13.73	
		120	35.82	1.67	25.01	
		86	50.09	1.20	34.97	
		66	60.00	0.92	45.56	
		59	68.03	1.76	50.89	
		42	95.04	1.26	71.06	
		30	120.00	0.90	99.5	
		24	120.00	0.72	123.97	

Additional order information

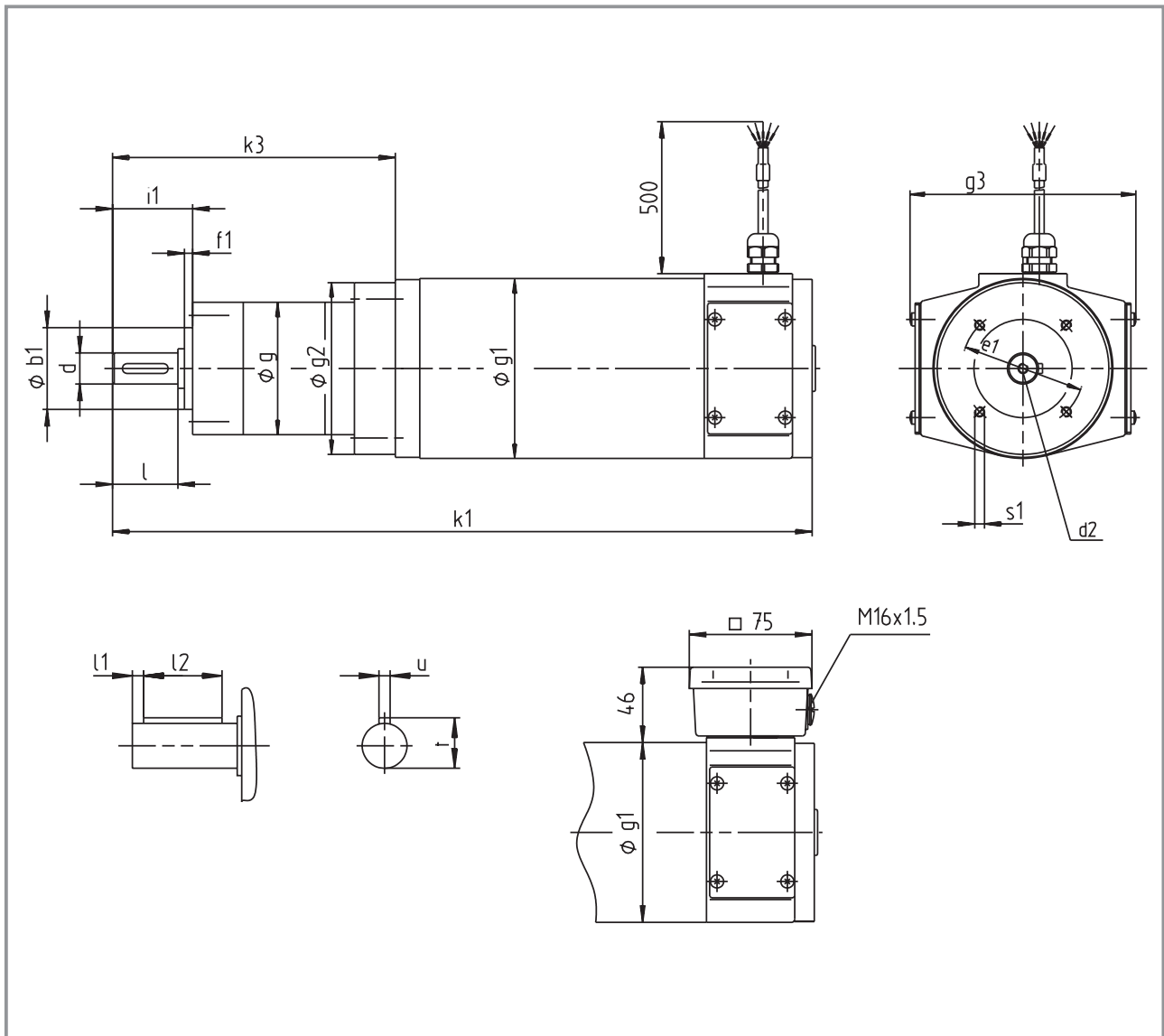
B-side design	0 = no built-on accessories	
	1 = with spring-applied brake	
	4 = with DC tachometer	
	5 = with AC tachometer	
	6 = for tachometer attachment	
	7 = for brake attachment	
Rated armature voltage	24 V	
	160 V	
Brake supply voltage	24 V DC	
	205 V DC only with armature voltage of 160 V	
Electrical connection	Cable	
	Terminal box	
Position of electrical connection		2

Type code see pages 1-3 to 1-6.

Mounting position see cover fold-out.



Dimensions Type SPL81-□PVCR-071N21



Geared motor	Ratio i	b ₁ h8	d h7	d ₂	e ₁	f ₁	g	g ₁	g ₂	g ₃	i ₁	k ₁	k ₃	l	l ₁	l ₂	s ₁	t	u	Weight approx. kg
SPL81-□PVCR-071N21	3.7	50	19	M6	65	5	81	110	105	138	49	409	151	40	6	28	M6 x12	21.5	6	12.6
	14 ... 46											431	173							13.3
	51 ... 124											452	194							14.0

Dimensions in mm



Drive selection

DC planetary geared motors

Selection table Type SPL12-□PVCr-071N21

Motor type	P _N W	n ₂ rpm	M ₂ Nm	c	i	Selection (tick as required)
13.120.75.1.2.□	24 V	540	811	5.03	9.94	3.7
		444	9.08	5.45	6.75	
		218	17.51	8.57	13.73	
		120	31.89	4.70	25.01	
		66	58.09	2.58	45.56	
		59	64.88	4.62	50.89	
		32	110.31	2.72	92.7	
		18	200.92	1.49	168.84	
13.120.75.1.2.□	160 V	600	811	5.65	8.84	3.7
		444	10.31	4.85	6.75	
		218	19.67	7.63	13.73	
		120	35.83	4.09	25.01	
		66	65.26	2.30	45.56	
		59	72.90	4.02	50.89	
		32	123.94	2.42	92.7	
		18	225.74	1.33	168.84	

Additional order information

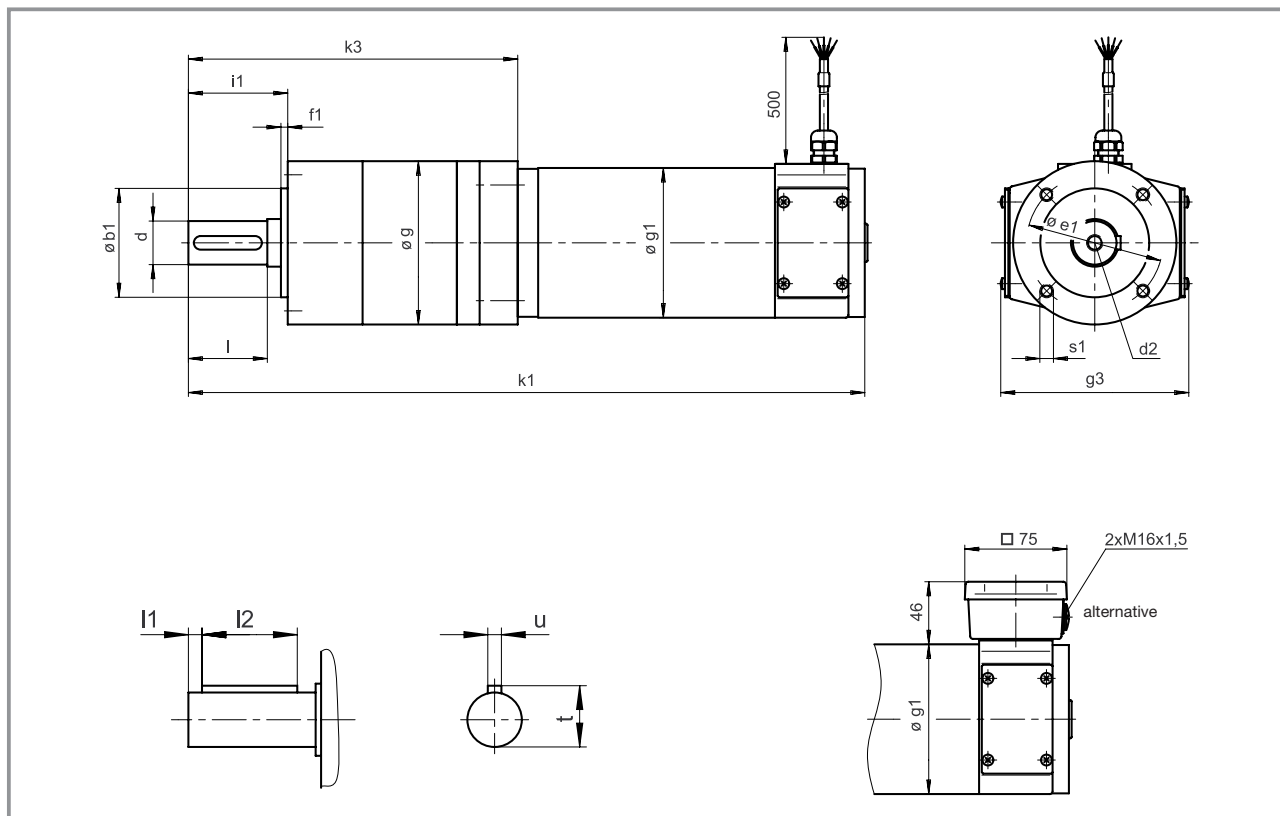
B-side design	0 = no built-on accessories	
	1 = with spring-applied brake	
	4 = with DC tachometer	
	5 = with AC tachometer	
	6 = for tachometer attachment	
	7 = for brake attachment	
Rated armature voltage	24 V	
	160 V	
Brake supply voltage	24 V DC	
	205 V DC only with armature voltage of 160 V	
Electrical connection	Cable	
	Terminal box	
Position of electrical connection		2

Type code see pages 1-3 to 1-6.

Mounting position see cover fold-out.



Dimensions Type SPL12-□PVCR-071N21



Geared motor	Ratio i	b ₁ j7	d k6	d ₂	e ₁	f ₁	g	g ₁	g ₃	i ₁	k ₁	k ₃	l	l ₁	l ₂	s ₁	t	u	Weight approx. kg
SPL12-□PVCR-071N21	3.7; 6.7	80	32	M12	100	5	120	110	138	73	463	208	58	4	50	M10 x22	35	10	15.8
	14 ... 46										497	242							18.2
	51 ... 169										531	276							20.6

Dimensions in mm