



Drive selection

Technical data AC asynchronous motors (inverter-optimised)

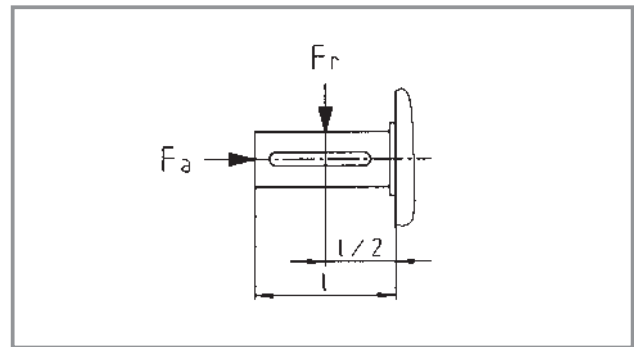
Description

Inverter-optimised motors are characterised by their smooth surface and variable applications. The reinforced insulation system is particularly dimensioned for inverter operation.



General data

Motor type	SDSGA□□□□□□□□
Enclosure	IP54 or IP 55
Thermal class (VDE530)	F
Motor protection	Thermal contact or KTY Note options in the tables
Cooling	Naturally ventilated
Temperature range	-20 to +40 °C
Site altitude	Up to 1000 m a.m.s.l.
Electrical connection	Connector or terminal box Note options in the tables
Bearing	Deep-groove ball bearing
Operating mode (VDE530)	S1



Rated data

Motor type	SDSGA□□□047-22	SDSGA□□□056-22	SDSGA□□□063-22	SDSGA□□□063-32
Rated power (W)	75	240	400	600
Rated torque (Nm)	0.27	0.81	1.35	1.9
Rated current (A)	0.90/0.52	1.49/0.86	2.02/1.23	3.00/1.74
Rated voltage (V)	230/400	230/400	230/400	230/400
Rated frequency (Hz)	100	100	100	100
Rated speed (rpm)	2700	2790	2800	2825
Max. speed (rpm)	6000	6000	6000	6000
Power factor	0.5	0.714	0.7	0.7
Moment of inertia (kgcm ²)	0.41	1.404	2.796	4.21
Max. radial force (N) F_r	350	560	650	650
Max. axial force (N) F_a	750	430	510	510



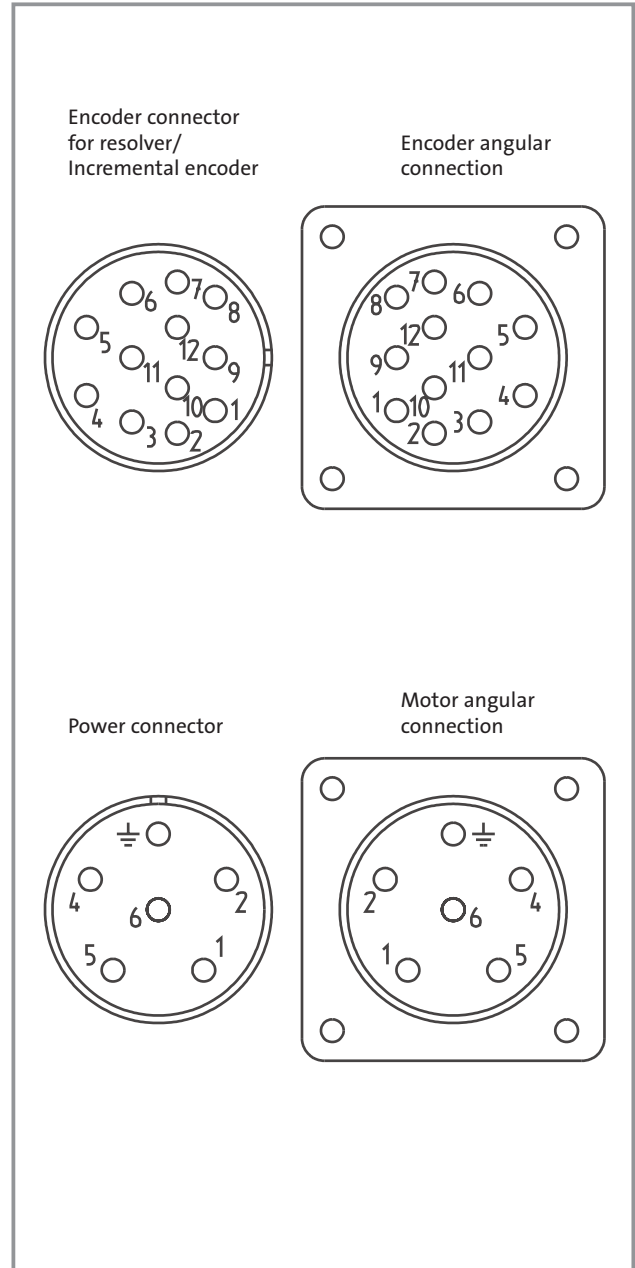
Connection plan for inverter motor SDSGA□□047-22

Parameter setting for servo inverter 9321			
Code	Setting		Meaning
	Y	Δ	
C0006	2	22	Servo asynchronous (Y)
C0025	RsX		Resolver
C0070	5		
C0071	150		ms
C0075	0.35		
C0076	1.80		ms
C0081	0.075		Pn (kW)
C0084	72		Rphase (ohm)
C0085	267		Xleakage (mH)
C0086	0		COMMON
C0087	2700		nn (rpm)
C0088	0.52	0.90	In (A)
C0089	100		fn (Hz)
C0090	390	230	Un (V)
C0091	0.5		cos phi

Connector for resolver and thermal contact		
Pin no.	Connection name	Connection to:
1	+Ref	Resolver
2	-Ref	Resolver
3		
4	+cos	Resolver
5	-cos	Resolver
6	+sin	Resolver
7	-sin	Resolver
8		
9		
10		
11	+	KTY/thermal switch
12	-	KTY/thermal switch

Connector for motor and brake		
Pin no.	Connection name	Connection to:
1	Y1	Brake
2	Y2	Brake
PE	PE	Conductor
4	U	Motor phase
5	V	Motor phase
6	W	Motor phase

Connector for incremental encoder and thermal contact		
Pin no.	Connection name	Connection to:
1	B	Track B
2	-A	Track A inv.
3	A	Track A
4	+UB	+5 V - +24 V
5	+0V	Grnd
6	-N	Track 0 inv.
7	N	Track 0
8		
9	-B	Track B inv.
10		
11	+	KTY/thermal switch
12	-	KTY/thermal switch





Drive selection

Technical data AC asynchronous motors (inverter-optimised)

Connection plan for inverter motor SDSGA□□056-22

Parameter setting for servo inverter 9321

Code	Setting		Meaning
	Y	Δ	
C0006	2	22	Servo asynchronous
C0025	RsX		Resolver
C0070	5		
C0071	150		ms
C0075	0.35		
C0076	1.80		ms
C0081	0.24		Pn (kW)
C0084	20.9		Rphase (ohm)
C0085	103		Xleakage (mH)
C0086	0		COMMON
C0087	2790		nn (rpm)
C0088	0.86	1.50	In (A)
C0089	100		fn (Hz)
C0090	390	230	Un (V)
C0091	0.70		cos phi

Connector for resolver and thermal contact

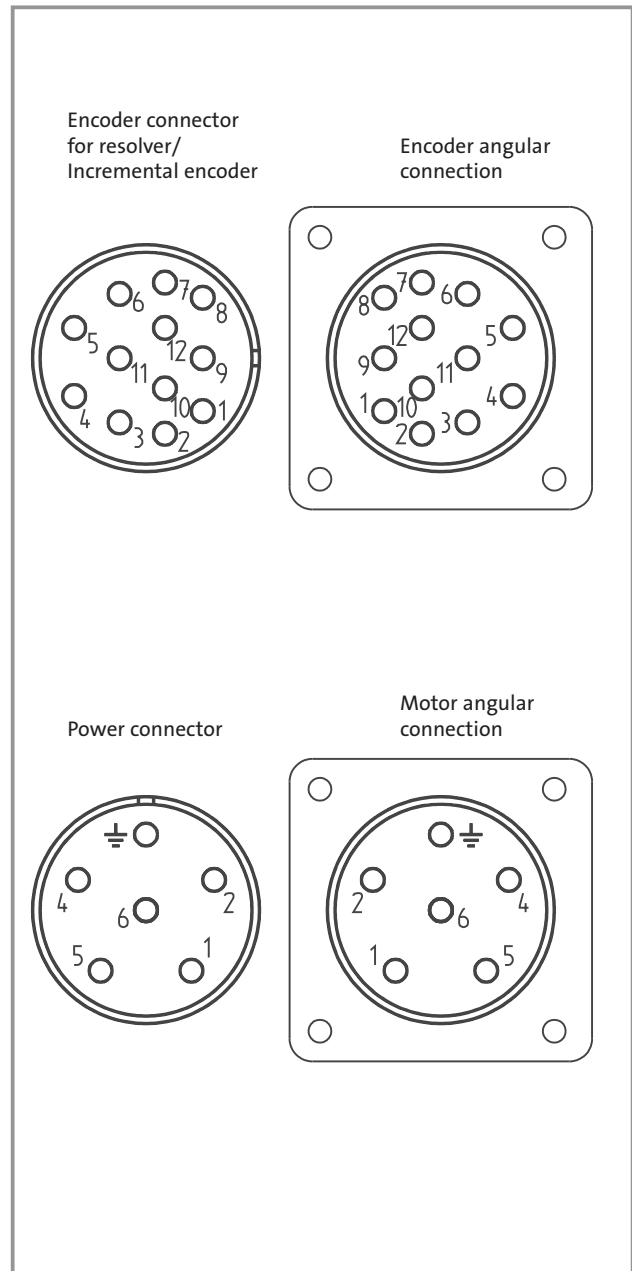
Pin no.	Connection name	Connection to:
1	+Ref	Resolver
2	-Ref	Resolver
3		
4	+cos	Resolver
5	-cos	Resolver
6	+sin	Resolver
7	-sin	Resolver
8		
9		
10		
11	+	KTY/thermal switch
12	-	KTY/thermal switch

Connector for motor and brake

Pin no.	Connection name	Connection to:
1	Y1	Brake
2	Y2	Brake
PE	PE	Conductor
4	U	Motor phase
5	V	Motor phase
6	W	Motor phase

Connector for incremental encoder and thermal contact

Pin no.	Connection name	Connection to:
1	B	Track B
2	-A	Track A inv.
3	A	Track A
4	+UB	+5 V - +24 V
5	+0V	Grnd
6	-N	Track 0 inv.
7	N	Track 0
8		
9	-B	Track B inv.
10		
11	+	KTY/thermal switch
12	-	KTY/thermal switch





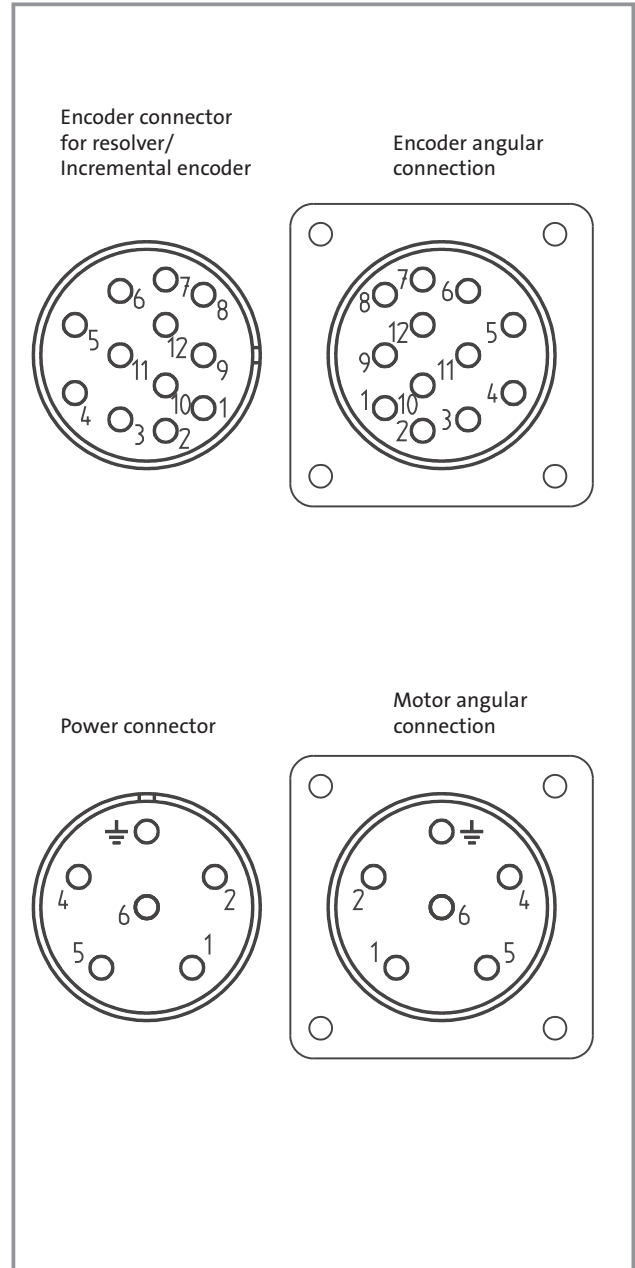
Connection plan for inverter motor SDSGA□□063-22

Parameter setting for servo inverter 9321			
Code	Setting		Meaning
	Y	Δ	
C0006	2	22	Servo asynchronous
C0025	RsX		Resolver
C0070	5		
C0071	150		ms
C0075	0.35		
C0076	1.80		ms
C0081	0.40		Pn (kW)
C0084	10		Rphase (ohm)
C0085	50		Xleakage (mH)
C0086	0		COMMON
C0087	2800		nn (rpm)
C0088	1.23	2.12	In (A)
C0089	100		fn (Hz)
C0090	390	230	Un (V)
C0091	0.70		cos phi

Connector for resolver and thermal contact		
Pin no.	Connection name	Connection to:
1	+Ref	Resolver
2	-Ref	Resolver
3		
4	+cos	Resolver
5	-cos	Resolver
6	+sin	Resolver
7	-sin	Resolver
8		
9		
10		
11	+	KTY/thermal switch
12	-	KTY/thermal switch

Connector for motor and brake		
Pin no.	Connection name	Connection to:
1	Y1	Brake
2	Y2	Brake
PE	PE	Conductor
4	U	Motor phase
5	V	Motor phase
6	W	Motor phase

Connector for incremental encoder and thermal contact		
Pin no.	Connection name	Connection to:
1	B	Track B
2	-A	Track A inv.
3	A	Track A
4	+UB	+5 V - +24 V
5	+0V	Grnd
6	-N	Track 0 inv.
7	N	Track 0
8		
9	-B	Track B inv.
10		
11	+	KTY/thermal switch
12	-	KTY/thermal switch





Drive selection

Technical data AC asynchronous motors (inverter-optimised)

Connection plan for inverter motor SDSGA□063-32

Parameter setting for servo inverter 9321

Code	Setting		Meaning
	Y	Δ	
C0006	2	22	Servo asynchronous
C0025	RsX		Resolver
C0070	5		
C0071	150		ms
C0075	0.35		
C0076	1.80		ms
C0081	0.60		Pn (kW)
C0084	8.5		Rphase (ohm)
C0085	26		Xleakage (mH)
C0086	0		COMMON
C0087	2825		nn (rpm)
C0088	1.74	3	In (A)
C0089	100		fn (Hz)
C0090	390	230	Un (V)
C0091	0.70		cos phi

Connector for resolver and thermal contact

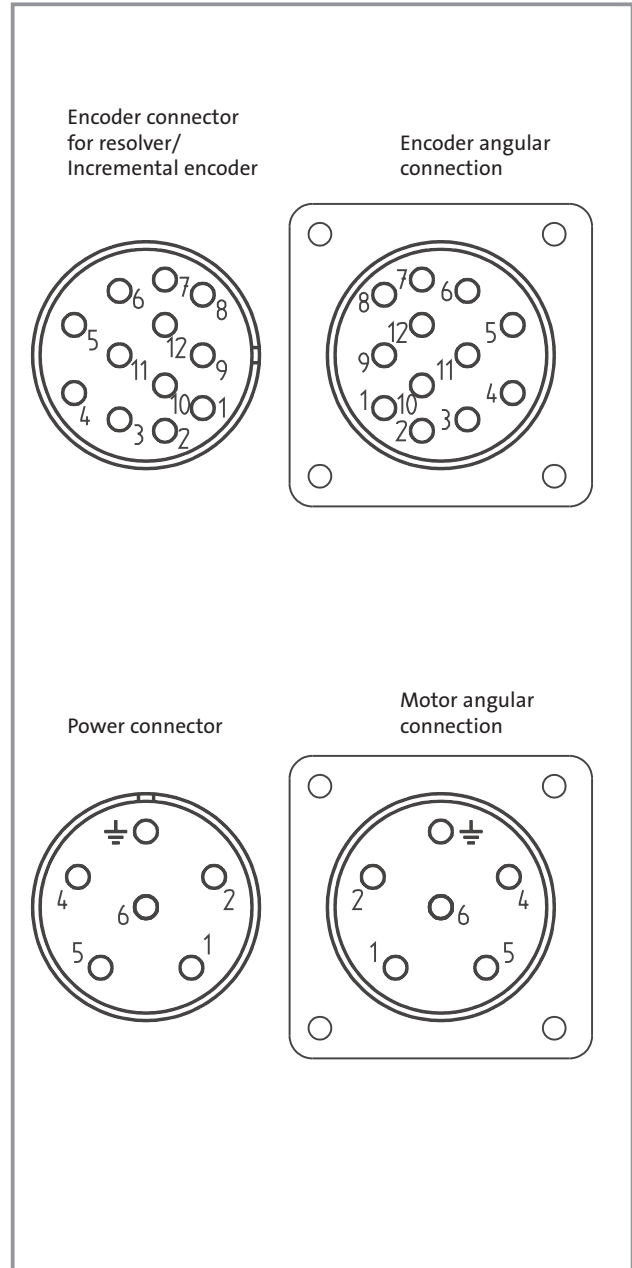
Pin no.	Connection name	Connection to:
1	+Ref	Resolver
2	-Ref	Resolver
3		
4	+cos	Resolver
5	-cos	Resolver
6	+sin	Resolver
7	-sin	Resolver
8		
9		
10		
11	+	KTY/thermal switch
12	-	KTY/thermal switch

Connector for motor and brake

Pin no.	Connection name	Connection to:
1	Y1	Brake
2	Y2	Brake
PE	PE	Conductor
4	U	Motor phase
5	V	Motor phase
6	W	Motor phase

Connector for incremental encoder and thermal contact

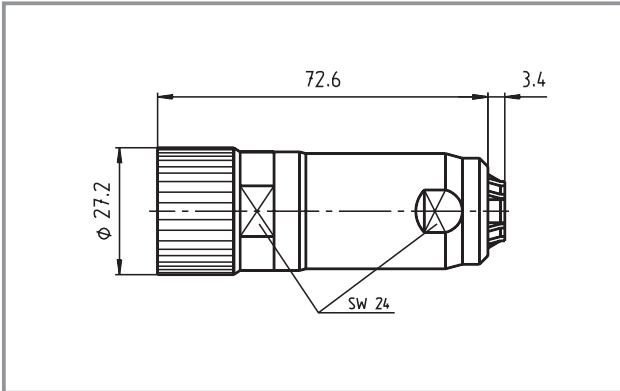
Pin no.	Connection name	Connection to:
1	B	Track B
2	-A	Track A inv.
3	A	Track A
4	+UB	+5 V - +24 V
5	+0V	Grnd
6	-N	Track 0 inv.
7	N	Track 0
8		
9	-B	Track B inv.
10		
11	+	KTY/thermal switch
12	-	KTY/thermal switch



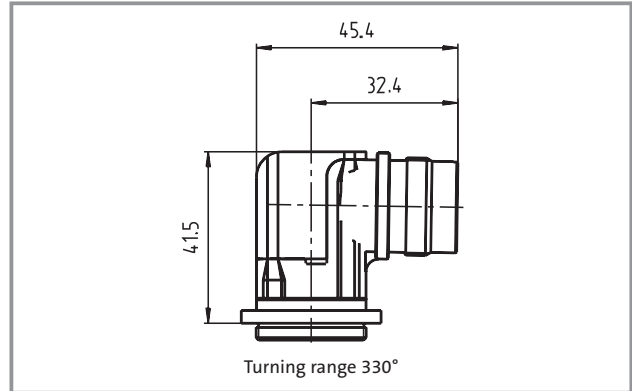


Dimensions of male and female connectors

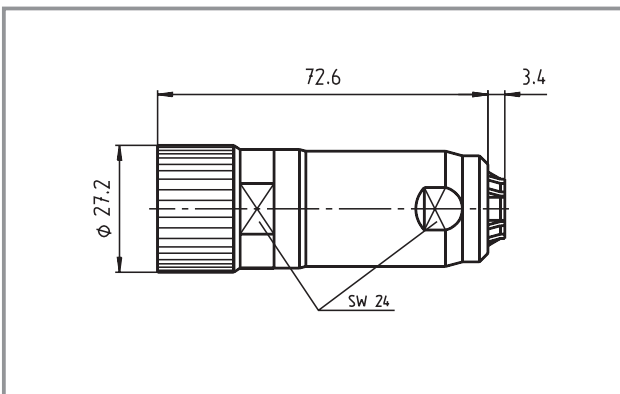
Power connector SDSGA□□047
SDSGA□□056
SDSGA□□063



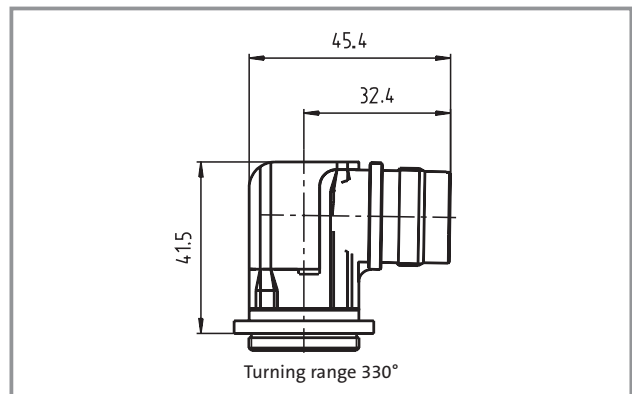
Motor angular connection SDSGA□□047
SDSGA□□063
SDSGA□□056



Encoder connector (resolver/incremental encoder)



Encoder angular connection

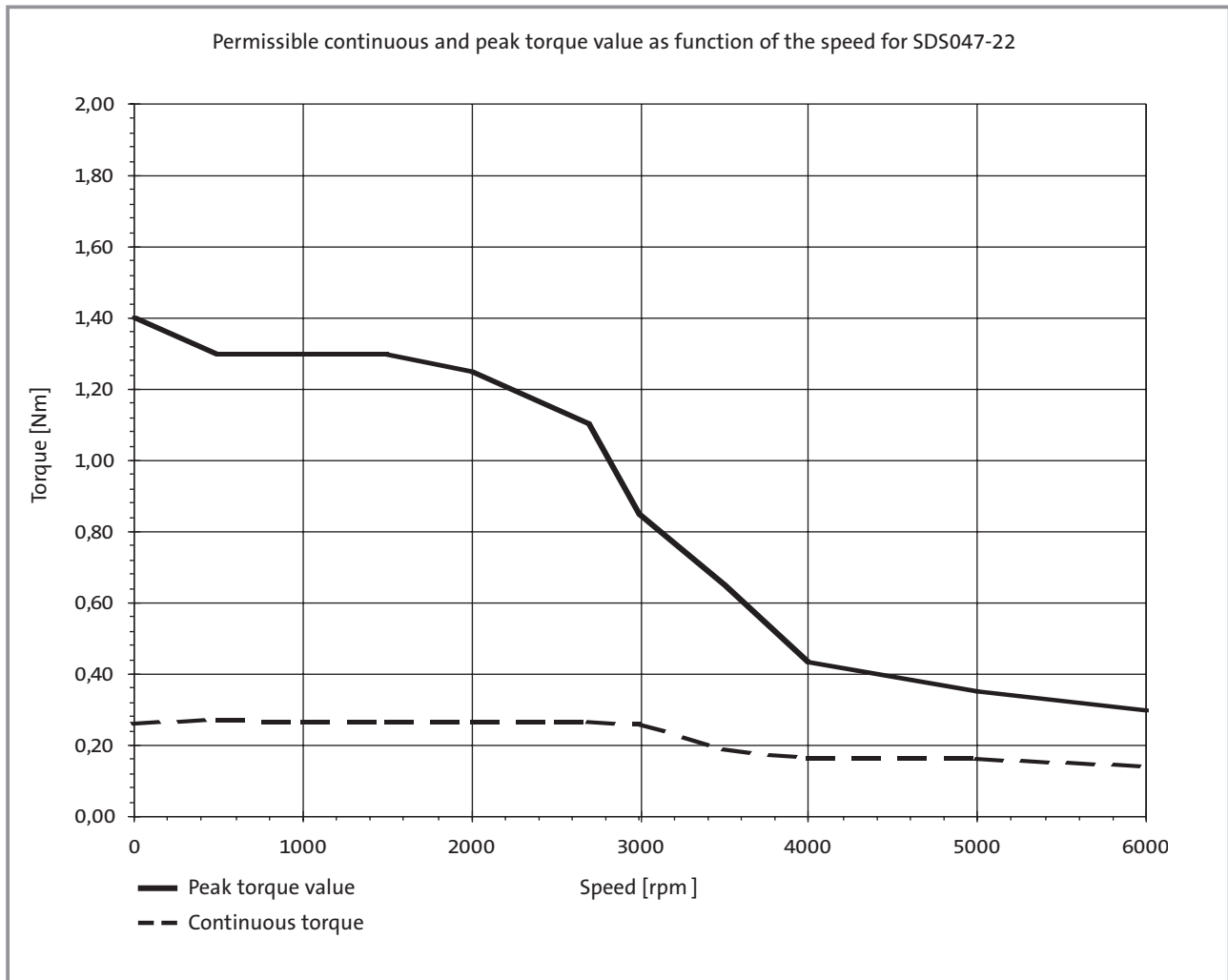




Drive selection

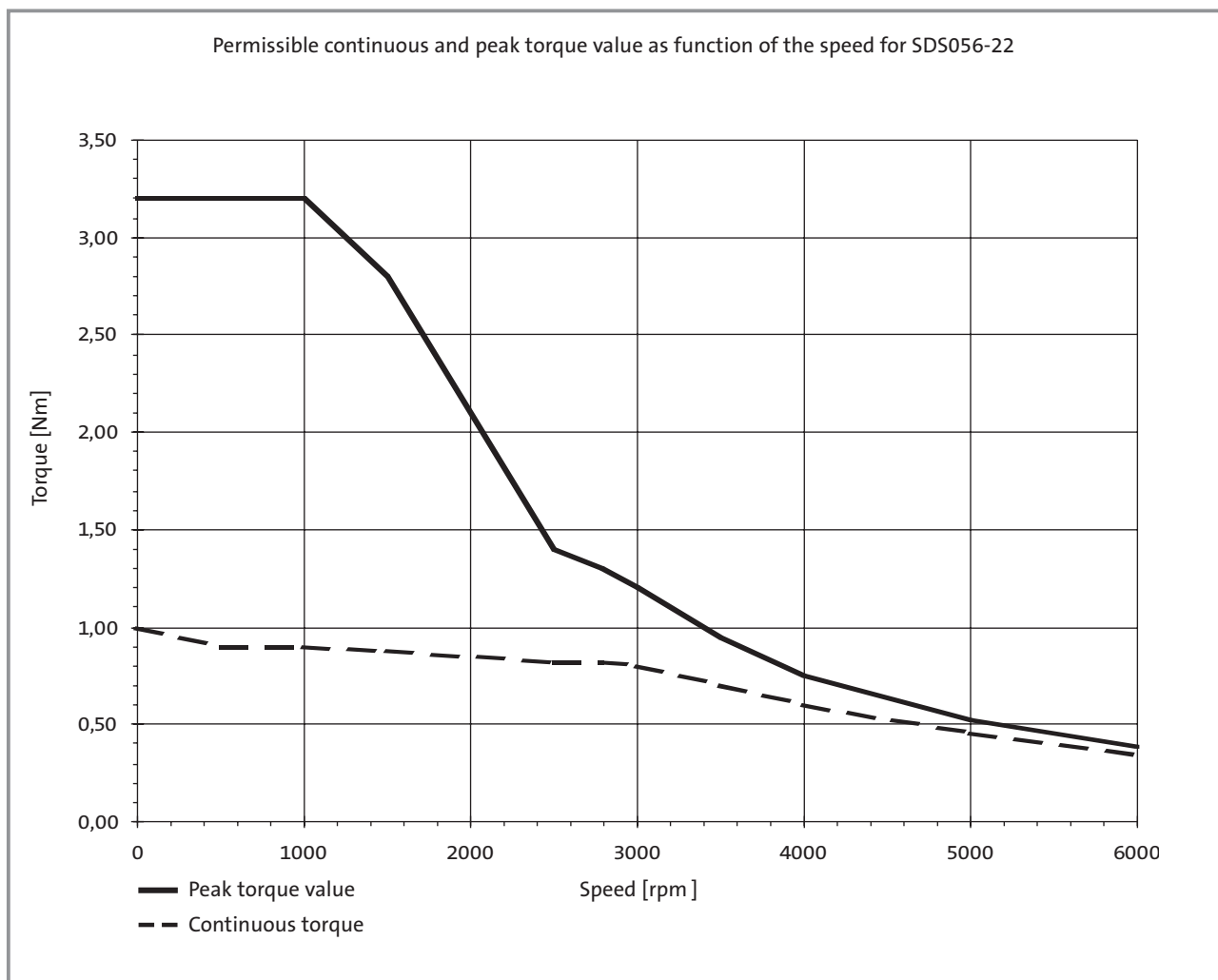
Technical data AC asynchronous motors (inverter-optimised)

Characteristics SDSGA□□047





Characteristics SDSGA□□056-22

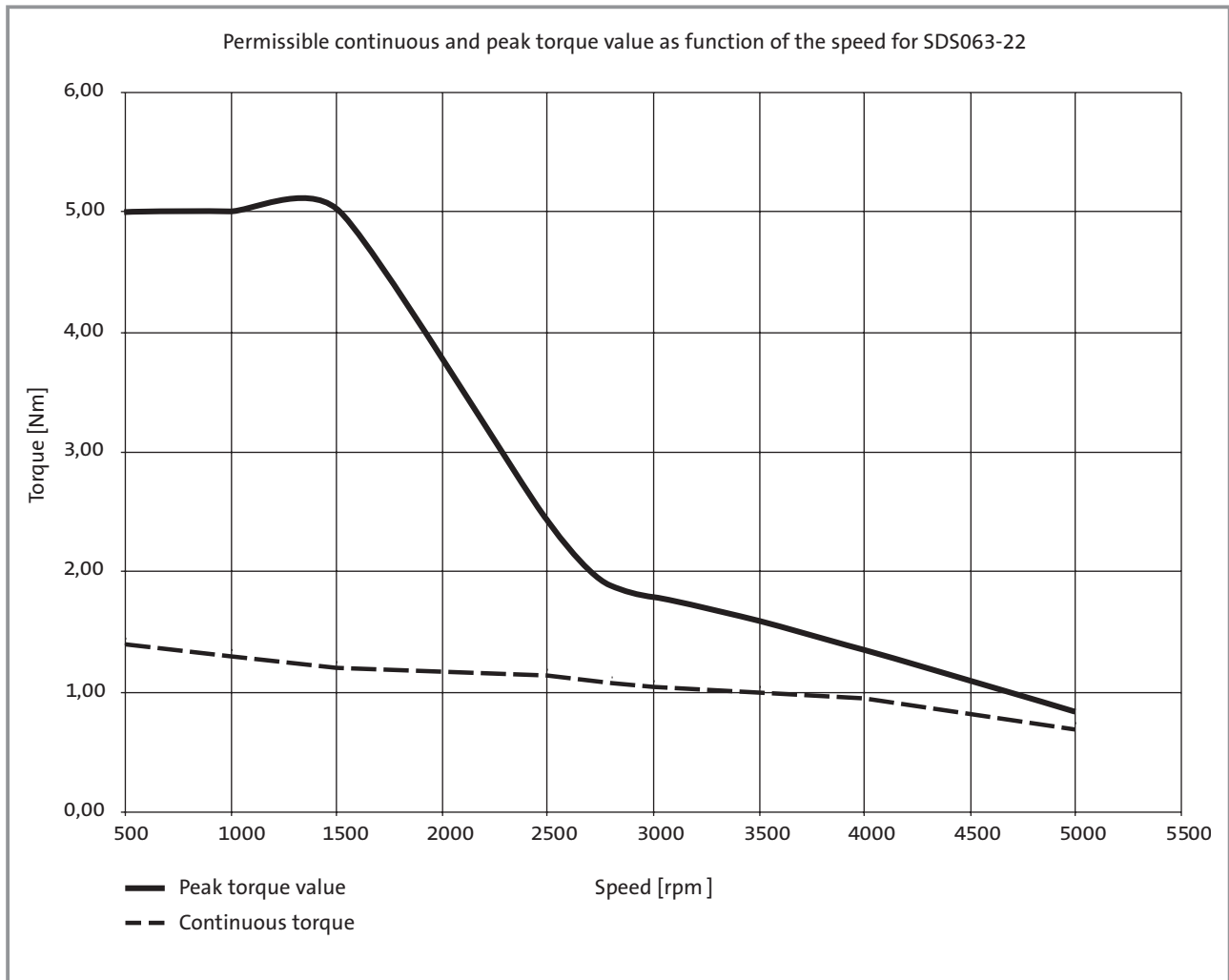




Drive selection

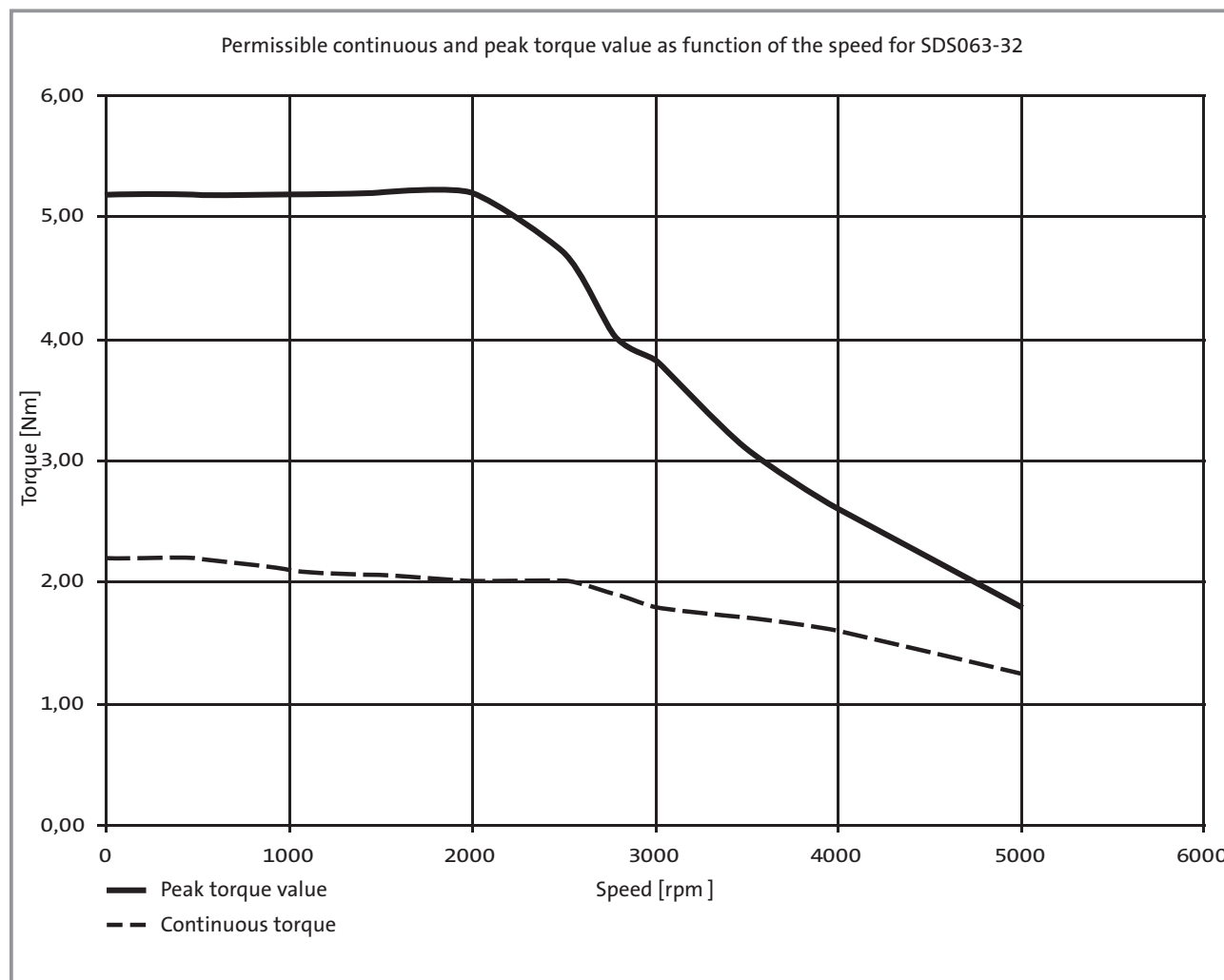
Technical data AC asynchronous motors (inverter-optimised)

Characteristics SDSGA□□063-22





Characteristics SDSGA□□063-32





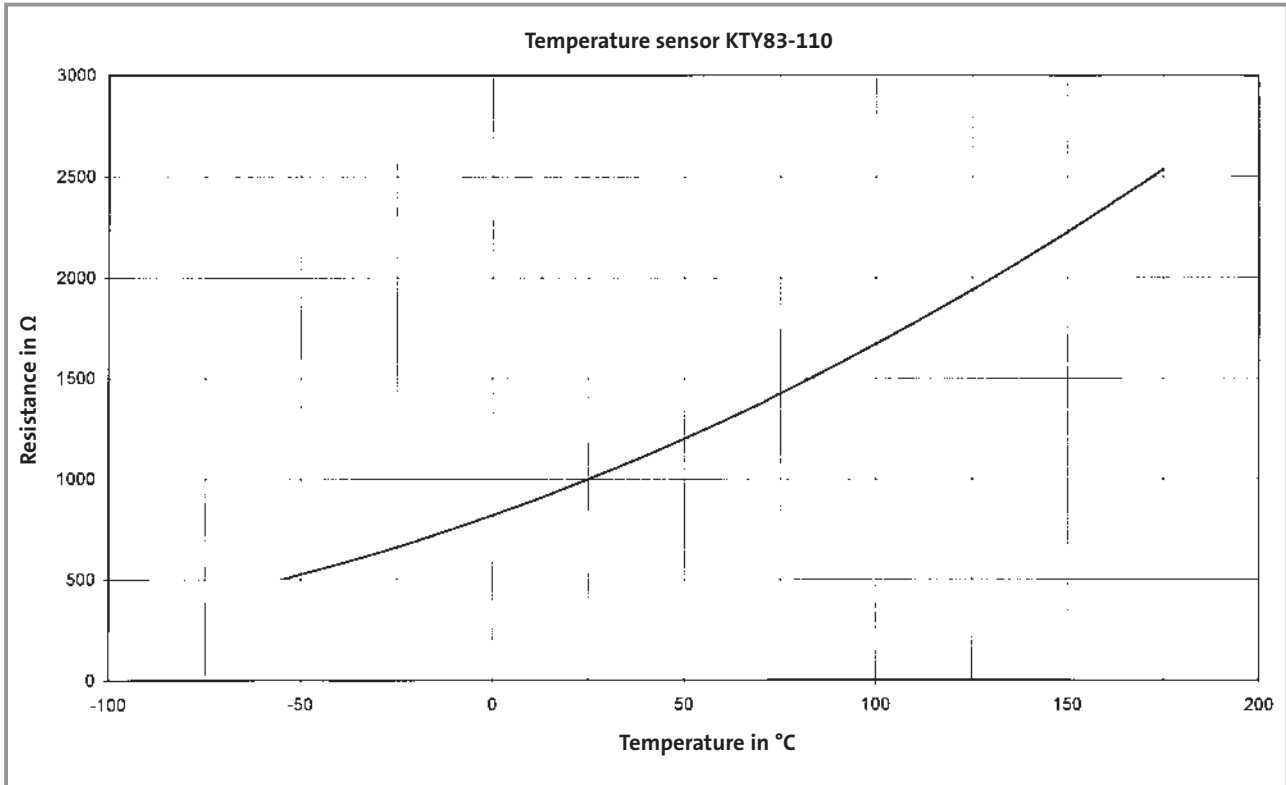
Drive selection

Technical data AC asynchronous motors (inverter-optimised)

Temperature encoder KTY 83-110 (integrated temperature detector)

The motor temperature is monitored continuously using the KTY temperature detector, although this does not offer full protection.

The feedback to the servo inverter 9300 is carried out using the feedback system cable. When the encoder is fed with a measuring current of 1 mA, the relationship between temperature and resistance will be as follows:



Thermostat – NC contact (TKÖ)

As an alternative to the continuous sensor KTY, a temperature contact can also be used to monitor the windings of motor series SDSGA.

Technical data

	AC connection	DC connection		
Operating temperature	150 °C ± 5 °C			
Reset temperature	90...135 °C			
Supply voltage	250 V ≈	60 V	48 V	24 V
Rated current [A]	2.5 A	1.0 A	1.25 A	1.6 A



Drive selection

AC asynchronous motor (inverter-optimised)

Selection table Type SDSGA□□0□□□-□□

Motor type	P _N W	100 Hz		Design A-side	Selection (tick as required)
		n ₂ rpm	M ₂ Nm		
SDSGA□□047-22	75	2700	0.27	IEC56 B14 C80	
SDSGA□□056-22	240	2790	0.81	IEC63 B14 C90	
SDSGA□□063-22	400	2800	1.35	IEC71 B14 C105	
SDSGA□□063-32	600	2825	1.90	IEC71 B14 C105	

Additional order information

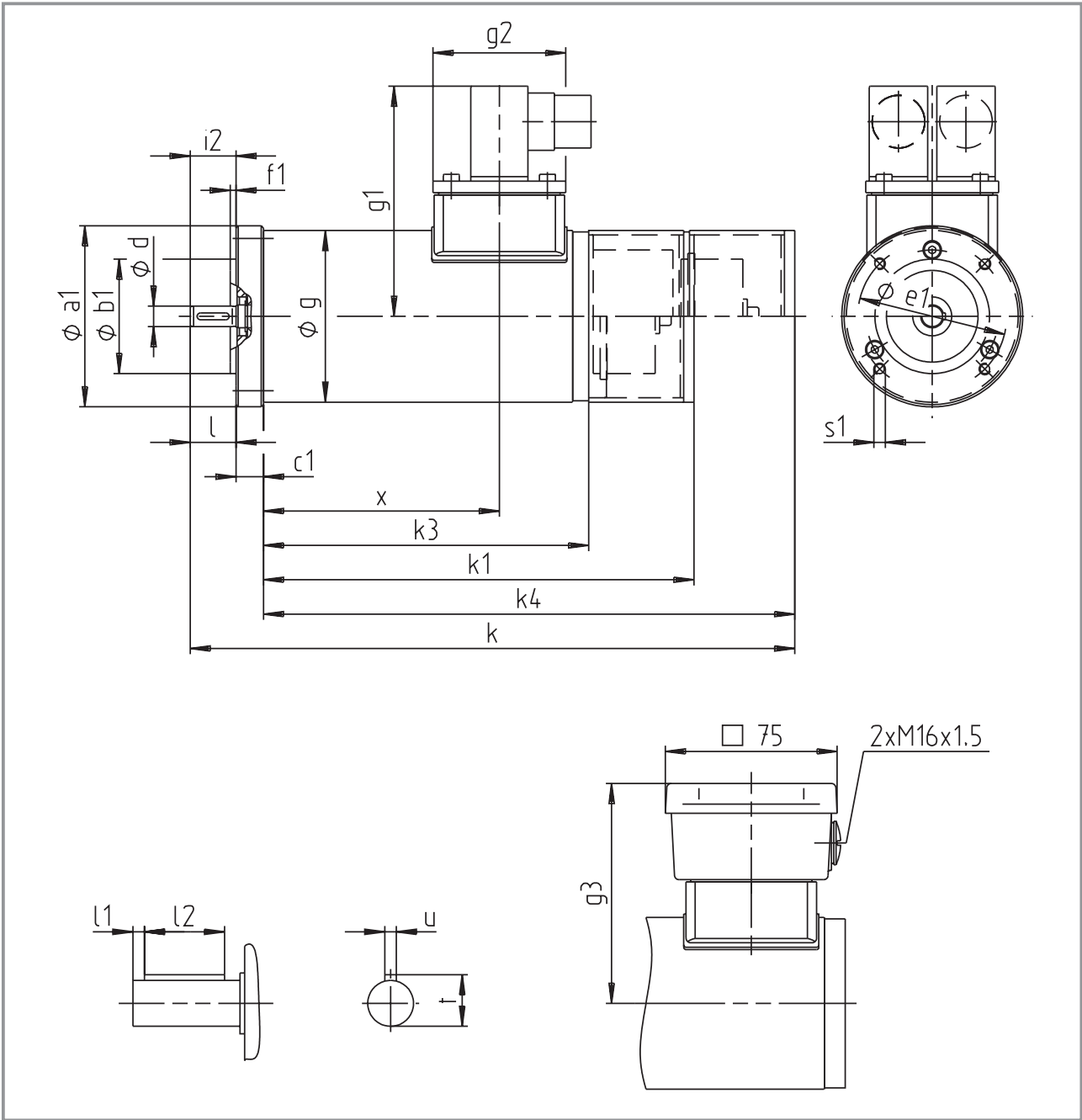
Rated voltage	230 V	connector version and motor frame size 047 only	
	390 V	connector version and motor frame size 056-063 only	
	230/400 V	terminal box version only	
Enclosure	IP54		
	IP55		
Motor protection	KTY	connector version only	
	Thermal contact 'NC contact'	terminal box version only	
Electrical connection	Terminal box		
	Connector		
B-side design	XX=no built-on accessories	terminal box version only	
	RS=with resolver	connector version only	
	BR=with spring-applied brake	terminal box version only	
	RS=with incremental encoder	connector version only	
	BS=with spring-applied brake and resolver	connector version only	
	BI=with spring-applied brake and incremental encoder	connector version only	
Brake supply voltage	BV=for brake attachment	terminal box version only	
	24 V DC		
Position of electrical connection	230 V AC with bridge rectifier	terminal box version only	
			2

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

Mounting position see cover fold-out.



Dimensions Type SDSGA□□□□□-22



Motor type	Frame size	a_1	b_1 j_7	c_1	d k_6	e_1	f_1	g	g_1	g_2	g_3	i_2	k	k_1	k_3	k_4	l	l_1	l_2	s_1	t	u	x	Weight approx. kg
SDSGA□□047-22	IEC56C80	79	50	12	9	65	2.5	75	101	58	96	20	264	188	144	232	20	3	14	M5	10.2	3	103	3.0-4.0
SDSGA□□056-22	IEC63C90	89	60	12	11	75	2.5	85	106	58	101	23	274	195	151	239	23	3	18	M5	12.5	4	108	4.0-5.5
SDSGA□□063-22	IEC71C105	104	70	12	14	85	2.5	95	111	58	106	30	293	202	156	251	30	2.5	25	M6	16	5	118	5.3-6.7
SDSGA□□063-32	IEC71C105	104	70	12	14	85	2.5	95	111	58	106	30	333	242	196	291	30	2.5	25	M6	16	5	158	6.8-8.2

Dimensions in mm



Drive selection

AC asynchronous motor (inverter-optimised)

Selection table Type SDSGA□□0□□-□□

Motor type	P _N W	100 Hz		Design A-side for gearbox attachment	Selection (tick as required)
		n ₂ rpm	M ₂ Nm		
SDSGA□□047-22	75	2700	0.27	B14 for SSN31 B14 for SPL42	
SDSGA□□056-22	240	2790	0.81	B14 for SSN40	
SDSGA□□063-22	400	2800	1.35	B14 for SSN40	
SDSGA□□063-32	600	2825	1.90	B14 for SSN40	

Additional order information

Rated voltage	230 V	connector version and motor frame size 047 only	
	390 V	connector version and motor frame size 056-063 only	
	230/400 V	terminal box version only	
Enclosure	IP54		
	IP55		
Motor protection	KTY	connector version only	
	Thermal contact 'NC contact'	terminal box version only	
Electrical connection	Terminal box		
	Connector		
B-side design	XX=no built-on accessories	terminal box version only	
	RS=with resolver	connector version only	
	BR=with spring-applied brake	terminal box version only	
	RS=with incremental encoder	connector version only	
	BS=with spring-applied brake and resolver	connector version only	
	BI=with spring-applied brake and incremental encoder	connector version only	
Brake supply voltage	24 V DC		
	230 V AC with bridge rectifier	terminal box version only	
Position of electrical connection			2

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

Mounting position see cover fold-out.