



AMKASYN

Servo motors DV

Technical Data

Version: 2018/03

Part-No.: 27856

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AMK

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1 AMKASYN Servo Motors DV

Servo motors DV are sturdy three-phase induction type asynchronous AC motors. They cannot be demagnetized and feature high overload capacity and smooth running properties.

AMKASYN servo motors DV deliver practically constant torque from zero speed up to rated speed. The field weakening range allows constant output power up to 3 times rated speed. The maximum speed extends up to 10,000 rpm, the torque range from 0.3 to 26 Nm. AMKASYN servo motors DV are low-leakage design and permit fast current rise times for high dynamic response.

These motors can be used for torque control, speed control, positioning and synchronous control in combination with the digital AMK inverters type AMKASYN.

Features

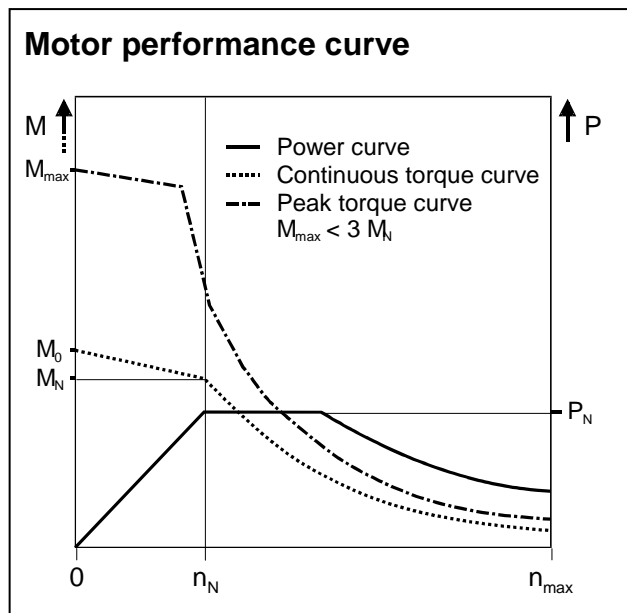
- Low maintenance
- Lifetime lubricated bearings
- TENV (totally enclosed non-ventilated) or
- TEFC (total enclosed fan cooled)
- Field weakening range up to 3 times rated speed
- High speeds
- High overload capacity
- Smooth running properties

Standard version

Mounting:	B5-Metric flange
Degree of protection	IP 54
Connections:	Terminal box
Position feedback:	Resolver
Keyway:	Standard

Options

- Holding brake
- Position feedback systems A, I, T
- Smooth shaft
- Plug type connector for motor leads



2 Technical data DV

Rated voltage 190V, TENV (Totally Enclosed Non-ventilated)

Motor type	M_0 [Nm]	M_N [Nm]	P_N [kW]	I_N [A]	I_M [A]	I_{M1} [A]	T_R [s]	n_N [1/min]	n_{max} [1/min]	J *10 ⁻³ [kgm ²]	m [kg]	L [mm]	LBr [mm]
DV 4-0,5-4-..0- 4000	0,6	0,3	0,13	1	0,3	0,2	0,017	4000	10000	0,05	2,5	160	196
DV 4- 1- 4-..0- 4000	0,9	0,8	0,32	2,2	1,4	0,9	0,015	4000	10000	0,09	4,5	210	246
DV 5- 1- 4-..0- 4000	1,25	1,1	0,49	2,4	0,6	0,4	0,038	4000	10000	0,2	6,5	198	250
DV 5- 2- 4-..0- 4000	2,2	2	0,83	4	1,1	0,7	0,040	4000	10000	0,37	7,5	248	300

Rated voltage 190V, TEFC (Totally Enclosed Fan cooled)

Motor type	M_0 [Nm]	M_N [Nm]	P_N [kW]	I_N [A]	I_M [A]	I_{M1} [A]	T_R [s]	n_N [1/min]	n_{max} [1/min]	J *10 ⁻³ [kgm ²]	m [kg]	$L1$ [mm]	$L1Br$ [mm]
DV 5-2-4-..F-3000	2,2	2,1	0,7	3,7	1,1	0,6	0,035	3000	10000	0,2	8,5	301	353
DV 5-4-4-..F-3000	4,1	3,9	1,2	6,1	1,6	0,9	0,040	3000	10000	0,37	9,5	351	403

Rated voltage 350V, TENV (Totally Enclosed Non-ventilated)

Motor type	M ₀ [Nm]	M _N [Nm]	P _N [kW]	I _N [A]	I _M [A]	I _{M1} [A]	T _R [s]	n _N [1/min]	n _{max} [1/min]	J *10 ⁻³ [kgm ²]	m [kg]	L [mm]	LBr [mm]
DV 4-0,5-4-..0-4000	0,6	0,3	0,13	0,55	0,3	0,2	0,017	4000	10000	0,05	2,5	160	196
DV 4- 1- 4-.. 0-4000	0,9	0,8	0,32	1,2	0,7	0,5	0,018	4000	10000	0,09	4,5	210	246
DV 5- 1- 4-.. 0-4000	1,3	1,1	0,49	1,3	0,6	0,4	0,038	4000	10000	0,2	6,5	198	250
DV 5- 2- 4-.. 0-4000	2,2	2	0,83	2,2	1,1	0,7	0,040	4000	10000	0,37	7,5	248	300
DV 7- 4- 4-.. 0- 500 -3000	4,3	4	0,63	1,7	0,8	0,4	0,080	1500	8000	1,1	10	216	261
	4	3,4	1,1	2,6	1,2	0,7	0,090	3000	8000	1,1	10	216	261
DV 7- 6- 4-.. 0-1500 -3000	6,7	6	0,95	2,4	1,1	0,7	0,085	1500	8000	1,8	13,5	261	306
	6,1	5	1,55	3,6	1,8	1,1	0,090	3000	8000	1,8	13,5	261	306
DV 10-7- 4-.. 0-1500 -3000	9,5	9	1,4	3,1	1,2	0,8	0,17	1500	5500	7,4	34	271	350
	7,6	7	2,2	5,5	2,1	1,5	0,17	3000	5500	7,4	34	271	350
DV 10-11-4-..0-1500 -3000	15	14	2,2	4,8	1,7	1,2	0,18	1500	5500	10	41	311	390
	11,8	11	3,5	7,5	3,1	2,1	0,17	3000	5500	10	41	311	390

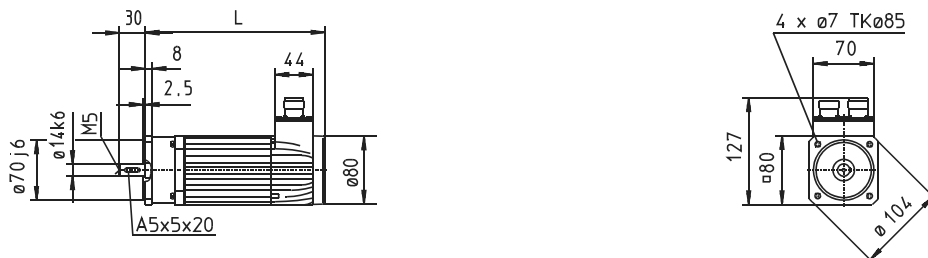
Rated voltage 350V, TEFC (Totally Enclosed Fan cooled)

Motor type	M ₀ [Nm]	M _N [Nm]	P _N [kW]	I _N [A]	I _M [A]	I _{M1} [A]	T _R [s]	n _N [1/min]	n _{max} [1/min]	J *10 ⁻³ [kgm ²]	m [kg]	L1 [mm]	L1Br [mm]
DV 5- 2-4-..F-3000	2,2	2,1	0,7	2	1,1	0,6	0,035	3000	10000	0,2	8,5	301	353
DV 5- 4-4-..F-3000	4,1	3,9	1,2	3,3	1,6	0,9	0,040	3000	10000	0,37	9,5	351	403
DV 7- 8-4-..F-1500 -3000	7,4	7	1,1	3,5	1,4	0,75	0,11	1500	8000	1,1	13	328	373
	7,4	6,8	2,1	5,2	2,3	1,1	0,075	3000	8000	1,1	13	328	373
DV 7-12-4-..F-1500 -3000	11,5	10,5	1,7	4,9	2,0	1,1	0,11	1500	8000	1,8	18,5	373	418
	11	10	3,1	7,3	3,3	1,6	0,08	3000	8000	1,8	18,5	373	418
DV 10-19-4-..F-1500 -3000	23,5	22	3,5	8,1	3,0	1,7	0,17	1500	5500	7,4	44	396	475
	20	19	6	14	4,4	2,8	0,18	3000	5500	7,4	44	396	475
DV 10-26-4-..F-1500 -3000	32	30	4,6	10,5	3,5	2,0	0,16	1500	5500	10	51	436	515
	27	26	8,3	19	6,7	4,2	0,17	3000	5500	10	51	436	515

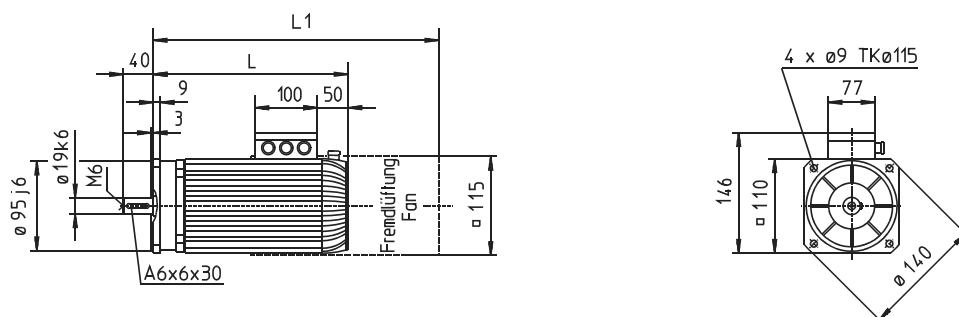
3 Dimensions DV

Dimensions in mm

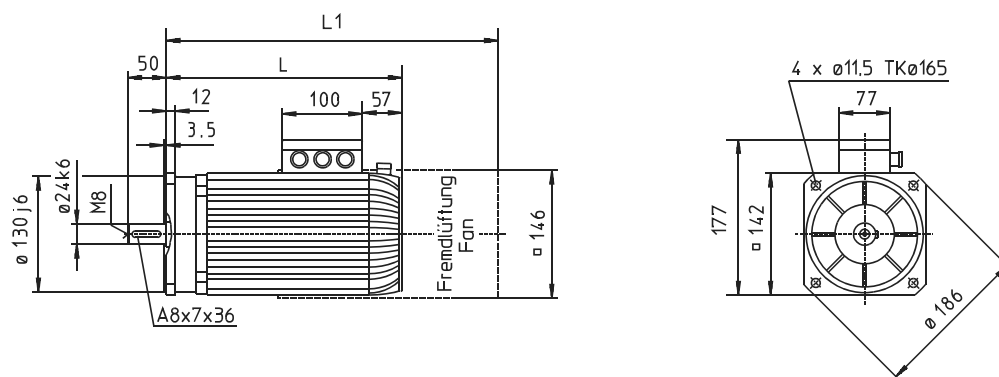
DV 4



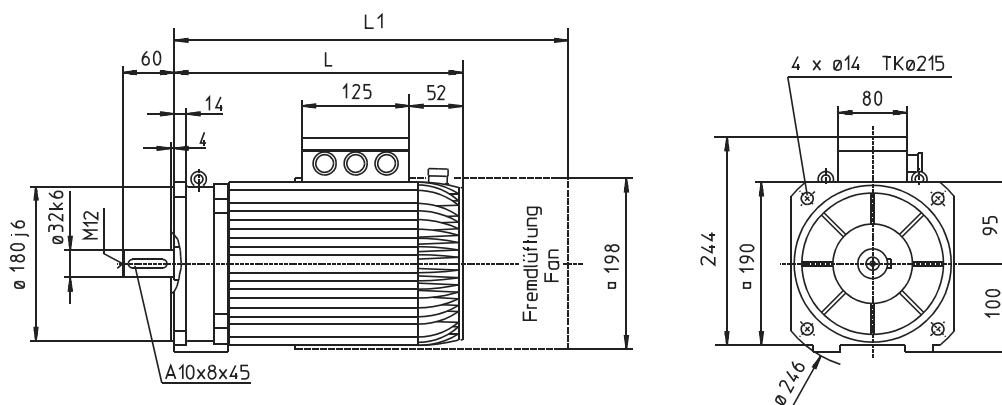
DV 5



DV 7



DV 10



4 AMKASYN motor name plate (Asynchronous motor DV)

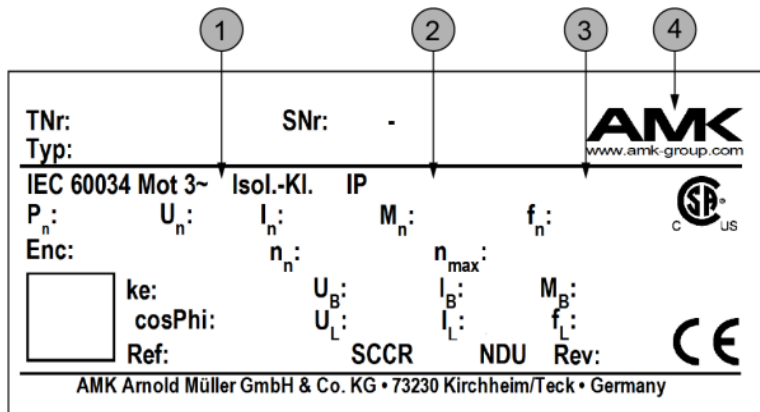
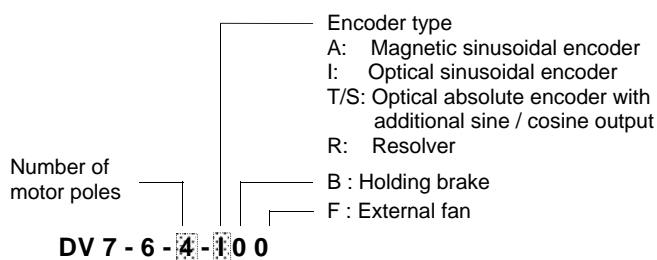


Illustration as an example: Content and scope can differ

Legend:

Abbreviation	Designation
1	Connection type
2	Duty type
3	Weight
4	Manufacturer
TNr	Part number
SNr	Serial number (year + calendar week – consecutive number)
Typ	Type designation
Isol.-Kl.	Insulation class
IP	Type of protection according to EN 60529
P _n	Rated power
U _n	Rated voltage
I _n	Rated current
M _n	Rated torque
f _n	Rated frequency
Enc	Motor encoder resolution
n _n	Rated speed
n _{max}	Max. speed of the output shaft of the system
ke	Voltage constant

Abbreviation	Designation
U _B	Data on the motor holding brake: brake voltage
I _B	Data on the motor holding brake: brake current
M _B	Data on the motor holding brake: min. static brake torque
cosPhi	Power factor
U _L	Data on the fan: fan voltage
I _L	Data on the fan: fan current
f _L	Data on the fan: fan frequency
Ref	Customer material number
SCCR	Short Circuit Current Rating
NDU	Non Dual-use
Rev	Revision



AMK	Arnold Müller GmbH & Co. KG D-73230 Kirchheim/Teck	S.-Nr.	-	-	VDE 0530-T1:1995	CE	
					MOT 3~		
Type	DV 7 - 6 - 4 - 100				LÜFTER / FAN	BREMSE / BRAKE	
P	1,65 kW	M 5 Nm	U	350 V	3,6 A	IP 54	U _L V U _{Br} V
I_M	1,8 A	I_M 1,1 A	T_R 0,09 s	Encoder	1000 P./Rev.	ISO.-KL. F	I _L A I _{Br} A
KD-Nr:		n / n _{max}	3000 / 9000	r/min	f _L Hz	M _{Br} Nm	

IM , IM1 :
Magnetizing
current

M :
Nominal
motor
torque

TR :
Rotor time
constant

I :
Nominal
motor
current

n :
Nominal
motor
speed

P./Rev :
Encoder
periods per
revolution

5 Imprint

Title **AMKASYN Motors DV**

Objective **Technical data and Dimensions of the Motor series DV**

Part-Number **27856**

History

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1999/23
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- Nameplate data
- Software version
- System configuration and application
- Description of problem and presumed cause of failure
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