AC GI

SSD DRIVES

Servo motor

Short Description

The most important thing first

We thank you for the trust that you have shown in our product.
The short description presents themselves as an overview of the mounting and connecting-up.

Please read the product - manuals before putting the product to use.

If you have any questions, please contact your nearest SSD Drives representative.
Improper application of the product in connection with dangerous voltage, can lead to injuries.
In addition, damage can also occur to motors or other products.
Therefore please observe strictly our safety precautions.

Topic: Safety precautions

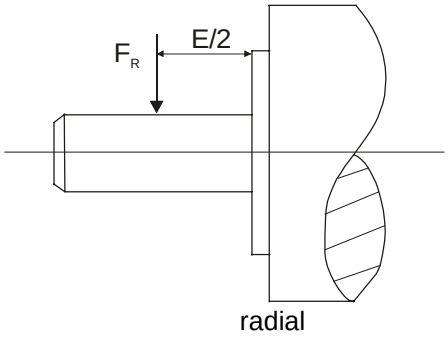
We assume that as an expert, you are familiar with the relevant safety regulations, especially in accordance with VDE 0100, VDE 0113, VDE 0160, EN 50178, the accident prevention regulations of the employers liability insurance company and the DIN regulations and that you can use and apply them.
Also the regulations are to be observed the relevant European directive.

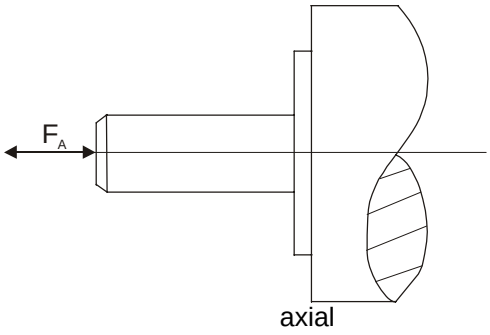
Depending on the kind of application, additional norms e.g. UL, DIN are to be observed.
If our products are employed in connection with components from other manufacturers, their operating instructions are also to be strictly observed.

Made in Germany, 2004

1 Shaft loads

1.1 Notation of definition





1.2 Technical dates of the max. radial FR (N) and axial F_A (N) shaft load

Motor-Type	rated speed	maximum radial shaft load	maximum axial shaft load
(-)	N_n (1/min)	F_R (N)	F_A (N)
AC G 0060	4000	150	100
AC G 0090	4000	180	100
AC G 0170	4000	200	100
AC G 0190	4000	220	100

The specifications refers to 20000 hours of operation !

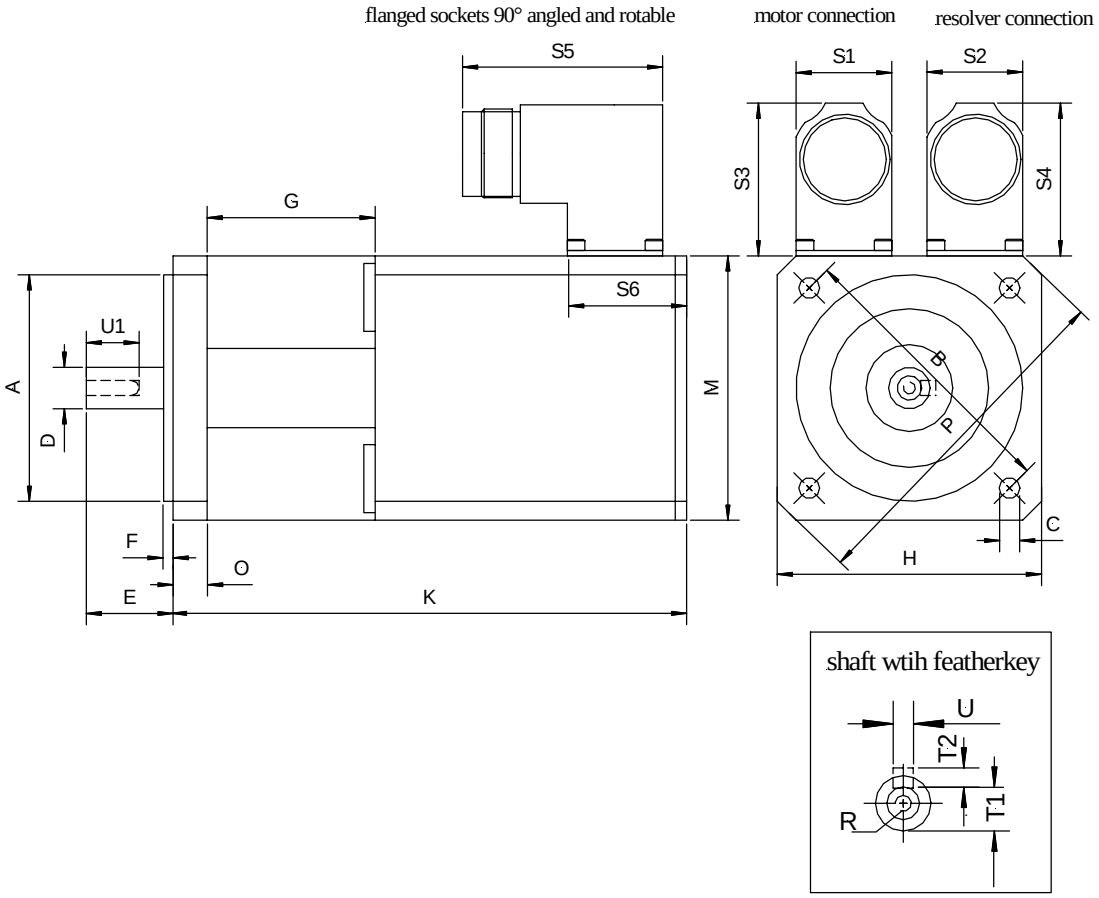
1.3 Use Ball bearing type

Motorsize	Ball bearing type	
	A-side	B-side
01	6002	6000

2 Dimensions

2.1 Standard design motor size 01

2.1.1 Connections via connectors



Type	Motor				Resolver			
	S1	S3	S5	S6	S2	S4	S5	S6
AC G0060	25,7	40,0	53,0	31,6	25,7	40,0	53,3	31,6
AC G0090	25,7	40,0	53,0	31,6	25,7	40,0	53,3	31,6
AC G0170	25,7	40,0	53,0	31,6	25,7	40,0	53,3	31,6
AC G0190	25,7	40,0	53,0	31,6	25,7	40,0	53,3	31,6

Type	A (j6)	B	C	D (k6)	E	F	G	H	K	M	O	P	R	T1	T2 (h9)	U (h9)	U1
AC G0060	60	75	5,5	11	23	2,5	44,5	70	136	70	9	92	M3·12	8,5	4	4	14
AC G0090	60	75	5,5	11	23	2,5	44,5	70	146	70	9	92	M3·12	8,5	4	4	14
AC G0170	60	75	5,5	11	23	2,5	44,5	70	176	70	9	92	M3·12	8,5	4	4	14
AC G0190	60	75	5,5	11	23	2,5	44,5	70	205	70	9	92	M3·12	8,5	4	4	14

all specifications in "mm"

3 Connector assignment

3.1 Power connector

Power connector

motor side

SSD Drives - motor size 0...2

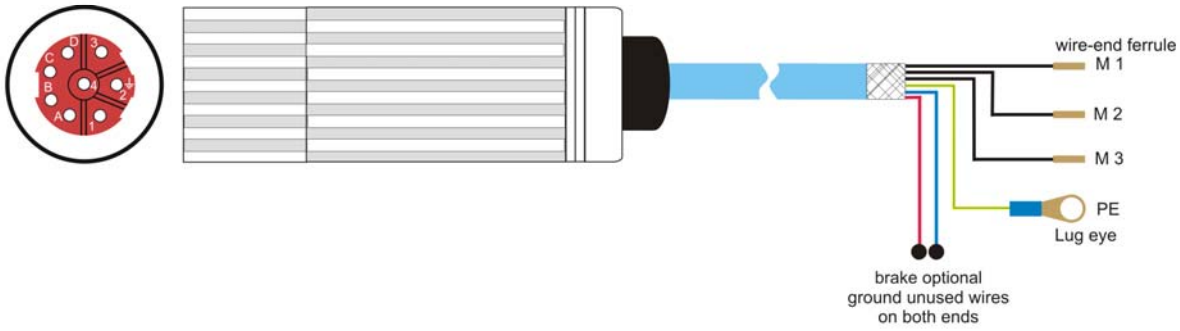
Model: AC G, AC M2n; ACM2G; AC M2K
AC MHS / MHM

regulator side

SSD Drives - Servo drives

Model: 631/635 and 637/637+/637f
637+/637f
in the compact enclosure

view solder / crimp connector - side



S MB GM2nRn BG 0/3-C+L ST.0100.3001		K MB BG 0/2-B KA.0003.6304			terminal strip
PIN - Nr.		colour	function		PIN - Nr.
1		black 1	motor connection		M1
2	1)	yellow/green	ground connection		PE
3		black 2	motor connection		M2
4		black 3	motor connection		M3
A		red	brake +24V DC	2)	Connection
B		blue	brake 0V DC	2)	not on terminal
C		-	-		-
D		-	-		-
case	1)		screen		case

1) motor mating plug
the screen is connected to
the groundpin and also
extensively to the case.

2) ⚠ **Attention ! Security and insulation:**
The brake must be insolated for secure division (PELV).Otherwise, the insulation class of the drive becomes reduced or the effort of an additional galvanic separation is required.

				Bear.	06.02.02	DL	Maßstab / scale:
04	ACM2K	10.08.04		Gep.	14.02.02	EH	Typ / model: KK MB GM2nRn 0/2.K - XX.X / B
03	ACM2G	15.08.03	DL	Norm			Bezeichnung / designation: Blue motor cable (compact enclosure) for SSD Drives standard motors and servo drives
02	637f	16.04.03	DL				Zeichnungsnummer / drawing No: Z-MK.6400.xxxx
01	Motor-size	06.02.02	DL				Blatt sheet 1
Zust.	Änderung	Datum	Name	Ursprung			Dateiname / File name: Z-MK-6400-E.cdr

Connector assignment
3.2 Resolver connector

Resolver connector

motor side

SSD Drives - motor size 0...4

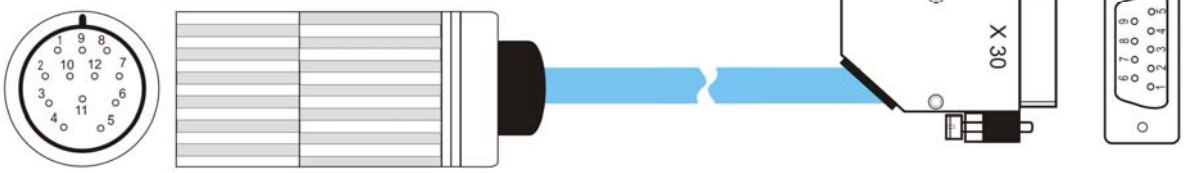
Type: AC G, AC R, AC Mn,
AC M2n, AC M2K; ACM2G
AC MRW, AC MRL

regulator side

SSD Drives - servo drives

Model: 631/635 and 637/637+/637f

view solderside



view solderside

SIR ST.0200.0001	KIR -B KA.0003.6301		SUB - D 09 S/M ST.1002.2001
PIN - Nr.	colour	function	PIN - Nr.
1	white	sin +	4
2	brown	sin -	8
3	green	cos +	3
4	yellow	cos -	7
5	red	PTC optional	2
6	blue	PTC optional	6
7	pink	carrier -	9
8	gray	carrier +	5
case		screen	case

Zust.	Änderung	Datum	Name	Ursprung		
05	ACM2K	10.08.04	DL	Bear.	09.05.01	DL
04	ACMRL	27.11.03	DL	Gep.	10.05.01	EH
03	ACMRW	02.10.03	DL	Norm		
02	ACM2G	15.08.03	DL			
01	637f	16.04.03	DL			

Maßstab / scale:

Typ / model: KK RT GMR-xx.x/B

Bezeichnung / designation: Blue resolver cable for SSD Drives standard motors and servo drives

Zeichnungsnummer / drawing No: Z-RK.6300.xxxx

Blatt / sheet 1

Dateiname / File name: Z-R-.6300-E.cdr

Connector assignment

3.3 Cabling instructions

Important rules when operating servo regulators and servomotors:

1. A radio interference suppression level cannot be maintained without an interference suppression filter at the line input. Moreover, line filter increase the immunity of the system to interference.

2. The cable between the power electronics and the motor must be shielded as YCY. A SY shield is not suitable. The shield support for the power cable (motor cable) must be on both ends.
We recommend using SSD Drives motor cables K M BG xx – B!

3. Metal parts in the switching cabinet must be connected with each other having large areas of contact and must carry high frequencies very well. Avoid anodized, yellow-passivized and painted surfaces which can have very high resistance values based on the frequency!
Make sure that the metals lie close together in the chemical circuit voltage class! Use the good conductivity and the large surface of the galvanized mounting plate as earth potential!

4. Relays, contactors and solenoid values build into the same circuit must be connected with spark-suppressing combinations or components limiting over voltage, respectively. This applies also if these parts are not mounted in the same cabinet as the servo regulator.

5. The shield for the analog signal lines must be installed on one end and, if possible, in the switching cabinet. Ensure a connection which provides extensive contact and which is low-resistant! The shield for the digital signal lines must be installed on both ends, must have extensive contact and must be low resistance. An additional equalizer is to be laid parallel when there are potential differences. It is necessary to use plugs with metal enclosures with separable connections.

6. Avoid unnecessary extra loops on all connecting cables. All measures regarding filtering and shielding can be short cicuited on them with high frequency. Connect unused litz wires in cables on both ends to the equipment ground conductor.

7. Unshielded cables of a cicuit, the conductors going out and returning, should be twisted due to symmetrical interferences.

8. Separate physically "live" and "dead" wires even in the planning phase. Give special attention to the motor cables. The area of the common terminal strip-line input and motor output is especially endangered.

9. Relays, contactors and solenoid values. The cables should be laid in the switching cabinet as close as possible to the ground; wires hanging freely in the air are preferred EMC victims as well as active and passive aerials.

10. When operating with more than one line component in a common network, EMC problems are to be expected. From the start, the installation planer must integrate in his concept high frequency emitted interference as well as the electromagnetic susceptibility of the components to one another and take measures against it.

11. It is absolutely necessary to run cable shields completely up to the connectors. The connection of the cable shields to ground must be in the near field of the servo regulator (10 - 50 cm). Sensitive measuring leads should be removed as far as possible from this area; this applies also when they are shielded!

12. It is mandatory to run the motor cables in a separate cable channel and to lay flexible cable shielding also when these are shielded. This channel must be separated by at least 30 - 40 cm from the channel for the signal lines.

4 Certificates

Standard Specifications and Certifications
Manufacturer's Declaration

In accordance with the EC – Machinery Directive 89/392/EEC
Anmex II B approximation of the regulation of the member states for machinery.

The following Products

AC – Servo - motors of series

AC M2n, AC M2K, AC MHx, AC M2G and **AC G**

in standard design are components to be incorporated into machinery and may not be operated alone. The complete machinery or installation using this equipment may only be put into service when the safety considerations of the Directive 89/3892/EEC are fully adhered to.

The above mentioned products are in accordance with the relevant clauses
from the following standards.

Basic directives:

- EN 60034 / VDE 0530
- IECE 34 – 1,5,6,8,9,14 / IEC 72 / IEC 85
- VDE 0100, VDE 0110, VDE 0530-1
- .EC – MASCHINERY DIRECTIVE 89/392/EEC
- EC – LOW VOLTAGE DIRECTIVE 73/23/EEC

CE – Lable
as standard on the name plate.

Issuer:
SSD Drives GmbH
Im Sand 14
76669 Bad Schönborn

Bad Schönborn, 01.11.2004 Legally binding signature

ppa. Erich Ehlen
Plant Manager

This declaration does not include any assertion of properties. The references for safety and protection (operating instruction) are to observe in every case keep.