

A - Servo



COMBIVERT

0,2 ... 5 Nm

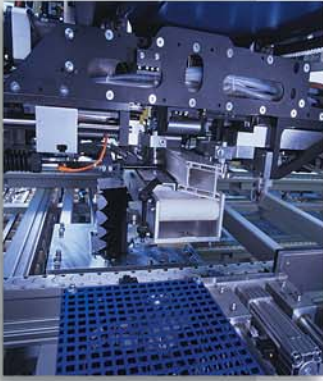
F5

KEB



KEB COMBIVERT F5-A-Servo

compact single axis servo system in plug- and play-technology.



- *Supply voltages: 1/3 phase 240 V AC
3 phase 400 V AC / 340 V DC / 560 V DC*
- *Integrated braking transistor „GTR7“*
- *++ / - - DC-bus-connection*
- *Thermal motor protection via thermistor*
- *Integrated RFI-Filter compliant with EN 55011/B-10m (size 04)*
- *External RFI-Filter compliant with EN 55011/B-10m (sizes 07/09)*
- *-10V...0...+10V analog reference input*
- *Pluggable terminal blocks for*
 - *control*
 - *mains*
 - *motor connections*
- *Two feedback interfaces in RJ45 technology for*
 - *resolver*
 - *encoder connection*
- *Input for external 24 V supply*
- *Pre-assembled motor and feedback cables*
- *KEB software package COMBIVIS for easy commissioning and diagnosis*
- *CE, UL and cUL listed*
- *Closed loop operation of synchronous motors or open loop operation of asynchronous motors*
- *Compatible with all common field bus protocols, i. e.*



CANopen

ETHERNET

MODBUS

KEB-HSP 5/
DIN 66019-II

PROFI
BUS



DeviceNet

SERCOS
interface

The compact actuator

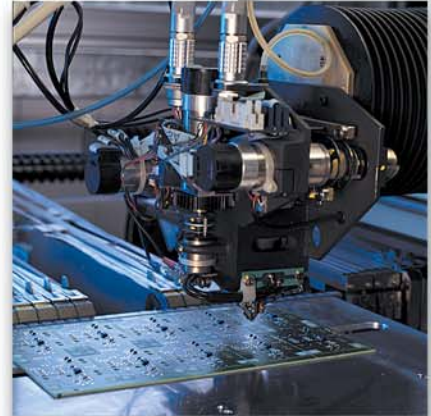
- providing speed and torque control for use with external positioning control.

Reaction times: Current control 125 μ s
Speed control 250 μ s

The dynamic stepper driver

- speed reference via analog input, digital input or serial communication.

Sample times: Analog inputs: 1 ms / Min: 250 μ s
Analog outputs: 1 ms
Digital inputs and outputs: 1 ms
Serial communication up to 115 kBaud



The speed or angular synchronous follower drive

- with adjustable master-slave ratio and on the fly referencing

The single axis positioning drive

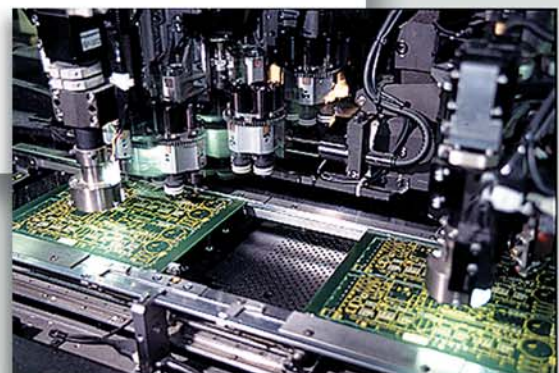
- providing up to 16 positions with 8 adjustable profiles

The versatile drive for stand alone process automation solutions

- with PID-process-control on board as well as comprehensive input and output functionality in 8 parameter sets

with display and keypad incorporated in the operator

- via free programmable CP parameters and scaling function





F5 - A-Servo - Complete system

1/3ph. 230 V

3ph. 400 V



37 mm



70 mm



105 mm



Motor size	T_N [Nm]	T_0 [Nm]	T_{max} [Nm]	n_N [min ⁻¹]	n_{max} [min ⁻¹]	J_L [kgcm ²]	Amplifier size	P [kW]
12.*	0.18	0.2	0.8	6.000	12.000	0.06	04	0.3
21.	0.19	0.2	0.8	4.500	12.000	0.06	04	0.3
22.	0.36	0.4	1.6	4.500	12.000	0.08	04	0.3
23.	0.55	0.6	2.4	4.500	12.000	0.11	04	0.3
24.	0.72	0.8	3.2	4.500	12.000	0.14	04	0.3
B1	0.6	0.65	2.2**/3.1	4.000	9000	0.22	04	0.3
B2	1.3	1.5	7.2	4.000	9000	0.36	07	0.7
B3	2.0	2.3	11.0	4.000	9000	0.57	07	0.7
31.	0.55	0.65	2.6	3.000	12.000	0.45	04	0.3
32.	1.15	1.3	5.2	3.000	12.000	0.7	04	0.3
33.	2.15	2.5	10	3.000	12.000	1.2	07	0.7
41.	2.3	2.6	10	3.000	12.000	1.65	07	0.7
42.	4.6	5.3	21	3.000	12.000	3.13	07	0.7

1/3 ph. 230 V (180... 260 V)

* motor and feedback cables with flying leads 1.400 mm
 ** limited by max. amplifier current
 *** with HF-filter

available gear

- helical worm



- helical inline



- heli



Options:

Braking resistor with thermal protection

size	04	07	09
200 V	07.BR.100-1180 180 Ohm	07.BR.100-1180 180 Ohm	-
400 V	07.BR.100-6620 150 Ohm	-	09.BR.100-6390 120 Ohm



Filter for sizes 07 / 09

1ph. 200 V: 10.E5.T60-0001

3ph. 200 V:

3ph. 400 V: 10.E5.T60-1001

Input choke

size	04	07	09
200 V (1ph.)	05.DR.F08-4951	07.DR.F08-2951	-
(3ph.)	05.DR.A08-4251	07.DR.A08-2851	-
400 V (3ph.)	05.DR.B08-7351	-	07.DR.B08-4951



V	I_N [A]	I_{max} [A]	f_{min}/f_{max} [kHz]	Amplifier size	P [kW]	I_N [A]	I_{max} [A]	f_{min}/f_{max} [kHz]	Dimensions B x H x T [mm]
37	2	8	4/8	04	0.37	1.4	5.6	4/8	75 x 185 x 145
37	2	8	4/8						75 x 185 x 145
37	2	8	4/8						75 x 185 x 145
37	2	8	4/8						75 x 185 x 145
37	2	8	4/8						75 x 185 x 145
37	2	8	4/8	09	1.5	4.1	8.2	4	90 x 250 x 200***
75	4	8	4						90 x 250 x 200***
75	4	8	4						90 x 250 x 200***
37	2	8	4/8	04	0.37	1.4	5.6	4/8	75 x 185 x 145
37	2	8	4/8						75 x 185 x 145
75	4	8	4	09	1.5	4.1	8.2	4	90 x 250 x 200***
75	4	8	4						90 x 250 x 200***

3 ph. 400 V (305... 500 V)



55 mm



88 mm

gear motor options:

- backlash-free planetary



output level

- helical shaft mounted



Anschoßfertige Systeme



- Resolver feedback cable, screened, twisted pairs, 12-pin resolver plug, RJ45 plug for F5-A-Servo 00.F5.0C1-00 __ , Standard sizes: 2 m, 3 m, 5 m, 10 m



- Motorcable 1.5 mm², screened, twisted pairs, incl. connection of mechanical brake and thermistor, 8-pin motor plug, 00.S4.019-00 __ , Standard sizes: 2 m, 3 m, 5 m, 10 m



- Incremental encoder feedback cable, screened, twisted pairs, 12-pin resolver plug, RJ45 plug for F5-A-Servo 00.F5.0C1-30 __ , Standard sizes: 2 m, 3 m, 5 m, 10 m



- Master cable RJ45 - RJ45, l = 0,5 m 00.F5.0C1-20P5

fieldbus diagnostic connector HSP-Adapter 00.F5.0C0-0002



Serial In Interface 00.F5.



- Adapter RJ45 - SubminD9-female, l = 0,05 m 00.F5.0C0-0009



- Adapter RJ45 - SubminD15-female, l = 0,05 m 00.F5.0C0-0008

for motor size 12.SM.202-62NO

- Encoder cable connector - 12pin 00.90.912-0007



- Mains cable connector - 8pin 00.90.912-0008

Serielle Vernetzung



display and keyboard operation
Digital-Operator
 00.F5.060-1000

Keypad / Display

**PC-Tool
 COMBIVIS 5**
 with diagnostic for
 fieldbus applications



**KEB-HSP 5 /
 DIN66019-II**

MODBUS

Serial Interface
MODBUS
 00.F5.060-A000

ETHERNET

Serial Interface
ETHERNET
 00.F5.060-8000

DeviceNet

Serial Interface
DeviceNet-Operator
 00.F5.060-7000

Serial Interface
Profibus-Operator
 00.F5.060-2000
 -2100



Serial Interface
Profibus-Operator
 00.F5.060-3000
 -3100



Serial Interface
Sercos-Operator
 00.F5.060-6000



Serial Interface
InterBus-Operator
 00.F5.060-4000
 -4100

CANopen



Serial Interface
CAN-Operator
 00.F5.060-5010
 -5110

people in motion



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