

# A - Servo



## COMBIVERT

# F5

A Member of the

**KEB**

Group

**KEBCO**

POWER TRANSMISSION

## KEBCO COMBIVERT F5-A-Servo

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

- Supply voltages: 1/3 phase 230 VAC or 3 phase 460 VAC
- Integrated braking transistor
- ++ / - - DC-bus-connection for shared power
- Thermal motor protection via thermistor
- Integrated RFI-Filter compliant with EN 55011/B-10m
- -10V...0...+10V 12 bit analog input
- Pluggable terminal blocks for
  - control signals
  - line connection
  - motor connection
- Two feedback interfaces using RJ45 connections
  - resolver
  - encoder input/output
- Control input for external 24 V supply
- Pre-assembled motor and feedback cables
- KEBCO software package COMBIVIS for easy commissioning and diagnosis
- CE, UL and cUL listed
- Allows connection of many types of AC servo motors
- Compatible with all common field bus protocols



PROFIBUS  
 INTERBUS Remote  
 CAN  
 SERCOS  
 DEVICE NET  
 KEB-HSP 5 /  
 DIN 66019-II

### The compact actuator

- providing speed and torque control for use with external positioning control.
- Reaction times: Current control 125  $\mu$ s  
 Speed control 250  $\mu$ s

### The dynamic mover

- speed reference via analog input, digital input, or serial communication.
- Sample times: Analog inputs: 1 ms / Min: 125  $\mu$ s  
 Analog outputs: 1 ms  
 Digital inputs and outputs: 1 ms  
 Serial communication up to 115 kBaud

### The electronic angular synchronous gear drive

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

### The single axis positioning drive

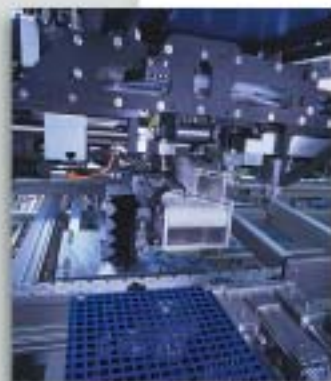
- providing up to 16 positions with 8 adjustable profiles

### The versatile drive for stand alone process automation solutions

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

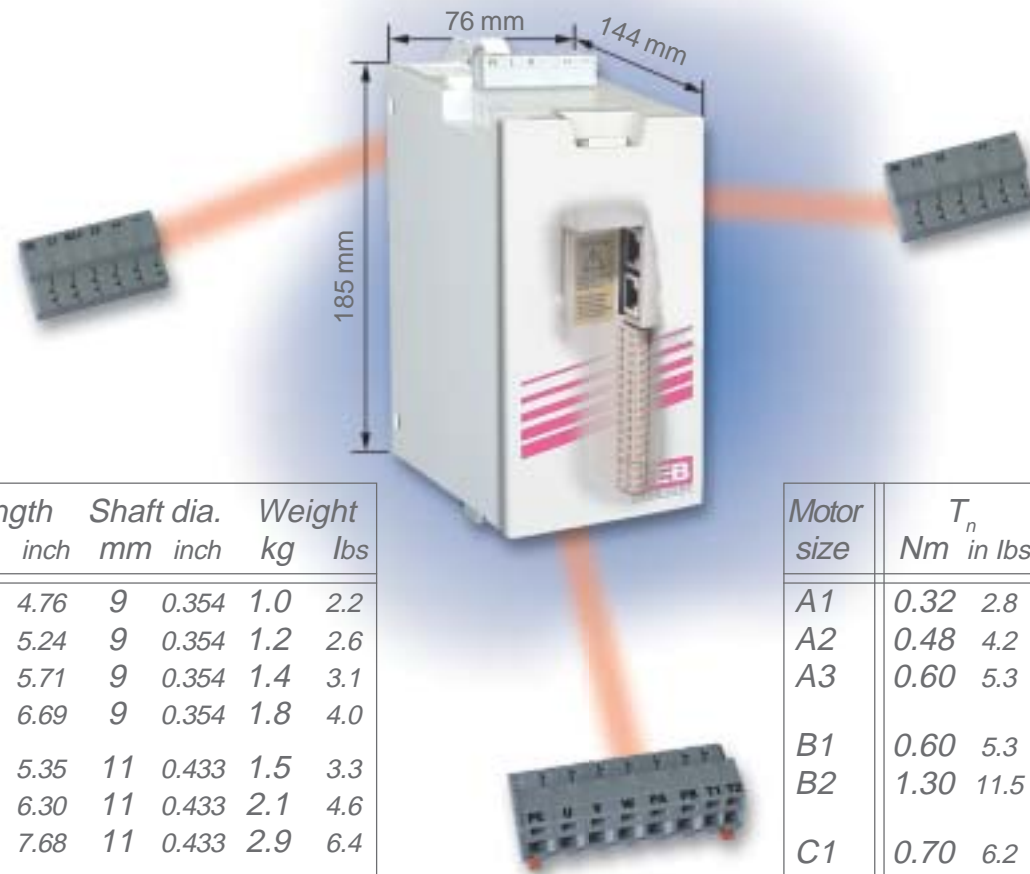
### with display and keypad incorporated in the operator

- programmable parameter list to customize the unit to the application



**F5-A-Servo-System**  
230 V 1 or 3 phase

**F5-A-Servo-System**  
460 V 3 phase



Motor size	$T_n$		$T_{MAX}$		Speed <sub>N</sub>	$J_{Rotor}$		Length		Shaft dia.		Weight	
	Nm	in lbs	Nm	in lbs		rpm	kgcm <sup>2</sup>	lb in <sup>2</sup>	mm	inch	mm	inch	kg
A1	0.32	2.8	1.6	14	6000	0.17	0.058	121	4.76	9	0.354	1.0	2.2
A2	0.48	4.2	2.3	20	6000	0.24	0.082	133	5.24	9	0.354	1.2	2.6
A3	0.60	5.3	3.0	27	4000	0.31	0.11	145	5.71	9	0.354	1.4	3.1
A4	0.80	7.1	3.8	33	3000	0.45	0.15	170	6.69	9	0.354	1.8	4.0
B1	0.60	5.3	2.4	21	4000	0.22	0.075	136	5.35	11	0.433	1.5	3.3
B2	0.95	8.4	3.8	34	3000	0.36	0.12	160	6.30	11	0.433	2.1	4.6
B3	2.00	17.7	8.0	71	2000	0.57	0.19	195	7.68	11	0.433	2.9	6.4
C1	0.75	6.6	3.3	29	4000	1.2	0.41	156	6.14	14	0.551	2.7	6.0
C2	2.10	18.6	8.4	74	3000	2.7	0.92	180	7.09	14	0.551	3.9	8.6
C2	2.40	21.2	12.0	106	2000	2.7	0.92	180	7.09	14	0.551	3.9	8.6

Motor size	$T_n$		$T_{MAX}$		Speed <sub>N</sub>	$J_{Rotor}$		Length		Shaft dia.		Weight	
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A1	0.32	2.8	1.6	14.2	6000	0.17	0.058	121	4.76	9	0.354	1.0	2.2
A2	0.48	4.2	2.4	21.2	6000	0.24	0.082	133	5.24	9	0.354	1.2	2.6
A3	0.60	5.3	2.6	22.8	6000	0.31	0.11	145	5.71	9	0.354	1.4	3.1
B1	0.60	5.3	3.0	26.6	4000	0.22	0.075	136	5.35	11	0.433	1.5	3.3
B2	1.30	11.5	5.2	46.0	4000	0.36	0.12	160	6.30	11	0.433	2.1	4.6
C1	0.70	6.2	3.0	26.7	6000	1.2	0.41	156	6.14	14	0.551	2.7	6.0
C1	0.75	6.6	3.8	33.2	4000	1.2	0.41	156	6.14	14	0.551	2.7	6.0
C1	0.80	7.1	4.0	35.4	3000	1.2	0.41	156	6.14	14	0.551	2.7	6.0

Actual servo system part number depends on amplifier and motor combination as well as options, i.e. brake special feedback etc. Consult KEBCO for assistance.

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- zero backlash permanent power off brakes

- helical worm gears

- helical shaft mounted gear boxes

- helical inline gear boxes

Options:

**Braking resistor with thermal protection**

230V: 07.BR.100- 1180, 182 Ohm,  $P_{\theta} = 800\text{Watt}$

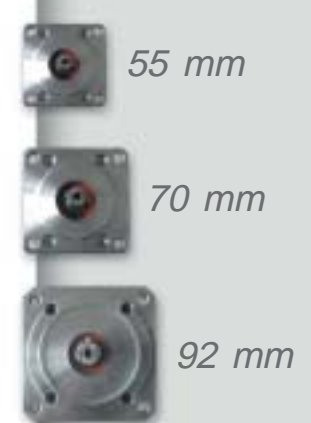
460V: 07.BR.100- 6620, 620 Ohm,  $P_{\theta} = 900\text{Watt}$

**Input choke**

230V: 05.DR.F08-4951 (1-phase)

U0.90.290-0401 (3-phase)

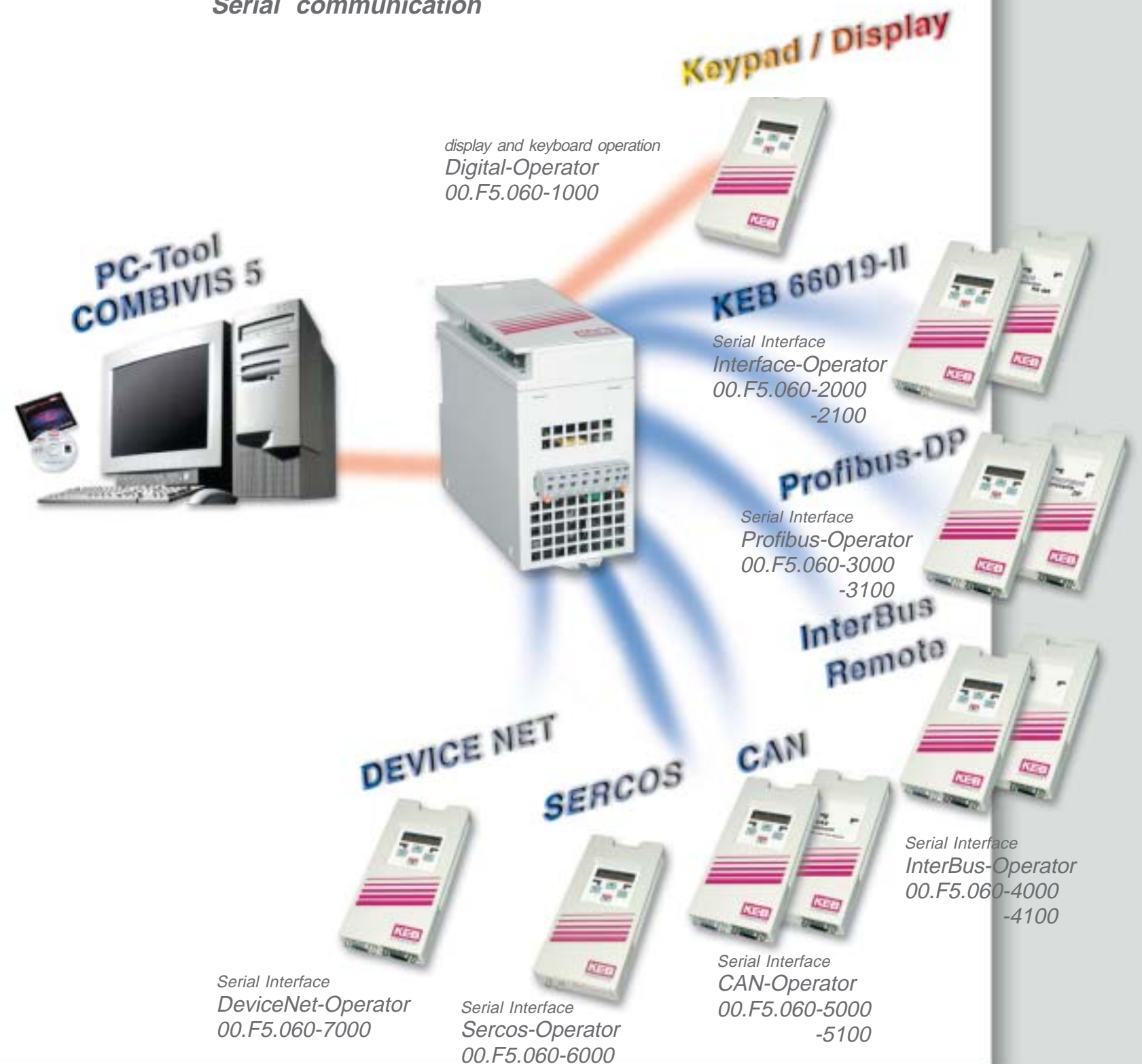
460V: U0.90.290-0201



**Pre-configured cable systems**

- Resolver feedback cable, shielded, 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 mm<sup>2</sup>, shielded, twisted pairs, incl. connections for 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, shielded, 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
- Adapter RJ45 - SubminD9-female, l = 0.05 m  
00.F5.0C0-0009
- Adapter RJ45 - SubminD15-female, l = 0.05 m  
00.F5.0C0-0008

**Serial communication**



people in motion



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