

COMBIVERT



CRANES

© Bharat Bijlee



Cranes - customised drive

THE SOLUTION



- *Construction cranes*
- *Container cranes*
- *Harbour cranes*
- *Overhead cranes*
- *Balance cranes*

Powered and controlled by KEB!

drive solutions worldwide

COMBIVERT F5 range

200 V : 1.5 ...45 kW

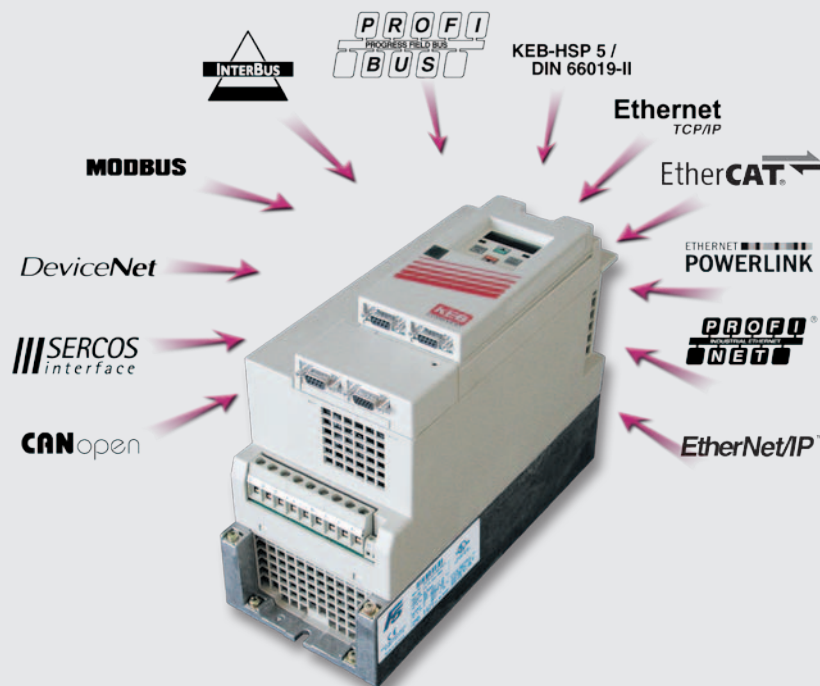
400 V : 0.75 ...800 kW

690 V : 200 ...900 kW

Features for your crane:
various speed interface cards available



Bus structures



Various cooling concepts



forced ventilation



liquid cooled

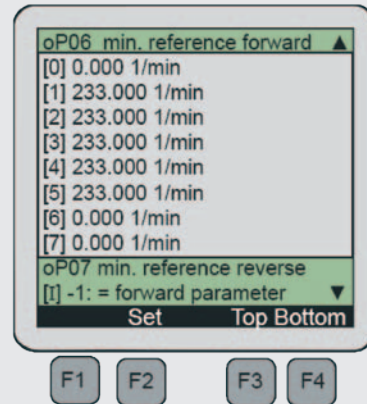


push through



flat rear

Profit from our longstanding experience in electronic drives!

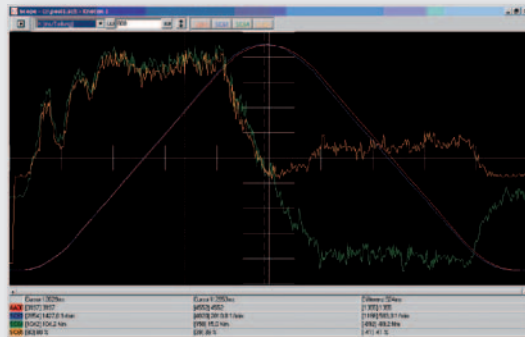


Plaintext operation

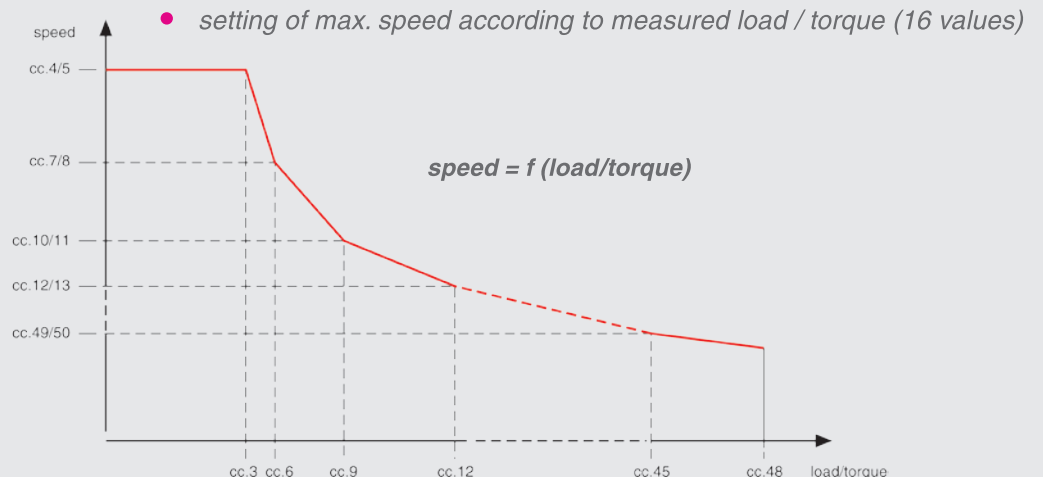
LCD operator, part no. 00.F5.060-K000

Equipped with 6-language plaintext display and menu-controlled keyboard operation as plug-in module for all **KEB COMBIVER F5** units.

The memory function allows storing and loading of complete parameter settings by calling the settings from the internal flash or plug-in-SD-/ MMC memory card.



- easy commissioning and supervision of the system by using Inverter Scope function



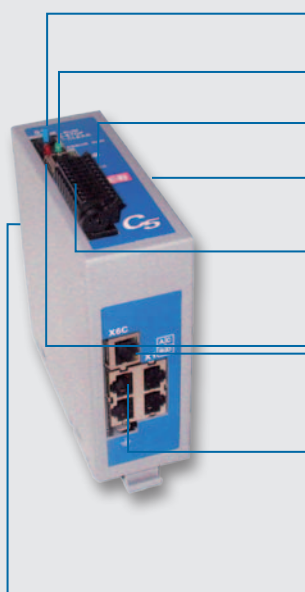
Platform

Multi-Axis-Application Master

With the **COMBICONTROL C5** a new option is available that is designed to act as the interface between the main control, PLC, IPC etc and the motor drives. Possibly it can even replace the main control completely.

Used together with the **COMBIVERT F5** series of drives, the **COMBICONTROL C5** offers an effective alternative solution to currently employed methods. The C5 is free to be programmed working with the programming method according to IEC 61131-3.

C5 Compact



Run | Stop | Reset switch

Status and error LED's

24V voltage supply

Serial port RS232/485

I/O module
4DI / 4DO
8DI / 8DO

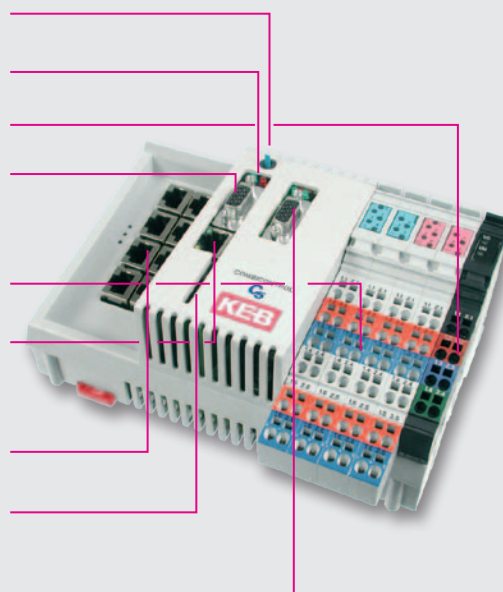
Ethernet interface
10/100 Mbit

Real time interface
4 / 8 x HSP5

Card reader for SD/MMC

Fieldbus optional:
Profibus or CAN

C5 Enhanced



Application example for drive control

e.g. **overhead crane control with**

- Antisway operation
- Tandem operation
- Auto positioning operation



Functions :

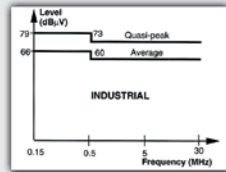
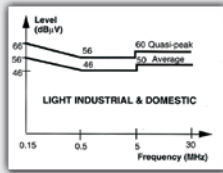
- Zero load slippage even in open loop operation
- Brake control function
- Regenerative AC Drive for energy saving and eliminations of DBR



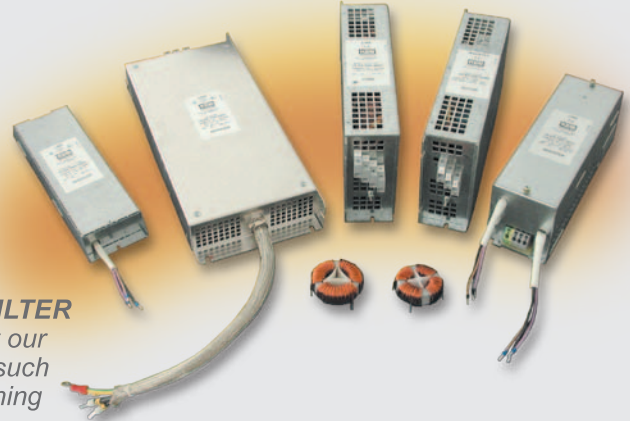
KEB - your reliable partner

Components

EMC Solutions



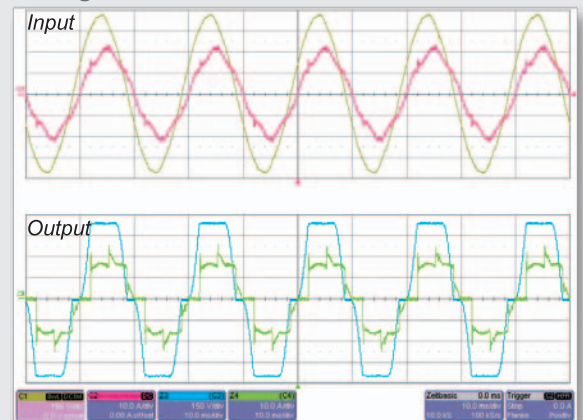
KEB design, manufacture and supply a comprehensive range of input / output filters and chokes. Those products can be used to make machinery compliant with the relevant EMC regulations as well as to improve operating conditions. **KEB** experts in the field of EMC offer advice and support during the selection process of the suitable products. For on site testing a mobile EMC service is available.



The new **KEB COMBILINE HARMONIC FILTER** is the latest innovative solution designed by our team of highly skilled engineers to combat such problems. It can be designed in at the planning stage and simply replace the traditional line reactor. With this solution compliance to the following standards are achieved:

- IEEE 519 - 1992 (USA)
- G5/4 Engineering Recommendation (GB)
- EN 61000-3-2; bis16 A
- EN 61000-3-12; 16 A bis 75 A
- EN 61000-3-4
- EN 12015 (lift norm Europa)
- AS 2279 (Australia)
- COP, supply rules (Hongkong)
- Quality of Electric Energy Supply, Harmonics in Public Supply Network (China)

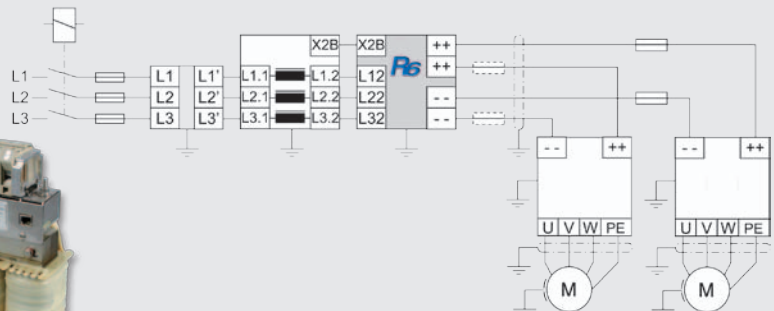
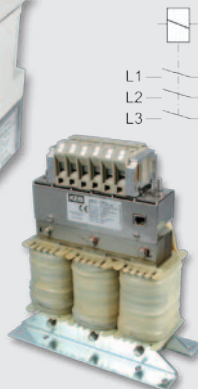
Voltage and current at harmonic filters



Supply and Regenerative Units COMBIVERT R6

regenerative power
supply power

20.5 and 41 kW, can be multiplied by parallel installation
22.3 and 44.5 kW



1) The drive model selection for motor 415VAC:

F5 Model	Light Duty 110% O/L for 60 sec.		Medium Duty 150% O/L for 30 sec.		Heavy Duty 150% O/L for 60 sec.	
	KW rating	Current rating	KW rating	Current rating	KW rating	Current rating
07.F5.A1D	1.1	2.8A†	0.75	2.6A*	0.75	3A
09.F5.A1D	2.2	4.5A†	1.5	4.1A*	1.5	4A
10.F5.A1D	4	6.3A†	2.2	5.8A*	2.2	6A
12.F5.A1D	5.5	10.4A†	4	9.5A*	4	10A
13.F5.A1D	7.5	13A†	5.5	12A*	5.5	12A
14.F5.A1D	11	18A†	7.5	16.5A*	7.5	16A
15.F5.A1E	15	26A†	11	24A	11	23.2A
16.F5.A1E	18.5	36A†	15	33A	15	31.9A
17.F5.A1G	22	48A†	18.5	42A	18.5	41A
18.F5.A1H	30	55A†	22	50A	22	48A
19.F5.A0H	37	66A†	30	60A	30	58A
20.F5.A0H	45	83A†	37	75A	37	73A
21.F5.A0R-	55	99A†	45	90A	45	87A
22.F5.A0R-	75	127A†	55	115A	55	111A
23.F5.A0R-	90	165A†	75	150A	75	145A
24.F5.A0R-	110	198A†	90	180A	90	174A
25.F5.A0U-	132	232A	110	210A●	90	165A
26.F5.A0U-	160	276A	132	250A●	110	197A
27.F5.A0U-	200	331A	160	300A●	132	236A
28.F5.A0P-	250	408A	200	370A●	160	291A
29.F5.A0P-	315	507A	250	460A●	200	362A
30.F5.A0P-	355	628A	315	570A●	250	448A
31.F5.A0W-	400	695A	355	630A●	285	496A
32.F5.A0P-	450	783A	400	710A●	315	559A
33.F5.A0P-	500	882A	450	800A●	355	629A
34.F5.A0P-	560	981A	500	890A●	400	700A
35.F5.A0P-	630	1103A	560	1000A●	450	787A
36.F5.A0P-	710	1268A	630	1150A●	500	905A
37.F5.A0P-	850	1466A	710	1330A●	630	1046A
¥ 38.F5.A0P-	900	1599A	800	1450A●	710	1141A

2) The drive model selection for motor 690VAC:

F5 Model	Light Duty 110% O/L for 60 sec.		Medium Duty 120% O/L for 30 sec.		Heavy Duty 150% O/L for 60 sec.	
	KW rating	Current rating	KW rating	Current rating	KW rating	Current rating
27.F5.A0P-	160		160	185A	132	145A
28.F5.A0P-	220	248A	200	225A	160	177A
29.F5.A0P-	250	309A	250	280A	220	220A
30.F5.A0W-	315	380A	315	350A	280	271A
32.F5.A0P-	450	474A	400	430A	315	338A
33.F5.A0P-	500	551A	450	490A	400	393A
34.F5.A0P-	560	606A	500	550A	450	433A
35.F5.A0P-	630	684A	560	610A	500	488A
36.F5.A0P-	710	783A	630	700A	560	559A
37.F5.A0P-	800	904A	710	810A	630	645A
38.F5.A0P-	900	992A	800	880A	710	708A
¥ 39.F5.A0P-	1000	1119A	900	1000A	800	798A

Note:

- ¥ - Liquid cooled version only
- † - Overload 110% for 200sec. Applicable
- * - Overload 180% for 30sec. Applicable
- - Overload 120% for 30sec. Applicable

1) Above ratings are up to ambient temp. of 45° C and altitude of 1000 met. For higher temperature up to 55° C deration of 1% per degree temp. rise is applicable.



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