

Drive system for decentralized control systems

FlexiMova[®] mm

UL Addendum manual



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UL Addendum manual - FlexiMova® mm. Rev.02

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1. Certification

FlexiMova® mm is UL certified:
Control number certification E486448.

2. Ratings

Drive ratings are reported in the main manual. Refer to main manual for electrical drive rating.

Table 1: Auxiliary connection ratings

Terminal	Rating
NC1/NO1-COM1	0,5A / 125 Vac
NC2/NO2-COM2	2A / 30 Vdc

Table 2: Accessory-I/O Expander ratings

Terminal	Rating
NC3/NO3-COM3	0,5A / 125 Vac
NO4/5/6/7/8-COM4-8	2A / 30 Vdc

Common Terminal COM4-8 : max current 10A

Environmental rating: maximum ambient temperature shall be 40°C
 Enclosed type 1 and 12.

Table 3: Maximum current

Model No.	Size	Maximum current output	
		Nominal Current (Arms)	Maximum current (Arms)
F0K37	A	1,3	2,0
F0K55		1,8	2,7
F0K75		2,5	3,8
F1K10		3,5	5,3
F1K50		4,9	7,4
F2K20	B	6,0	9,0
F3K00		8,0	12,0
F4K00		10,0	15,0
F5K50	C	14,0	21,0
F7K50		18,0	27,0
F11K0		25	39,0
F15K0	D	34,5	51,8
F18K5		44	70,4
F22K0		51	76,5
F30K0		68	102,0
F37K0	E	84	126,0
F45K0		101	151,5
F55K0		120	180

3. Electrical installation

Use copper and aluminum conductor.

This equipment is suitable for use on a circuit of delivering not more than 5 kArms (Size A,B,C,D) 10 kArms(size E) symmetrical Amperes , 480V +10% Maximum.

“Transient surge suppression overvoltage protection shall be externally provided in the end-use application on the Line-side of the equipment by any suitable R/C Surge-protective Devices – Component (VZCA2/VZCA8) or a suitable “Power Supply/System” of “overvoltage Category-II”, rated minimum Nominal Voltage= 500Vac, maximum Voltage Protection Rating VPR (L-L)= 2000Vpk and minimum Nominal Discharge Current In=5kA”.

Integral solid state short circuit protection does not provide branch circuit protection. R/C (JFHR2) Branch circuit protection fuses model and rated in Volts and Amperes as indicated in this description shall be present in the end-use application.

Table 4: Suggested fuses

Size	Model No.	Manufacturer	Fuse Model No.	External (Recommended) Cartridge Fuses - Rating				
				VAC	Arms	Maximum Breaking Capacity AC	I _{2t} , kA-2sec	I _p (A)
A	F0K37	SIBA GMBH (E180276) (JFHR2/JFHR8)	50 179 06	700	20	200,000A	168	600
	F0K55							
	F0K75							
	F1K10							
	F1K50							
B	F2K20	SIBA GMBH (E180276) (JFHR2/JFHR8)	50 179 06	700	20	200,000A	168	600
	F3K00							
	F4K00							
C	F5K50	SIEMENS AG (E167357) (JFHR2/CSA 248170)	3NC2250	700	50	200,000A	945	1500
	F7K50							
	F11K0							
D	F15K0	SIBA GMBH (E180276) (JFHR2/JFHR8)	URZ 5014006.100	700	100	200,000A	6319	2600
	F18K5							
	F22K0							
	F30K0							
E	F37K0	COOPER BUSSMANN LLC (E125085) (JFHR2/CSA 053787_C_000)	170M3814D	700	160	200,000A	5775	2100
	F45K0							
	F55K0							

Alternative - Any Listed Cartridge Fuses, Nonrenewable (JDDZ/JDDZ7) or R/C Special-purpose Fuses (JFHR2/JFHR8) with the same ratings of

the above fuse, in particular with I_{2t} and I_{peak} equal or lower.

Dynamic brake unit

The following Table 5 shows the ratings of the Dynamic Brake Unit Resistors recommended by the manufacturer or provided, as external optional accessories, for the specific end-use application, as specified and detailed in the general description of the equipment.

Table 5: Dynamic brake unit

FlexiMova® mm size		FlexiMova® mm data			Chopper Brake max Current [A]	Brake resistor min value [Ω]	Chopper Brake max Power [kW]	PWM KHz
		Power [kW]	Nominal current [A]	Max current [A]				
A	F0K37	0.37	1.3	2,0	2.8	280	2.2	2.5
	F0K55	0.55	1.8	2,7	2.8	280	2.2	2.5
	F0K75	0.75	2.5	3,8	2.8	280	2.2	2.5
	F1K10	1.1	3.5	5,3	2.8	280	2.2	2.5
	F1K50	1.5	4.9	7,4	2.8	280	2.2	2.5
B	F2K20	2.2	6	9,0	6.5	120	4.9	2.5
	F3K00	3	8	12,0	6.5	120	4.9	2.5
	F4K00	4	10	15,0	6.5	120	4.9	2.5
C	F5K50	5.5	14	21,0	9.7	82	7.7	2.5
	F7K50	7.5	18	27,0	12	66	9.5	2.5
	F11K0	11	25	39,0	17.2	46	13.7	2.5
D	F15K0	15	34,5	51,8	23.5	34.00	18.8	2.5
	F18K5	18.5	44	70,4	29	27.00	23.2	2.5
	F22K0	22	51	76,5	34.5	23.00	27.5	2.5
	F30K0	30	68	102,0	47	17.6	37.5	2.5
E	F37K0	37	84	126,0	46	17.4	37	2.5
	F45K0	45	101	151,5	55	14.5	44	2.5
	F55K0	55	120	180	55	14.5	44	2.5

4. Mounting, wiring and connection

Table 6: Screw mounting torque

Location	(Nm)(in.lb)
Between the two bottom metal enclosures (middle cover and back cover and heatsink)	2,5 Nm
Between the two upper metal enclosures (middle cover and front c-cover)	2,5 Nm
Backside motor connector cover	2 Nm
*Power gland connector to cable Size A,B,C	5Nm
*Power gland connector to enclosure Size A,B,C	5Nm
Power gland connector M40 to cable Size D	71 in. lb
Power gland connector M40 to enclosure Size D	71 in. lb
Power gland connector to cable(1900.M63) Size E	89in. lb
Power gland connector to enclosure(1900.M63) Size E	89in. lb
Gland connector (M32) to cable	66in. lb
Gland connector (M32) to enclosure	66in. lb
Gland connector (1901.M20) to cable	33in-lb
Gland connector (1901.M20) to enclosure	33in-lb
Gland connector (1900.m16n) to cable	4 Nm
Gland connector (1900.m16n) to enclosure	4 Nm
Gland connector (1900.m12n) to cable	1,5 Nm
Gland connector (1900.m12n) to enclosure	1,5 Nm
Internal Terminal Block	1 Nm
Expansion slot cover	1 Nm
DC-Link capacitor accessory screws	2.5Nm
DC-Link capacitor accessory size A,B Power gland supply connector to cable/ Power gland to enclosure	4Nm/4Nm
DC-Link capacitor accessory size A,B Power gland motor connector to cable/ Power gland to enclosure	33in-lb/33in-lb
DC-Link capacitor accessory size C Power gland supply connector to cable/ Power gland to enclosure	33in-lb/33in-lb
DC-Link capacitor accessory size C Power gland motor connector to cable/ Power gland to enclosure	66in-lb/66in-lb

Gland connectors shall be used with hard-service or junior hard-service flexible cord, such as type SO or SJO, 75°C, 600V, diameter as specified in this report.

Each flexible cord shall be internally equipped with a knot as close as possible to the gland connector.

Table 7: Cord diamenter

Gland connector model	Cord diameter
1900.M63	35 - 45.0 mm
1900.M32	15 - 21.0 mm
1901.M40N	21 - 28 mm
50.036M40PA	20 - 26 mm
*50.029M32PA10/SW	19 - 25 mm
1900.M25N	17.0 mm
1901.M20-1900.M20	13.0 mm
1900.M16N-1901.M16	3.5 - 7 mm
1900.M12N-1901.M12	2 - 5 mm

5. Motor protection

This equipment do not incorporate internal overload protection for motor load. The drive is intended to be used with motors that must have integral thermal protection: the integral thermal protection signal shall be connected on the equipment, on terminal PTC, terminal no. P5 Pins 1 and 2, which accepts +5Vdc, max 1mA. The ultimate result of this signal is to switch the output solid state motor controller "OFF".

Over current protection: the drive is provided with a current limiting circuitry. Refer to manual for the right value according to the models.

6. Wireless module

When Fleximova is shipped with a Bluetooth Modul, that is available as accessory, a wireless module (internal ID 01538434) is used as cB-0946 device.

This device contains:

- FCC ID: PVH0946
- IC: 5325A-0946

This device complies with Part 15 of the FCC Rules.

Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

NOTES

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