

## **Commander CD2 to Commander SE Retrofit Guide**

Commander SE is the latest product in the family of AC inverters from Control Techniques, designed to meet today's customer needs of simple installation and ease of use, yet also providing a flexible solution to a diverse range of applications.

This guide is part of a series to provide you with an easy way of retrofitting existing Control Techniques General Purpose type Drives with Commander SE.

Due to the potential flexibility of Control Techniques Drives, these retrofit guides only show the Drives in their default terminal and parameter states.

The Commander SE has 3 levels of parameter menus. Level 1 has only 10 parameters which quickly lets you access these parameters most frequently required for simple applications.

Level 2 gives access to additional parameters for increased flexibility.

Both Level 1 and Level 2 are accessible via the keypad and display on the Commander SE.

Level 3 (Extended Menu) parameters gives maximum flexibility of the Drive. If required, these parameters can only be accessed using serial communications. The tools we offer for this are:

- The Universal Keypad - a hand held, two line, LCD plain text display
- SESoft - graphical commissioning software and serial communications lead, SE71

We trust these guides will ease your transition to our latest range of Drives.

Please refer to the user manual of each Drive if more information is required or contact your local Drive Centre.

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# 1 I/O Comparison

## CD2

Analog out - Frequency  
 Analog out - Load  
 Analog in - Local speed reference  
 Analog in - Remote speed reference  
 Analog in - Torque reference  
 Analog in - Motor thermistor  
 Digital in - ET  
 Digital in - Run  
 Digital in - Stop  
 Digital in - Reset  
 Digital in - Local / Remote  
 Digital in - Forward / Reverse  
 Digital in - Preset speed 1  
 Digital in - Preset speed 2  
 Digital in - Jog  
 Digital out - Drive status or At speed  
 Digital out - Drive running or Minimum speed

## Commander SE

Analog out - Frequency  
 Analog in - Local speed reference  
 Analog in - Remote speed reference  
 Digital in - Enable  
 Digital in - Run forward  
 Digital in - Run reverse  
 Digital in - Local / Remote / Preset select  
 Digital in - Jog / Preset select / Motor thermistor  
 Digital out - Zero speed

# 2 Rating Tables

## CD2

Drive Module	Output		Motor Ratings		Input			
	100% RMS current (1)	150% RMS current (2)			100% RMS current		100% fundamental current	
	A	A	kW	HP	A	kVA	A	kW
CD75	2.1	3.2	0.75	1.0	5.4	3.6	1.8	1.2
CD110	2.8	4.2	1.1	1.5	5.9	3.8	2.4	1.6
CD150	3.8	5.7	1.5	2.0	5.3	3.5	3.3	2.2
CD220	5.6	8.4	2.2	3.0	7.1	4.7	4.9	3.2
CD400	9.5	14.3	4.0	5.3	9.5	6.3	8.3	5.5
CD550	12.0	18.0	5.5	7.3	13.7	9.0	10.4	6.9
CD750	16.0	24.0	7.5	10.0	16.3	10.7	13.9	9.2

## Commander SE

MODEL	SE23400...					
	075	110	150	220	300	400
AC supply voltage and frequency	3 phase 380 to 480V +/- 10%, 48 to 62Hz					
Input displacement factor (cos $\phi$ )	>0.97					
Nominal motor power - kW	0.75	1.1	1.5	2.2	3.0	4.0
Nominal motor power - HP	1.0		2.0	3.0		5.0
Output voltage and frequency	3 phase, 0 to input voltage, 0 to 1000Hz					
100% RMS output current - A	2.1	3.0	4.2	5.8	7.6	9.5
150% overload current for 60 secs - A	3.2	4.5	6.3	8.7	11.4	14.3
Typical full load input current - A*400V, 50Hz/480V, 60Hz	3.6	4.8	6.4	9.3	11	14
Typical inrush current - A** (duration <10ms)	90			60		
Drive power losses at 480VAC at 6kHz switching frequency - W	43	57	77	97	122	158
Weight - kg/lb	2.75 / 6					
Cooling fan fitted	No			Yes		

MODEL	SE33400...	
	550	750
AC supply voltage and frequency	3 phase 380 to 480V +/-10%, 48 to 62Hz	
Input displacement factor (cos $\phi$ )	>0.97	
Nominal motor power - kW	5.5	7.5
Nominal motor power - HP	7.5	10.0
Output voltage and frequency	3 phase, 0 to input voltage, 0 to 1000Hz	
100% RMS output current - A	13.0	16.5
150% overload current for 60 secs - A	19.5	24.8
Typical full load input current - A*	13.0	15.4
Typical inrush current - A** (duration <10ms)	80	
Drive power losses at 230VAC at 6kHz switching frequency - W	190	270
Weight - kg/lb	6 / 13.2	
Cooling fan fitted	Yes	

### 2.1 Cabling and fusing differences

Drive size	CD2 input fuse rating	SE input Fuse rating	CD2 input cable size	SE input cable size
kW	A	A	mm <sup>2</sup>	mm <sup>2</sup>
0.75	6	10	1.0	1.0
1.1	6	10	1.0	1.0
1.5	10	10	1.5	1.0
2.2	10	16	1.5	1.5
4.0	16	20	2.5	2.5
5.5	16	16	2.5	2.5
7.5	20	20	2.5	2.5

Shading in the above table indicates differences.

### 3 Dynamic Braking Comparison

#### CD2

Available on all sizes with additional braking cards:

IN61 - Internal braking card  
IN56 - External braking unit

Minimum resistance -  $47\Omega^{+/-10\%}$

### 4 General Feature Comparison

CD2 by default is negative logic and Commander SE is positive logic. For Commander SE applications that require negative logic, simply set **p8.29** = 0 and perform a save routine.

#### CD2

Distance between Drives in a cubicle: 100mm

CD2 has a terminal for status relay N/C (3) and a terminal for N/O (2).

CD2 has a torque reference input terminal (7).

#### Commander SE

On board dynamic braking on Sizes 2,3 and 4.  
Dynamic braking not possible on Size 1.

MODEL	SE2D200...			
	075	110	150	220
Minimum braking resistor value - $\Omega$	50			40
Recommended braking resistor value - $\Omega$	100		75	50
Maximum braking current - A	9			11
Resistor peak power rating - kW	1.8		2.4	3.5

MODEL	SE23200400
Minimum braking resistor value - $\Omega$	30
Recommended braking resistor value - $\Omega$	30
Maximum braking current - A	14
Resistor peak power rating - kW	5.9

MODEL	SE23400...					
	075	110	150	220	300	400
Minimum braking resistor value - $\Omega$	100		75			
Recommended braking resistor value - $\Omega$	200			100		
Maximum braking current - A	10			12.5		
Resistor peak power rating - kW	3.4			6.9		

#### Commander SE

Distance between Drives in a cubicle: 20mm

As default the Commander SE has a terminal for Status relay N/C (15) and no separate terminal for N/O. If this function is required then **p8.17** will need to be set to 1 to invert the relay state.

If torque reference is required then **p4.11** will need to be set to 1 and an analog input re-programmed to become a torque input. For example set **p7.10** = **4.08** for the torque input to be terminal 2.

CD2 has a motor thermistor input terminal (9)

If a motor thermistor input is required first set **p8.39** = 1 and then set **p8.40** = 1, the thermistor input is now available on terminal 13.

CD2 has an encoder input terminal (10)

This feature is not incorporated into Commander SE and in fact was a very crude method on CD2.

CD2 has an external trip terminal (12)

If this function is required then a digital input will need to be set up, for example to use terminal 12 as ET input. First set **p8.39** = 1, then set **p8.15** = 1, and also **p8.25** = **p10.32** and perform a save routine. Terminal 12 is now active as an ET input.

CD2 has a stop input terminal (14)

CD2 has a run input terminal (15)

CD2 has a Fwd / Rev terminal (17)



Setting parameter 35 = 3 will set up Commander SE to imitate these 3 terminals in CD2.

Terminal 9 = STOP

Terminal 10 = RUN

Terminal 11 = FWD/REV



Latching

CD2 has a Reset terminal (13)

The Drive does have a Reset/Enable terminal (9) as default, so if the Drive is in a tripped state when an enable is applied, the Drive will reset automatically.

However, if a separate reset terminal is required then a digital input will have to be sacrificed, for example, if the JOG terminal 13 is not used in your application then this can be programmed to be the reset terminal. Set **p8.39** = 1, then set **p8.26** = **10.33** and perform a save routine.

CD2 has a frequency output terminal (18)

CD2 has a load output terminal (19)

As default the Commander SE has a frequency output on terminal 6. However, it does not have an individual load output terminal. If this is required, terminal 6 will have to be programmed. Set parameter 36 = Ld.

CD2 has a status output that indicates 'Drive running at' or 'below minimum speed' terminal (25)

As default Commander SE's status output indicates 'zero speed'. To change this to 'Drive running at' or 'below minimum speed' like CD2, set **p8.21** = **10.04** and perform a save routine.

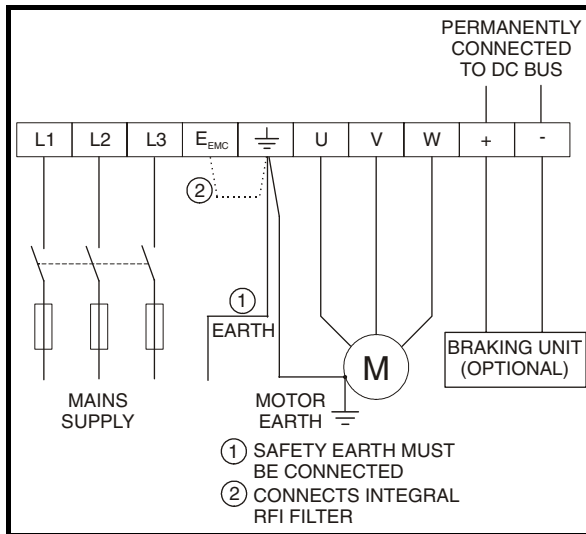
CD2 has 3 preset speed terminals (28,29 and 30)

If preset speeds are required parameter **05** will need to be set to A1.Pr or A2.Pr depending on which speed reference is required, current or voltage. 3 preset speeds can be selected by switching terminals 12 and 13.

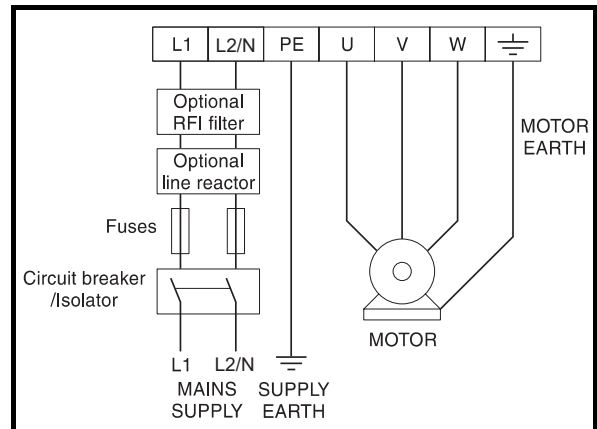
CD2 has a Jog input terminal (30)

As default Commander SE has a Jog input on terminal 13. However, if preset speeds are required as well as a Jog input, then a digital input will have to be sacrificed in order to assign the Jog function.

## 5 Power Terminal Comparison



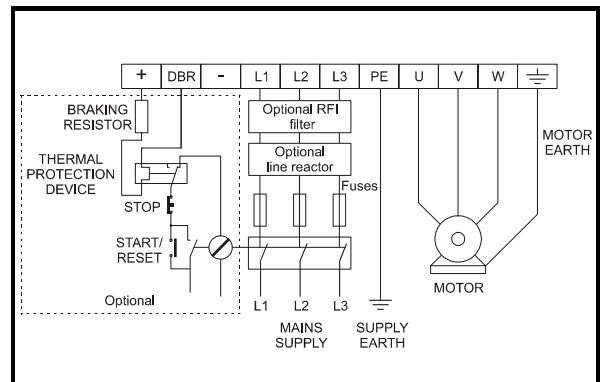
CD2 power terminal connections.



Commander SE Size 1 power terminal connections.

### NOTE

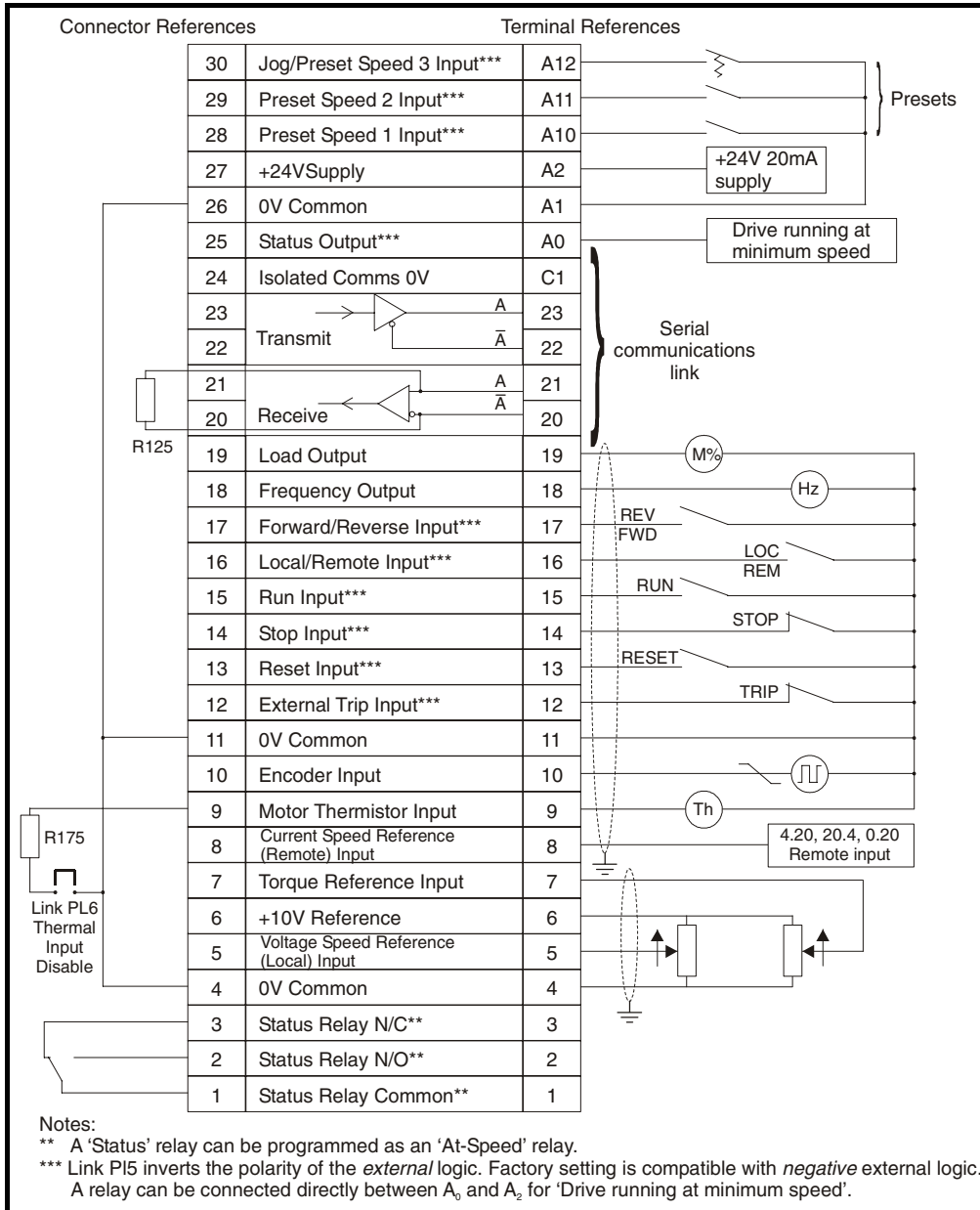
*On Commander SE Size 1 no DC Bus connections are available and hence dynamic braking is not available.*



Commander SE Size 2 to 4 power terminal connections.

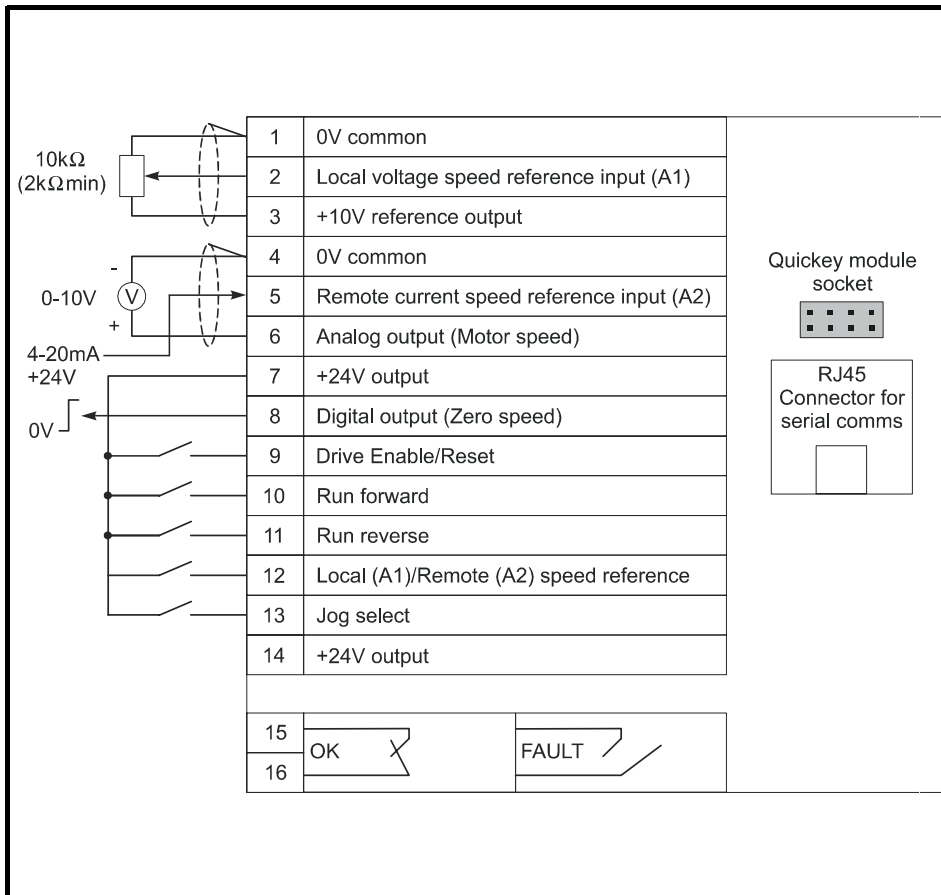
# 6 Control Terminal Comparison

CD2



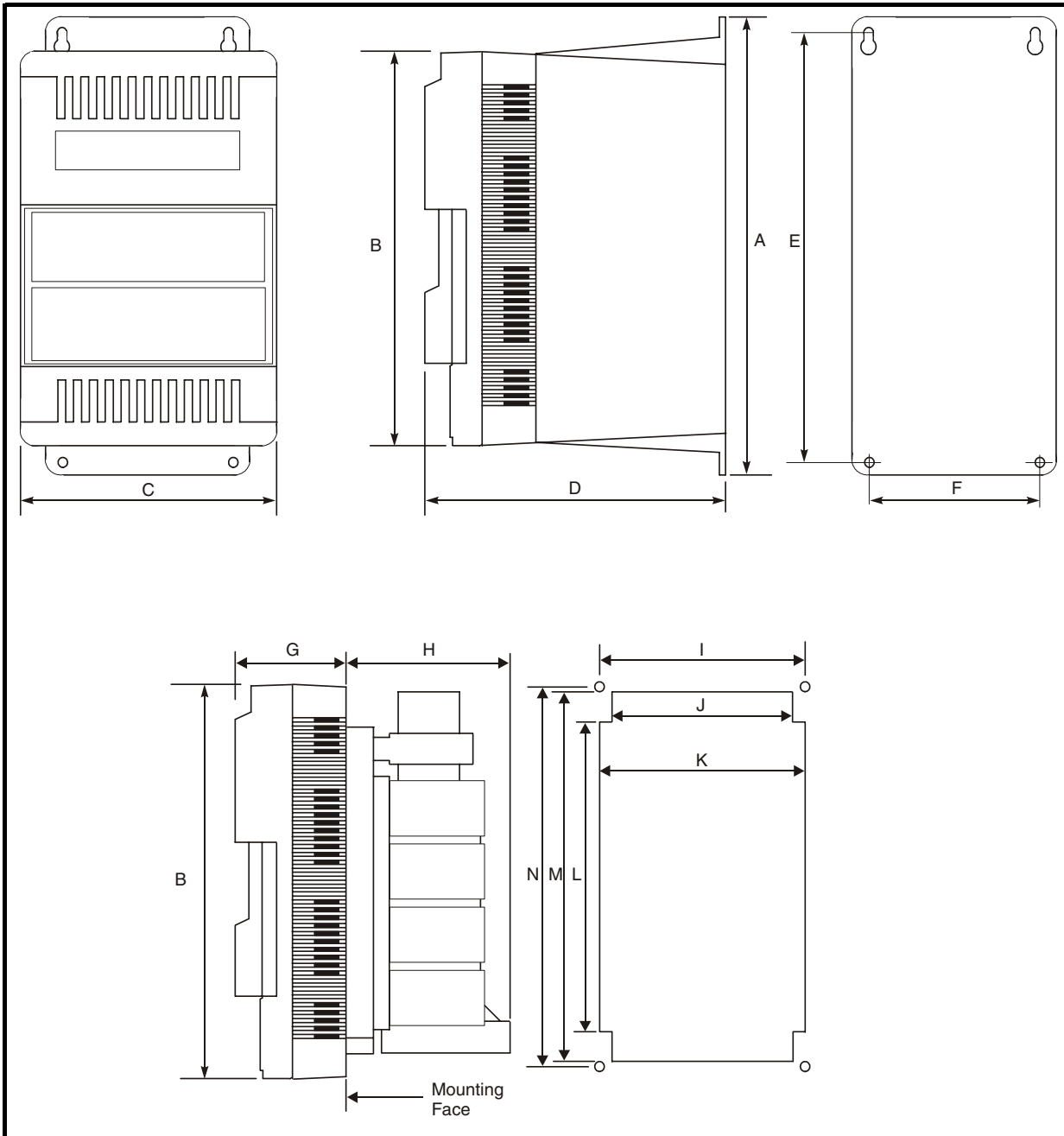


## Commander SE



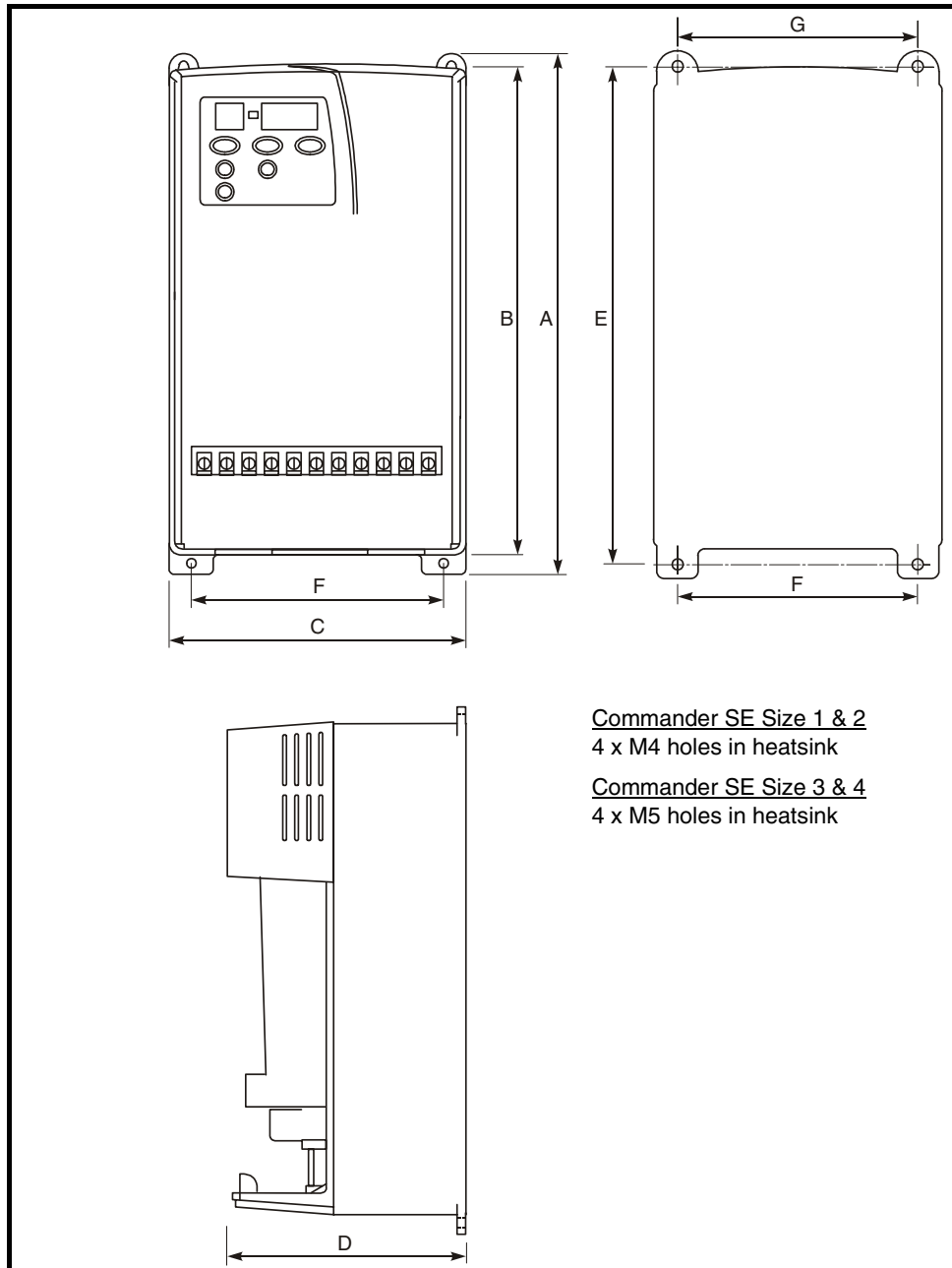
# 7 Installation Comparison

## 7.1 CD75-750 Drive Dimensions



A	B	C	D	E	F	G	H	I	J	K	L	M	N
mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
350	305	170	208	325	105	82	120	151	140	152	257	281	286

## 7.2 Commander SE Drive Dimensions



Drive Size	A		B		C		D		E		F		G	
	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in
1	191	7 <sup>33</sup> / <sub>64</sub>	175	6 <sup>57</sup> / <sub>64</sub>	102	4 <sup>1</sup> / <sub>64</sub>	130	5 <sup>7</sup> / <sub>64</sub>	181.5	7 <sup>9</sup> / <sub>64</sub>	84	3 <sup>5</sup> / <sub>16</sub>	84	3 <sup>5</sup> / <sub>16</sub>
2	280	1 <sup>11</sup> / <sub>64</sub>	259	10 <sup>3</sup> / <sub>16</sub>	147	5 <sup>25</sup> / <sub>32</sub>	130	5 <sup>7</sup> / <sub>64</sub>	265	10 <sup>7</sup> / <sub>16</sub>	121.5	4 <sup>25</sup> / <sub>32</sub>	121.5	4 <sup>25</sup> / <sub>32</sub>
3	336	13 <sup>7</sup> / <sub>32</sub>	315	12 <sup>13</sup> / <sub>32</sub>	190	7 <sup>31</sup> / <sub>64</sub>	155	6 <sup>7</sup> / <sub>64</sub>	320	12 <sup>19</sup> / <sub>32</sub>	172	6 <sup>25</sup> / <sub>32</sub>	164	6 <sup>29</sup> / <sub>64</sub>
4	412	16 <sup>7</sup> / <sub>32</sub>	389	15 <sup>5</sup> / <sub>16</sub>	250	9 <sup>27</sup> / <sub>32</sub>	185	7 <sup>9</sup> / <sub>32</sub>	397	15 <sup>5</sup> / <sub>8</sub>	228	8 <sup>63</sup> / <sub>64</sub>	217	8 <sup>35</sup> / <sub>64</sub>

### 7.3 CD75-750 Drive Losses

Drive Size	Frequency kHz	Power W	Control W	Total W
CD75 CD110	2.9	42	30	72
	5.9	52	30	82
	8.8	62	30	92
	11.7	72	30	102
CD150 CD220	2.9	82	35	117
	5.9	97	35	132
	8.8	112	35	147
	11.7	127	35	162
CD400	2.9	135	35	170
	5.9	160	35	195
	8.8	185	35	220
	11.7	215	35	250
CD550 CD750	2.9	251	35	286
	5.9	311	35	346
	8.8	366	35	401
	11.7	421	35	456

CD220 to CD750 are fan cooled

### 7.4 Commander SE Drive Losses

Drive	3kHz W	6kHz W	12kHz W
SE11200025	17	18	20
SE11200037	22	24	27
SE11200055	34	37	42
SE11200075	50	56	63
SE2D200075	48	54	62
SE2D200110	63	69	80
SE2D200150	82	88	103
SE2D200220	114	125	146
SE23200400	156	174	206
SE23400075	35	43	63
SE23400110	44	57	79
SE23400150	61	77	105
SE23400220	77	97	130
SE23400300	95	122	159
SE23400400	126	158	192
SE33200550	210	230	265
SE33200750	280	305	335
SE33400550	130	190	295
SE33400750	215	270	385
SE43401100	280	400	570
SE43401500	345	495	700

## 8 Parameter Comparison

### NOTE

*Extended Menu parameters on Commander SE can only be accessed using serial communications. The tools we offer for this are:*

- *The Universal Keypad - a hand held, two line, LCD plain text display*
- *SESoft - graphical commissioning software and serial communications lead, SE71*

Par. No	Description CD2	Default Setting	Description Commander SE (Level 1-2)	Corresponding Extended Menu Parameter	Default Setting
Pr0	Min frequency	0Hz	01	1.07	0.0Hz
Pr1	Max frequency	50Hz	02	1.06	50.0Hz
Pr2	Acceleration time	5s/120Hz	03	2.11	5s/100Hz
Pr3	Deceleration time	10s/120Hz	04	2.21	10s/100Hz
Pr4	Current limit	150%	N/A	4.07	150%
Pr5	Max cont lxt	100% FLC	06	5.07	Drive rated current
Pr6	Voltage boost	5.1%	N/A	5.15	5.0%
Pr7	Slip compensation	0Hz	07	5.08	Upon entering the values from the motor nameplate for parameter 5.08, the Drive will automatically calculate the correct value of slip and enable slip compensation.
Pr8	DC braking level	150%	N/A	6.06	100%
Pr9	Serial address	11	43	11.23	1.1
PrA	Failure mode	Blank	18	10.20	Blank
PrA-1	Failure mode	Blank	19	10.21	Blank
PrA-2	Failure mode	Blank	20	10.22	Blank
PrA-3	Failure mode	Blank	21	10.23	Blank
PrA-4	Failure mode	Blank	N/A	10.24	Blank
PrA-5	Failure mode	Blank	N/A	10.25	Blank
PrA-6	Failure mode	Blank	N/A	10.26	Blank
PrA-7	Failure mode	Blank	N/A	10.27	Blank
PrA-8	Failure mode	Blank	N/A	10.28	Blank
PrA-9	Failure mode	Blank	N/A	10.29	Blank
Prb	Security code	0	25	11.30	0
b0	Torque or speed	1=speed	N/A	4.11	0=speed
b1	Auto or manual start	1>manual	N/A	N/A	N/A
b2	Stop mode with b7	0=standard ramp	31	6.01	1=standard ramp
b3	Auto/fixed boost	0=auto	SE is an open loop vector Drive by default, but fixed boost mode is attainable by setting p5.14 = 2		
b4	Uni/bipolar ref	1=unipolar	SE is unipolar by default. However with the addition of the SE51 option card, a bipolar speed input is achievable.		
b5	Open/closed loop	1=open loop	N/A	N/A	N/A
b6	Master/slave	0=master	N/A	N/A	N/A

Par. No	Description CD2	Default Setting	Description Commander SE (Level 1-2)	Corresponding Extended Menu Parameter	Default Setting
b7	Stop mode with b2	0=standard ramp	31	6.01	1=standard ramp
b8	Freq/load display	0=frequency	22 and 23	4.21 and 5.34	If the mode key is held down for 2s then the display will change between frequency and load.
b9	Keypad/terminal	1=terminal	05	1.14	A1.A2 terminal
b10	Even/odd parity	0=even	N/A	N/A	N/A
b11	Remote speed ref	4-20mA	16	7.11	4-.20mA
b12	Baud rate	4.8	42	11.25	4.8
b14	Switching frequency	2.9kHz	37	5.18	6kHz
PrC	Voltage/frequency profile	50Hz	08	Dependant on settings of 5.06 and 5.09	Rated voltage EUR = 400V, USA = 460V
			N/A		Rated frequency EUR = 50Hz, USA = 60Hz
Prd 0-10	Menu access	N/A	N/A	N/A	N/A
Pr10	Skip frequency 1	0Hz	N/A	1.29	0.0Hz
Pr11	Skip frequency 2	0Hz	N/A	1.31	0.0Hz
Pr12	Skip frequency 3	0Hz	N/A	1.33	0.0Hz
Pr13	Skip freq. band 1	0.5Hz	N/A	1.30	0.5Hz
Pr14	Skip freq. band 2	0.5Hz	N/A	1.32	0.5Hz
Pr15	Skip freq. band 3	0.5Hz	N/A	1.34	0.5Hz
Prd 10-20	Menu access	N/A	N/A	N/A	N/A
Pr20	Preset speed 1	0Hz	11	1.21	0.0Hz
Pr21	Preset speed 2	0Hz	12	1.22	0.0Hz
Pr22	Preset speed 3	0Hz	13	1.23	0.0Hz
Pr23	Preset speed 4	0Hz	14	1.24	0.0Hz
Pr24	Preset speed 5	0Hz	N/A	1.25	0.0Hz
Pr25	Preset speed 6	0Hz	N/A	1.26	0.0Hz
Pr26	Preset speed 7	0Hz	N/A	1.27	0.0Hz
Pr27	Jog speed	1.5Hz	15	1.05	1.5Hz
b20	7presets or 3 presets and jog	0=3 presets and jog	Setting p05=4 will give 4 preset speeds, and a separate jog terminal can also be programmed as required. SE can give up to 8 preset speeds (see <i>Drive set-up for 8 preset speeds</i> in the <i>Commander SE Advanced User Guide</i> ).		
b21	Std/preset	0=standard ramps	N/A	2.10	0=standard
b22	Preset speed reverse source	0=terminal	N/A	N/A	N/A
Prd 20-30	Menu access	N/A	N/A	N/A	N/A
Pr30	Preset 1 accel	5s/120Hz	N/A	2.11	5.0s/100Hz
Pr31	Preset 2 accel	5s/120Hz	N/A	2.12	5.0s/100Hz

Par. No	Description CD2	Default Setting	Description Commander SE (Level 1-2)	Corresponding Extended Menu Parameter	Default Setting
Pr32	Preset 3 accel	5s/120Hz	N/A	2.13	5.0s/100Hz
Pr33	Preset 4 accel	5s/120Hz	N/A	2.14	5.0s/100Hz
Pr34	Preset 5 accel	5s/120Hz	N/A	2.15	5.0s/100Hz
Pr35	Preset 6 accel	5s/120Hz	N/A	2.16	5.0s/100Hz
Pr36	Preset 7 accel	5s/120Hz	N/A	2.17	5.0s/100Hz
Pr37	Jog accel	0.2s/120Hz	N/A	2.19	0.2s/100Hz
Prd 30-40	Menu access	N/A	N/A	N/A	N/A
Pr40	Preset 1 decel	10s/120Hz	N/A	2.21	10s/100Hz
Pr41	Preset 2 decel	10s/120Hz	N/A	2.22	10s/100Hz
Pr42	Preset 3 decel	10s/120Hz	N/A	2.23	10s/100Hz
Pr43	Preset 4 decel	10s/120Hz	N/A	2.24	10s/100Hz
Pr44	Preset 5 decel	10s/120Hz	N/A	2.25	10s/100Hz
Pr45	Preset 6 decel	10s/120Hz	N/A	2.26	10s/100Hz
Pr46	Preset 7 decel	10s/120Hz	N/A	2.27	10s/100Hz
Pr47	Jog decel	0.2s/120Hz	N/A	2.29	0.2s/100Hz
Prd 40-50	Menu access	N/A	N/A	N/A	N/A
Pr50	Reset attempts	0	N/A	10.34	0
Pr51	Reset delay	1s	N/A	10.35	1.0s
b50	Drive healthy/at speed relay	0=Drive healthy	N/A	If at speed is required, set p8.27 = 10.06	p8.27 = 10.01 (Drive healthy)
b51	Fwd/rev key disable	0=disable	26	6.13	Off
b52	Spinning motor	0=disable	33	6.09	0=disable
b53	Run/min speed output	0=Drive running	N/A	If the Drive running is required, set p8.21=10.02. If at or below min speed is required, set p8.21 = 10.04	10.03 = Zero speed
b54	Fixed or dynamic V/F	0=fixed V/F	32	5.13	0=fixed V/F

#### **NOTE**

**On all CDV Drives the following defaults will alter:**

**b52 Spinning motor = 1 enabled**

**b54 Dynamic V/F = 1 dynamic V/F enable**

## 8.1 CD2 Parameters (for reference)

Par. No.	Description	Default Setting
Pr0	Min frequency	0Hz
Pr1	Max frequency	50Hz
Pr2	Acceleration time	5s
Pr3	Deceleration time	10s
Pr4	Current limit	150%
Pr5	Max cont lxt	100% FLC
Pr6	Voltage boost	5.1%
Pr7	Slip compensation	0Hz
Pr8	DC braking level	150%
Pr9	Serial address	11
PrA	Failure mode	Blank
PrA-1	Failure mode	Blank
PrA-2	Failure mode	Blank
PrA-3	Failure mode	Blank
PrA-4	Failure mode	Blank
PrA-5	Failure mode	Blank
PrA-6	Failure mode	Blank
PrA-7	Failure mode	Blank
PrA-8	Failure mode	Blank
PrA-9	Failure mode	Blank
Prb	Security code	0
b0	Torque or speed	1=speed
b1	Auto or manual start	1=manual
b2	Stop mode with b7	0=standard ramp
b3	Auto/fixed boost	0=auto
b4	Uni/bipolar ref	1=unipolar
b5	Open/closed loop	1=open loop
b6	Master/slave	0=master
b7	Stop mode with b2	0=standard ramp
b8	Freq/load display	0=frequency
b9	Keypad/terminal	1=terminal
b10	Even/odd parity	0=even
b11	Remote speed ref	4-20mA
b12	Baud rate	4.8
b14	Switching frequency	2.9kHz
PrC	Voltage/frequency profile	50Hz
Prd 0-10	Menu access	N/A
Pr10	Skip frequency 1	0Hz
Pr11	Skip frequency 2	0Hz
Pr12	Skip frequency 3	0Hz
Pr13	Skip freq. band 1	0.5Hz
Pr14	Skip freq. band 2	0.5Hz
Pr15	Skip freq. band 3	0.5Hz



Par. No.	Description	Default Setting
Prd 10-20	Menu access	N/A
Pr20	Preset speed 1	0Hz
Pr21	Preset speed 2	0Hz
Pr22	Preset speed 3	0Hz
Pr23	Preset speed 4	0Hz
Pr24	Preset speed 5	0Hz
Pr25	Preset speed 6	0Hz
Pr26	Preset speed 7	0Hz
Pr27	Jog speed	1.5Hz
b20	7presets or 3 presets and jog	0=3 presets and jog
b21	Std/preset	0=standard ramps
b22	Preset speed reverse source	0=terminal
Prd 20-30	Menu access	N/A
Pr30	Preset 1 accel	5s
Pr31	Preset 2 accel	5s
Pr32	Preset 3 accel	5s
Pr33	Preset 4 accel	5s
Pr34	Preset 5 accel	5s
Pr35	Preset 6 accel	5s
Pr36	Preset 7 accel	5s
Pr37	Jog accel	0.2s
Prd 30-40	Menu access	N/A
Pr40	Preset 1 decel	10s
Pr41	Preset 2 decel	10s
Pr42	Preset 3 decel	10s
Pr43	Preset 4 decel	10s
Pr44	Preset 5 decel	10s
Pr45	Preset 6 decel	10s
Pr46	Preset 7 decel	10s
Pr47	Jog decel	0.2
Prd 40-50	Menu access	N/A
Pr50	Reset attempts	0
Pr51	Reset delay	1s
b50	Drive healthy/at speed relay	0=Drive healthy
b51	Fwd/rev key disable	0=disable
b52	Spinning motor	0=disable
b53	Run/min speed output	0=Drive running
b54	Fixed or dynamic V/F	0=fixed V/F

## 8.2 Commander SE Level 1 and 2 Parameters (for reference)

Par. No	Description	Default		Corresponding extended menu parameter
		EUR	USA	
01	Min. speed (Hz)	0.0		1.07
02	Max. speed (Hz)	50.0	60.0	1.06
03	Accel. rate (s/100Hz)	5.0		2.11
04	Decel. rate (s/100Hz)	10.0		2.21
05	Ref. select	A1.A2	PAd	1.14
06	Rated current (A)	Drive rating		5.07
07	Rated speed (rpm)	1500	1800	5.08
08	Rated voltage (V)	230 / 400	230 / 460	5.09
09	Power factor	0.85		5.10
10	Parameter access	L1	L1	11.44
11	Preset 1 (Hz)	0.0		1.21
12	Preset 2 (Hz)	0.0		1.22
13	Preset 3 (Hz)	0.0		1.23
14	Preset 4 (Hz)	0.0		1.24
15	Jog. speed (Hz)	1.5		1.05
16	Current mode (mA)	4-.20		7.11
17	Enable negative preset speeds	OFF		1.10
18	Last trip	--		10.20
19	Trip before parameter 18	--		10.21
20	Trip before parameter 19	--		10.22
21	Trip before parameter 20	--		10.23
22	Load display units	Ld		4.21
23	Speed display units	Fr		5.34
24	Customer scaling	1.00		11.21
25	Security setup	0		11.30
26	Fwd/rev key enable	OFF		6.13
27	Power up key. ref	0		1.51
28	Parameter cloning	no		11.42
29	Load defaults	no		11.43
30	Ramp mode	1		2.04
31	Stopping mode	1		6.01
32	Variable torque select	OFF		5.13
33	Spinning motor select	0		6.09
34	Positive logic select	On		8.29
35	Start/Stop logic select	0		6.04
36	Analog output select	Fr		7.33
37	Switching frequency (kHz)	6		5.18
38	Auto tune	0		5.12
39	Rated frequency (Hz)	50.0	60.0	5.06
40	No. of poles	Auto		5.11
41	Serial mode	AnSI		11.24
42	Baud rate	4.8		11.25
43	Serial address	1.1		11.23
44	Software version	--		11.29
*45	Fieldbus node address	0		15.03
*46	Fieldbus baudrate	0		15.04
*47	Fieldbus diagnostics	0		15.06

\* Will only appear when parameter 41 is set to FbUS.