

# Analogue DC Drives

514C Series

Up to 9 kW



## Description

The regenerative 514C DC thyristor drive offers full four quadrant control of DC motors from single phase supplies. As such it is ideal for applications involving overhauling loads or where rapid and accurate deceleration is required. Together with the non-regenerative 512C they offer the perfect solution for lower power single motor and multi-drive applications.

Typical applications include:

- Machine tool spindles
- Wire drawing machines
- Winders/Reelers

**Four quadrant regenerative control**

**110-500Vac AC supply selection by jumpers**

**CE marked and EMC compliant**

**AC power contactor logic and supply**

**Many system features**

**Extremely linear control loops**

## Technical Specification

Supply Voltage	110-500V +10% user selectable
Auxiliary supply	110/120 or 220/240V +10% user selectable. Single phase 50-60Hz +10%
Ambient	0-40°C - Altitude : up to 1000m without derating
Overload	150% for 60 seconds

## Features

### User Facilities

- Four quadrant regenerative control
- Separate AC auxiliary supply
- AC supply contactor logic
- Torque or speed control
- Three setpoint inputs
- Torque limit input
- Buffered analogue current output (10V, 10mA)
- +10V and -10V analogue reference supplies
- +24V digital reference supply
- Drive healthy output
- Buffered speed output (10V, 10mA)
- Buffered ramp output (10V, 10mA)
- Buffered total setpoint output (10V, 10mA)
- Zero speed / zero setpoint output

### Potentiometer Adjustments

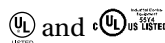
- Maximum speed
- Current limit
- Acceleration time (0-40 seconds)
- Deceleration time (0-40 seconds)
- IR Compensation
- Speed loop gain - Proportional
- Speed loop gain - Integral
- Current gain - proportional
- Current gain - integral
- Zero speed offset
- Zero speed threshold

## Standards

CE Marked

EN61800-3 (EMC) with external filter

EN50178 (safety, low voltage directive)



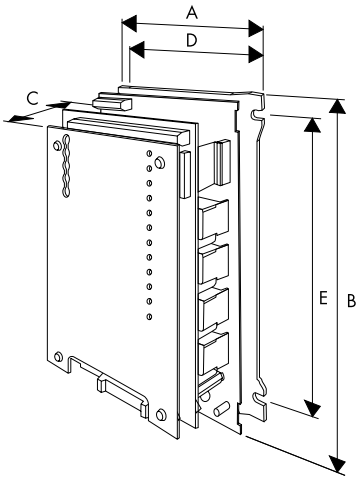
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Supply Voltage Vac	Armature Voltage Vdc	Field Voltage Vdc
110	80	100
240	180	210
415-500	320	360

Order Code	Armature Current
514C-04-00-00	4
514C-08-00-00	8
514C-16-00-00	16
514C-32-00-00	32



## Dimensions

Type	A	B	C	D	E	Weight (kg)
514C-04, -08	160	240	90	148	210	1.6
514C-16, -32	160	240	130	148	210	3.0

# EMC Filters

## for DC Drives

### Description

A range of custom designed optional EMC (Electromagnetic Compatibility) filters are available for use with Parker SSD Drives product range.

They are used to help achieve conformance with the EMC directive BS EN 61800-3:2004 - "Adjustable speed electrical power drive systems - Part 3".

Installation of the drive must be in accordance with the installation guidelines in the product manual. The filters comply with the relevant standards as outlined in the following table.

**1<sup>st</sup> Environment** : Drives directly connected without intermediate transformers to a low voltage (<100V rms) supply network that is part of a network that also supplies buildings used for domestic purposes.

**2<sup>nd</sup> Environment** : Establishments where there is no direct connection to a low voltage supply network that also supplies buildings used for domestic purpose.

**TN Earthing** = Grounded neutral AC supply <460V ac

**IT Earthing** = Ungrounded neutral AC supply <500V ac

**Ext. Filter** = External filter

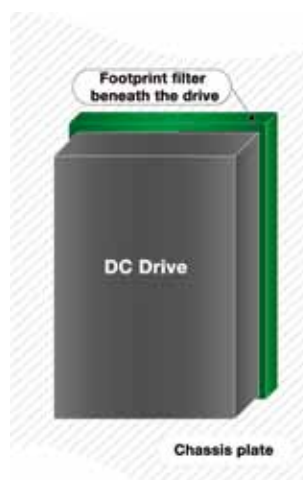
**Ext. Filter FP** = Footprint external filter

### EMC Filters

DC Drives	Frame	Current	2 <sup>nd</sup> Environment (Industrial)	1 <sup>st</sup> Environment (Domestic)
506,507,508			External FP Filter C0389115	External FP Filter C0389115
512,514C		4, 8, 16A	External FP Filter C0389113	External FP Filter C0389113
		32A	External FP Filter C0389114	External FP Filter C0389114
DC590+	1	15A	Standard with input capacitors	External Filter CO467844U015
		35,40A	Standard with input capacitors	External Filter CO467844U040
	2	70A	Standard with input capacitors	External Filter CO467844U070
		110A	Standard with input capacitors	External Filter CO467844U110
		165A	Standard	External Filter CO467844U165
	3	180A	Standard	External Filter CO467844U180
		270A	Standard	External Filter CO467844U340
	4, 5, H		Standard	Refer to your local sales office

Wall Mounting : Use the mounting kits below

Filter	Mounting Kit
CO467842U020	BA467840U020
CO467842U044	BA467840U044
CO467842U084	BA467840U084
CO467842U105	BA467840U105



Drive mounted on an external footprint filter