fairford
Soft Start Technology

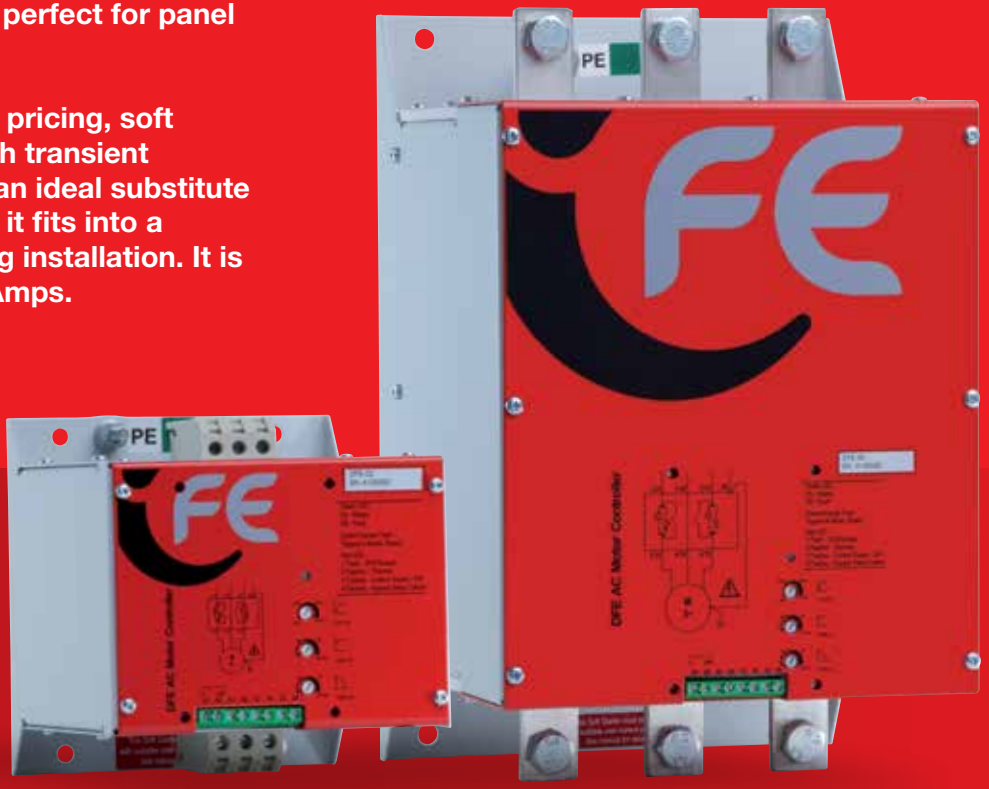
DFE

Fairford low cost, internally bypassed non-optimizing Soft Starter

DFE – Internally Bypassed Soft Starter 22 - 500 Amps

The DFE is Fairford's internally bypassed, non-optimizing Soft Starter which is perfect for panel builders and end users alike.

To the user it offers competitive pricing, soft stopping and the removal of high transient currents. To panel builders it is an ideal substitute for a Star/Delta starter because it fits into a similar footprint, thus simplifying installation. It is available from 22 Amps to 500 Amps.



Case Study

H3 Pump Controls, a division of Triple H Specialty Co. Inc, was challenged to provide a small rural municipal in Alston, Georgia, USA with a high quality, economical, and reliable Soft Starter solution for the town's new water well project.

H3 Pump Controls quickly decided that the Fairford' DFE Soft Starter product had exactly what we needed. The key decision factors in choosing the DFE were, a basic "setup" Soft Starter was needed to enable the municipality to maintain the operation of the product after the purchase, with little or no maintenance. An economical approach was needed for the Soft Starter to help meet the local government's budget demands. A rugged Soft Start with great reliability was required to keep the confidence of the municipality.

DFE

The DFE is Fairford's internally bypassed, non-optimizing Soft Starter which is perfect for panel builders and end users alike.

The DFE offers easy installation and is designed to be fitted with minimal disruption to production. The DFE is cost effective, low maintenance and has an excellent service lifetime.

To the user it offers competitive pricing, soft stopping and the removal of high transient currents. To panel builders it is an ideal substitute for a Star/Delta starter because it fits into a similar footprint, thus simplifying installation. It is now available from 22 Amps to 500 Amps.

Features and Benefits

Internally Bypassed
Internal bypassing of the Thyristors at the top of ramp allows for reduction in heat and cabinet size. Costs are reduced in ancillary equipment and these savings are passed on to the end user.

Substitution of Star/Delta Starters
- Lower maintenance costs
- Less stress on auxiliary equipment when starting
- Reduced down time
- Low cost of ownership

Simplified Installation
Rapid build and install time.

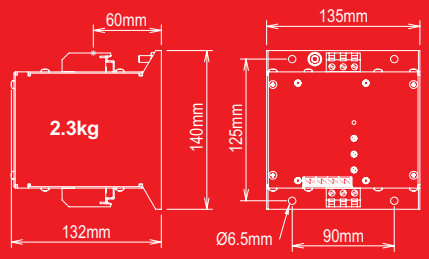
No need to change wiring configurations
All six wires of the Star/Delta configuration can be used to minimise installation and design costs.

Competitive with Star/Delta Starters
- Longer life
- Less maintenance
- Lower cost of ownership

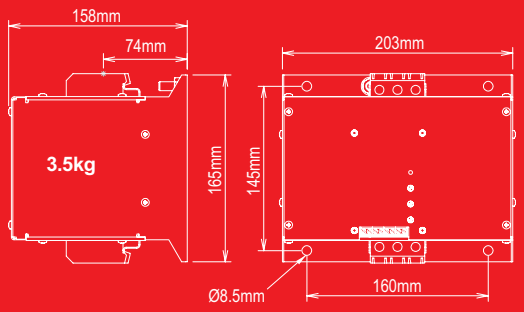
DFE – Technical data

Operational Voltage (Ue)	230-460VAC rms, 3-Phase (-15% +10%)
Rated Frequency	50 - 60Hz +/- 2Hz
Index Rating	Trip Class 10 DFE-02 to DFE-26 3-23:697 DFE-30 to DFE-38 3-23:1177
Start Time	0.5 to 30 Seconds
Stop Time	0 to 30 Seconds
Control Supply	24V DC Supplied externally to terminals X1-X2 DFE-02 to DFE-16 power supply of 4VA, 4A for 250 ms DFE-22 to DFE-38 power supply of 12VA, 4A for 250 ms
Soft Start/Stop Control	24V DC/110V AC galvanically isolated terminals A1-A2
Auxiliary Circuits (Relays)	Run - 13/14, Ready - 23/24. 230VAC 3A, Ac11
Indication	Multifunction LED on the front of the unit
Power Terminals	Input 1/L1, 3/L2 and 5/L3 Output 2/T1, 4/T2 and 6/T3 Up to 55kW IP20 rated wire clamping terminals 75kW to 280kW External Busbars
IP Rating	Up to 55kW IP20 75kW to 280kW IP00
Ambient Temperature	0°C to 40°C Above 40°C de-rate linearly by 2% of unit FLC per °C to a de-rate of 40% at 60°C
Transport and Storage	-25°C to +60°C
Altitude	1000m. Above 1000m de-rate linearly by 1% of unit FLC per 100m to a maximum altitude of 2000m
Humidity	Max. 85% non-condensing, not exceeding 50% at 40°C

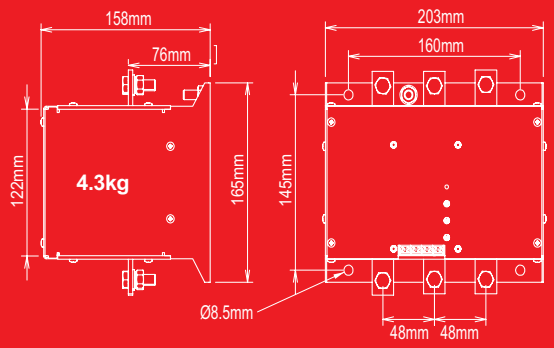
DFE-02 to DFE-08



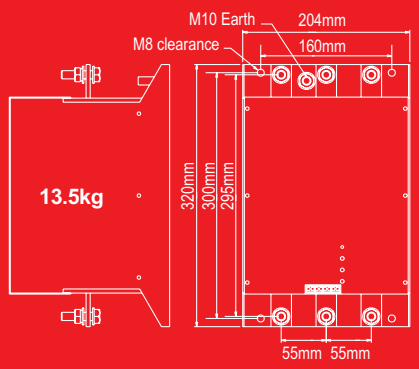
DFE-12 to DFE-16



DFE-22 to DFE-26



DFE-30 to DFE-38



For application specific sizing go to **www.fairford.com** and click product selector

Ie (A)	kW	HP	Trip Class 10	Trip Class 20	Trip Class 30
			Ie: AC-53b:	Ie: AC-53b:	Ie: AC-53b:
400V	400V	440-480V	3-23:697	4-19:701	4-29:691
15.5	7.5	10	DFE-02	DFE-04	DFE-04
22	11	15	DFE-04	DFE-04	DFE-06
29	15	20	DFE-06	DFE-06	DFE-08
35	18.5	25	DFE-06	DFE-08	DFE-12
41	22	30	DFE-08	DFE-12	DFE-16
55	30	40	DFE-12	DFE-16	DFE-22
66	37	50	DFE-14	DFE-22	DFE-22
80	45	60	DFE-22	DFE-22	DFE-24
97	55	75	DFE-22	DFE-24	DFE-26

IEC Ie	kW	HP	Trip Class 10	Trip Class 20	Trip Class 30
			Ie: AC-53b:	Ie: AC-53b:	Ie: AC-53b:
A	400V	440-480V	3-23:1177	4-19:1181	4-29:1171
132	75	100	DFE-26	DFE-30	DFE-32
160	90	125	DFE-30	DFE-32	DFE-34
195	110	150	DFE-32	DFE-34	DFE-36
230	132	200	DFE-34	DFE-36	DFE-38
280	160	200	DFE-36	DFE-38	CALL
350	200	250	DFE-38	CALL	CALL
380	220	300	DFE-38	CALL	CALL

DFE – Accessories

PSU 5R Series

- 24VDC Power Supply for the DFE02 – DFE16 (Part Number - APSU005-R)
- Can control up to 4 DFE Soft Starters
- Input Voltage 90VAC – 264VAC
- Output Voltage 24VDC
- 18 Watt Output
- UL Listed

PSU 6R Series

- 24VDC Power Supply for the DFE22 – DFE38 (Part Number – APSU006-R)
- One Power Supply for each DFE Soft Starter
- Input Voltage 85VAC – 264VAC
- Output Voltage 24VDC
- 60 Watt Output
- UL Listed

For more information on how the DFE from Fairford can reduce your running costs and lower maintenance bills contact your local distributor.

visit our website

www.fairford.com

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www.fairford.com

RoHS 2002/95/EC

BRO-DFE-001-V01