



FAIRFORD  
ELECTRONICS

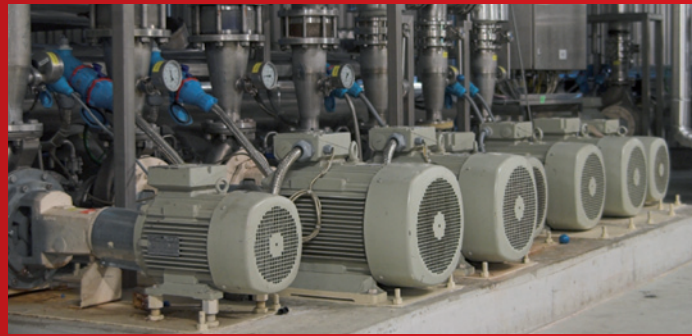
# PFFE



**The cost effective  
starter for small AC  
induction motors**  
The choice for small  
to medium industrial  
applications



The PFE is an innovative development from Fairford Electronics, who have 30 years of experience producing innovative designs in the soft start market.



With ratings from 2.2kW to 22kW, the PFE is ideally placed to support any AC induction motors in use today. This makes the PFE the natural choice for distributors and customers alike.

Benefiting from Fairford's excellence in engineering, the PFE combines the quality and reliability you have come to expect. This is one product that ticks all the boxes.

## Features and Benefits

### Internally Bypassed

Reduces cost because the Soft Starter is out of circuit once it has done its job. This reduces cabinet size and the heat produced which again reduces cost.

### Over Current Protected

Protects the Soft Starter against use above its duty rating.

### 45mm Wide (Size 1)

Same width as typical existing control gear for easy connectability and enables a more compact cabinet to be used.

### DIN Rail Mounted

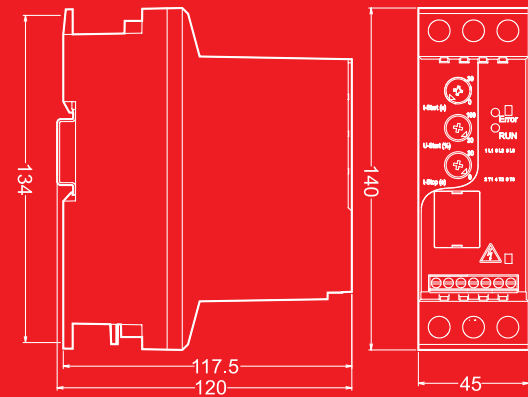
For easy installation – it just clips on.

# PFE - Technical data

For application specific sizing go to [www.fairford.com](http://www.fairford.com) and click product selector

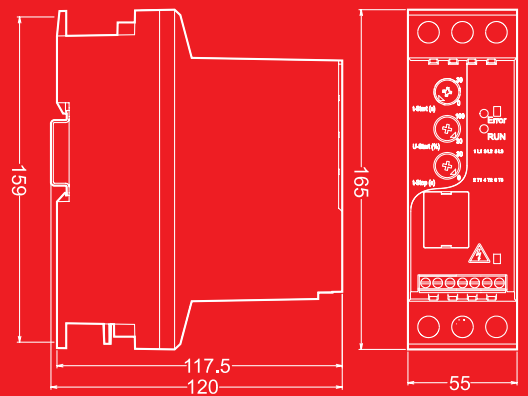
<b>Operational Voltage (Ue)</b>	230-460 VAC rms 3-Phase (-15% +10%)
<b>Rated Frequency</b>	50 - 60Hz +/- 2Hz
<b>Index Rating</b>	Standard AC53b: 3-5: 355 Class 10 AC53b: 3-23: 697
<b>Control Supply</b>	24V DC approx 4VA supplied externally to terminals 0 - 24.
<b>Enable and Start/ Soft Stop</b>	24V DC galvanically isolated terminals -A2, EN, +A1
<b>Indication</b>	Multi function LEDs on front panel
<b>Start Time</b>	1 to 30 seconds.
<b>Stop Time</b>	0 to 30 seconds
<b>Start Duty</b>	3 x FLC for 5 seconds at standard rating
<b>Starts / Hour</b>	10 starts per hour or 5 starts + 5 soft stops per hour.
<b>Optimum Starts / Hour</b>	Up to 60 Starts/Hr with Optional Fan
<b>Internally bypassed</b>	
<b>Power Terminals</b>	Input 1/L1, 3/L2 & 5/L3 output 2/T1, 4/T2 6/T3. IP20 Rated wire clamping terminals (unit is IP20)
<b>Ambient Temperature</b>	0°C to 40°C. Above 40°C de-rate linearly by 2% of unit FLC per °C to a derate of 40% at 60°C
<b>Transport and Storage</b>	-25°C to +60°C
<b>Altitude</b>	1000m. Above 1000m de-rate linearly by 1% of unit FLC per 100m to a max altitude of 2000m.
<b>Humidity</b>	Max. 85% non-condensing, not exceeding 50% at 40°C
<b>Protection/IP Rating</b>	IP20, NEMA 1
<b>Design Standards</b>	IEC 60947-4-2; EN60947-4-2 "AC Semiconductor Motor Controllers and Starters", UL, C-Tick & CE

## Size 1 PFE-02 to PFE-10



Please note: All dimensions in mm

## Size 2 PFE-12 to PFE-18



Please note: All dimensions in mm

Model	Current (I) Amps	Motor kW (400V)	Motor HP (460V)
PFE-02	5	2.2	3
PFE-04	7	3	5
PFE-06	9	4	6
PFE-08	12	5.5	7.5
PFE-10	16	7.5	10
PFE-12	22	11	15
PFE-14	30	15	20
PFE-16	36	18.5	25
PFE-18	40	22	30

# PFE - Case Study

The PFE range has been successfully used in many applications. A good example of its versatility is in the following case study of an unloading winch and davit in a large commercial port.

The winch is used for unloading 500Kg fish/scallop boxes from vessel to shore and a smoother start/stop was required to alleviate 'jarring' which was becoming a problem. A PFE-08 5.5Kw soft start with fan was chosen to increase the number of start/stops per hour as the trawler can be 5/8 meters below dock level and jogging is used to position the lifting gear under the skippers instructions. Due to the success of the installation another four systems have been installed.

*Dockside Davit designed and built by Spencer Carter Ltd, Falmouth, Cornwall. [www.spencercarter.com](http://www.spencercarter.com)*



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

tel: +44 (0) 1752 894554 or visit our website [www.fairford.com](http://www.fairford.com)

# PFE - Options



## Auxiliary Fan

Increases performance to  
**60**  
starts per hour



## Power supply

Can run up to  
**3**  
PFE's



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[www.fairford.com](http://www.fairford.com)

