

Two ways to connect the Fairford XFE soft start

1. In line or 3 wire. This type of connection the soft start is connected in the 3 phases between the mains supply and the motor.

Advantages of “In Line” connection are

- a) That only 3 wires are brought from the motor.
- b) The circuit is very simple & most people can understand the circuit.

Disadvantage of “In line” connection is that the soft start, semiconductor fuses & any bypass contactor need to be fully rated for the motor full load current (FLA).

2. Inside Delta or 6 wire. This type of connection the soft start is connected in the delta circuit of the motor. See drawing below.

Advantages of “Inside Delta” connection are

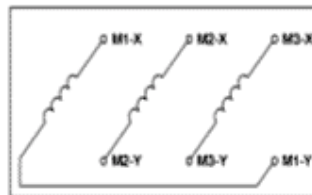
- a) Soft start current is reduced by 1.73 ($\sqrt{3}$) for a 350A motor you would normally select a 410A XFE soft starter, to operate “In Line” mode. When operating “Inside Delta”, $350 \div 1.73$ yields the selection of 205A XFE soft starter instead, saving over £1000.00.
- b) Highly competitive when replacing a star delta contactor combination.

Disadvantages of “Inside Delta” connection are

- a) 6 wires are needed to be brought from the motor.
- b) More complex circuit, some people find difficult to understand.

Sample wiring when using the XFE soft start “Inside Delta.”

INSIDE DELTA CONNECTION



Standard Motor Winding