## Soft starter benefits for MARINE APPLICATIONS



| BENEFIT                                       |  | FEATURE                      | BLOWER/<br>FAN | BOW<br>THRUSTER | COMPRESSOR | HYDRAULIC<br>POWER PACK | PUMP | WINCH |
|---|--|------------------------------|----------------|-----------------|------------|-------------------------|------|-------|
| Protect<br>equipment                          | Prevent damage due to reverse operation  | Phase sequence               |                |                 |            |                         |      |       |
|   | Prevent damage from jammed loads   | Instantaneous<br>overcurrent |                |                 |            |                         |      | -     |
|   | Prolong life of pumps, pipes, valves and headworks by preventing water hammer                        | Soft stop                    |                |                 |            |                         |      |       |
|   | Early warning of abnormal load<br>conditions (broken couplings, blocked<br>pipes etc)                | Undercurrent                 |                |                 |            |                         | •    |       |
|   | Smooth take-up with gradual tensioning   | Gentle acceleration          |                |                 |            |                         |      |       |
| Maximise<br>productivity                      | Safely use full motor capacity without nuisance tripping   | Motor thermal model          |                |                 |            |                         |      |       |
|   | Complete critical processes  | PowerThrough                 |                |                 |            |                         |      |       |
| Smoother<br>operation                         | Minimise stress on electrical supply   | Reduced start current        |                |                 |            |                         |      |       |
|   | Reduce mechanical stress during start  | Gentle acceleration          |                |                 |            |                         |      |       |
| Intelligent<br>control of the<br>whole system | Override motor and system protections<br>in emergency situations, eg fire pumps,<br>ventilation fans | Emergency run                |                |                 |            |                         | •    |       |
|   | Simplify control circuits by directly connecting pressure switches                                   | Digital inputs               |                |                 |            |                         |      |       |
|   | Improve system performance with closed loop process control  | Analog output                |                |                 |            |                         |      |       |