

## General Description

The motor control range provides the user with a product that is robust and cost effective. Housed in weatherproof sheet steel enclosures, these assemblies can be placed in most industrial environments.

Manufactured to British standards BSEN60947-Pt4-Sec 1. BSEN60529-1992 and to IEC947-4-1. All starters give degree of protection IP55 and are suitable for use up to an altitude of 2000 meters above sea level and for operation in ambient temperatures of -5° C to +40° C.

The Direct-On-Line and Star Delta Starters are available with or without integral triple pole isolator. The rotary mains isolator switch comes standard with a door interlocking red / yellow handle, pad-lockable in the "Off" position.

## Direct-On-Line Starters

### Features

- Single or Three Phase
- Sealing to IP55
- Sheet Steel Enclosure
- Epoxy Powder Coated Paint Finish: RAL 7035 - Light Grey
- Built-in Start / Stop Reset Push Buttons
- Surface Mounting
- Overloads Supplied Separately
- Available With or Without Integral Isolator



Other sizes and features are available on request. Contact us for more information.

### Catalogue Numbers

| Catalogue No. | Description                   | Voltage | Max. Rating |     | Enclosure Size |
|---------------|-------------------------------|---------|-------------|-----|----------------|
|               |                               |         | kW          | A   |                |
| DOLC1V40/00/S | 3 Phase Starter               | 400V    | 5.5kW       | 12A | 1              |
| DOLC2V40/00/S |                               |         | 7.5kW       | 18A |                |
| DOLC1V40/00/D | 3 Phase Starter with Isolator | 400V    | 5.5kW       | 12A | 3              |
| DOLC2V40/00/D |                               |         | 7.5kW       | 18A |                |
| DOLC1V23/00/S | Single Phase Starter          | 230V    | 1.5kW       | 12A | 1              |
| DOLC2V23/00/S |                               |         | 2.2kW       | 18A |                |

## Direct-On-Line Reversing Starters

### Features

- Three Phase
- Sealing to IP55
- Sheet Steel Enclosure
- Epoxy Powder Coated Paint Finish: RAL 7035 - Light Grey
- Built-in Forward / Stop Reset / Reverse Push Buttons
- Surface Mounting
- Overloads supplied separately



Other sizes and features are available on request. Contact us for more information.

### Catalogue Numbers

| Catalogue No. | Description               | Voltage | Max. Rating |     | Enclosure Size |
|---------------|---------------------------|---------|-------------|-----|----------------|
|               |                           |         | kW          | A   |                |
| DORC1V40/00/S | 3 Phase Reversing Starter | 400V    | 5.5kW       | 12A | 2              |
| DORC2V40/00/S |                           |         | 7.5kW       | 18A |                |



## Star Delta Starters

### Features

- Three Phase
- Sealing to IP55
- Sheet Steel Enclosure
- Epoxy Powder Coated Paint Finish: RAL 7035 - Light Grey
- Built-in Start / Stop Reset Push Buttons
- Wye Delta Connected
- Surface Mounting
- Overloads Supplied Separately
- Available With or Without Integral Isolator

Other sizes and features are available on request. Contact us for more information.



### Catalogue Numbers

| Catalogue No. | Description                              | Voltage | Max. Rating |     | Enclosure Size |
|---------------|--|---------|-------------|-----|----------------|
|               |  |         | kW          | A   |                |
| SDEC1V40/00/S | 3 Phase Star Delta Starter               | 400V    | 11kW        | 21A | 4              |
| SDEC2V40/00/S |  |         | 15kW        | 30A |                |
| SDEC3V40/00/S |  |         | 22kW        | 43A |                |
| SDEC1V40/00/D | 3 Phase Star Delta Starter with Isolator | 400V    | 11kW        | 21A | 5              |
| SDEC2V40/00/D |  |         | 15kW        | 30A |                |
| SDEC3V40/00/D |  |         | 22kW        | 43A |                |

## Overloads

Manual reset thermal overloads available up to 43A. Suitable for Direct-on-Line and Star Delta Starters.

### Catalogue Numbers

| Catalogue No. | Rating (A)     |            | Catalogue No. | Rating (A)     |             |
|---------------|----------------|------------|---------------|----------------|-------------|
|               | Direct-On-Line | Star Delta |               | Direct-On-Line | Star Delta  |
| OL/00.25      | 0.16 - 0.25A   | --         | OL/04.00      | 2.5 - 4A       | 4.3 - 6.9A  |
| OL/00.40      | 0.25 - 0.4A    | --         | OL/06.00      | 4 - 6A         | 6.9 - 10.4A |
| OL/00.63      | 0.4 - 0.63A    | --         | OL/08.00      | 5.5 - 8A       | 9.5 - 13.8A |
| OL/01.00      | 0.63 - 1A      | --         | OL/10.00      | 7 - 10A        | 12 - 17A    |
| OL/01.60      | 1 - 1.6A       | --         | OL/13.00      | 10 - 13A       | 17 - 22A    |
| OL/02.50      | 1.6 - 2.5A     | 2.7 - 4.3A | OL/18.00      | 13 - 18A       | 22 - 31A    |
|               |                |            | OL/25.00      | 18 - 25A       | 31 - 43A    |



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## Speed Controls



New range of 0.25kW to 22kW, single or three phase, enclosed internally mounted energy saving speed controls inverter panels supplied ready to run.

- Pre-engineered enclosures & simple controls
- Pre-programmed soft start and stop ramps
- Set the speed and press start

### REDUCE THE SPEED AND SAVE MONEY

- Reduced Energy Consumption:** Pre-set via internally mounted adjustable speed potentiometer
- Reduced CO<sup>2</sup> Emissions:** Helping larger companies hit CO<sup>2</sup> targets and reduce their carbon footprint
- Reduced Inrush Current:** Pre-set Soft Start Ramp Up Feature
- Reduced Mechanical Wear:** Soft Start, Soft Stop and Slower Running Speed
- Easy Installation:** Just wire in the Mains Supply & Connect the Motor - just like a DOL Starter!

## Features

- The latest Emotron VS Inverters
- Integral EMC filter & keypad/display fitted as standard
- Built in short circuit, overload, voltage imbalance & earth fault detection
- Compact IP54 enclosures with ventilation fans & filters
- 150% rated current for 60 seconds, 200% for 3 seconds
- Mains supply & motor connection terminals
- Simple Start & Stop external Push buttons
- Internally mounted energy saving potentiometer

## Catalogue Numbers

| Single Phase 230V Mains Supply<br>For controlling 3 Phase 230VAC Motors |      |     |            | Three Phase 400V Neutral Mains Supply<br>For controlling 3 Phase 400VAC Motors |      |      |            |
|---|------|-----|------------|--|------|------|------------|
| Catalogue No  | kW   | A   | Enc. Size  | Catalogue No   | kW   | A    | Encl. Size |
| SC1P/00.25  | 0.25 | 1.7 | 7          | SC3P/00.37   | 0.37 | 1.3  | 7          |
| SC1P/00.37  | 0.37 | 2.4 |            | SC3P/00.55   | 0.55 | 1.8  |            |
| SC1P/00.55  | 0.55 | 3.2 |            | SC3P/00.75   | 0.75 | 2.4  |            |
| SC1P/00.75  | 0.75 | 4.2 |            | SC3P/01.10   | 1.1  | 3.2  |            |
| SC1P/01.10  | 1.1  | 6.0 | 8          | SC3P/01.50   | 1.5  | 3.9  | 8          |
| SC1P/01.50  | 1.5  | 7.0 |            | SC3P/02.20   | 2.2  | 5.6  |            |
| SC1P/02.20  | 2.2  | 9.6 |            | SC3P/03.00   | 3    | 7.3  |            |
|   |      |     |            | SC3P/04.00   | 4    | 9.5  |            |
|   |      |     |            | SC3P/05.50   | 5.5  | 13   |            |
|   |      |     |            | SC3P/07.50   | 7.5  | 16.5 |            |
|   |      |     | SC3P/11.00 | 11   | 25   | 10   |            |
|   |      |     | SC3P/15.00 | 15   | 30   |      |            |
|   |      |     | SC3P/18.50 | 18.5   | 36   |      |            |
|   |      |     | SC3P/22.00 | 22   | 45   |      |            |

**Approximate Saving**  
 10% slower = 25% saving  
 20% slower = 45% saving  
 30% slower = 65% saving

All smaller sizes have vents, larger sizes also have a fan for heat dissipation



## Technical Specification

## Starters

Manufactured to British standards BSEN60947-Pt4-Sec 1. BSEN60529-1992 and to IEC947-4-1.

| Application                       | Unit            | Catalogue No  |              |          |              |          |          |          |          |          |
|-----------------------------------|-----------------|---------------|--------------|----------|--------------|----------|----------|----------|----------|----------|
|                                   |                 | DOLC1***      |              | DOLC2*** |              | DORC1*** | DORC2*** | SDEC1*** | SDEC2*** | SDEC3*** |
|                                   |                 | 3 Phase       | Single Phase | 3 Phase  | Single Phase | 3 Phase  | 3 Phase  | 3 Phase  | 3 Phase  | 3 Phase  |
| IP Rating                         | IP              | 55            | 55           | 55       | 55           | 55       | 55       | 55       | 55       | 55       |
| Coil Voltage                      | V               | 400           | 230          | 400      | 230          | 400      | 400      | 400      | 400      | 400      |
| Max. Rating                       | kW              | 5.5           | 1.5          | 7.5      | 2.2          | 5.5      | 7.5      | 11       | 15       | 22       |
|                                   | A               | 12            | 12           | 18       | 18           | 12       | 18       | 21       | 30       | 43       |
|                                   | hp              | 7.5           | 2            | 10       | 3            | 7.5      | 10       | 15       | 20       | 30       |
|                                   | Hz              | 50/60         | 50/60        | 50/60    | 50/60        | 50/60    | 50/60    | 50/60    | 50/60    | 50/60    |
| Operation in ambient temperatures |                 | -5°C to +40°C |              |          |              |          |          |          |          |          |
| Contactors                        |                 |               |              |          |              |          |          |          |          |          |
| Coil Inrush VA<br>Closed VA       |                 | 60<br>7       | 60<br>7      | 60<br>7  | 60<br>7      | 60<br>7  | 60<br>7  | 60<br>7  | 60<br>7  | 60<br>7  |
| Aux. Contacts Rating              | 415V<br>(AC15)  | 2.5           | 2.5          | 2.5      | 2.5          | 2.5      | 2.5      | 2.5      | 2.5      | 2.5      |
| Max. Cable size: Main Terminals   | mm <sup>2</sup> | 2x4           | 2x4          | 2x6      | 2x4          | 2x4      | 2x6      | 2x4      | 2x6      | 2x6      |
| Aux. Terminals                    | mm <sup>2</sup> | 2x2.5         | 2x2.5        | 2x2.5    | 2x2.5        | 2x2.5    | 2x2.5    | 2x2.5    | 2x2.5    | 2x2.5    |

## Technical Specification

## Overloads

| Catalogue No. | Rating (A)     |             | Fuse Rating     |                 | Aux Contact Rating (415V) | Overload Relays                  |  |                                   |
|---------------|----------------|-------------|-----------------|-----------------|---------------------------|----------------------------------|--|-----------------------------------|
|               | Direct-On-Line | Star Delta  | Max Fuse (Fast) | Max Fuse (Slow) |                           | Ambient Temperature Compensation | Max. Cable size: Main Terminals (mm <sup>2</sup> ) | Aux. Terminals (mm <sup>2</sup> ) |
| OL/00.25      | 0.16 - 0.25A   | --          | 1               | 0.5             | 2.5                       | -40°C to 60°C                    | 2x4  | 2x2.5                             |
| OL/00.40      | 0.25 - 0.4A    | --          | 2               | 1               | 2.5                       |                                  | 2x4  | 2x2.5                             |
| OL/00.63      | 0.4 - 0.63A    | --          | 2               | 1               | 2.5                       |                                  | 2x4  | 2x2.5                             |
| OL/01.00      | 0.63 - 1A      | --          | 4               | 2               | 2.5                       |                                  | 2x4  | 2x2.5                             |
| OL/01.60      | 1 - 1.6A       | --          | 4               | 2               | 2.5                       |                                  | 2x4  | 2x2.5                             |
| OL/02.50      | 1.6 - 2.5A     | 2.7 - 4.3A  | 6               | 4               | 2.5                       |                                  | 2x4  | 2x2.5                             |
| OL/04.00      | 2.5 - 4A       | 4.3 - 6.9A  | 10              | 6               | 2.5                       |                                  | 2x4  | 2x2.5                             |
| OL/06.00      | 4 - 6A         | 6.9 - 10.4A | 16              | 8               | 2.5                       |                                  | 2x4  | 2x2.5                             |
| OL/08.00      | 5.5 - 8A       | 9.5 - 13.8A | 20              | 12              | 2.5                       |                                  | 2x4  | 2x2.5                             |
| OL/10.00      | 7 - 10A        | 12 - 17A    | 20              | 12              | 2.5                       |                                  | 2x4  | 2x2.5                             |
| OL/13.00      | 10 - 13A       | 17 - 22A    | 25              | 16              | 2.5                       |                                  | 2x4  | 2x2.5                             |
| OL/18.00      | 13 - 18A       | 22 - 31A    | 32              | 20              | 2.5                       |                                  | 2x4  | 2x2.5                             |
| OL/25.00      | 18 - 25A       | 31 - 43A    | 50              | 25              | 2.5                       |                                  | 2x4  | 2x2.5                             |



## Technical Specification

## Speed Controls, Single Phase

| Application  | Unit | Catalogue No - Single Phase |        |        |        |        |        |        |
|--------------|------|-----------------------------|--------|--------|--------|--------|--------|--------|
|              |      | /00.25                      | /00.32 | /00.55 | /00.75 | /01.10 | /01.50 | /02.20 |
| IP Rating    | IP   | 54                          | 54     | 54     | 54     | 54     | 54     | 54     |
| Coil Voltage | V    | 230                         | 230    | 230    | 230    | 230    | 230    | 230    |
| Max. Rating  | kW   | 0.25                        | 0.37   | 0.55   | 0.75   | 1.1    | 1.5    | 2.2    |
|              | A    | 1.7                         | 2.4    | 3.2    | 4.2    | 6.0    | 7.0    | 9.6    |
| Weight       | kg   | 7.5                         | 7.5    | 7.5    | 7.5    | 10     | 10     | 10     |

## Technical Specification

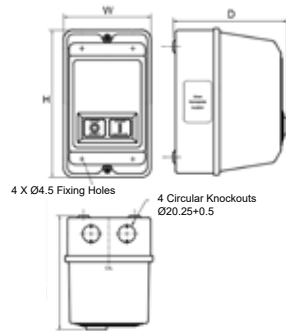
## Speed Controls, Three Phase

| Application  | Unit | Catalogue No - Three Phase |        |        |        |        |        |        |        |        |        |        |        |        |        |
|--------------|------|----------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|              |      | /00.32                     | /00.55 | /00.75 | /01.10 | /01.50 | /02.20 | /03.00 | /04.00 | /05.50 | /07.50 | /11.00 | /15.00 | /18.50 | /22.00 |
| IP Rating    | IP   | 54                         | 54     | 54     | 54     | 54     | 54     | 54     | 54     | 54     | 54     | 54     | 54     | 54     | 54     |
| Coil Voltage | V    | 400                        | 400    | 400    | 400    | 400    | 400    | 400    | 400    | 400    | 400    | 400    | 400    | 400    | 400    |
| Max. Rating  | kW   | 0.37                       | 0.55   | 0.75   | 1.1    | 1.5    | 2.2    | 3      | 4      | 5.5    | 7.5    | 11     | 15     | 18.5   | 22     |
|              | A    | 1.3                        | 1.8    | 2.4    | 3.2    | 3.9    | 5.6    | 7.3    | 9.5    | 13     | 16.5   | 25     | 30     | 36     | 45     |
| Weight       | kg   | 7.5                        | 7.5    | 7.5    | 10     | 10     | 10     | 11     | 11     | 11     | 16     | 48     | 48     | 48     | 48     |

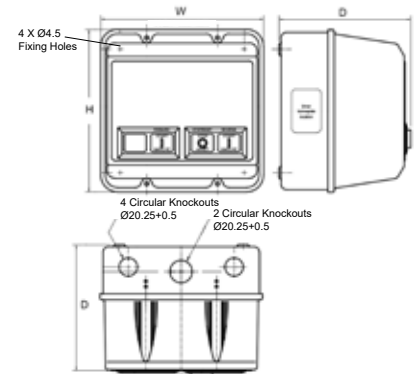
## Dimensions

| Encl. Size | Dims (mm) |     |       |
|------------|-----------|-----|-------|
|            | H         | W   | D     |
| 1          | 173       | 103 | 134   |
| 2          | 184       | 184 | 149   |
| 3          | 184       | 184 | 176   |
| 4          | 184       | 284 | 149   |
| 5          | 184       | 284 | 176   |
| 6          | 305       | 285 | 183.5 |
| 7          | 300       | 300 | 200   |
| 8          | 400       | 300 | 200   |
| 9          | 500       | 400 | 200   |
| 10         | 800       | 600 | 300   |

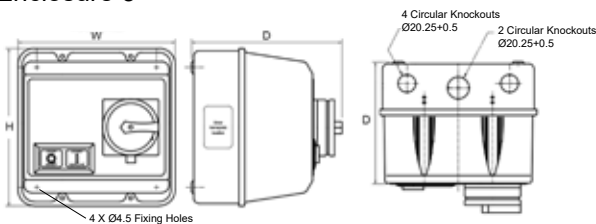
### Enclosure 1



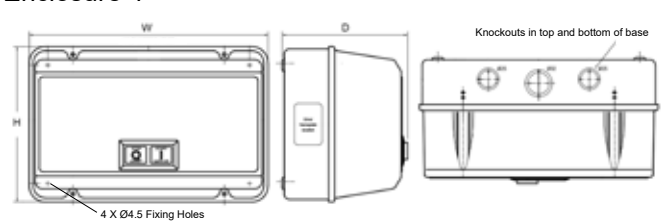
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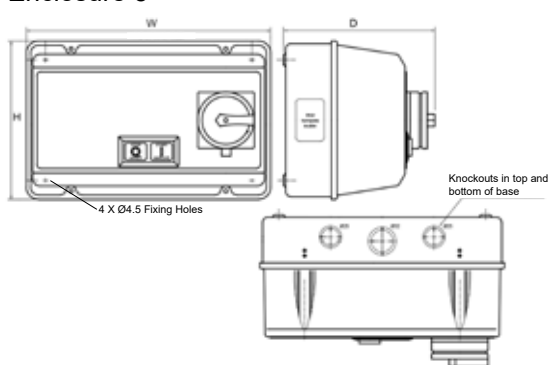
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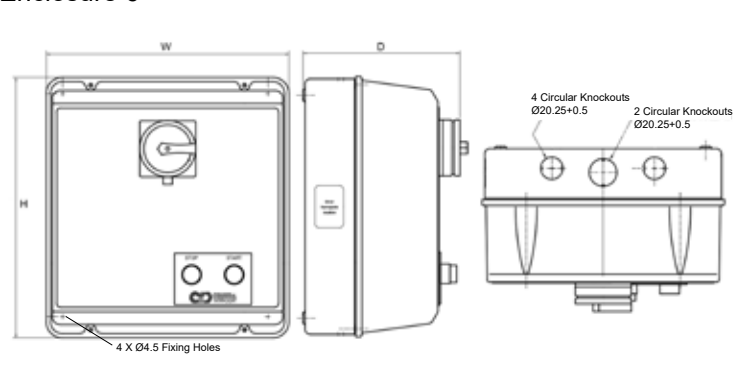
### Enclosure 4



### Enclosure 5



### Enclosure 6

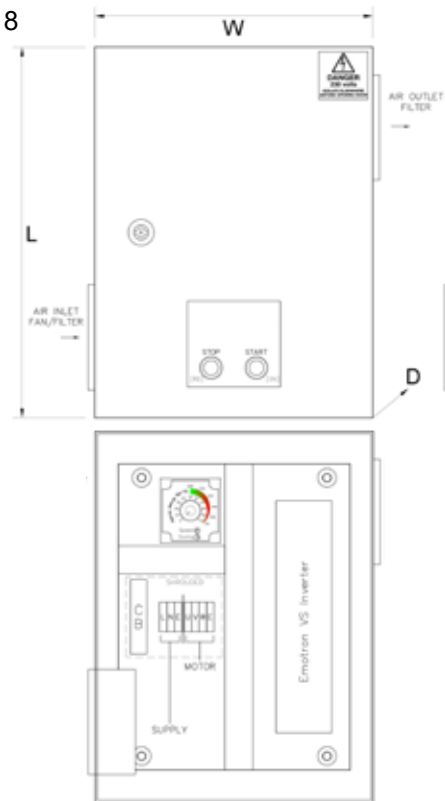


## Dimensions

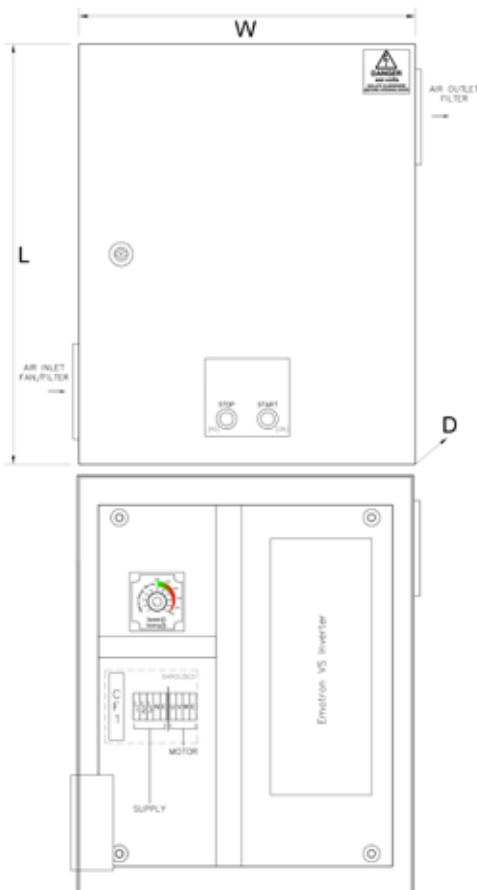
Enclosure 7



Enclosure 8



Enclosure 9



Enclosure 10

