

## MCBs and Accessories Data

### 1. Ambient Operating Temperature

With CBI Hydraulic-Magnetic Miniature Circuit Breakers, there is no effect on the fixed trip point at ambient temperature ranges from -40°C to +85°C.

### 2. Certification

Products comply to local and international standards (SANS, VC, IEC, etc.).

### 3. DC Voltage Rating

Please refer to CBI catalogues / leaflets for DC ratings.

### 4. For Reverse Feeding

Contact CBI for details.

### 5. Module Width

CBI's MCB module widths are:

- 13 mm and 26 mm dual mounting (escutcheon height 57 mm).
- 13 mm and 18 mm in DIN rail mounting (escutcheon height 45 mm), Suffix "D" (page 92)

### 6. Special Breakers

For all breakers manufactured to non-standard requirements, prices will be by quotation only

### 7. Standard Current Ratings

Ampere ratings as indicated are standard. Non-standard ratings can be provided – Prices on Request (POR).

### 8. Switch Disconnectors

All switch disconnectors must be backed up by a suitable short circuit protection device (SCPD), having the same or lower current rating and the same interrupting capacity as the switch disconnector, unless otherwise stated. Contact CBI for availability of 4 Pole switch disconnector units.

### 9. Motor Starting

Information available in Technical Section

### 10. Time Delay Curves

| Curve No.    | Time Delay    | Instantaneous (short circuit )   | Must Hold | Current Tripping Current |
|--------------|---------------|----------------------------------|-----------|--------------------------|
| 1            | Long          | High 10 – 20 x In                | 1.05 x In | 1.30 x In                |
| 2            | Medium        | Medium 5 – 10 x In               | 1.05 x In | 1.30 x In                |
| 3            | Short         | Low 3 – 5 x In                   | 1.05 x In | 1.30 x In                |
| 2,3 (LL)     | Medium        | 115 % Trip Point (Load Limiting) | 1.05 x In | 1.15 x In                |
| 9            | Long          | Medium 7 – 12 x In               | 1.05 x In | 1.30 x In                |
| OP (AC + DC) | Instantaneous | Low 3 – 5 x In                   | 1.05 x In | 1.30 x In                |
| U2 (DC)      | Medium        | Medium 6 – 11 x In               | 1.05 x In | 1.30 x In                |
| KM           | Medium        | Medium 6 – 12 x In               | 1.05 x In | 1.25 x In                |

**Note:**

Other curves available on request.

## MCBs and Accessories Data

### 1. Adjustable Current Ratings

From the FD range upwards, some breakers are fitted with adjustable magnetic trips. The suffix “V/E” types also have adjustable overload trips. “E” (electronic) types down to 50% of nominal rating and suffix “V” (mechanical) types down to 75% of nominal rating.

### 2. Calibration

CBI thermal breakers are calibrated at 40°C, unless otherwise stated. Derating for higher temperature environment to be done in accordance with derating curves.

### 3. Reverse Feeding

Contact CBI for details. Units indicated line / load should not be reverse fed.

### 4. Special Breakers

Prices for all breakers made by CBI to meet non-standard rating requirements of customer will be by quotation only.

### 5. Standard Current Ratings

Ampere ratings indicated are standard. Non-standard can be provided, on application at a surcharge of up to 20% of the next standard rating price, depending on quantity, product type and acceptance by CBI.

### 6. Switch Disconnecter Fault Ratings

The fault current ratings of CBI switch disconnectors which are fitted with shunt trips and external tripping devices are the same as those of the corresponding circuit breakers. Additional of interface barriers is mandatory.

### 7. Terminations

Consult CBI Catalogues for details.

### 8. Transient Inrush and Close Co-ordination Protection

Higher transient motor starting current associated with some high efficiency motors have created nuisance tripping problems. Consult CBI when in doubt.

### 9. DC Interrupting Capacity

Refer to CBI DC Catalogue for details.

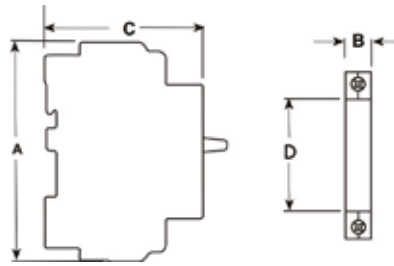
### 10. Motor Starting

In addition to cable protection functions, the CBI circuit breakers are designed for induction motor starting and protection duties. These breakers are particularly suited to direct-on-line starting applications for standard type motors in conjunction with a contactor overload combination or as a stand-alone unit.

For complete details, refer to the “Motor Starting and Protection Application Guide” and “Circuit Breaker Selection Guide for DOL Motor Starting”.

## Warranty Claims

Products may only be returned to CBI for warranty claims if all conditions under Section 7, Limitation of Liability, of CBI’s General Terms and Conditions of Sale have been met (copy available upon request).



### MCB Dimensions

| MCB Dimensions |            |           |           |                |
|----------------|------------|-----------|-----------|----------------|
| Product        | Height (A) | Width (B) | Depth (C) | Escutcheon (D) |
| QA - 1(13)     | 93         | 13        | 66        | 57             |
| QA - 2(13)     | 93         | 26        | 66        | 57             |
| QA - 3(13)     | 93         | 39        | 66        | 57             |
| QF - 1(13)     | 93         | 13        | 66        | 57             |
| QF - 2(13)     | 93         | 26        | 66        | 57             |
| QF - 3(13)     | 93         | 39        | 66        | 57             |
| QF - 4(13)     | 93         | 52        | 66        | 57             |
| QF - 1(26)     | 93         | 26        | 66        | 57             |
| QF - 2(26)     | 93         | 52        | 66        | 57             |
| QF - 3(26)     | 93         | 78        | 66        | 57             |
| QF - 4(26)     | 93         | 104       | 66        | 57             |
| QF - 1(27)-D   | 97,5       | 27        | 65        | 45             |
| QF - 2(27)-D   | 97,5       | 54        | 65        | 45             |
| QF - 3(27)-D   | 97,5       | 81        | 65        | 45             |
| QF - 4(27)-D   | 97,5       | 108       | 65        | 45             |
| QF14 A/C - D   | 93         | 36        | 65        | 45             |
| QA17 A/C       | 93         | 26        | 64,8      | 57             |
| QF17 A/C       | 93         | 26        | 64,8      | 57             |
| SM15A          | 122        | 65        | 66        | 57             |
| SM36           | 122        | 117       | 66        | 57             |

**Note: All measurements are in mm.**

## Technical Section: Motor Starting Guide 230 - 400 V

| Motor Size (kW) | Single Phase Voltage 230 Vac |                           | Three Phase Voltage 400 Vac |                           |                             |                               |
|-----------------|------------------------------|---------------------------|-----------------------------|---------------------------|-----------------------------|-------------------------------|
|                 | 5 kA                         | 5 kA                      | 15 kA                       | 25 kA                     | 35 kA                       | 65 kA                         |
| 0.12            | QF1 (5 A)*                   | QF3 (1 A)*                |                             |                           |                             |                               |
| 0.18            | QF1 (5 A)*                   | QF3 (2 A)*                |                             |                           |                             |                               |
| 0.25            | QF1 (5 A)*                   | QF3 (2 A)*                |                             |                           |                             |                               |
| 0.37            | QF1 (10 A)*                  | QF3 (5 A)*                | G15D (16 A)**               | G25D (16 A)**             | G35D (16 A)**               | F65DV 16-25 (16 A)**          |
| 0.55            | QF1 (10 A)*                  | QF3 (5 A)*                | G15D (16 A)**               | G25D (16 A)**             | G35D (16 A)**               | F65DV 16-25 (16 A)**          |
| 0.75            | QF1 (10 A)*                  | QF3 (5 A)*                | G15D (16 A)**               | G25D (16 A)**             | G35D (16 A)**               | F65DV 16-25 (16 A)**          |
| 1.1             | QF1 (15 A)*                  | QF3 (5 A)*                | G15D (16 A)**               | G25D (16 A)**             | G35D (16 A)**               | F65DV 16-25 (16 A)**          |
| 1.5             | QF1 (15 A)*                  | QF3 (10 A)*               | G15D (16 A)**               | G25D (16 A)**             | G35D (16 A)**               | F65DV 16-25 (16 A)**          |
| 1.8             | QF1 (20 A)*                  | QF3 (10 A)*               | G15D (16 A)**               | G25D (16 A)**             | G35D (16 A)**               | F65DV 16-25 (16 A)**          |
| 2.2             | QF1 (20 A)*                  | QF3 (10 A)*               | G15D (16 A)**               | G25D (16 A)**             | G35D (16 A)**               | F65DV 16-25 (16 A)**          |
| 3               | QF1 (25 A)*                  | QF3 (10 A)*               | G15D (16 A)**               | G25D (16 A)**             | G35D (16 A)**               | F65DV 16-25 (16 A)**          |
| 3.7             | QF1 (30 A)*                  | QF3 (15 A)*               | G15D (16 A)**               | G25D (16 A)**             | G35D (16 A)**               | F65DV 16-25 (16 A)**          |
| 4               | QF1 (30 A)*                  | QF3 (15 A)*               | G15D (16 A)**               | G25D (16 A)**             | G35D (16 A)**               | F65DV 16-25 (16 A)**          |
| 4.5             | QF1 (35 A)*                  | QF3 (20 A)*               | G15D (20 A)                 | G25D (20 A)               | G35D (20 A)                 | F65DV 16-25 (20 A)            |
| 5.2             | QF1 (40 A)*                  | QF3 (20 A)*               | G15D (20 A)                 | G25D (20 A)               | G35D (20 A)                 | F65DV 16-25 (20 A)            |
| 5.5             | QF1 (45 A)*                  | QF3 (20 A)*               | G15D (20 A)                 | G25D (20 A)               | G35D (20 A)                 | F65DV 16-25 (20 A)            |
| 6               | QF1 (50 A)*                  | QF3 (20 A)*               | G15D (20 A)                 | G25D (20 A)               | G35D (20 A)                 | F65DV 16-25 (20 A)            |
| 7               | QF1 (60 A)*                  | QF3 (20 A)*               | G15D (32 A)                 | G25D (32 A)               | G35D (32 A)                 | F65DV 25-40 (32 A)            |
| 7.5             | QF1 (70 A)*                  | QF3 (25 A)*               | G15D (32 A)                 | G25D (32 A)               | G35D (32 A)                 | F65DV 25-40 (32 A)            |
| 9.3             | QF1 (80 A)*                  | QF3 (30 A)*               | G15D (40 A)                 | G25D (40 A)               | G35D (40 A)                 | F65DV 25-40 (40 A)            |
| 11              | QF1 (100 A)*                 | QF3 (35 A)*               | G15D (40 A)                 | G25D (40 A)               | G35D (40 A)                 | F65DV 25-40 (40 A)            |
| 15              |                              | QF3 (45 A)*               | G15D (50 A)                 | G25D (50 A)               | G35D (50 A)                 | F65DV 40-63 (63 A)            |
| 18.5            |                              | QF3 (60 A)*               | G15D (63 A)                 | G25D (63 A)               | G35D (63 A)                 | F65DV 80-125 / 63-100 (80 A)  |
| 22              |                              | QF3 (70 A)*               | G15D (80 A)                 | G25D (80 A)               | G35D (80 A)                 | F65DV 80-125 / 63-100 (100 A) |
| 26              |                              | QF3 (80 A)*               | G15D (100 A)                | G25D (100 A)              | G35D (100 A)                | F65DV 80-125 / 63-100 (100 A) |
| 30              |                              | QF3 (100 A)*              | G15D (100 A)                | G25D (100 A)              | G35D (100 A)                | F65DV 80-125 (125 A)          |
| 37              |                              | QF3 (125 A)*              | G15D (125 A)                | G25D (125 A)              | G35D (125 A)                | F65DV 80-125 (125 A)          |
| 45              |                              | QF3 (125 A)               | G15D (125 A)                | G25D (125 A)              | G35D (125 A)                | F65DV 160-250 (175 A)         |
| 55              |                              | F15D (175 A)              | F25D (175 A)                | F35D (175 A)              | F65DV 160-250 (175 A)       |                               |
| 75              |                              | F15D (225 A)              | F25D (225 A)                | F35D (225 A)              | F65DV 160-250 (225 A)       |                               |
| 90              |                              | F15D 250 A / F25D (250 A) | F25D 250 A / F35D (250 A)   | F35D 250 A / F65D (250 A) | F65DV 250 A / K65DE (250 A) |                               |
| 110             |                              | K25D (350 A)              | K25D (350 A)                | K35D (350 A)              | K36D (350 A)                |                               |
| 132             |                              | K25D (400 A)              | K25D (400 A)                | K35D (400 A)              | K65D (400 A)                |                               |
| 160             |                              | K35D (500 A)              | K35D (500 A)                | K35D (500 A)              | K70D (500 A)                |                               |
| 200             |                              | K35D (600 A)              | K35D (600 A)                | K35D (600 A)              | K70D (600 A)                |                               |
| 250             |                              | L35DE 800 (700 A)         | L35DE 800 (700 A)           | L35DE 800 (700 A)         | L70DE 800 (700 A)           |                               |
| 315             |                              | N85DE 1000 (900 A)        | N85DE 1000 (900 A)          | N85DE 1000 (900 A)        | N85DE 1000 (900 A)          |                               |
| 355             |                              | N85DE 1000 (1000 A)       | N85DE 1000 (1000 A)         | N85DE 1000 (1000 A)       | N85DE 1000 (1000 A)         |                               |
| 400             |                              | N85DE 1250 (1200 A)       | N85DE 1250 (1200 A)         | N85DE 1250 (1200 A)       | N85DE 1250 (1200 A)         |                               |
| 450             |                              | N85DE 1250 (1250 A)       | N85DE 1250 (1250 A)         | N85DE 1250 (1250 A)       | N85DE 1250 (1250 A)         |                               |
| 500             |                              | N85DE 1600 (1400 A)       | N85DE 1600 (1400 A)         | N85DE 1600 (1400 A)       | N85DE 1600 (1400 A)         |                               |
| 560             |                              | N85DE 1600 (1600 A)       | N85DE 1600 (1600 A)         | N85DE 1600 (1600 A)       | N85DE 1600 (1600 A)         |                               |
| 630             |                              | ACB2000CM (1750 A)        | ACB2000CM (1750 A)          | ACB2000CM (1750 A)        | ACB2000CM (1750 A)          |                               |
| 710             |                              | ACB2000CM (1900 A)        | ACB2000CM (1900 A)          | ACB2000CM (1900 A)        | ACB2000CM (1900 A)          |                               |

Note: \* External overload protection required. Curve 1 circuit breakers only  
\*\* Locked motor protection only

Notes:  
 1. All information in this table is for reference and selection purposes only, and only direct line (DOL) starting  
 2. Breaker selection is based on 4 Pole three phase squirrel cage motors and certain deviations may be encountered for different motor manufacturers  
 3. Circuit breaker settings are based on rated motor current multiplied by 1.6 to prevent starting current from exceeding the instantaneous pick-up current of the circuit breaker  
 4. For complete details refer to the "Circuit Breaker Selection Guide for DOL Motor Starting"  
 1 These are adjustable breakers and the current in ( ) is the Ampere value that these breakers must be set at  
 \*\* External overload protection required. Curve 1 circuit breakers only  
 \*\* Locked motor protection only

## DOL: Contactor - Overload - MCCB Selection

Note: Customer to confirm motor FLC on site and adapt where necessary

| Motor Rating<br>3PH<br>kW | 400 V<br>HP | FLC<br>AC3<br>A | Contactor<br>Type<br>MCM | Rating<br>AC3<br>A | OL Relay<br>Type<br>OR | Setting<br>Range<br>A | MCCB | Rating<br>A | Cable<br>Size<br>mm <sup>2</sup> |
|---------------------------|-------------|-----------------|--------------------------|--------------------|------------------------|-----------------------|------|-------------|----------------------------------|
| 5.5                       | 7.5         | 11.3            | ST20                     | 18                 | THT18-11               | 9 to 13 A             | G15D | 20          | 2.5                              |
| 7.5                       | 10          | 15.2            | ST20                     | 18                 | THT18-15               | 12 to 18 A            | G15D | 40          | 2.5                              |
| 11                        | 15          | 21.7            | ST35                     | 40                 | THT25-22               | 18 to 26 A            | G15D | 40          | 4                                |
| 15                        | 20          | 29.3            | ST35                     | 40                 | THT50-29               | 24 to 34 A            | G15D | 50          | 10                               |
| 18.5                      | 25          | 36              | ST35                     | 40                 | THT50-29               | 24 to 34 A            | G15D | 63          | 10                               |
| 22                        | 30          | 41              | ST50                     | 50                 | THT50-42               | 34 to 50 A            | G15D | 100         | 10                               |
| 30                        | 40          | 55              | ST65                     | 65                 | THT65-54               | 43 to 65 A            | G15D | 100         | 16                               |
| 37                        | 50          | 68              | ST80                     | 85                 | THT100-67              | 54 to 80 A            | G25D | 125         | 25                               |
| 45                        | 60          | 81              | ST80                     | 85                 | THT100-82              | 65 to 100 A           | G25D | 125         | 35                               |
| 55                        | 75          | 99              | ST100                    | 100                | THT100-95              | 85 to 105 A           | G25D | 175         | 35                               |
| 75                        | 100         | 134             | SN150                    | 150                | THN120-125             | 100 to 150 A          | F25D | 225         | 50                               |
| 90                        | 125         | 161             | SN180                    | 185                | THN220-150             | 120 to 180 A          | F25D | 250         | 95                               |
| 110                       | 150         | 196             | SN220                    | 225                | THN220-210             | 170 to 250 A          | K25D | 350         | 95                               |
| 132                       | 180         | 231             | SN300                    | 225                | THN400-250             | 200 to 300 A          | K25D | 400         | 150                              |
| 160                       | 220         | 279             | SN300                    | 330                | THN400-330             | 260 to 400 A          | K35D | 500         | 185                              |
| 200                       | 270         | 349             | SN400                    | 400                | THN400-330             | 260 to 400 A          | K35D | 600         | 240                              |

| Motor Rating<br>3PH<br>kW | 500 V<br>HP | FLC<br>AC3<br>A | Contactor<br>Type<br>MCM | Rating<br>AC3<br>A | OL Relay<br>Type<br>OR | Setting<br>Range<br>A | MCCB | Rating<br>A | Cable<br>Size<br>mm <sup>2</sup> |
|---------------------------|-------------|-----------------|--------------------------|--------------------|------------------------|-----------------------|------|-------------|----------------------------------|
| 5.5                       | 7.5         | 9               | ST20                     | 13                 | THT18-9                | 7 to 11 A             | G15D | 16          | 1.5                              |
| 7.5                       | 10          | 12.1            | ST20                     | 13                 | THT18-11               | 9 to 13 A             | G15D | 20          | 2.5                              |
| 11                        | 15          | 17.4            | ST35                     | 32                 | THT25-22               | 18 to 26 A            | G15D | 40          | 2.5                              |
| 15                        | 20          | 23.4            | ST35                     | 32                 | THT25-22               | 18 to 26 A            | G15D | 40          | 6                                |
| 18.5                      | 25          | 28.9            | ST35                     | 32                 | THT50-29               | 24 to 34 A            | G15D | 50          | 6                                |
| 22                        | 30          | 33              | ST50                     | 43                 | THT50-29               | 24 to 34 A            | G15D | 50          | 10                               |
| 30                        | 40          | 44              | ST65                     | 60                 | THT65-42               | 34 to 50 A            | G15D | 100         | 10                               |
| 37                        | 50          | 54              | ST80                     | 75                 | THT65-54               | 43 to 65 A            | G15D | 100         | 16                               |
| 45                        | 60          | 65              | ST80                     | 75                 | THT100-67              | 54 to 80 A            | G15D | 125         | 25                               |
| 55                        | 75          | 79              | ST100                    | 85                 | THT100-82              | 65 to 100 A           | G15D | 125         | 35                               |
| 75                        | 100         | 107             | SN150                    | 100                | THN120-125             | 100 to 150 A          | F35D | 175         | 50                               |
| 90                        | 125         | 129             | SN180                    | 185                | THN220-150             | 120 to 180 A          | F35D | 200         | 50                               |
| 110                       | 150         | 157             | SN180                    | 180                | THN220-150             | 120 to 180 A          | K35D | 250         | 95                               |
| 132                       | 180         | 184             | SN220                    | 200                | THN220-210             | 140 to 250 A          | K35D | 300         | 95                               |
| 160                       | 220         | 224             | SN300                    | 280                | THN400-250             | 200 to 300 A          | K35D | 350         | 150                              |
| 200                       | 270         | 279             | SN400                    | 350                | THN400-330             | 260 to 400 A          | K35D | 400         | 185                              |

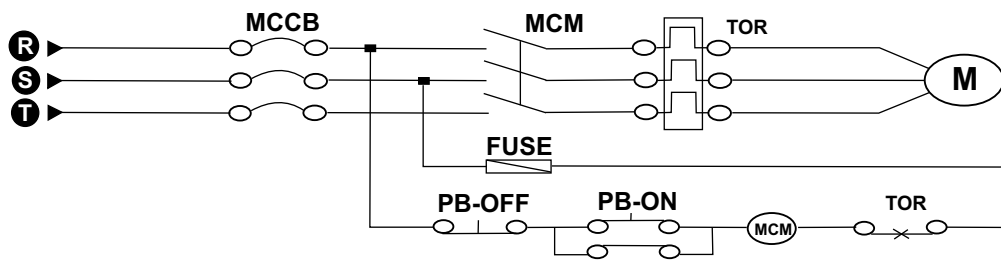
## Star Delta Starting: Contactor - Overload - MCCB Selection

Note: Customer to confirm motor FLC on site and adapt where necessary

| Motor Rating 3PH kW | 400 V HP | FLC AC3 A | Main Contactor Type MCM | Rating AC3 A | Delta Contactor Type MCD | Star Contactor Type MCY | TOR OL Relay Type CMT | Setting Range A | MCCB | Rating A | Cable Size mm <sup>2</sup> |
|---------------------|----------|-----------|-------------------------|--------------|--------------------------|-------------------------|-----------------------|-----------------|------|----------|----------------------------|
| 5.5                 | 7.5      | 11.3      | ST20                    | 18           | ST20                     | ST20                    | THT18-11              | 9 to 13 A       | G15D | 20       | 2.5                        |
| 7.5                 | 10       | 15.2      | ST20                    | 18           | ST20                     | ST20                    | THT18-15              | 12 to 18 A      | G15D | 40       | 2.5                        |
| 11                  | 15       | 21.7      | ST35                    | 18           | ST35                     | ST20                    | THT25-22              | 18 to 26 A      | G15D | 40       | 4                          |
| 15                  | 20       | 29.3      | ST35                    | 22           | ST35                     | ST20                    | THT50-35              | 30 to 40 A      | G15D | 63       | 10                         |
| 18.5                | 25       | 36        | ST35                    | 22           | ST35                     | ST20                    | THT50-42              | 34 to 50 A      | G15D | 80       | 10                         |
| 22                  | 30       | 41        | ST50                    | 40           | ST50                     | ST35                    | THT50-42              | 34 to 50 A      | G15D | 100      | 10                         |
| 30                  | 40       | 55        | ST65                    | 40           | ST65                     | ST35                    | THT65-54              | 43 to 65 A      | G15D | 125      | 16                         |
| 37                  | 50       | 68        | ST80                    | 50           | ST80                     | ST50                    | THT100-67             | 54 to 80 A      | F15D | 150      | 25                         |
| 45                  | 60       | 81        | ST80                    | 65           | ST80                     | ST50                    | THT100-82             | 65 to 100 A     | F15D | 175      | 35                         |
| 55                  | 75       | 99        | ST100                   | 65           | ST100                    | ST50                    | THN120-105            | 85 to 125 A     | F15D | 200      | 35                         |
| 75                  | 100      | 134       | SN150                   | 85           | SN150                    | ST80                    | THN120-125            | 100 to 150 A    | K25D | 300      | 50                         |
| 90                  | 125      | 161       | SN180                   | 105          | SN180                    | ST100                   | THN220-150            | 120 to 180 A    | K25D | 350      | 95                         |
| 110                 | 150      | 196       | SN220                   | 130          | SN220                    | SN150                   | THN220-210            | 170 to 250 A    | K25D | 400      | 95                         |
| 132                 | 180      | 231       | SN300                   | 150          | SN300                    | SN150                   | THN400-250            | 200 to 300 A    | K35D | 500      | 150                        |
| 160                 | 220      | 279       | SN300                   | 185          | SN300                    | SN150                   | THN400-330            | 260 to 400 A    | K35D | 630      | 185                        |

| Motor Rating 3PH kW | 500 V HP | FLC AC3 A | Contactor Type MCM | Rating AC3 A | Delta Contactor Type MCD | Star Contactor Type MCY | OL Relay Type OR | Setting Range A | MCCB | Rating A | Cable Size mm <sup>2</sup> |
|---------------------|----------|-----------|--------------------|--------------|--------------------------|-------------------------|------------------|-----------------|------|----------|----------------------------|
| 5.5                 | 7.5      | 9         | ST20               | 17           | ST20                     | ST20                    | THT18-11         | 9 to 13 A       | G15D | 20       | 1.5                        |
| 7.5                 | 10       | 12.1      | ST20               | 17           | ST20                     | ST20                    | THT18-15         | 12 to 18 A      | G15D | 32       | 2.5                        |
| 11                  | 15       | 17.4      | ST25               | 24           | ST25                     | ST20                    | THT25-22         | 18 to 25 A      | G15D | 40       | 2.5                        |
| 15                  | 20       | 23.4      | ST25               | 24           | ST25                     | ST20                    | THT25-22         | 18 to 26 A      | G15D | 40       | 6                          |
| 18.5                | 25       | 28.9      | ST35               | 32           | ST35                     | ST20                    | THT50-35         | 30 to 40 A      | G15D | 63       | 6                          |
| 22                  | 30       | 33        | ST35               | 32           | ST35                     | ST20                    | THT50-35         | 30 to 40 A      | G15D | 63       | 10                         |
| 30                  | 40       | 44        | ST65               | 60           | ST65                     | ST35                    | THT50-42         | 34 to 50 A      | G15D | 80       | 10                         |
| 37                  | 50       | 54        | ST65               | 60           | ST65                     | ST35                    | THT65-54         | 43 to 65 A      | G15D | 125      | 16                         |
| 45                  | 60       | 65        | ST80               | 75           | ST80                     | ST50                    | THT100-67        | 54 to 80 A      | F15D | 150      | 25                         |
| 55                  | 75       | 79        | ST100              | 85           | ST100                    | ST50                    | THT100-82        | 65 to 100 A     | F15D | 175      | 35                         |
| 75                  | 100      | 107       | SN150              | 140          | SN150                    | ST100                   | THN120-105       | 85 to 125 A     | F15D | 200      | 50                         |
| 90                  | 125      | 129       | SN150              | 140          | SN150                    | ST100                   | THN220-150       | 120 to 180 A    | K25D | 300      | 50                         |
| 110                 | 150      | 157       | SN180              | 180          | SN180                    | ST100                   | THN220-150       | 120 to 180 A    | K25D | 350      | 95                         |
| 132                 | 180      | 184       | SN220              | 200          | SN220                    | SN125                   | THN220-210       | 170 to 250 A    | K25D | 400      | 95                         |
| 160                 | 220      | 224       | SN300              | 250          | SN300                    | SN150                   | THN400-250       | 200 to 300 A    | K35D | 500      | 150                        |

## DOL Starting (Full Load)

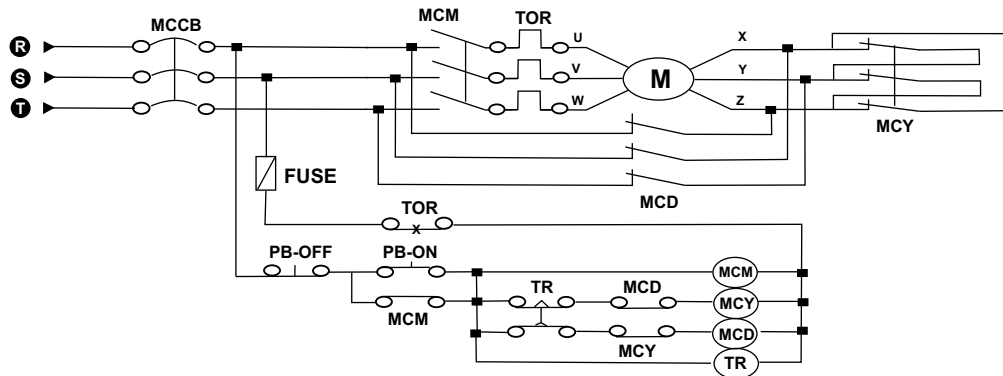


### Conditions

1. The load shall be an Induction Motor with 3 phase and 4 poles
2. The overload relay setting range is selected according to the full load current of the motor
3. The cross-section area of the cable is within the value that is connectable to the motor starter
4. The circuit breaker (MCCB) is for cable protection

The breaking capacity of the MCCB should be reviewed according to the site conditions.

## Star Delta Starting Y: Δ



### Conditions



1. The load shall be a squirrel cage motor with 3 phase and 4 poles
2. The overload relay setting range is selected according to the full load current of the motor
3. When the Thermal Overload Relay (TOR) is placed in the area shown the setting range should be divided by  $\sqrt{3}$  (0.58)
4. The cross-section area of the cable is within the value that is connectable to the motor starter.
5. Thermal Overload Relay (TOR) mounting:\*
  - Separately mountable with an optional mounting unit
  - Directly mountable when placed in the area shown in the dotted line

The breaking capacity of the MCCB should be reviewed according to the site conditions.

### Note:

\* Contact CBI for availability

## Terminations

|                    |   |                    |   |
|--------------------|---|--------------------|---|
| <b>J50 / J25S</b>  |   | <b>K25D / K35D</b> |   |
| G1                 | Ratings 15 - 150 A<br>         | G4B                | Supplied as Standard<br>(No spares)<br><br>x 3 of each              |
| <b>L20B / L40B</b> |   | <b>J25S / FD</b>   |   |
| G4B                | <br>x 3 of each<br><br>4120166 | G4B                | Ratings 15 - 250 A<br><br>x 1 of each<br>x 2 of each<br><br>FSAX001 |
| <b>N50D / N70D</b> |   | <b>K50D</b>        |   |
| G4                 |                              | G4B                | Supplied as Standard<br>(No spares)<br>                           |

### Notes:

Refer to product specific pages for actual terminal types - may not be available as separate items if supplied as standard.

For relevant current carrying capacities, please refer to relevant products.

| <b>MCCB</b>                |     |
|----------------------------|-----|
| <b>Terminal Bolt Sizes</b> |     |
| J25S                       | M8  |
| L20 / L40B                 | M12 |
| G15D / 25D                 | M8  |
| G35D                       | M8  |
| F15 / 25D                  | M8  |
| F35D                       | M8  |
| K25 / 35D                  | M12 |
| L35 / 40D                  | M12 |
| MB                         | M12 |
| N85D                       | M12 |
| F65DV                      | M12 |



**This is a series connected (cascading) system  
Replacement of the circuit breakers other than those of identical types  
and ratings should be referred to the circuit breaker manufacturer**

### Cascading Tables

**Note:**

**Any current limiting by the cables should be taken into account**

**The cascading table is applied in practice as follows:**

1. Determine the maximum prospective short circuit fault current level at the point of installation of the upstream breaker in the cascade
2. Moving from the left side towards the right side of the cascading table, in the **top** row, select an upstream breaker whose breaking capacity is equal to or greater than determined by (1.) above
3. Determine the prospective short circuit current at the installation point of the **downstream** breaker, taking into account only the current limiting effect of any cable that is connected between the upstream and downstream breakers. Any current limiting by the upstream breaker should be ignored for this purpose.
4. From the first column on the left of the cascading table, select the **row** that represents a short circuit current that is equal to or higher than this latter short circuit current
5. The **downstream** breaker suitable for the cascading application will then be found at the intersection of the row from (2.) above, and the column from (4.) above

Due to constant research and development, CBI reserves the right to make changes, modifications and extensions to these cascading tables without prior notice.

**No substitute of any alternative product is allowed**

**Care must be taken in replacing older product versions or obsolete ranges**



## Cascading Table (CBI MCBs and MCCBs) Upstream Circuit Breakers

| No of Poles                                    | G15D / F15D |           | G25D / F25D |           | G35D / F35D |             | F65DV       |            | K25D         | K35D<br>K50DE<br>K35DE | K70DE<br>K65DE | L70DE<br>L50DE<br>L35DE | Busbar<br>Rating<br>kArms |
|--|-------------|-----------|-------------|-----------|-------------|-------------|-------------|------------|--------------|------------------------|----------------|-------------------------|---------------------------|
|  | 15          | 250       | 25          | 250       | 35          | 250         | 100         | 250        | 25           | 35                     | 65             | 65                      |                           |
| <b>Fault Level kA</b>                          | 15          | 250       | 25          | 250       | 35          | 250         | 100         | 250        | 400          | 400 / 630              | 400 / 630      | 800                     |                           |
| <b>Amp Rating</b>                              | 125         | 250       | 125         | 250       | 125         | 250         | 100         | 250        | 400          | 400 / 630              | 400 / 630      | 800                     |                           |
| <b>Protective Downstream Fault Level kArms</b> | 65          |           |             |           |             |             | F15D        | F15D       |              |                        |                |                         | 20                        |
|  | 50          |           |             |           |             |             | F15D        | F15D       |              |                        |                |                         | 20                        |
|  | 35          |           |             |           | QF1         | F15D<br>QF1 | F15D<br>QF1 | F15D       |              |                        |                | G15D<br>F15D            | 15                        |
|  | 30          |           |             |           | QF1<br>QF   | F15D<br>QF  | QF1<br>QF   | F15D<br>QF |              | G15D<br>F15D           | G15D<br>F15D   | G15D<br>F15D            | 15                        |
|  | 25          |           |             | QF1<br>QF | F15D<br>QF  | QF1<br>QF   | F15D<br>QF  | QF         | G15D<br>F15D | G15D<br>F15D           | G15D<br>F15D   | G15D<br>F15D            | 15                        |
|  | 20          |           |             | QF<br>QF  | QF1<br>QF   | QF<br>QF    | QF1<br>QF   | QF1<br>QF  | G15D<br>F15D | G15D<br>F15D           | QF1            | G15D<br>F15D            | 15                        |
| 15   | QF          | QF1<br>QF | QF<br>QF    | QF1<br>QF | QF<br>QF    | QF1<br>QF   | QF1<br>QF   | QF1        | QF1          | QF1                    | QF1            | 10                      |                           |
| 10   | QF          | QF        | QF          | QF        | QF          | QF          | QF          | QF         | QF           | QF1                    | QF1            | 10                      |                           |

Notes:

QF = QF(13), QF(18), QF(26)  
 QF1 = Single pole circuit breakers  
 QF = Single, double or triple pole circuit breakers

| Type | Mounting Type | Escutcheon, mm |
|------|---------------|----------------|
| QF   | Mini / DIN    | 57             |
|      | DIN           | 45             |







Review: June 2020



For more product information regarding cascading, please contact CBI

## Mitsubishi DOL Starting

| Mitsubishi DOL  |   |  |
|-----------------|---|--|
| Motor Size (kW) | Three phase voltage - 400 Vac                         | Three phase voltage - 525 Vac                          |
| 0.37            | NF63-HVA 10 A, NV63-HVA 16 A, NV125-SVA/HVA 16 A      | NF63-HVA 10 A, NV63-HVA 16 A, NV125-SVA/HVA 16 A       |
| 0.55            | NF63-HVA 10 A, NV63-HVA 16 A, NV125-SVA/HVA 16 A      | NF63-HVA 10 A, NV63-HVA 16 A, NV125-SVA/HVA 16 A       |
| 0.75            | NF63-HVA 10 A, NV63-HVA 16 A, NV125-SVA/HVA 16 A      | NF63-HVA 10 A, NV63-HVA 16 A, NV125-SVA/HVA 16 A       |
| 1.1             | NF63-HVA 10 A, NV63-HVA 16 A, NV125-SVA/HVA 16 A      | NF63-HVA 10 A, NV63-HVA 16 A, NV125-SVA/HVA 16 A       |
| 1.5             | NF63-HVA 10 A, NV63-HVA 16 A, NV125-SVA/HVA 16 A      | NF63-HVA 10 A, NV63-HVA 16 A, NV125-SVA/HVA 16 A       |
| 2.2             | NF63-HVA 10 A, NV63-HVA 16 A, NV125-SVA/HVA 16 A      | NF63-HVA 10 A, NV63-HVA 16 A, NV125-SVA/HVA 16 A       |
| 3               | NF63-HVA 10 A, NV63-HVA 16 A, NV125-SVA/HVA 16 A      | NF63-HVA 10 A, NV63-HVA 16 A, NV125-SVA/HVA 16 A       |
| 4               | NF63-HVA 16 A, NF125-SVA/HVA 16 A, NV125-SVA/HVA 16 A | NF63-HVA 10 A, NV63-HVA 16 A, NV125-SVA/HVA 16 A       |
| 5.5             | NF63-HVA 20 A, NF125-SVA/HVA 20 A, NV125-SVA/HVA 20 A | NF63-HVA 16 A, NF125-HVA 16 A, NV125-SVA/HVA 16 A      |
| 7.5             | NF63-HVA 32 A, NF125-SVA/HVA 32 A, NV125-SVA/HVA 32 A | NF63-HVA20 A, NF125-HVA 20 A, NV125-SVA/HVA 20 A       |
| 11              | NF63-HVA 40 A, NF125-SVA/HVA 40 A, NV125-SVA/HVA 40 A | NF63-HVA32 A, NF125-HVA 32 A, NV125-SVA/HVA 32 A       |
| 15              | NF63-HVA 50 A, NF125-SVA/HVA 50 A, NV125-SVA/HVA 50 A | NF63-HVA40 A, NF125-HVA 40 A, NV125-SVA/HVA 40 A       |
| 18.5            | NF63-HVA 63 A, NF125-SVA/HVA 63 A, NV125-SVA/HVA 63 A | NF63-HVA50 A, NF125-HVA 50 A, NV125-SVA/HVA 50 A       |
| 22              | NF125-SVA/HVA 80 A, NV125-SVA/HVA 80 A                | NF63-HVA50 A, NF125-HVA 50 A, NV125-SVA/HVA 50 A       |
| 30              | NF125-SVA/HVA 100 A, NV125-SVA/HVA 100 A              | NF125-SVA/HVA 80 A, NV125-SVA/HVA 80 A                 |
| 37              | NF250-SVA/HVA 125 A, NV125-SVA/HVA 125 A              | NF125-SVA/HVA 80 A, NV125-SVA/HVA 80 A                 |
| 45              | NF250-SVA/HVA 125 A, NV125-SVA/HVA 125 A              | NF125-SVA/HVA 100 A, NV125-SVA/HVA 100 A               |
| 55              | NF250-SVA/HVA 175 A, NV250-SVA/HVA 175 A              | NF250-SVA/HVA 125 A, NV250-SVA/HVA 125 A               |
| 75              | NF250-SVA/HVA 225 A, NV250-SVA/HVA 225 A              | NF250-SVA/HVA 175 A, NV250-SVA/HVA 175 A               |
| 90              | NF250-SVA/HVA 250 A, NF400-SW 250 A, NV400-SW 250 A   | NF250-SVA/HVA 200 A, NV250-SVA/HVA 200 A               |
| 110             | NF400-CW/SW 350 A, NV400-SW 350 A                     | NF250-SVA/HVA 250 A, NF400-CW/SW 250 A, NV400-SW 250 A |
| 132             | NF400-CW/SW 400 A, NV400-SW 400 A                     | NF400-CW/SW 300 A, NV400-SW 300 A                      |
| 160             | NF630-CW/SW 500 A, NV630-SW 500 A                     | NF400-SW 350 A, NV400-SW 350 A                         |
| 200             | NF630-CW/SW 600 A, NV630-SW 600 A                     | NF630-CW/SW 500 A, NV630-SW 500 A                      |
| 250             | NF800-CEW/SEW (700 A)*, NV800-SEW (700 A)*            | NF630-CW/SW 600 A, NV630-SW 600 A                      |
| 315             | NF1000-SEW (900 A)*, AE1000-SW (900 A)*               | NF800-CEW/SEW (700 A)*, NV800-SEW (700 A)*             |
| 355             | NF1000-SEW (1000 A)*, AE1000-SW (1000 A)*             | NF800-CEW/SEW (800 A)*, NV800-SEW (800 A)*             |
| 400             | NF1250-SEW (1200 A)*, AE1250-SW (1200 A)*             | NF1000-SEW (900 A)*, AE1000-SW (900 A)*                |
| 450             | NF1250-SEW (1250 A)*, AE1250-SW (1250 A)*             | NF1000-SEW (1000 A)*, AE1000-SW (1000 A)*              |
| 500             | NF1600-SEW (1400 A)*, AE1600-SW (1400 A)*             | NF1250-SEW (1200 A)*, AE1250-SW (1100 A)*              |
| 560             | NF1600-SEW (1600 A)*, AE1600-SW (1600 A)*             | NF1250-SEW (1200 A)*, AE1250-SW (1200 A)*              |
| 630             | AE2000-SW/SWA (1750 A)*                               | NF1600-SEW (1400 A)*, AE1600-SW (1300 A)*              |
| 710             | AE2000-SW/SWA (1900 A)*                               | NF1600-SEW (1500 A)*, AE1600-SW (1500 A)*              |

## Torque Settings MCCB

| Terminal Screw | Screw Diameter      | M5  | M6  | M8  |  |   | M12   |
|----------------|---------------------|---|---|---|--|---|---|
|                | Shape               |  |  |  |  |  |  |
|                | Fastening Torque Nm | 2 - 3   | 2.5 - 4.5   | 5.0 - 7.0   | 8.0 - 13.0   | 8.0 - 13.0  | 40.0 - 50.0   |

| Solderless Terminal Screw | Screw Diameter      | M5  | M10  | M16         | M18         | M20         | M24         |
|---------------------------|---------------------|---|--|-------------|-------------|-------------|-------------|
|                           | Shape               |  |  |             |             |             |             |
|                           | Fastening Torque Nm | 4.0 - 6.0   | 3.5 - 4.5  | 20.0 - 30.0 | 30.0 - 40.0 | 30.0 - 40.0 | 50.0 - 60.0 |

## AGREED GENERAL TERMS & CONDITIONS OF SALES

This document is an abridged version of the general terms and conditions of sale of Circuit Breaker Industries (Pty) Ltd ("CBI") and serves only as a summary of the main provision of CBI's general terms and conditions of sale. The latter shall prevail in all circumstances should there be any conflict between them and this abridged version of the general terms and conditions of sale. A copy of the general terms and conditions of sale is available upon request.

### 1. APPLICABILITY, PRECEDENCE

- 1.1 This Agreement (as defined below):
- 1.1.1 shall govern all transactions for the sale of Goods (as defined below), by:
- 1.1.1.1 Circuit Breaker Industries (Pty) Ltd t/a CBI-Electric: Low Voltage (registration number 1943/15747/07) of 1 Tripswitch Drive, Elandsfontein, Johannesburg, South Africa (hereinafter the "Seller", as further defined below), to
- 1.1.1.2 the legal/natural person/s identified and described on the Buyer Application Form (the "BAF") hereto (hereinafter the "Buyer", as further defined below);
- 1.1.2 will only be amended or varied or cancelled or replaced or waived to the extent expressly agreed to in writing and signed by the authorised representatives of each Party;
- 1.1.3 shall supersede, overrule and prevail over any terms and conditions of contract of the Buyer, either as submitted in documentary form to the Seller or found elsewhere, including on any website, unless specifically otherwise agreed between the Parties in writing.
- 1.1.4 If there are any discrepancies or conflict between the provisions of the terms and conditions contained in clauses 1 to 21 hereof, and:
- 1.1.4.1 any annexure/s hereto (clause 23 and further), the provisions of the annexure/s shall prevail;
- 1.1.4.2 the completed BAF, these terms and conditions shall prevail;
- 1.1.4.3 any accepted Purchase Order (as defined below), the provisions of the accepted Purchase Order shall prevail in respect of that specific Purchase Order only.

### 2. INTERPRETATION, DEFINITIONS

- 2.1 In this Agreement:
- 2.1.1 clause headings are for reference purposes only and shall not influence the interpretation;
- 2.1.2 reference to:
- 2.1.2.1 one gender shall include the other genders;
- 2.1.2.2 natural persons include juristic persons and vice versa;
- 2.1.2.3 the singular shall include the plural and vice versa;
- 2.1.2.4 days, months or years shall be construed as Gregorian calendar days, months or years;
- 2.1.3 if any provision in a definition is a substantive provision conferring rights or imposing obligations on a Party (as defined below), effect shall be given to it as if it were a substantive provision in the body of the Agreement;
- 2.1.4 where figures are referred to in numerals and in words, if there is any conflict, the words shall prevail;
- 2.1.5 all annexures hereto shall be deemed to be incorporated herein and shall form an integral part hereof;
- 2.1.6 expressions defined in this Agreement shall bear the same meanings in annexures hereto;
- 2.1.7 durations shall be reckoned exclusively of the first and inclusively of the last day.
- 2.2 The following capitalised terms shall have the meanings assigned to them hereunder and cognate expressions shall have corresponding meanings:
- 2.2.1 "Agreement" means:
- (i) the completed BAF,
- (ii) these terms and conditions (clauses 1 to 21),
- (iii) any annexure hereto (clause/s 23 and further),
- (iv) any Purchase Order accepted hereunder,
- as the same may be amended, modified or supplemented from time to time in accordance with the terms of this Agreement.
- 2.2.2 "BAF" means the buyer application form, (forming part of this Agreement), which shall be fully completed by the Buyer before Signature Date, by including the requested information thereon.
- 2.2.3 "Business Day" means any day except a Saturday, Sunday or statutory public holiday in South Africa.
- 2.2.4 "Buyer" means the Party identified and more fully described as the Buyer in the BAF, to whom the Seller sells the Goods under this Agreement.
- 2.2.5 "Commercial Use" means use by the Buyer of the Goods in the ordinary course of business, or substantial readiness for such use.
- 2.2.6 "Corrupt Act" means any offence in respect of corruption or corrupt activities contemplated in the Prevention and Combating of Corrupt Activities Act, 12 of 2004.
- 2.2.7 "CPA" means the Consumer Protection Act, 68 of 2008.
- 2.2.8 "Delivery" means, regardless whether the word is capitalised or not, delivery of Goods in accordance with the applicable Incoterms.
- 2.2.9 "Effective Date" means, irrespective of Signature Date, the date on which the Purchase Order is accepted by the Seller and any suspensive conditions agreed to by the Parties have been fulfilled.
- 2.2.10 "Goods" means the circuit breakers, equipment, parts, components, and materials sold by the Seller to the Buyer under this Agreement, as set out in a PO.
- 2.2.11 "Incoterms" means the International Commercial Terms 2010 rules, published by the International Chamber of Commerce.
- 2.2.12 "Intellectual Property" means all intellectual property rights, whether registered or unregistered in any jurisdiction, including but not limited to know-how, designs, copyright, registered trademarks and applications therefor, registered designs and applications therefor, patents and applications therefor.
- 2.2.13 "Parties" means the Buyer and the Seller collectively, and "Party" means either of them.
- 2.2.14 "POPI" means the Protection of Personal Information Act, 4 of 2013.
- 2.2.15 "Proof of Delivery", "POD" means written acknowledgement by the Buyer that the Goods have been duly delivered, as provided in clause 6.
- 2.2.16 "Purchase Order/PO" means an official, written order issued by the Buyer to the Seller to supply Goods.
- 2.2.17 "Seller" means Circuit Breaker Industries (Pty) Ltd, t/a CBI-Electric: Low Voltage, the Party selling the Goods to the Buyer under this Agreement.
- 2.2.18 "Signature Date" means the date last in time on which either Party signs this Agreement, as indicated in clause 21.
- 2.2.19 "South Africa" means the Republic of South Africa.
- 2.2.20 "Warranty Period" means the specific period of time for which the warranty is granted for a specific type and range of Goods, as stated in clause 23 (Annexure "A" hereto), and as described more fully in clause 10.2 hereof.

### 3. PRICES

- 3.1 All prices are quoted in the currency agreed to, and if it is South African Rand (ZAR), it

shall exclude Value Added Tax which will be separately quoted.

3.2 Prices are stated and delivery will be according to the Incoterm agreed upon in the BAF. If no other specific Incoterm is agreed therein, then by default the applicable Incoterm shall be Ex- Works, the Seller's factory, Elandsfontein, Gauteng (EXW).

3.3 If specific prices are not quoted in writing for a PO, the price of any Goods shall be the price stated in the Seller's standard price list in force at the date of quotation of the Goods.

3.4 The price of Goods sold to the Buyer is strictly net and not subject to any discounts unless otherwise agreed upon in writing. If any discount is so agreed, it shall only be allowed if payment is received by the Seller strictly by the due date and shall only apply to the actual price of the Goods themselves and not to any transport costs, insurance, storage charges or other duties or taxes.

3.5 The sale of the Goods reflected on the invoice in question does not include installation costs unless otherwise so agreed in writing.

### 4. PAYMENT TERMS

4.1 The prices for the Goods and all other amounts due under this Agreement shall be due and payable within the period of the credit terms, agreed to between the Parties in writing, calculated from date of the Seller's monthly statement.

4.2 If not otherwise agreed in writing, payment shall be made by electronic funds transfer into the Seller's nominated bank account in clause 6 and the Buyer shall immediately e-mail proof of payment to the Seller. The Buyer shall be deemed to have paid the amount stated on the proof of payment only after the Seller has actually received the payment.

4.3 In the event that the Seller shall agree (in writing) to permit that payment be made by way of a letter of credit, such letter of credit shall be drawn on a bank acceptable to the Seller and on terms and conditions as may be acceptable to it, in its sole discretion.

4.4 Any late payment of amounts that are due and payable by the Buyer to the Seller under this Agreement may attract interest at rate of prime interest rate quoted by Nedbank Limited from time to time per annum plus the amount of percentage points agreed in the BAF, compounded monthly in arrears.

4.5 All payments received by the Seller, shall be appropriated firstly in respect of interest and thereafter in respect of capital amounts payable, it being recorded and agreed that the Seller shall be entitled to appropriate payments received from the Buyer to whichever of the Buyer's debts as the Seller may in its sole discretion elect.

4.6 A certificate issued and signed by a director or duly authorised manager of the Seller, whose authority need not be proved, stating the amount owing and/or the amount of interest payable by the Buyer, is prima facie proof of the facts stated therein and the amount of the indebtedness of the Buyer to the Seller. The certificate may be used in support of any application by the Seller for default- or summary judgment, provisional sentence, or any other legal or arbitration proceedings.

4.7 The Buyer shall not be entitled to withhold payment of the prices or any other amount legally due for any reason whatsoever, notwithstanding that a dispute may be pending between the Parties or as a retention or as a result of a third party not paying the Buyer for any Goods sold to them, nor shall the Buyer be entitled to make any deduction from the prices or any other amount due, or to set off any alleged claim against the amounts due by the Buyer to the Seller.

4.8 The Buyer may not cancel any Purchase Order placed, except upon written notice and only if accepted by the Seller (in writing) on payment of a reasonable cancellation charge determined by the Seller.

4.9 The Buyer hereby acknowledges and agrees that information regarding its payment behaviour may be disclosed to any registered credit bureau and/or any other suppliers.

### 5. BANK ACCOUNT DETAILS

5.1 The Seller's bank account details are attached hereto, as Annexure "B" (clause 24).

5.2 This banking account details will not be amended by the Seller by way of email or telephone, but will only be amended by written notification by the appointed representative of the Seller.

5.3 The Buyer indemnifies and shall hold the Seller harmless against any claim, damage, cost, liability and expense including reasonable attorney's fees caused by, relating to or arising from the Buyer making payment into any other account than the above mentioned account.

### 6. DELIVERY

6.1 Goods delivered in terms of the Seller's local ordering policy within South Africa, shall be delivered by the Seller according to the agreed Incoterm (BAF) or failing which, at the Seller's cost and discretion, either by post to the Buyer at the Buyer's place of business, or delivered by road or rail to the Buyer's place of business.

6.2 If Goods are mailed, delivery will take place upon posting, even if the use of post was not authorised by the Buyer.

6.3 If any permit, licence or authorisation is required for

6.3.1 the export of Goods from South Africa and/or import into the Buyer's country;

6.3.2 the transport of Goods, or

6.3.3 payment to be effected in accordance with this Agreement, then, subject to the applicable Incoterms agreed to herein, the Buyer shall obtain such permit, licence or authorisation timely and at its own cost.

6.4 Should the Seller at the Buyer's request, which request may be granted or refused at the Seller's sole discretion, agree to engage a third party ("Shipping Agent") to supply courier or transport services in regards to the Goods on behalf of the Buyer, then the Seller is hereby:

6.4.1 authorised to engage a Shipping Agent as agent for the Buyer on such terms and conditions as it deems fit; and

6.4.2 indemnified by the Buyer against all demands and claims which may be made against it by the Shipping Agent so engaged and all liability which the Seller may incur to the Shipping Agent or any third party arising out of the transportation of the Goods.

6.5 The Buyer shall immediately upon receipt thereof check the content of the Goods. On signature of the Proof of Delivery by any employee or agent of the Buyer, the Buyer is deemed to have received the Goods referred to in the Purchase Order or any other delivery notice, without shortage or visual defect and the Buyer shall have no claim against the Seller for non-delivery of, or shortages or visual defects in the Goods. Should the Buyer fail to sign the Proof of Delivery prior to the Shipping Agent's or Buyer's vehicle leaving the point of delivery, the signature of a representative of the Seller shall be prima facie proof that the Goods were delivered without visual defect or shortage.

6.6 Time is not of the essence for Delivery of the Goods, and the Seller shall not be liable for any loss or damage of any nature whatsoever, should delivery of Goods not be made within the period stated in the Purchase Order or the Seller's documentation.

6.7 Should delivery of any Goods not be accepted by the Buyer, consignee or party

## AGREED GENERAL TERMS & CONDITIONS OF SALES

nominated by the Buyer to accept delivery, then the Seller shall, in its sole discretion:

- 6.7.1 be entitled to return and store the Goods and any part thereof at no risk to the Seller and at the expense of the Buyer; or  
 6.7.2 sell the Goods in execution and retain the proceeds thereof as rowkoop or as liquidated damages for the settlement or part settlement of the return and storage of the Goods.

### 7 STANDARDS AND TESTING

- 7.1 The Goods shall comply to those standards indicated on the particulars Goods, as well as applicable legislation and safety standards that are prescribed for the particular Goods.  
 7.2 No provision has been made in the prices of the Goods for the performance of any special or additional tests and, subject to clause 7.4 below, the Seller shall not be liable for the performance of such special or additional tests.  
 7.3 If any acceptance tests are agreed by the Parties, Commercial Use constitutes final acceptance regardless whether the tests have been carried out or not.  
 7.4 If the Buyer requests the Seller to do special or additional tests over and above the standard prescribed tests, the Seller may in its sole discretion do so, subject to the Parties agreeing to a price for such testing.

### 8 RISK, OWNERSHIP AND INSURANCE

- 8.1 The risk passes to the Buyer in terms of the stated and agreed Incoterm (BAF).  
 8.2 Notwithstanding the date of Delivery and notwithstanding the date of passing of the risk, ownership in the Goods only passes to the Buyer on receipt by the Seller of the full price in respect of the Goods.  
 8.3 The Buyer shall at all times fully and adequately insure those Goods supplied to it, but wherein ownership has not yet passed to it, against all forms of loss.  
 8.4 Pending payment to the Seller for Goods purchased, all benefits in terms of the insurance policy relating to the insurance of such Goods, are hereby ceded to the Seller.

### 9 APPOINTED REPRESENTATIVES

- 9.1 In the BAF, the Seller and the Buyer each appoints a representative to liaise with the other regarding day-to-day decisions in connection with the performance of this Agreement. The appointed representatives shall each have the power to make all such decisions as may be required from him by the other Party (except to vary the Agreement or any price or amount due hereunder) and the other Party shall be entitled to act upon such decisions.  
 9.2 The Parties shall not accept instructions or requests from the other Party other than through the appointed representative, and all such instructions and/or requests shall be in writing.  
 9.3 The appointed representative of a Party may be changed by written notice.

### 10 WARRANTY AND RETURN OF GOODS

- 10.1 The Seller shall not be liable on the ground of any common law warranty in respect of the Goods, including without limitation against latent defects in, or relating to "fitness for purpose" of, the Goods.  
 10.2 Subject to clause 10.1, the Seller warrants that the type of Goods listed in clause 23.1 (Annexure "A") hereto, will be free from defects in material and workmanship under normal use and service for the particular Warranty Period, agreed to in that clause. The Warranty Period shall never be longer than the specific period prescribed for the particular type of Goods. The Warranty Period commences on the date of manufacturing of the Goods.  
 10.3 The Seller shall make good any defect, by repair or at its option replacement, which appears in the Goods during the applicable Warranty Period, provided that:  
 10.3.1 the Seller is notified in writing within 5 (five) Business Days of the alleged defect occurring, and  
 10.3.2 the Buyer has fulfilled all its obligations under this Agreement.  
 10.4 The provisions of clause 10.3 shall however not apply where the defect in the Goods arose, in the Seller's reasonable opinion:  
 10.4.1 due to the modification of or incorrect application of the Goods, the unauthorised tampering, or the changing or adjustments in, or any other unauthorised modifications of the Goods in question (including seals, date stamps or coding); or  
 10.4.2 as a result of force majeure (as defined below), lightning, water, electromagnetic disturbances, dust or other environmental conditions, unless the Seller has warranted to the Buyer that the Goods in question were specifically designed to cater for such conditions or contingencies.  
 10.5 Without derogating from the provisions of clauses 10.1 to 10.4 above, and in the event that the Seller shall in writing agree to replace or repair or examine any Goods in order to determine whether it is prepared to replace or repair such Goods:  
 10.5.1 the Buyer shall be liable to pay for the cost of delivering the Goods in question to the Seller;  
 10.5.2 the Seller shall be entitled to levy, in which event the Buyer shall pay in advance, a handling fee up to a maximum of 10 % (ten percent) of the purchase price of such Goods, which handling fee may also be payable in those circumstances where the Seller shall refuse to repair or replace such Goods; and  
 10.5.3 the Seller shall not be liable to the Buyer for any loss or damage of whatsoever nature suffered by it in the event that any Goods are lost or damaged while in the Seller's possession and under its control, under the above circumstances.  
 10.6 Further without derogating from the provisions of the previous clauses (10.1 to 10.5), the Seller may in its sole discretion determine whether correctly supplied and invoiced Goods, and which have no defects or are not subject to any claim, will be returned, and whether handling charges will be levied therefor.  
 10.7 Further to the provisions of clause 10.6 above, and if in the exercise of its discretion, the Seller, at the request of the Buyer agrees, to accept the return of any such Goods for credit, then the Seller shall be entitled, without the necessity of any further agreement, to claim from the Buyer a handling fee up to a maximum of 10 % (ten percent) of the invoice price of the Goods so returned.

### 11 CPA

- 11.1 The Buyer warrants and represents that, to the extent that its activities are subject to the CPA, it shall ensure compliance with all provisions of the CPA in its dealings with end-users of the Goods or consumers, irrespective of the provisions of this Agreement.  
 11.2 The Buyer acknowledges that if, at Signature Date, it is a juristic person (as defined in the CPA), and its annual turnover or asset value, as indicated in the BAF:  
 11.2.1 exceeds the threshold determination stated in section 5 the CPA, the transaction/s contemplated in terms of this Agreement is exempt from the majority of the provisions of the CPA, alternatively  
 11.2.2 does not exceed the stated threshold, then the Buyer is a protected consumer under the CPA.  
 11.3 The Seller's sole obligations and responsibilities to the Buyer in relation to the Goods shall be in terms of the warranty as set out in clause 10. Furthermore, insofar as this Agreement or the relevant transaction/s thereunder is/are subject to the provisions of the CPA, the Seller indemnifies the Buyer under the provisions of clause 17.4.1, if harm arising from the death or personal injury is caused by the Goods supplied by the Seller, subject to the limitations and/or exclusions and/or effects of sub-sections 61 (4) and 61 (6) of the CPA.  
 11.4 In amplification of the above, this Agreement is concluded without prejudice to any rights or defences which the Seller may have under the CPA, or otherwise at law in respect of any claims made or brought against it by the Buyer and/or any consumer or end-user protected under the CPA, or the purchaser of any Goods, supplied by the Seller.

### 12 INTELLECTUAL PROPERTY

- 12.1 The Seller and its licensors retain all Intellectual Property rights to, and in respect of, the Goods and related items. The Buyer shall only use the Goods and related items subject to this Agreement and for the purposes for which they have been developed, manufactured and supplied to the Buyer.  
 12.2 Without limitation to the above, the Buyer shall not have any right directly or indirectly to copy, reverse engineer or manufacture the Goods, or to license, lease, dispose of, distribute, disclose or otherwise exploit any Intellectual Property whatsoever of the Seller and its licensors, or any part thereof, or allow others to do so.  
 12.3 Should the Buyer become aware of any threatened or actual infringement of any Intellectual Property of the Seller or its licensors, then the Buyer shall forthwith, in writing inform the Seller accordingly and shall provide such cooperation and assistance as the Seller may reasonably require in the enforcement of its rights against any person.  
 12.4 In the event of any claim being proved by a third party in respect of an infringement of any Intellectual Property rights relating to any part of the Goods (other than a part based on a design or instructions furnished by the Buyer), the Seller shall at its expense and sole election either replace or modify such part with a non-infringing part or procure the right for the Buyer to use such a part, provided that the Seller is given full opportunity to conduct all negotiations in respect of such claim. Such claim shall not be acknowledged or settled by the Buyer without prior written consent of the Seller.  
 12.5 The Buyer warrants that any design or instructions furnished by it shall not be such as to cause the Goods to infringe any Intellectual Property rights of a third party.

### 13 CONFIDENTIALITY AND POPI

- 13.1 Confidential information includes, without limitation:  
 13.1.1 information relating to the Goods and the Intellectual Property, know-how, methods and techniques employed by a Party; and  
 13.1.2 financial and commercial information regarding this Agreement, or a Party in relation to its obligations pursuant to this Agreement.  
 13.2 Each Party shall not (and shall take all reasonable steps to ensure that its employees and agents shall not) for the duration of this Agreement, or at any time after the expiration or termination of this Agreement for any reason, disclose to any person (other than to its professional advisers on a need to know basis, or in compliance with a court order) or otherwise make use of any confidential information of the other Party.  
 13.3 Nothing in this clause 13 shall restrict the rights of either Party to use such information or documents for the purposes of legal enforcement of this Agreement in accordance with its terms.  
 13.4 The Buyer is hereby notified, and therefore acknowledges, consents to and agrees that, in terms of the provisions of POPI and subject to this clause 13, the personal information supplied by it and the information relating to the Goods (collectively referred to as the "Data") is necessary and required for the successful conclusion of the transaction/s under this Agreement, the enforcement of rights and performance of obligations arising herefrom as well as the rendering of services in terms hereof, and that the Data will not be disclosed to any unauthorised parties.  
 13.5 The Buyer consents to the processing of the Data by the Seller in accordance with the provisions of this Agreement and POPI.

### 14 BREACH AND INSOLVENCY

- 14.1 Should either Party fail to remedy any breach of contract within 10 (ten) Business Days of a written request by the other Party to do so, then in such event that other Party may, without prejudice to any of its rights in terms of the Agreement or in law, cancel the Agreement by written notice with immediate effect, with or without claiming damages.  
 14.2 In the event that a Party:  
 14.2.1 commits an act of insolvency;  
 14.2.2 is placed under a provisional or final winding-up, or is subject to business rescue proceedings;  
 14.2.3 suffers that its credit rating is downgraded or its credit facilities withdrawn or rejected by any financial institution or credit bureau;  
 14.2.4 fails to satisfy or take steps to have set aside any judgment taken against it within 15 (fifteen) Business Days after such judgment has come to its notice;  
 then the other Party may terminate the Agreement on written notice with immediate effect.  
 14.3 Nothing in this clause 14 shall prevent a Party from claiming specific performance or damages for any breach, or from terminating the Agreement by written notice with immediate effect for any material breach of contract.

### 15 DISPUTE RESOLUTION AND GOVERNING LAW

- 15.1 The Seller shall always have the right to elect to institute action or any other form of litigation, for payment of the prices and any other amounts due under the Agreement in any court of competent jurisdiction. The Buyer agrees that this shall include any Magistrate's Court having jurisdiction over the Buyer, even if the claim or the value of the matter in dispute exceeds the monetary jurisdiction limit of the Magistrate's Court, and it accordingly hereby consents to the jurisdiction of such Magistrate's Court.  
 15.2 In the event of any disagreement or claim ("Dispute") arising out of or relating to this Agreement (including without limitation as to its existence or validity), the senior executives of the Parties or their delegates designated in writing shall endeavour to settle the Dispute through bona fide negotiations within 10 (ten) Business Days of the Dispute being referred to them by written notice from either Party.  
 15.3 Should the Parties be unable to settle the Dispute by the means and within the time frame stated above, either Party may refer the Dispute for final decision by arbitration in accordance with the rules for commercial arbitrations ("Rules") of the Arbitration Foundation of Southern Africa ("AFSA"), by one or more arbitrator/s appointed in accordance with the Rules.  
 15.4 Unless otherwise agreed in writing the arbitration shall be held in Pretoria and conducted in the English language. Only the Parties and their legal representatives or persons agreed to shall attend the arbitration proceedings.  
 15.5 The decision of the arbitrator/s may be made an order of court.  
 15.6 This Agreement shall in all respects be governed by the law of South Africa, without regard to its conflict of law provisions. The application of the United Nations Convention on Contracts for the International Sale of Goods (CISG) of 11 April 1980, shall be excluded.  
 15.7 This clause 15 is severable from the rest of the Agreement and shall survive the expiry or termination for whatsoever reason of the Agreement.

### 16 URGENT RELIEF

- The provisions of clause 16 shall not preclude either Party from access to a competent court of law for relief in the form of an interdict, including a mandatory interdict or an order for specific performance.

### 17 LIMITATION OF LIABILITY AND INDEMNITY

- 17.1 Neither Party shall be liable to the other for any loss of profit, loss of use, interruption or reduction of operation, loss of data (including the recovery thereof), loss of production, loss of contracts or for any indirect or consequential damage that may be suffered by the other even if advised of the possibility of such damages and regardless of the form in which any action is brought. This waiver of all the classes of damages stated herein, shall survive termination of this Agreement for whatever reason.  
 17.2 Neither Party's aggregate liability to the other for any claim or claims for damages, out



## AGREED GENERAL TERMS & CONDITIONS OF SALES

of or in connection with any cause arising from this Agreement, whether in contract or delict or any other cause of action, will in any event exceed 100 % (one hundred percent) of the value of the Goods and

Services supplied to the Buyer under this Agreement during the 12 (twelve) months immediately prior to the events leading to the cause of action.

17.3 Nothing contained in clauses 17.1 and 17.2 above shall limit either Party's liability to the other in respect of:

17.3.1 death or injury of any person, or damage to property;

17.3.2 infringement of Intellectual Property rights;

17.3.3 breach of confidentiality;

17.3.4 the warranties and indemnities contained in the Information Warranty and clauses 5.3, 6.4.2 and 12.5; or

17.3.5 intentional, fraudulent or criminal acts.

17.4 Subject to clauses 16.1, 16.2 and 16.3 above, each Party (the "Indemnifying Party") agrees to defend, indemnify and hold the other Party, its directors, employees, agents and other members of its group of companies, as that term is defined in the Companies Act 71 of 2008, (each an "Indemnified Party") harmless from any claim, damage, cost, liability and expense including reasonable attorney's fees caused by, relating to or arising from:

17.4.1 the acts or omissions of the Indemnifying Party, its directors, employees or agents;

17.4.2 any alleged delict, or breach of any contractual right of a third party, or infringement of any Intellectual Property rights of a third party, or confidentiality obligations, or rights of privacy and publicity resulting from, relating to or arising out of the acts or omissions of the Indemnifying Party, except where any such claim relates to or arises out of any material furnished by the Indemnified Party.

17.5 The Parties will co-operate in the defence of any matter arising from an indemnity under clause 17.4. A Party has the right to participate in the conduct of the defence with legal counsel chosen by it.

### 18 NOTICES AND DOMICILIUM

18.1 For the purposes of this Agreement, including the giving of notices and the serving of legal process, the Seller chooses the address set out in clause 1.1.1.1 above, and the Buyer chooses the address as set out in the Physical address of the form, as their respective domicilia citandi et executandi.

18.2 Any notice addressed to a Party shall be delivered by hand during office hours to its physical address, and shall be deemed to be received (unless the contrary is proved) on the day of delivery.

18.3 Although the Parties may correspond via electronic mail for operational purposes, no valid notice under, or amendment to the terms of, this Agreement may be given or concluded by way of a data message as defined in the Electronic Communications and Transactions Act, 25 of 2002.

18.4 A Party may by written notice to the other Party change its domicilium to another address in South Africa which is not exclusively a post office box or poste restante. The change will become effective on the 5th (fifth) day following deemed receipt of the notice.

18.5 No provision of this domicilium clause shall be taken as affecting the validity of any notice which is actually received by a Party, whether at its domicilium or not and whether delivered in terms of the express provisions of this domicilium clause or not and any notice which is actually received by a Party shall be deemed to be notice validly given.

### 19 COMPLIANCE WITH LAWS AND ANTI-CORRUPTION

19.1 Each Party shall in all matters arising from or relating to the fulfilment of this Agreement conform at its own expense with all laws and legislation relevant hereto.

19.2 The Parties shall not be entitled to claim or receive any benefits or rewards arising from the Agreement, other than specifically provided for in this Agreement.

19.3 Each Party confirms that neither it nor any of its employees, associates or agents have committed, or admitted to, or have been convicted of, any Corrupt Act in relation to the Agreement and that it has ensured that all anti-corruption laws, internal processes and anti-corruption preventative measures have been complied with, prior to Signature Date. Each Party will further ensure that all anti-corruption laws, internal processes and anti-corruption preventative measures will continue to be complied with for the duration hereof.

19.4 Failure by a Party to comply with this clause 19 shall constitute a material breach of contract.

### 20 GENERAL

#### 20.1 Validity and Severability

If any provision of this Agreement is found or held to be invalid or unenforceable, the validity of all the other provisions hereof will not be affected thereby and the Parties agree to meet and review the matter, and if any valid and enforceable means is reasonably available to achieve the same objective as the invalid or unenforceable provision, to adopt such means by way of variation of this Agreement.

#### 20.2 Contra Proferentem

The rule of construction that in the event of any uncertainty in any provision in any agreement, such agreement shall, in construing/interpreting the uncertainty, be construed or interpreted against the drafter of such agreement, shall not be applicable to this Agreement.

#### 20.3 Variation

No variation or cancellation of, or addition to this Agreement will be of any force or effect unless reduced to writing and signed by the Parties.

#### 20.4 Indulgence and Waiver

20.4.1 No indulgence, extension of time, relaxation or latitude which a Party may show, grant or allow to the other Party, shall constitute a waiver by it of any of its rights and it shall not thereby be prejudiced or **stopped** from exercising any of its rights against the other Party which may have arisen in the past, or which might arise in the future.

20.4.2 No waiver or abandonment on the part of a Party of any rights arising from a breach of any provision of this Agreement:

20.4.2.1 will constitute a waiver or abandonment of rights in respect of any subsequent breach of the same or any other provision, and

20.4.2.2 shall be binding on it unless such waiver or abandonment is in writing and signed by it.

#### 20.5 Force Majeure

20.5.1 Failure to comply with any of the terms and conditions of the Agreement if occasioned by or resulting from an act of nature or public enemy, fire, explosion, earthquake, perils of the sea, flood, storm or other adverse weather conditions, war declared or undeclared, civil war, revolution, civil commotion or other civil strife, riot, strikes, blockade, embargo, sanctions, epidemics, act of any government or other authority, compliance with government orders, demands or regulations, as well as shortages, interruptions, fluctuations or the unavailability of electrical power, water supply or means of communication or any circumstances of like or different nature beyond the reasonable control of the Party so failing ("force majeure"), will not be deemed to be a breach of the Agreement, nor will it subject either Party to any liability to the other.

20.5.2 Should a Party's performance of an obligation become temporarily impossible owing to force majeure, that Party shall:

20.5.2.1 as soon as reasonably possible after the force majeure sets in notify the other Party in writing of the incidence of force majeure;

20.5.2.2 be released from performance of the affected obligation for so long as the force majeure prevails;

20.5.2.3 use its best endeavours to recommence performance of the affected obligation, to whatever extent reasonably possible, without delay; and

20.5.2.4 co-operate with the other Party in implementing such contingency measures as the other Party may reasonably require.

20.5.3 If some of the Goods (or any part thereof) ordered under a PO have been delivered, but not all of the Goods (so ordered under that PO) as a result of force majeure, the Buyer shall pay to the Seller that proportion of the stated price appropriate to the Goods (or any part thereof) which have been delivered.

20.5.4 Should the circumstances of force majeure continue for longer than 20 (twenty) Business Days, either Party shall be entitled to terminate the relevant PO, or if appropriate the Agreement, with immediate effect by written notice.

#### 20.6 Cession and Delegation

A Party cannot validly cede any right or delegate any obligation arising under this Agreement without the prior written consent of the other Party, which consent shall not be unreasonably withheld. Notwithstanding the above, the Seller may by written notice to the Buyer cede and delegate this Agreement to any other company controlled by Reunert Limited 1913/004355/06.

#### 20.7 Warranties

No Party has given any warranty or made any representation to the other Party, other than as expressly set out in this Agreement. No Agency

#### 20.8 No Agency

The Seller is an independent contractor of the Buyer and nothing in this Agreement constitutes a relationship of employment, agency, joint venture or partnership between the Parties. A Party shall not hold itself out as being an agent or partner of the other Party, or as being in a joint venture with the other Party. A Party shall not assume or create or attempt to assume or create directly or indirectly any obligation on behalf of or in the name of the other Party.

#### 20.9 Co-operation and Support

Each Party undertakes at all times to use commercially reasonable efforts to co-operate, to perform all such actions and take such steps and to procure the cooperation, the performance of all such actions and taking of all such steps as may be open to it and necessary for and incidental to the putting into effect and maintenance of the provisions of this Agreement.

#### 20.10 Non Solicitation

A Party shall not, at any stage after the commencement of this Agreement, and for a period of 12 (twelve) months after this Agreement has terminated, make any offers of employment to any Staff Member, who is or has been employed by the other Party and has been involved in the execution of this Agreement. The aforementioned restraint shall not be applicable in the event where the prior written approval to make such an offer has been obtained from the other Party who is or has been the employer of such Staff Member. For the purpose of this clause "Staff Member" shall include permanent and part-time employees of a Party, and of a Party's suppliers under this Agreement. Should a Party breach this restraint, it shall pay as liquidated damages to the other Party upon such breach an amount equivalent to the gross annual salary as calculated immediately prior to the breach (including any commissions and other payments) of such Staff Member.

#### 20.11 Entire Agreement

The terms contained in this Agreement constitute the entire agreement between the Parties with respect to the subject matter hereof, superseding all contemporaneous oral agreements and prior oral and written quotations, communications, agreements, and understanding of the Parties.

#### 20.12 Language

The ruling language of this Agreement and for communications and notices shall be English. All documents, manuals, certificates, notices, materials and training, if any, to be supplied by a Party under this Agreement shall be in English.

#### 20.13 Costs

20.13.1 Each Party shall bear its own legal costs and disbursements of and incidental to the negotiation, preparation, settling, signing and implementation of this Agreement.

20.13.2 Any legal costs incurred by a Party arising out of or in connection with a breach by the other Party, shall be borne by the Party in breach on a scale as between attorney and client, including but not limited to, collection charges and tracing costs.

Refer to our website for the full Term's and Conditions of Sales

## CIRCUIT BREAKER INDUSTRIES PRODUCT WARRANTY

All products sold are subject to the Circuit Breaker Industries General Terms and Conditions of Sale. The applicable product warranties are depicted in Table 1 below:

| CIRCUIT BREAKER INDUSTRIES PRODUCT WARRANTIES        |                    |                               |           |   |
|--|--------------------|-------------------------------|-----------|---|
| Product Range  | Type               | Technology                    | Warranty  | Note  |
| <b>CBE - B / C / DD / Y</b>                          | CBE                | Hydraulic-Magnetic            | 60 Months | <b>Warranty is from date of manufacture</b> |
| <b>QA / QF / QDC</b>                                 | MCB - Clip In      | Hydraulic-Magnetic            | 60 Months |   |
| <b>GD / FD / KD / LD / ND / MB / NF / NV / DSN</b>   | MCCB               | Thermal-Magnetic / Electronic | 24 Months |   |
| <b>AE</b>  | ACB                | Thermal-Magnetic / Electronic | 24 Months |   |
| <b>LB / JSO</b>                                      | MCCB               | Hydraulic-Magnetic            | 60 Months |   |
| <b>QA17 / QF17 / QA36 / SF15 / SF36 SM15 / SM36</b>  | Earth Leakages     | Hydraulic-Magnetic            | 12 Months |   |
| <b>QAT-TRDM / ECU / SAK</b>                          | Auxiliary Products | Various                       | 12 Months |   |
| <b>QFL / QKL</b>                                     | Surge              | Various                       | 12 Months |   |
| <b>Astute</b>  | Various            | Various                       | 12 Months |   |
| <b>Wiring Accessories</b>                            | Various            | Various                       | 12 Months |   |
| <b>All other products not specifically mentioned</b> | Various            | Various                       | 12 Months |   |

Table 1: Product Warranties

### Exclusions

All products returned to Circuit Breaker Industries under warranty claim will be subject to a failure investigation to determine the validity of the communicated failure. The following conditions are not considered as a product failure, as such will not qualify as a warranty claim:

- Any unofficial Product Modification
- Any incorrect Product Application
- Any tampering with the Product Seal or Date Stamp / Coding
- Any damage resulting from Lightning, Water or Dust (Environmental Disturbances and Quality of Supply)
- Any failure caused as a result of VIZ MAJOR