

Line-load reactors help to keep your equipment to run longer by absorbing many of the disturbances, especially the spikes coming from the electrical system, which otherwise damage or shut down your inverters, variable speed controllers, or other sensitive equipments. They are the modern technological solution to the problems of the inverter and drive applications. They are very effective at reducing harmonic distortion produced by inverters and drives.



### TECHNICAL DATA

|                         |                                              |
|-------------------------|----------------------------------------------|
| Standards               | : TS EN61558-2-20, TS EN60076-6              |
|                         | : CE Conformity                              |
| Rated Voltage           | : 230V...400V...600V...1000V                 |
| Rated Current           | : 4A.....3000A                               |
| Rated Power             | : 0,37kW.....1600kW                          |
| Rated Frequency         | : 50Hz                                       |
| Phase                   | : 1 - 3                                      |
| Impedance               | : 4% or demanded                             |
| Tolerance of Inductance | : $\pm 5\%$                                  |
| Thermal Strength        | : 1,15In continuous                          |
| Linearity               | : 1,4In above                                |
| Protection Class        | : IP00                                       |
| Insulation Class        | : F Class 155°C                              |
| Impregnation            | : H Class Varnish Vacuum Impregnation        |
| Cooling                 | : Natural                                    |
| Ambient Temperature     | : 40°C                                       |
| Humidity                | : 95%                                        |
| Altitude                | : 1000m                                      |
| Design                  | : 3 phase, Iron Cored, with air gap          |
| Winding                 | : Copper, Aluminium                          |
| Terminals               | : Terminal blocks, Cable lugs or Copper bars |

### THE BENEFITS OF LINE REACTORS

- Decrease the harmonic distortion
- Absorb the surges and the spikes
- Decrease voltage peaks
- Improve the true power factor
- Lengthens the operating life of the inverters

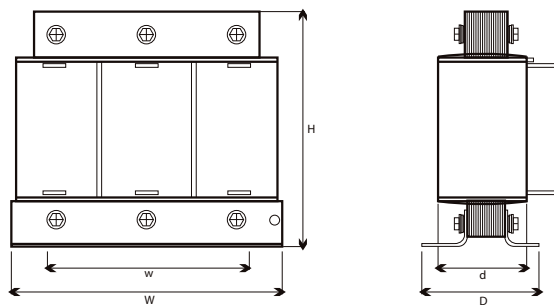
### THE BENEFITS OF LOAD REACTORS

- Decrease the ratio of  $dv/dt$
- Decrease peak voltage
- Increase the efficiency of the motor
- Decrease the noise of the motor
- Decrease over heating of the motor
- Lengthens the isolation life of the motor

# Harmonic Solutions Oil & Gas

Specialists in Oilfield Harmonics & Power Quality

## LINE - LOAD REACTORS



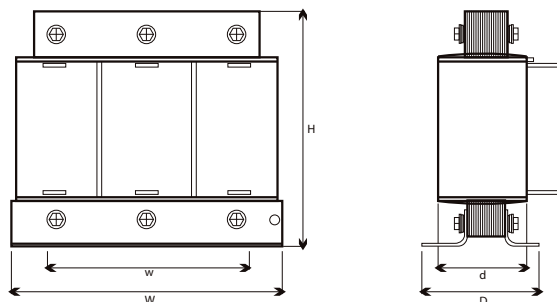
| LINE REACTORS DATA SHEET    |       |         |       |         |            |                         |
|-----------------------------|-------|---------|-------|---------|------------|-------------------------|
| 400V, 3 PHASE, 4% IMPEDANCE |       |         |       |         |            |                         |
| CODE                        | POWER | VOLTAGE | PHASE | CURRENT | INDUCTANCE | DIMENSIONS<br>W x H x D |
|                             | kW    | V       |       | A       | mH         | mm                      |
| GKRTN3704                   | 0,37  | 400     | 3     | 1,5     | 20         | 120 x 130 x 70          |
| GKRTN5504                   | 0,55  | 400     | 3     | 2       | 15         | 120 x 130 x 70          |
| GKRTN7504                   | 0,75  | 400     | 3     | 2,5     | 12         | 120 x 130 x 75          |
| GKRT1N104                   | 1,1   | 400     | 3     | 3       | 10         | 120 x 130 x 70          |
| GKRT1N504                   | 1,5   | 400     | 3     | 4       | 7,4        | 120 x 130 x 70          |
| GKRT204                     | 2,2   | 400     | 3     | 6       | 4,9        | 120 x 130 x 80          |
| GKRT304                     | 3     | 400     | 3     | 8       | 3,7        | 120 x 130 x 80          |
| GKRT404                     | 4     | 400     | 3     | 10      | 3,0        | 150 x 150 x 85          |
| GKRT504                     | 5,5   | 400     | 3     | 12      | 2,4        | 150 x 150 x 80          |
| GKRT704                     | 7,5   | 400     | 3     | 16      | 1,84       | 150 x 150 x 100         |
| GKRT1104                    | 11    | 400     | 3     | 25      | 1,20       | 150 x 180 x 100         |
| GKRT1504                    | 15    | 400     | 3     | 35      | 0,84       | 180 x 215 x 120         |
| GKRT1804                    | 18,5  | 400     | 3     | 40      | 0,73       | 180 x 225 x 125         |
| GKRT2204                    | 22    | 400     | 3     | 50      | 0,59       | 180 x 160 x 130         |
| GKRT3004                    | 30    | 400     | 3     | 63      | 0,47       | 240 x 205 x 140         |
| GKRT3704                    | 37    | 400     | 3     | 80      | 0,37       | 240 x 210 x 150         |
| GKRT4504                    | 45    | 400     | 3     | 100     | 0,29       | 240 x 210 x 160         |
| GKRT5504                    | 55    | 400     | 3     | 110     | 0,27       | 260 x 210 x 170         |
| GKRT7504                    | 75    | 400     | 3     | 160     | 0,18       | 300 x 260 x 170         |
| GKRT9004                    | 90    | 400     | 3     | 200     | 0,15       | 300 x 260 x 185         |
| GKRT11004                   | 110   | 400     | 3     | 220     | 0,13       | 300 x 260 x 200         |
| GKRT13204                   | 132   | 400     | 3     | 260     | 0,11       | 300 x 260 x 210         |
| GKRT16004                   | 160   | 400     | 3     | 320     | 0,092      | 360 x 305 x 210         |
| 230V, 1PHASE, 4% IMPEDANCE  |       |         |       |         |            |                         |
| GKRON3704                   | 0,37  | 230     | 1     | 4       | 8          | 84 x 100 x 75           |
| GKRMN5504                   | 0,55  | 230     | 1     | 6       | 5          | 84 x 100 x 80           |
| GKRMN7504                   | 0,75  | 230     | 1     | 8       | 4          | 84 x 100 x 80           |
| GKRM1N104                   | 1,1   | 230     | 1     | 10      | 3          | 96 x 120 x 95           |
| GKRM1N504                   | 1,5   | 230     | 1     | 12      | 2,5        | 96 x 110 x 95           |
| GKRM2N204                   | 2,2   | 230     | 1     | 20      | 1,5        | 95 x 110 x 90           |
| GKRM304                     | 3     | 230     | 1     | 25      | 1,2        | 96 x 105 x 120          |
| GKRM404                     | 4     | 230     | 1     | 30      | 1          | 96 x 100 x 120          |

Reactors up to 3000A are available

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## LINE - LOAD REACTORS



### LOAD REACTORS DATA SHEET

#### 400V, 50Hz, 3 PHASE

| CODE               | VOLTAGE | PHASE | MOTOR POWER | CURRENT | INDUCTANCE | DIMENSIONS<br>W x H x D |
|--------------------|---------|-------|-------------|---------|------------|-------------------------|
|                    | V       |       | kW          | A       | mH         | mm                      |
| MKRT1N1            | 400     | 3     | 1,1         | 3       | 4          | 120 x 130 x 75          |
| MKRT1N5            | 400     | 3     | 1,5         | 4       | 3          | 120 x 135 x 75          |
| MKRT2              | 400     | 3     | 2,2         | 6       | 2,4        | 120 x 130 x 80          |
| MKRT3              | 400     | 3     | 3           | 8       | 1,5        | 120 x 130 x 80          |
| MKRT4              | 400     | 3     | 4           | 10      | 1,4        | 150 x 150 x 90          |
| MKRT5              | 400     | 3     | 5,5         | 12      | 1,2        | 150 x 155 x 85          |
| MKRT7              | 400     | 3     | 7,5         | 16      | 0,9        | 150 x 180 x 90          |
| MKRT11             | 400     | 3     | 11          | 25      | 0,55       | 150 x 180 x 95          |
| MKRT15             | 400     | 3     | 15          | 35      | 0,40       | 180 x 160 x 105         |
| MKRT18             | 400     | 3     | 18,5        | 40      | 0,35       | 180 x 155 x 120         |
| MKRT22             | 400     | 3     | 22          | 45      | 0,30       | 180 x 160 x 130         |
| MKRT30             | 400     | 3     | 30          | 63      | 0,24       | 240 x 210 x 145         |
| MKRT37             | 400     | 3     | 37          | 80      | 0,18       | 240 x 210 x 155         |
| MKRT45             | 400     | 3     | 45          | 100     | 0,15       | 240 x 210 x 160         |
| MKRT55             | 400     | 3     | 55          | 110     | 0,12       | 240 x 210 x 160         |
| MKRT75             | 400     | 3     | 75          | 160     | 0,09       | 300 x 260 x 180         |
| MKRT90             | 400     | 3     | 90          | 200     | 0,07       | 300 x 260 x 190         |
| MKRT110            | 400     | 3     | 110         | 220     | 0,06       | 300 x 260 x 200         |
| MKRT132            | 400     | 3     | 132         | 260     | 0,05       | 300 x 255 x 200         |
| MKRT160            | 400     | 3     | 160         | 320     | 0,04       | 360 x 310 x 200         |
| 230V, 50Hz, 3PHASE |         |       |             |         |            |                         |
| MKRMN75            | 230     | 3     | 0,75        | 4       | 2          | 120 x 130 x 70          |
| MKRM1N1            | 230     | 3     | 1,1         | 6       | 1,7        | 120 x 130 x 70          |
| MKRM1N5            | 230     | 3     | 1,5         | 8       | 1,2        | 120 x 130 x 80          |
| MKRM2              | 230     | 3     | 2,2         | 10      | 1,0        | 120 x 130 x 80          |

Reactors up to 3000A are available