

Sinusoidal output filters for VFD



- Three phase sine wave voltage output filters especially designed for frequency converters.
- LC filters of TORYTRANS remove pulses generated by the output voltage of the frequency converters PWM (pulse width modulation) at high frequencies and restore sinusoidal waveform at power converter's output.
- Avoid the premature motor deterioration caused by high dV / dt , overvoltage and reflection wiring.
- Increase significantly the motor's lifetime, reducing its overheating and eddy current losses.
- Recommended for installations with cables over 50 meters in length between the frequency converter and motor.



NET



CONVERTER



LC FILTER



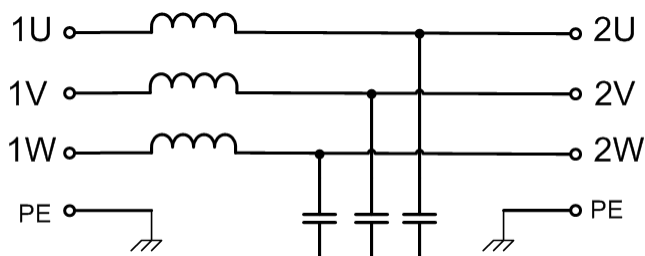
MOTOR

Technical characteristics

| | |
|----------------------------|---|
| Motor rating | 0,37 ÷ 220 kW (0,5 ÷ 300 CV) |
| Nominal current | 1 ÷ 500 A |
| Converter output voltage | 380 ÷ 420 V |
| Converter output frequency | 0 ÷ 70 Hz |
| Commutation frequency | 2 ÷ 8 kHz |
| Voltage distortion | ≈ 8% THD-V |
| Insulation class | H (180°C) |
| Admissible overload | Permanent 1,07 I_N Transitory 1,5 I_N |
| Ambient temperature | 50 °C |
| Protection degree | IP-20 (up to LC040) IP-00 (from LC050) |
| Cooling | Natural |
| Standards | IEC /UNE-EN 60076-6 IEC /UNE-EN 61558-2-20 |

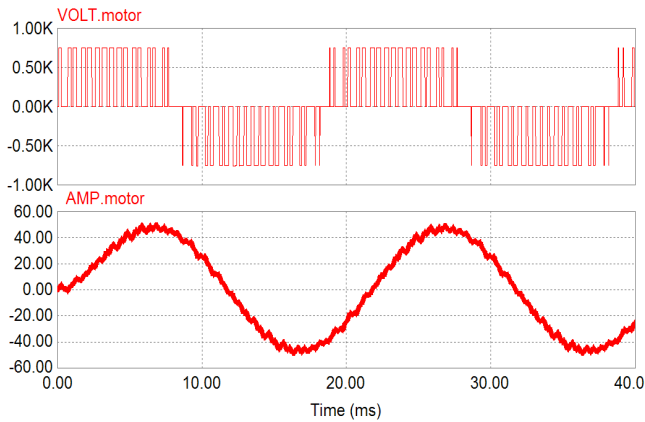


Electrical diagram

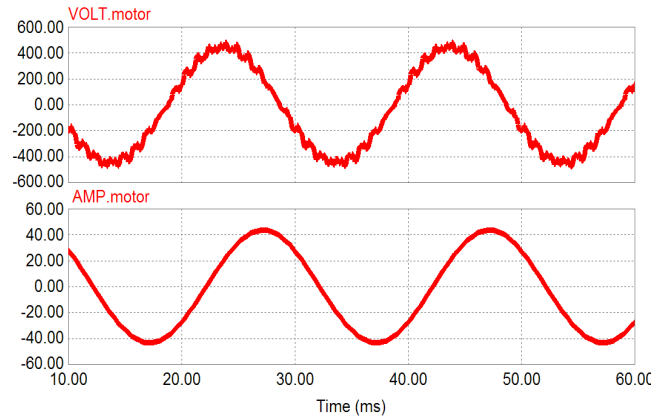


Output voltage-current comparative waveform of frequency converter

Without LC



With LC



Select filter current according to motor rating

| Motor rating | | Rated current A | Reference | Dimensions mm | | | | | | Weight kg | Losses W |
|--------------|-----------|---------------------------|-----------|----------------------|-----|-----|-----|-----|----|---------------------|--------------------|
| kW | CV | | | A | B | C | D | E | Ø | | |
| 0,37 | 0,5 | 1 | LC001 | 150 | 120 | 190 | 100 | 46 | 7 | 2,9 | 38 |
| 0,75 | 1 | 2 | LC002 | 150 | 120 | 190 | 100 | 46 | 7 | 3,3 | 48 |
| 1,5 | 2 | 4 | LC004 | 150 | 135 | 190 | 100 | 61 | 7 | 4,2 | 55 |
| 2,2 | 3 | 6 | LC006 | 150 | 135 | 195 | 100 | 61 | 7 | 4,7 | 60 |
| 3 | 4 | 8 | LC008 | 150 | 135 | 195 | 100 | 61 | 7 | 5 | 73 |
| 4 | 5,5 | 10 | LC010 | 180 | 150 | 215 | 140 | 82 | 7 | 8,5 | 85 |
| 5,5 | 7,5 | 15 | LC015 | 180 | 155 | 220 | 140 | 87 | 7 | 9,5 | 105 |
| 7,5 | 10 | 20 | LC020 | 240 | 170 | 285 | 200 | 99 | 7 | 15 | 123 |
| 11 | 15 | 25 | LC025 | 240 | 170 | 285 | 200 | 99 | 7 | 16 | 140 |
| 15 | 20 | 30 | LC030 | 240 | 195 | 285 | 200 | 124 | 7 | 21 | 152 |
| 18,5 | 25 | 40 | LC040 | 240 | 195 | 285 | 200 | 124 | 7 | 22 | 161 |
| 22 | 30 | 50 | LC050 | 300 | 192 | 355 | 200 | 105 | 11 | 29 | 270 |
| 30 | 40 | 60 | LC060 | 300 | 212 | 355 | 200 | 125 | 11 | 36 | 310 |
| 37 | 50 | 80 | LC080 | 300 | 212 | 405 | 200 | 125 | 11 | 43 | 400 |
| 45 | 60 | 100 | LC100 | 300 | 222 | 405 | 200 | 135 | 11 | 45 | 430 |
| 55 | 75 | 125 | LC125 | 300 | 272 | 379 | 200 | 160 | 11 | 68 | 500 |
| 75 | 100 | 150 | LC150 | 300 | 292 | 379 | 200 | 175 | 11 | 77 | 565 |
| 90 | 125 | 200 | LC200 | 360 | 318 | 473 | 240 | 174 | 11 | 90 | 730 |
| 110 | 150 | 250 | LC250 | 420 | 318 | 543 | 280 | 169 | 11 | 110 | 960 |
| 150 | 200 | 300 | LC300 | 420 | 355 | 550 | 280 | 194 | 11 | 135 | 1050 |
| 185 | 250 | 400 | LC400 | 420 | 380 | 550 | 280 | 219 | 11 | 160 | 1220 |
| 220 | 300 | 500 | LC500 | 480 | 370 | 620 | 320 | 208 | 11 | 195 | 1480 |

* Other features, power, voltage, etc., on request

* Torytrans reserves the right to modify the information in any time and without prior notice.

