

| Windings       | 1          | 2       | 3       | 4          | 5 | 6 | 7 | 8 | 9 | 10 |
|----------------|------------|---------|---------|------------|---|---|---|---|---|----|
| Groups         | 2          | 1       | 1       | 3          |   |   |   |   |   |    |
| Circuits       | 5          | 5       | 5       | 4          |   |   |   |   |   |    |
| Connection     | 1          | 1       | 1       | 1          |   |   |   |   |   |    |
| H/Voltage/A    | 1 314 0    | 1 200 0 | 1 200 0 | 1 182 0    |   |   |   |   |   |    |
|                | .          | .       | .       | .          |   |   |   |   |   |    |
|                | .          | .       | .       | .          |   |   |   |   |   |    |
|                | .          | .       | .       | .          |   |   |   |   |   |    |
|                | .          | .       | .       | .          |   |   |   |   |   |    |
| H/Current/A    | 1 224 0    | .       | .       | 1 389 0    |   |   |   |   |   |    |
|                | 5 44.8 180 | .       | .       | 5 77.5 0   |   |   |   |   |   |    |
|                | 7 32 0     | .       | .       | 7 55.5 180 |   |   |   |   |   |    |
|                | 11 20.2 0  | .       | .       | 11 35 0    |   |   |   |   |   |    |
|                | 13 17.3 0  | .       | .       | 13 30 0    |   |   |   |   |   |    |
| Time1 min.     | 60         | 60      | 60      | 60         |   |   |   |   |   |    |
| Load1 *        | 1          | 1       | 1       | 1          |   |   |   |   |   |    |
| Time2 min.     | 60         | 0       | 0       | 60         |   |   |   |   |   |    |
| Load2 *        | 1          | 0       | 0       | 1          |   |   |   |   |   |    |
| Sectors        | 1          | 1       | 1       | 1          |   |   |   |   |   |    |
| Ser./Para.     | 1          | 1       | 1       | 1          |   |   |   |   |   |    |
| Wire file      | 6          | 6       | 6       | 6          |   |   |   |   |   |    |
| Cu/Al          | 1          | 1       | 1       | 1          |   |   |   |   |   |    |
| In/Layer $\mu$ | 100        | 100     | 100     | 100        |   |   |   |   |   |    |
| Type/Tran.     | 10         | 10      | 10      | 10         |   |   |   |   |   |    |
| Typ/L/C mm     | 3 2 12     | 2 1 12  | 2 1 12  | 2 2 12     |   |   |   |   |   |    |
| Typ/L/C mm     | 1 2 12     | 2 1 12  | 2 1 12  | 2 2 12     |   |   |   |   |   |    |
| Typ/L/I mm     | 1 10 1     | 1 10 1  | 1 10 1  | 1 10 1     |   |   |   |   |   |    |
| Margin mm      | 20         | 20      | 20      | 20         |   |   |   |   |   |    |
| RacRdc         | 1.1        | 1.3     | 1.3     | 1.1        |   |   |   |   |   |    |

|                                        |                              |                           |                            |
|----------------------------------------|------------------------------|---------------------------|----------------------------|
| Frequency Hz: 50                       | Core select. -: Selecte      | Cooling medium : Air      | CHANGED IN TEST            |
| Criterion : dT                         | Core file : LTCM_EI_3_L_     | Amb. temperature °C: 40   | Frequency Hz: 50           |
| Ucc-voltage act. %: 1                  | Core name : EI3P 750X650     | Convection outside *: 0.8 | Ambient temperature C: 40  |
| Ucc-voltage tot. %: 5                  | Core assembly: (7) 4x45°+3x9 | Convection inside *: 0.8  | Convection outside *: 0.8  |
| Temperat. rise °K: 100                 | With hole -: No              | Emission *: 1             | Convection/channels *: 0.8 |
| Max. Fe losses %: 1                    | Steel file : STEEL1.RDS      | Airflow outside m/s: 0    | Emission *: 1              |
| No-load factor %: 1                    | Steel name : M 165-35 =>M    | Airflow inside m/s: 0     | Ventilation/outside m/s: 0 |
| I <sup>in</sup> /I <sup>nom</sup> : 10 | Induction T: 1.65            | Min.oil temp.rise °K: 0   | Ventilation/channel m/s: 0 |
| Irms on/Irms nom : 10                  | W/kg *: 1                    |                           | Rth-Insulation *: 1        |
| Losses at temp.°C: 115                 | UAr/kg *: 1                  |                           | Rth-Varnish *: 1           |
| HU-Test volta. kU: 4                   | Airgap *: 1                  | Channel fill factor %: 80 | Rth-Compound *: 1          |
| LU-Test volta. kU: 1                   | f/Fn-Factor *: 1             | Varnish in windings %: 10 | Fillfactor/channels %: 80  |
| HU-Mom.voltage kU: 0.4                 | Fill factor : 1              | Varnish in gaps %: 10     | Varnish in windings %: 10  |
| LU-Testvoltage kU: 1                   | Annealed -: Yes              | Rth-varnish *: 1          | Varnish/gaps/stomack %: 10 |
| Cu Price per kg : 2                    |                              | Rth-compound *: 1         | Stomack mm: 1.00           |
| Al Price per kg : 1                    |                              | Rth-insulation *: 1       | Gap mm: 0.10               |
| Fe Price per kg : 1                    |                              | Coil insulation mm: 0     |                            |
|                                        |                              | Stomach mm: 1             |                            |
|                                        |                              | Gap mm: 0.1               |                            |
|                                        |                              | Min.distance W-W mm: 0    |                            |
|                                        |                              | Flange mm: 0              |                            |

#\*0

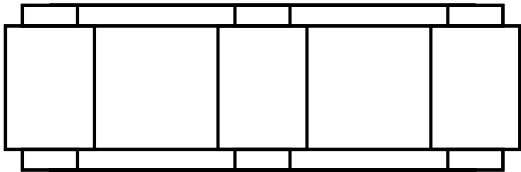
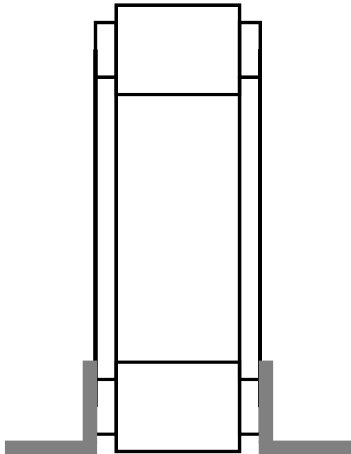
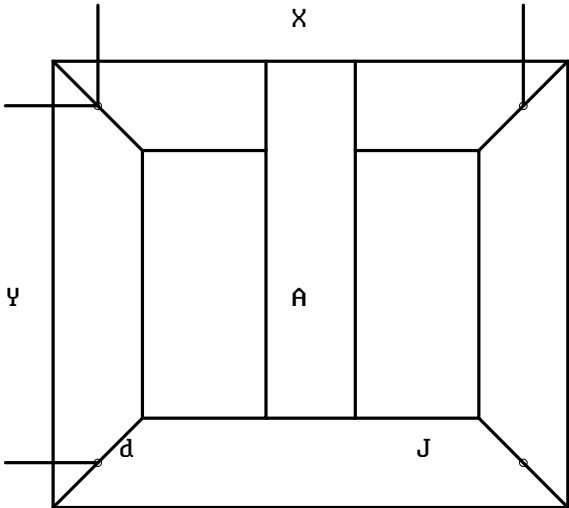
## DIAGNOSIS

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|                              |                              |          |           |    |
|------------------------------|------------------------------|----------|-----------|----|
| Name                         | :EI3P 750X650/240 oval       |          |           |    |
| Steel                        | :M 165-35 =>M6 0.014" 35G165 |          |           |    |
| Number of phases             | -:3                          |          |           |    |
| Number of legs               | -:3                          |          |           |    |
| Wight total/Cu/Fe            | kg:852.7                     | =295.0   | +558      |    |
| Max.build of windings        | %:90.0                       |          |           |    |
| max.wires in parrallel       | :1                           | =1       | X 1       | /6 |
| Induction on load            | T:1.654                      |          |           |    |
| No-load induction            | T:1.663                      |          |           |    |
| Max. CuAl-dT on load         | °K:94.2                      |          |           |    |
| Max. Fe-dT on load           | °K:77.0                      |          |           |    |
| Regulation                   | %:1.705                      |          |           |    |
| Short-circuit voltage cold   | %:1.75                       | Ucx=1.47 | Ucr=1.307 |    |
| Efficiency                   | %:98.435                     |          |           |    |
| Iinrush/Inom max/rms         | *: 8.82                      | / 6.62   |           |    |
| No-load onrms current factor | %: 1.6                       |          |           |    |

|                  |                         |                     |                          |
|------------------|-------------------------|---------------------|--------------------------|
| Core file name   | : LTCM_EI_3_L_1oval.USR | Fe-File name        | : STEEL1.RDS             |
| Core name        | : EI3P 750X650/240 oval | Fe-Name             | : M 165-35 =>M6 0.014" 3 |
| Core type        | : 3EI                   | Frequency           | Hz: 50                   |
| Type of windings | : oval/rectangular      | Remanence-Factor    | *: 0.35                  |
| Number of legs   | : 3                     | W/kg-Factor         | *: 1                     |
| Core assembly    | : (7) 4x45°+3x9         | UAr/kg-Factor       | *: 1                     |
| Leg/Diameter     | cm: 13                  | Gap-Factor          | *: 1                     |
| Window width     | cm: 18                  | f/fn-Factor         | *: 1                     |
| Window height    | cm: 39                  | Fillfactor          | *: 1                     |
| Stack            | cm: 24                  | Annealed            | -: Yes                   |
| Cross section    | cm^2: 272.1             |                     |                          |
| Weight total     | kg: 557.6               |                     |                          |
| With holes       | -: Yes                  | Chassis             | -:                       |
| Brackets         | -: L-T&B                | Vertical/Horizontal | -:                       |

|            |         |               |       |   |   |   |   |   |   |   |   |    |
|------------|---------|---------------|-------|---|---|---|---|---|---|---|---|----|
|            |         | Steps         | 1     | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| X-Width    | cm: 62  | A-Leg         | cm:13 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  |
| Y-Height   | cm: 52  | J-Yoke        | cm:13 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  |
| d_Hole     | cm: 1.1 | R-Rearyoke    | cm:0  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  |
| h-Distance | cm: 0.8 | S-Stack       | cm:18 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  |
| L-Laenght  | cm: 13  | Number lamin. | :     |   |   |   |   |   |   |   |   |    |
| Z-Width    | cm: 0   | Weight        | kg:   |   |   |   |   |   |   |   |   |    |



|                      |      |      |      |      |   |   |   |   |   |    |
|----------------------|------|------|------|------|---|---|---|---|---|----|
| Windings             | 1    | 2    | 3    | 4    | 5 | 6 | 7 | 8 | 9 | 10 |
| Groups-Circuits      | 2-D  | 1-D  | 1-D  | 3-Y  |   |   |   |   |   |    |
| Connection           | ser. | ser. | ser. | ser. |   |   |   |   |   |    |
| Turns per leg        | 32.0 | 20.0 | 20.0 | 18.0 |   |   |   |   |   |    |
| Build                | %    |      |      |      |   |   |   |   |   |    |
| Weight per leg       | kg   |      |      |      |   |   |   |   |   |    |
| WIRE                 |      |      |      |      |   |   |   |   |   |    |
| Type                 | Foil | Foil | Foil | Foil |   |   |   |   |   |    |
| Thicknes             | mm   |      |      |      |   |   |   |   |   |    |
| Width                | mm   |      |      |      |   |   |   |   |   |    |
| WG-thicknes          |      |      |      |      |   |   |   |   |   |    |
| WG-width             |      |      |      |      |   |   |   |   |   |    |
| Al/Cu                | Cu   | Cu   | Cu   | Cu   |   |   |   |   |   |    |
| STRAND/LITZ          |      |      |      |      |   |   | 7 |   |   |    |
| Thickne insula.      | mm   |      |      |      |   |   |   |   |   |    |
| Width insulata.      | mm   |      |      |      |   |   |   |   |   |    |
| Parallel wires       |      |      |      |      |   |   |   |   |   |    |
| side by side         |      |      |      |      |   |   |   |   |   |    |
| one upon the other   |      |      |      |      |   |   |   |   |   |    |
| Transposition        | Cyl  | Cyl  | Cyl  | Cyl  |   |   |   |   |   |    |
| Cross section        | mm^2 |      |      |      |   |   |   |   |   |    |
| SECTOR               |      |      |      |      |   |   |   |   |   |    |
| Number               | 1    | 1    | 1    | 1    |   |   |   |   |   |    |
| Serie/Parallel       | ser. | ser. | ser. | ser. |   |   |   |   |   |    |
| Turns                | 32   | 20   | 20   | 18   |   |   |   |   |   |    |
| Turns/Layer          | 1    | 1    | 1    | 1    |   |   |   |   |   |    |
| Layers               | 32   | 20   | 20   | 18   |   |   |   |   |   |    |
| Insul./Layer         | µm   |      |      |      |   |   |   |   |   |    |
| Transposition        | None | None | None | None |   |   |   |   |   |    |
| Thicknes             | mm   |      |      |      |   |   |   |   |   |    |
| Height               | mm   |      |      |      |   |   |   |   |   |    |
| Heights Wind/Sect    | 32   | 20   | 20   | 18   |   |   |   |   |   |    |
| SPACES/CHANNELS/INS. |      |      |      |      |   |   |   |   |   |    |
| C/I Outside          | WICW | WCW  | WCW  | WCW  |   |   |   |   |   |    |
| Insulation           | mm   |      |      |      |   |   |   |   |   |    |
| Channel              | mm   |      |      |      |   |   |   |   |   |    |
| C/I Inside           | WIW  | WCW  | WCW  | WCW  |   |   |   |   |   |    |
| Insulation           | mm   |      |      |      |   |   |   |   |   |    |
| Channel              | mm   |      |      |      |   |   |   |   |   |    |
| C/I Horizontal       | II   | II   | II   | II   |   |   |   |   |   |    |
| Sector-Sector        | mm   |      |      |      |   |   |   |   |   |    |
| Turn-Turn            | mm   |      |      |      |   |   |   |   |   |    |
| Distance to yoke     | mm   |      |      |      |   |   |   |   |   |    |

Coil insulation mm:                      Diatancw coil to coil : 18.00

D1i/D1e: 245.3 270.9

D2i/D2e: 294.9 316.9

D3i/D3e: 340.9 362.9

D4i/D4e: 386.9 401.3

D5i/D5e: /

D6i/D6e: /

D7i/D7e: /

D8i/D8e: /

