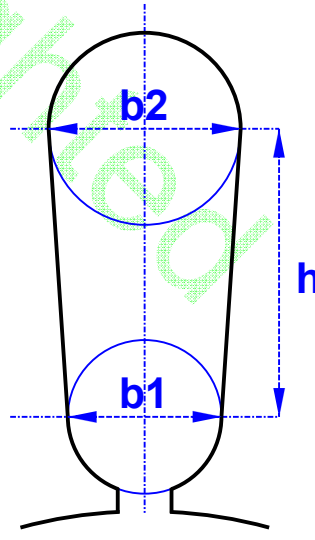
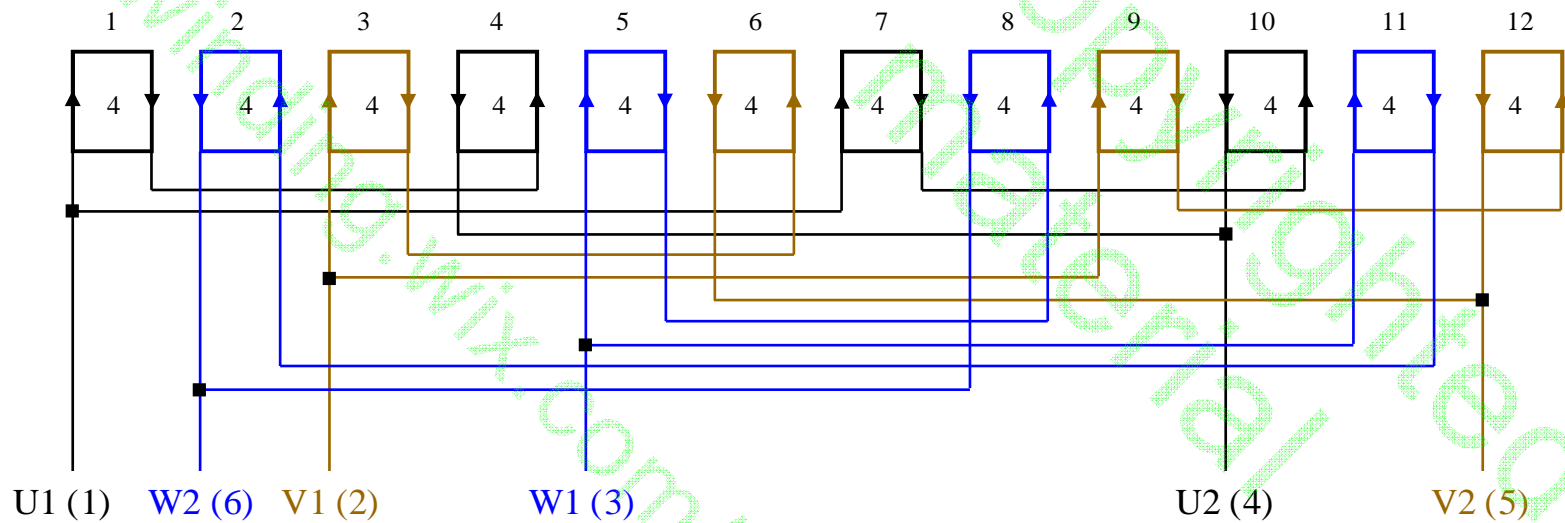


INPUT DATA

| nameplate data | core dimensions | slot dimensions |
|--|--|---|
| <p>Manufacturer:</p> <p>Type: ASIF 225 M4</p> <p>Power: 45 kW</p> <p>Voltage: 380 V</p> <p>Frequency: 50 Hz</p> <p>Connection: star</p> <p>Serial No:</p> <p>Full load amps: A</p> <p>Service factor: 1,00</p> <p>PF - cos(fi):</p> <p>Insulation class: F (155 C)</p> <p>Enclosure: closed</p> <p>Motor appl: S1</p> <p>Note:</p> | <p>Slots: 48</p> <p>Poles: 4</p> <p>Rotor bars: 34</p> <p>Skewed rotor bars: no</p> <p>Internal diameter: 220 mm</p> <p>External diameter: 335 mm</p> <p>Total slot depth: 36 mm</p> <p>Length: 238 mm</p> <p>Back iron: 21,5 mm</p> <p>Teeth width 'a': 7 mm</p> <p>Teeth width 'b': 7 mm</p> <p>Number od air vents: 0</p> <p>Air vent width: 0 mm</p> <p>Rotor: squirrel cage</p> | <p>b1 = 8 mm</p> <p>b2 = 10 mm</p> <p>h = 27 mm</p> <p>Ins. thickness: 0,25 mm</p> <p>Total slot area: 284,58 mm²</p>  <p>The diagram shows a cross-section of a rotor slot. It is a vertically elongated, rounded shape. A vertical dashed line represents the centerline. Two horizontal dashed lines indicate the widths at different heights: 'b2' at the top (wider) and 'b1' at the bottom (narrower). A vertical dimension line on the right side indicates the total height 'h' between the two horizontal lines. The slot is shown with a rounded top and a narrower bottom section.</p> |

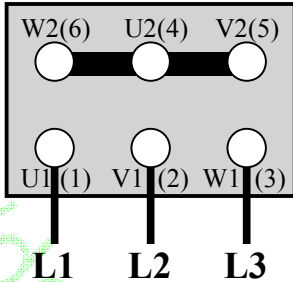
Three-phase, lap, double-layer winding for 48 slots and 4 poles, ($q = 4$), 2 circuits
Span: 1-11



Fractional turn winding with arrangement: 7, 8, 8, 7, adjacent pole

WINDING DATA

THREE-PHASE, 4 - POLE WINDING FOR 48 SLOTS

| | | | |
|----------------------|-------------------------------|---|---|
| Winding type: | lap | Air gap density: | 0,70 Tesla. (*in allowed range*) |
| Layers: | double-layer | Teeth density: | 1,51 Tesla. (*in allowed range*) |
| Connection: | 2Y, 380 V, 50 Hz | Back iron density: | 1,88 Tesla. (*in allowed range*) |
| Circuits: | 2 parallel circuits | Rotor per. speed: | 17 m/s rotor speed is OK |
| Star or delta: | star, adjacent pole | Side effects: | - noise: NO , - cogging: NO , - cusp: NO |
| Span: | 1-11 |  <p>Smallest size of T-leads:</p> <ul style="list-style-type: none"> - 3 leads: 20,6 mm² - 6 leads: 20,6 mm² <p>Note: always try the slot filling with the test coil</p> | |
| Slots/phase & pole: | 4 | | |
| Diagram ID: | 04804*omitted*** | | |
| Turns per slot: | 15 | | |
| Turns per coil: | 7,8,8,7 | | |
| Wires in turn: | 6 | | |
| Wire diameter: | 1,32 mm | | |
| Turn area: | 8,25282 mm² | | |
| Slot filling factor: | 0,435 | | |
| Winding factor: | 0,925 | | |
| | | no-load test: | |
| | | $I_1 = \text{___ A, } I_2 = \text{___ A, } I_3 = \text{___ A. Voltage} = \text{___ V, } \text{___ Hz.}$ | |
| | | date: | |