

# TEST REPORTS

**SERIE:** V5

**REFERENCES:** V50250

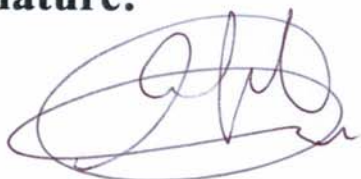
**DESCRIPTION:** SOFTSTARTERS V5 220-500V III,  
IP20

**SERIAL NUMBERS:** 3009012708 – 3009012709 –  
3009012710 – 3009012711 – 3009012712 – 3009012713

**TESTED AND AUTHORIZED BY:**

**ANTONIA GIL / QUALITY MANAGER**

**Signature:**





### CHECK LIST SOFT STARTER

| Order No. | Reference | Serial No. |
|-----------|-----------|------------|
| 9919      | V50250    | 3609012708 |

#### VISUAL INSPECTION

| Tests   | Expected Values            | Result |
|---|----------------------------|--------|
| Verification of the good condition of the chassis               | No damages                 | OK     |
| Verification of the right finished of transformer               | No damages                 | OK     |
| Check that the welding of the transformer's resistor is correct | Welding is right           | OK     |
| Check the torque at the input screw of the thyristors           | Correct Torque             | OK     |
| Check the torque at the output screw of the thyristors          | Correct Torque             | OK     |
| Check the torque of the heatsink to the chassis                 | Correct Torque             | OK     |
| Check of the wires and wiring connections                       | Wiring Connections Correct | OK     |

#### FINAL TEST

| Reviewed points   | Expected Values  | Result                            |
|---|--|-----------------------------------|
| Check the control wiring  | OK   |                                   |
| Check the power wiring  | OK   |                                   |
| Check the wiring connection   | OK   |                                   |
| Measuring between the input and output terminals  | L1-U = from 10K $\Omega$ to 2.5M $\Omega$  | L1-U = 2,4 K $\Omega$ /M $\Omega$ |
|   | L2-V = from 10K $\Omega$ to 2.5M $\Omega$  | L2-V = 2,3 K $\Omega$ /M $\Omega$ |
|   | L3-W = from 10K $\Omega$ to 2.5M $\Omega$  | L3-W = 2.1 K $\Omega$ /M $\Omega$ |
| Measuring of the resistance between the terminals and the control board.                        | L1 red = 0 - 1 $\Omega$  | OK                                |
|   | L1 red/white = 12 - 18 $\Omega$  | OK                                |
|   | U yellow = 0 - 1 $\Omega$  | OK                                |
|   | U yellow /white = 12 - 18 $\Omega$   | OK                                |
|   | L2 blue = 0 - 1 $\Omega$   | OK                                |
|   | L2 blue/white = 12 - 18 $\Omega$   | OK                                |
|   | V grey = 0 - 1 $\Omega$  | OK                                |
|   | V grey /white = 12 - 18 $\Omega$   | OK                                |
|   | L3 green = 0 - 1 $\Omega$  | OK                                |
|   | L3 green/white = 12 - 18 $\Omega$  | OK                                |
|   | W brown = 0 - 1 $\Omega$   | OK                                |
|   | W brown /white = 12 - 18 $\Omega$  | OK                                |
| Measurement of the resistance of the current transformer in parallel with the sensing resistor. | See table  | L1: 17,7                          |
|   | See table  | L3: 17,7                          |
| Test the softstarter with lamps   | Lights turn on according a ramp  | OK                                |
| Test the operation of the softstarter with load (motor)   | I empty: from 10 to 13A  | I empty = 12.8 A                  |
|   | Measure of the drop of the voltage between the input--output on control connectors (<1.8V) | L1-U = 1,2V                       |
|   |  | L2-V = 0,9V                       |
|   |  | L3-W = 0.9V                       |
| Adjustments of the display  | G3.14: set up 4<br>G3.15: set up 30<br>G4.6: set up 5                                      |                                   |
| Check the fan/s   | Proper running   | OK                                |
| Test of the softstarter during one hour to the nominal load                                     | Without faults   | OK                                |

### CHECK LIST SOFT STARTER

| Order No. | Reference | Serial No. |
|-----------|-----------|------------|
| 9920      | V50250    | 3609012709 |

#### VISUAL INSPECTION

| Tests   | Expected Values            | Result |
|---|----------------------------|--------|
| Verification of the good condition of the chassis               | No damages                 | OK     |
| Verification of the right finished of transformer               | No damages                 | OK     |
| Check that the welding of the transformer's resistor is correct | Welding is right           | OK     |
| Check the torque at the input screw of the thyristors           | Correct Torque             | OK     |
| Check the torque at the output screw of the thyristors          | Correct Torque             | OK     |
| Check the torque of the heatsink to the chassis                 | Correct Torque             | OK     |
| Check of the wires and wiring connections                       | Wiring Connections Correct | OK     |

# FINAL TEST

| Reviewed points   | Expected Values  | Result                            |
|---|--|-----------------------------------|
| Check the control wiring  | OK   |                                   |
| Check the power wiring  | OK   |                                   |
| Check the wiring connection   | OK   |                                   |
| Measuring between the input and output terminals  | L1-U = from 10K $\Omega$ to 2.5M $\Omega$  | L1-U = 1.9 K $\Omega$ /M $\Omega$ |
|   | L2-V = from 10K $\Omega$ to 2.5M $\Omega$  | L2-V = 2,4 K $\Omega$ /M $\Omega$ |
|   | L3-W = from 10K $\Omega$ to 2.5M $\Omega$  | L3-W = 2,4 K $\Omega$ /M $\Omega$ |
| Measuring of the resistance between the terminals and the control board.                        | L1 red = 0 - 1 $\Omega$  | OK                                |
|   | L1 red/white = 12 - 18 $\Omega$  | OK                                |
|   | U yellow = 0 - 1 $\Omega$  | OK                                |
|   | U yellow /white = 12 - 18 $\Omega$   | OK                                |
|   | L2 blue = 0 - 1 $\Omega$   | OK                                |
|   | L2 blue/white = 12 - 18 $\Omega$   | OK                                |
|   | V grey = 0 - 1 $\Omega$  | OK                                |
|   | V grey /white = 12 - 18 $\Omega$   | OK                                |
|   | L3 green = 0 - 1 $\Omega$  | OK                                |
|   | L3 green/white = 12 - 18 $\Omega$  | OK                                |
|   | W brown = 0 - 1 $\Omega$   | OK                                |
|   | W brown /white = 12 - 18 $\Omega$  | OK                                |
| Measurement of the resistance of the current transformer in parallel with the sensing resistor. | See table  | L1: 17,7                          |
|   | See table  | L3: 17,8                          |
| Test the softstarter with lamps   | Lights turn on according a ramp  | OK                                |
| Test the operation of the softstarter with load (motor)   | I empty: from 10 to 13A  | I empty = 12.4 A                  |
|   | Measure of the drop of the voltage between the input--output on control connectors (<1.8V) | L1-U = 0,9V                       |
|   |  | L2-V = 0,8V                       |
|   |  | L3-W = 0,9V                       |
| Adjustments of the display  | G3.14: set up 4<br>G3.15: set up 30<br>G4.6: set up 5                                      |                                   |
| Check the fan/s   | Proper running   | OK                                |
| Test of the softstarter during one hour to the nominal load                                     | Without faults   | OK                                |

### CHECK LIST SOFT STARTER

| Order No. | Reference | Serial No. |
|-----------|-----------|------------|
| 9503      | V50250    | 3609012710 |

#### VISUAL INSPECTION

| Tests   | Expected Values            | Result |
|---|----------------------------|--------|
| Verification of the good condition of the chassis               | No damages                 | OK     |
| Verification of the right finished of transformer               | No damages                 | OK     |
| Check that the welding of the transformer's resistor is correct | Welding is right           | OK     |
| Check the torque at the input screw of the thyristors           | Correct Torque             | OK     |
| Check the torque at the output screw of the thyristors          | Correct Torque             | OK     |
| Check the torque of the heatsink to the chassis                 | Correct Torque             | OK     |
| Check of the wires and wiring connections                       | Wiring Connections Correct | OK     |

# FINAL TEST

| Reviewed points   | Expected Values  | Result                            |
|---|--|-----------------------------------|
| Check the control wiring  | OK   |                                   |
| Check the power wiring  | OK   |                                   |
| Check the wiring connection   | OK   |                                   |
| Measuring between the input and output terminals  | L1-U = from 10K $\Omega$ to 2.5M $\Omega$  | L1-U = 2,1 K $\Omega$ /M $\Omega$ |
|   | L2-V = from 10K $\Omega$ to 2.5M $\Omega$  | L2-V = 2,2 K $\Omega$ /M $\Omega$ |
|   | L3-W = from 10K $\Omega$ to 2.5M $\Omega$  | L3-W = 2,2 K $\Omega$ /M $\Omega$ |
| Measuring of the resistance between the terminals and the control board.                        | L1 red = 0 - 1 $\Omega$  | OK                                |
|   | L1 red/white = 12 - 18 $\Omega$  | OK                                |
|   | U yellow = 0 - 1 $\Omega$  | OK                                |
|   | U yellow /white = 12 - 18 $\Omega$   | OK                                |
|   | L2 blue = 0 - 1 $\Omega$   | OK                                |
|   | L2 blue/white = 12 - 18 $\Omega$   | OK                                |
|   | V grey = 0 - 1 $\Omega$  | OK                                |
|   | V grey /white = 12 - 18 $\Omega$   | OK                                |
|   | L3 green = 0 - 1 $\Omega$  | OK                                |
|   | L3 green/white = 12 - 18 $\Omega$  | OK                                |
|   | W brown = 0 - 1 $\Omega$   | OK                                |
|   | W brown /white = 12 - 18 $\Omega$  | OK                                |
| Measurement of the resistance of the current transformer in parallel with the sensing resistor. | See table  | L1: 17,7                          |
|   | See table  | L3: 17,8                          |
| Test the softstarter with lamps   | Lights turn on according a ramp  | OK                                |
| Test the operation of the softstarter with load (motor)   | I empty: from 10 to 13A  | I empty = 12.5 A                  |
|   | Measure of the drop of the voltage between the input--output on control connectors (<1.8V) | L1-U = 1.1V                       |
|   |  | L2-V = 1.1V                       |
|   |  | L3-W = 1V                         |
| Adjustments of the display  | G3.14: set up 4<br>G3.15: set up 30<br>G4.6: set up 5                                      |                                   |
| Check the fan/s   | Proper running   | OK                                |
| Test of the softstarter during one hour to the nominal load                                     | Without faults   | OK                                |

### CHECK LIST SOFT STARTER

| Order No. | Reference | Serial No. |
|-----------|-----------|------------|
| 9922      | V50250    | 3609012711 |

#### VISUAL INSPECTION

| Tests   | Expected Values            | Result |
|---|----------------------------|--------|
| Verification of the good condition of the chassis               | No damages                 | OK     |
| Verification of the right finished of transformer               | No damages                 | OK     |
| Check that the welding of the transformer's resistor is correct | Welding is right           | OK     |
| Check the torque at the input screw of the thyristors           | Correct Torque             | OK     |
| Check the torque at the output screw of the thyristors          | Correct Torque             | OK     |
| Check the torque of the heatsink to the chassis                 | Correct Torque             | OK     |
| Check of the wires and wiring connections                       | Wiring Connections Correct | OK     |



## FINAL TEST

| Reviewed points   | Expected Values  | Result                            |
|---|--|-----------------------------------|
| Check the control wiring  | OK   |                                   |
| Check the power wiring  | OK   |                                   |
| Check the wiring connection   | OK   |                                   |
| Measuring between the input and output terminals  | L1-U = from 10K $\Omega$ to 2.5M $\Omega$  | L1-U = 2,4 K $\Omega$ /M $\Omega$ |
|   | L2-V = from 10K $\Omega$ to 2.5M $\Omega$  | L2-V = 2.1 K $\Omega$ /M $\Omega$ |
|   | L3-W = from 10K $\Omega$ to 2.5M $\Omega$  | L3-W = 2.2 K $\Omega$ /M $\Omega$ |
| Measuring of the resistance between the terminals and the control board.                        | L1 red = 0 - 1 $\Omega$  | OK                                |
|   | L1 red/white = 12 - 18 $\Omega$  | OK                                |
|   | U yellow = 0 - 1 $\Omega$  | OK                                |
|   | U yellow /white = 12 - 18 $\Omega$   | OK                                |
|   | L2 blue = 0 - 1 $\Omega$   | OK                                |
|   | L2 blue/white = 12 - 18 $\Omega$   | OK                                |
|   | V grey = 0 - 1 $\Omega$  | OK                                |
|   | V grey /white = 12 - 18 $\Omega$   | OK                                |
|   | L3 green = 0 - 1 $\Omega$  | OK                                |
|   | L3 green/white = 12 - 18 $\Omega$  | OK                                |
|   | W brown = 0 - 1 $\Omega$   | OK                                |
|   | W brown /white = 12 - 18 $\Omega$  | OK                                |
| Measurement of the resistance of the current transformer in parallel with the sensing resistor. | See table  | L1: 17,7                          |
|   | See table  | L3: 17,7                          |
| Test the softstarter with lamps   | Lights turn on according a ramp  | OK                                |
| Test the operation of the softstarter with load (motor)   | I empty: from 10 to 13A  | I empty = 12.8 A                  |
|   | Measure of the drop of the voltage between the input--output on control connectors (<1.8V) | L1-U = 1V                         |
|   |  | L2-V = 1V                         |
|   |  | L3-W = 1.1V                       |
| Adjustments of the display  | G3.14: set up 4<br>G3.15: set up 30<br>G4.6: set up 5                                      |                                   |
| Check the fan/s   | Proper running   | OK                                |
| Test of the softstarter during one hour to the nominal load                                     | Without faults   | OK                                |



### CHECK LIST SOFT STARTER

| Order No. | Reference | Serial No. |
|-----------|-----------|------------|
| 9923      | V50250    | 3609012712 |

#### VISUAL INSPECTION

| Tests   | Expected Values            | Result |
|---|----------------------------|--------|
| Verification of the good condition of the chassis               | No damages                 | OK     |
| Verification of the right finished of transformer               | No damages                 | OK     |
| Check that the welding of the transformer's resistor is correct | Welding is right           | OK     |
| Check the torque at the input screw of the thyristors           | Correct Torque             | OK     |
| Check the torque at the output screw of the thyristors          | Correct Torque             | OK     |
| Check the torque of the heatsink to the chassis                 | Correct Torque             | OK     |
| Check of the wires and wiring connections                       | Wiring Connections Correct | OK     |

# FINAL TEST

| Reviewed points   | Expected Values  | Result                            |
|---|--|-----------------------------------|
| Check the control wiring  | OK   |                                   |
| Check the power wiring  | OK   |                                   |
| Check the wiring connection   | OK   |                                   |
| Measuring between the input and output terminals  | L1-U = from 10K $\Omega$ to 2.5M $\Omega$  | L1-U = 2,3 K $\Omega$ /M $\Omega$ |
|   | L2-V = from 10K $\Omega$ to 2.5M $\Omega$  | L2-V = 2,2 K $\Omega$ /M $\Omega$ |
|   | L3-W = from 10K $\Omega$ to 2.5M $\Omega$  | L3-W = 2,4 K $\Omega$ /M $\Omega$ |
| Measuring of the resistance between the terminals and the control board.                        | L1 red = 0 - 1 $\Omega$  | OK                                |
|   | L1 red/white = 12 - 18 $\Omega$  | OK                                |
|   | U yellow = 0 - 1 $\Omega$  | OK                                |
|   | U yellow /white = 12 - 18 $\Omega$   | OK                                |
|   | L2 blue = 0 - 1 $\Omega$   | OK                                |
|   | L2 blue/white = 12 - 18 $\Omega$   | OK                                |
|   | V grey = 0 - 1 $\Omega$  | OK                                |
|   | V grey /white = 12 - 18 $\Omega$   | OK                                |
|   | L3 green = 0 - 1 $\Omega$  | OK                                |
|   | L3 green/white = 12 - 18 $\Omega$  | OK                                |
|   | W brown = 0 - 1 $\Omega$   | OK                                |
|   | W brown /white = 12 - 18 $\Omega$  | OK                                |
| Measurement of the resistance of the current transformer in parallel with the sensing resistor. | See table  | L1: 20.8                          |
|   | See table  | L3: 20.8                          |
| Test the softstarter with lamps   | Lights turn on according a ramp  | OK                                |
| Test the operation of the softstarter with load (motor)   | I empty: from 10 to 13A  | I empty = 11,7 A                  |
|   | Measure of the drop of the voltage between the input--output on control connectors (<1.8V) | L1-U = 1.1V                       |
|   |  | L2-V = 1.1V                       |
|   |  | L3-W = 1.1V                       |
| Adjustments of the display  | G3.14: set up 4<br>G3.15: set up 30<br>G4.6: set up 5                                      |                                   |
| Check the fan/s   | Proper running   | OK                                |
| Test of the softstarter during one hour to the nominal load                                     | Without faults   | OK                                |

### CHECK LIST SOFT STARTER

| Order No. | Reference | Serial No. |
|-----------|-----------|------------|
| 9924      | V50250    | 3609012713 |

#### VISUAL INSPECTION

| Tests   | Expected Values            | Result |
|---|----------------------------|--------|
| Verification of the good condition of the chassis               | No damages                 | OK     |
| Verification of the right finished of transformer               | No damages                 | OK     |
| Check that the welding of the transformer's resistor is correct | Welding is right           | OK     |
| Check the torque at the input screw of the thyristors           | Correct Torque             | OK     |
| Check the torque at the output screw of the thyristors          | Correct Torque             | OK     |
| Check the torque of the heatsink to the chassis                 | Correct Torque             | OK     |
| Check of the wires and wiring connections                       | Wiring Connections Correct | OK     |

# FINAL TEST

| Reviewed points   | Expected Values  | Result                            |
|---|--|-----------------------------------|
| Check the control wiring  | OK   |                                   |
| Check the power wiring  | OK   |                                   |
| Check the wiring connection   | OK   |                                   |
| Measuring between the input and output terminals  | L1-U = from 10K $\Omega$ to 2.5M $\Omega$  | L1-U = 2,5 K $\Omega$ /M $\Omega$ |
|   | L2-V = from 10K $\Omega$ to 2.5M $\Omega$  | L2-V = 2,5 K $\Omega$ /M $\Omega$ |
|   | L3-W = from 10K $\Omega$ to 2.5M $\Omega$  | L3-W = 2,3 K $\Omega$ /M $\Omega$ |
| Measuring of the resistance between the terminals and the control board.                        | L1 red = 0 - 1 $\Omega$  | OK                                |
|   | L1 red/white = 12 - 18 $\Omega$  | OK                                |
|   | U yellow = 0 - 1 $\Omega$  | OK                                |
|   | U yellow /white = 12 - 18 $\Omega$   | OK                                |
|   | L2 blue = 0 - 1 $\Omega$   | OK                                |
|   | L2 blue/white = 12 - 18 $\Omega$   | OK                                |
|   | V grey = 0 - 1 $\Omega$  | OK                                |
|   | V grey /white = 12 - 18 $\Omega$   | OK                                |
|   | L3 green = 0 - 1 $\Omega$  | OK                                |
|   | L3 green/white = 12 - 18 $\Omega$  | OK                                |
|   | W brown = 0 - 1 $\Omega$   | OK                                |
|   | W brown /white = 12 - 18 $\Omega$  | OK                                |
| Measurement of the resistance of the current transformer in parallel with the sensing resistor. | See table  | L1: 17,6                          |
|   | See table  | L3: 17,7                          |
| Test the softstarter with lamps   | Lights turn on according a ramp  | OK                                |
| Test the operation of the softstarter with load (motor)   | I empty: from 10 to 13A  | I empty = 11.9 A                  |
|   | Measure of the drop of the voltage between the input--output on control connectors (<1.8V) | L1-U = 0.9V                       |
|   |  | L2-V = 0,9V                       |
|   |  | L3-W = 0.9V                       |
| Adjustments of the display  | G3.14: set up 4<br>G3.15: set up 30<br>G4.6: set up 5                                      |                                   |
| Check the fan/s   | Proper running   | OK                                |
| Test of the softstarter during one hour to the nominal load                                     | Without faults   | OK                                |

