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RELAY, ELECTROMAGNETIC, NON-LATCHING, 28VDC, 2A, 2PDT, HALF-SIZE CRYSTAL CAN

ESCC Detail Specification No. 3601/003

Issue 8 July 2020



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DOCUMENTATION CHANGE NOTICE

(Refer to https://escies.org for ESCC DCR content)

| DCR No. | CHANGE DESCRIPTION |
|---------|---|
| 1341 | Specification updated to incorporate changes per DCR. |





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1 **GENERAL**

1.1 SCOPE

This specification details the ratings, physical and electrical characteristics, and test and inspection data for the component type variants and/or the range of components specified below. It supplements the requirements of, and shall be read in conjunction with, the ESCC Generic Specification listed under Applicable Documents.

1.2 <u>APPLICABLE DOCUMENTS</u>

The following documents form part of this specification and shall be read in conjunction with it:

(a) ESCC Generic Specification No. 3601.

1.3 TERMS, DEFINITIONS, ABBREVIATIONS, SYMBOLS AND UNITS

For the purpose of this specification, the terms, definitions, abbreviations, symbols and units specified in ESCC Basic Specification No. 21300 shall apply.

1.4 THE ESCC COMPONENT NUMBER AND COMPONENT TYPE VARIANTS

1.4.1 The ESCC Component Number

The ESCC Component Number shall be constituted as follows:

Example: 36010030126V1

- Detail Specification Reference: 3601003
- Component Type Variant Number: 01 (as required)
- Characteristic code: Rated Coil Voltage and Coil Resistance (26.5Vdc, 900Ω): 26V1 (as required)

1.4.1.1 Characteristics and/or Ratings Codes

Characteristics and/or ratings to be codified as part of the ESCC Component Number shall be as follows:

(a) The Rated Coil Voltage and Coil Resistance are expressed by means of the following codes:

| Rated Coil Voltage (Vdc) | Coil Resistance (Ω) | Code |
|-----------------------------|------------------------|------|
| 26.5 | 900 | 26V1 |
| 26.5 | 700 | 26V2 |
| 12 | 190 | 12V1 |
| 12 | 150 | 12V2 |



1.4.2 <u>Component Type Variants and Range of Components</u>

The component type variants and range of components applicable to this specification are as follows:

| Variant Number | Case and Terminal Description (Note 1) | Coil Characteristics | Weight max (g) |
|-------------------|---|-------------------------|-------------------|
| 01 | Plain Case (No Mount) Solder Pin Terminals | Note 2 | 8.1 |
| 02 | Raised Vertical Flange Mount Solder Pin Terminals | Note 2 | 8.8 |
| 03 | Horizontal Flange Mount Solder Hook Terminals | Note 2 | 10 |
| 04 | Horizontal Flange Mount Solder Pin Terminals | Note 2 | 9.7 |
| 05 | Plain Case (No Mount) Solder Hook Terminals | Note 2 | 8.4 |
| 06 | Raised Vertical Flange Mount Solder Hook Terminals | Note 2 | 9.1 |
| 09 | Plain Case (No Mount) Long Solder Pin Terminals | Note 2 | 8.5 |

- 1. See Para. 1.6.
- 2. The following Rated Coil Voltages and Coil Resistances are available and selectable for each Variant:

| Rated Coil Voltage | Coil Resistance |
|--------------------|-----------------|
| 26.5Vdc | 900Ω |
| 26.5Vdc | 700Ω |
| 12Vdc | 190Ω |
| 12Vdc | 150Ω |



1.5 MAXIMUM RATINGS

The maximum ratings shall not be exceeded at any time during use or storage.

Maximum ratings shall only be exceeded during testing to the extent specified in this specification and when stipulated in Test Methods and Procedures of the ESCC Generic Specification.

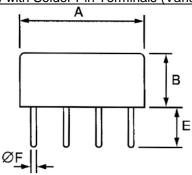
| Characteristics | Symbols | Maximum Ratings | Units | Remarks |
|--------------------------------|------------------|--------------------|-------|-----------------------------|
| Coil Voltage Range | Vcr | | Vdc | |
| | | 25 to 32 | | Rated Coil Voltage: 26.5Vdc |
| | | 11 to 15 | | Rated Coil Voltage: 12Vdc |
| Rated Resistive Load | Icr | 2 | Α | 28Vdc resistive |
| Contact Current | | | | Note 1 |
| Rated Inductive Load | I _{CL} | 400 | mA | 28Vdc inductive |
| Contact Current | | | | Inductance: 320mH |
| | | | | Note 1 |
| Overload Current | Ioverload | 4 | Α | 28Vdc resistive |
| Operating Temperature Range | Тор | -65 to +125 | °C | T _{amb} |
| Storage Temperature Range | T _{stg} | -65 to +125 | °C | Tamb |
| Soldering Temperature | T _{sol} | +260 | °C | Note 2 |

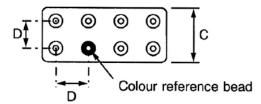
- 1. Relays should not be used in change-over mode where the potential difference between stationary contacts is greater than 10V and the switched current is greater than 100mA.
- 2. Duration 10 seconds maximum at a distance not less than 3mm from the device body. The same terminal shall not be resoldered until 3 minutes have elapsed.



1.6 PHYSICAL DIMENSIONS AND TERMINAL IDENTIFICATION

1.6.1 Plain Case (No Mount) with Solder Pin Terminals (Variant 01)



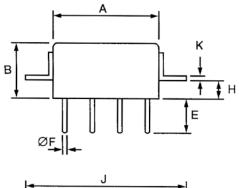


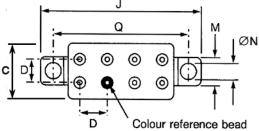
| Symbols | Dimensions (mm) | |
|---------|-----------------|-------|
| | Min | Max |
| Α | - | 20.57 |
| В | - | 10.41 |
| С | - | 10.41 |
| D | 4.95 | 5.21 |
| E | 4.24 | 5.4 |
| ØF | 0.66 | 0.86 |

NOTES:



1.6.2 Raised Vertical Flange Mount and Solder Pin Terminals (Variant 02)

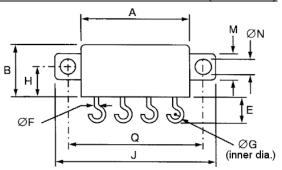


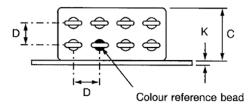


| Symbols | Dimensions (mm) | |
|---------|-----------------|-------|
| | Min | Max |
| Α | - | 20.57 |
| В | - | 10.41 |
| С | - | 10.41 |
| D | 4.95 | 5.21 |
| E | 4.24 | 5.4 |
| ØF | 0.66 | 0.86 |
| Н | 3.1 | 3.3 |
| J | - | 32.9 |
| K | 0.5 | 0.8 |
| М | 6.22 | 8.1 |
| ØN | 3 | 3.55 |
| Q | 26.6 | 27.4 |



1.6.3 Horizontal Flange Mount and Solder Hook Terminals (Variant 03)

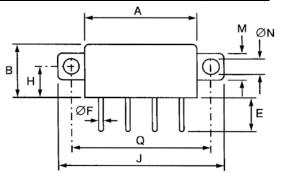


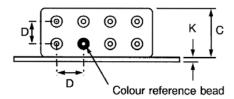


| Symbols | Dimensions (mm) | | |
|---------|-----------------|-------|--|
| | Min | Max | |
| Α | - | 20.57 | |
| В | - | 10.41 | |
| С | - | 10.41 | |
| D | 4.95 | 5.21 | |
| E | 4.11 | 4.83 | |
| ØF | 0.66 | 0.86 | |
| ØG | - | 1.8 | |
| Н | 5.97 | 6.73 | |
| J | - | 32.64 | |
| K | 0.38 | 0.9 | |
| M | 6.22 | 8 | |
| ØN | 3 | 3.55 | |
| Q | 26.8 | 27.2 | |



Horizontal Flange Mount and Solder Pin Terminals (Variant 04) 1.6.4

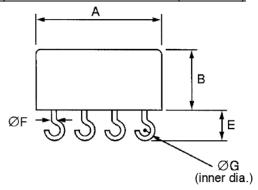


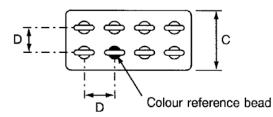


| Symbols | Dimensions (mm) | | |
|---------|-----------------|-------|--|
| | Min | Max | |
| Α | - | 20.57 | |
| В | - | 10.41 | |
| С | - | 10.41 | |
| D | 4.95 | 5.21 | |
| E | 4.24 | 5.4 | |
| ØF | 0.66 | 0.86 | |
| Н | 5.97 | 6.73 | |
| J | - | 32.64 | |
| K | 0.38 | 0.9 | |
| M | 6.22 | 8 | |
| ØN | 3 | 3.55 | |
| Q | 26.8 | 27.2 | |



1.6.5 Plain Case (No Mount) and Solder Hook Terminals (Variant 05)



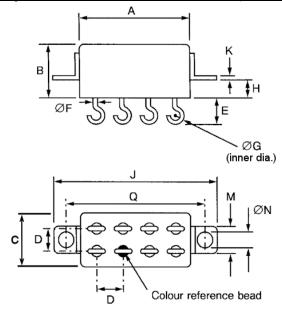


| Symbols | Dimensions (mm) | |
|---------|-----------------|-------|
| | Min | Max |
| Α | - | 20.57 |
| В | - | 10.41 |
| С | - | 10.41 |
| D | 4.95 | 5.21 |
| E | 4.11 | 4.83 |
| ØF | 0.66 | 0.86 |
| ØG | - | 1.8 |

NOTES:



1.6.6 Raised Vertical Flange Mount and Solder Hook Terminals (Variant 06)

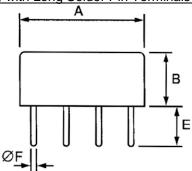


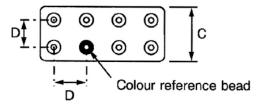
| Symbols | Dimensions (mm) | |
|---------|-----------------|-------|
| | Min | Max |
| Α | - | 20.57 |
| В | - | 10.41 |
| С | - | 10.41 |
| D | 4.95 | 5.21 |
| E | 4.11 | 4.83 |
| ØF | 0.66 | 0.86 |
| ØG | - | 1.8 |
| Н | 3.1 | 3.3 |
| J | - | 32.9 |
| K | 0.5 | 0.8 |
| M | 6.22 | 8.1 |
| ØN | 3 | 3.55 |
| Q | 26.6 | 27.4 |

NOTES:



1.6.7 Plain Case (No Mount) with Long Solder Pin Terminals (Variant 09)





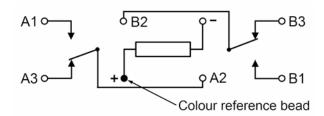
| Symbols | Dimensions (mm) | | |
|---------|-----------------|-------|--|
| | Min | Max | |
| A | - | 20.57 | |
| В | - | 10.41 | |
| С | - | 10.41 | |
| D | 4.95 | 5.21 | |
| E | 6.2 | 6.86 | |
| ØF | 0.66 | 0.86 | |

NOTES:

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1.7 <u>FUNCTIONAL DIAGRAM</u>



NOTES:

- As viewed from the terminal side with coil de-energised.
- 2. Individual terminal designations are for reference purposes only.

1.8 MATERIALS AND FINISHES

1.8.1 Case

Copper nickel, hermetically sealed. Tin-lead alloy plating may be used.

1.8.2 <u>Terminals</u>

The lead material and finish shall by type D3, D4, D19, F3, F4 or F19 in accordance with the requirements of ESCC Basic Specification No. 23500.

2 **REQUIREMENTS**

2.1 GENERAL

The complete requirements for procurement of the components specified herein are as stated in this specification and the ESCC Generic Specification. Permitted deviations from the Generic Specification, applicable to this specification only, are listed below.

Permitted deviations from the Generic Specification and this Detail Specification, formally agreed with specific Manufacturers on the basis that the alternative requirements are equivalent to the ESCC requirement and do not affect the component's reliability, are listed in the appendices attached to this specification.

2.1.1 Deviations from the Generic Specification

None.

2.2 MARKING

The marking shall be in accordance with the requirements of ESCC Basic Specification No. 21700 and as follows.

The information to be marked on the component shall be:

- (a) The ESCC qualified components symbol (for ESCC qualified components only).
- (b) The ESCC Component Number (see Para. 1.4.1).
- (c) Traceability information.



2.3 <u>TERMINAL STRENGTH</u>

The test conditions for Terminal Strength, tested as specified in the ESCC Generic Specification, shall be as follows:

(a) Pull Test:

• Applied Force: 15N

2.4 ELECTRICAL MEASUREMENTS AT ROOM, HIGH AND LOW TEMPERATURES

Electrical measurements shall be performed at room, high and low temperatures.

2.4.1 Room Temperature Electrical Measurements

The measurements shall be performed at $T_{amb} = +22 \pm 3^{\circ}C$.

| Characteristics | Symbols | Test Method and | Rated Coil | Lir | nits | Units |
|------------------|------------------|--------------------------------|------------------|----------|--------------------------|-------|
| | | Conditions | Voltage (Vdc) | Min | Max | |
| Pick-up Voltage | Uc | ESCC No. 3601 | | | | V |
| | | | 26.5 | - | 13.5 | |
| | | | 12 | - | 6.8 | |
| Drop-out Voltage | U _D | ESCC No. 3601 | | | | V |
| | | | 26.5 | 1.5 | 6.5 | |
| | | | 12 | 0.7 | 3.5 | |
| Operate Time | tc | ESCC No. 3601 | All | - | 4 | ms |
| Release Time | t _D | ESCC No. 3601 | All | - | 4 | ms |
| Bounce Time | t _B | ESCC No. 3601 | All | - | 2 | ms |
| Insulation | Rı | ESCC No. 3601 | All | 10 | - | GΩ |
| Resistance | | V _{TEST} = 100Vdc | | | | |
| Voltage Proof | VP | ESCC No. 3601 | All | 1000 | - | Vrms |
| (Test Voltage) | | Maximum Leakage | | (Note 1) | | |
| | | Current I _{LVP} = 1mA | | 500 | - | |
| | | | | (Note 2) | | |
| Voltage Proof | I _{LVP} | ESCC No. 3601 | All | - | 1 | mΑ |
| Leakage Current | | Note 3 | | | | |
| Contact Voltage | V_D | ESCC No. 3601 | All | - | 0.05 x I _{TEST} | V |
| Drop | | I _{TEST} = 100mA max | | | | |
| Coil Resistance | R _B | ESCC No. 3601 | | | | Ω |
| | | Coil resistance = 900Ω | 26.5 | 810 | 990 | |
| | | Coil resistance = 700Ω | 26.5 | 630 | 770 | |
| | | Coil resistance = 190Ω | 12 | 170 | 210 | |
| | | Coil resistance = 150Ω | 12 | 135 | 165 | |

- 1. Points of application (1000V):
 - Between terminals (except coil) and case, coil de-energised.
 - Between terminals (except coil) and case, coil energised with Rated Coil Voltage.
 - Between coil and other terminals.
 - Between switching circuits, coil de-energised.
 - Between switching circuits, coil energised with Rated Coil Voltage.
- 2. Points of application (500V):
 - Between coil and case.
 - Between open contacts, coil de-energised.
 - Between open contacts, coil energised with Rated Coil Voltage.
- 3. Measured during Voltage Proof test.



2.4.2 High and Low Temperatures Electrical Measurements

| Characteristics | Symbols | | Rated Coil | Limits | | Units |
|------------------|--------------------------|---|------------|--------|--------------------------|-------|
| | Conditions Voltage (Vdc) | Min | Max | | | |
| Pick-up Voltage | Uc | ESCC No. 3601 | | | | V |
| | | $T_{amb} = +125(+0.5)^{\circ}C$ | 26.5 | - | 19.8 | |
| | | and -65 (+5 -0)°C | 12 | - | 9.9 | |
| Drop-out Voltage | U _D | ESCC No. 3601 | | | | V |
| | | $T_{amb} = +125(+0.5)^{\circ}C$ | 26.5 | 1 | 14 | |
| | | and -65 (+5 -0)°C | 12 | 0.6 | 6.5 | |
| Operate Time | tc | ESCC No. 3601 | All | - | 4 | ms |
| | | T _{amb} = +125 (+0 -5)°C and -65 (+5 -0)°C | | | | |
| Release Time | t _D | ESCC No. 3601 | All | - | 4 | ms |
| | | T _{amb} = +125 (+0 -5)°C and -65 (+5 -0)°C | | | | |
| Bounce Time | t _B | ESCC No. 3601 | All | - | 2 | ms |
| | | T _{amb} = +125 (+0 -5)°C and -65 (+5 -0)°C | | | | |
| Insulation | Rı | ESCC No. 3601 | All | 100 | - | МΩ |
| Resistance | | T _{amb} = +125 (+0 -5)°C V _{TEST} = 100Vdc | | | | |
| Contact Voltage | V _D | ESCC No. 3601 | All | - | 0.05 x I _{TEST} | V |
| Drop | | $T_{amb} = +125 (+0.5)^{\circ}C$ | | | | |
| | | and -65 (+5 -0)°C | | | | |
| | | I _{TEST} = 100mA max | | | | |

2.5 PARAMETER DRIFT VALUES

Parameter Drift Values shall be measured as specified in the ESCC Generic Specification.

Unless otherwise specified, the measurements shall be performed at $T_{amb} = +22 \pm 3$ °C.

The test methods and test conditions shall be as per the corresponding test defined in Para. 2.4.1 Room Temperature Electrical Measurements.

The corresponding absolute limit values for each characteristic shall not be exceeded.

| Characteristics | Symbols | | Units | | |
|------------------|----------------|-------------|--------|--------|---|
| | | Drift Value | Abso | | |
| | | Δ | Min | Max | |
| Pick-up Voltage | Uc | Note 1 | Note 2 | Note 2 | V |
| Drop-out Voltage | U _D | Note 1 | Note 2 | Note 2 | V |

- 1. Drift Value (Δ) limits are not specified. Drift Values shall be recorded for information purposes only.
- 2. The limit specified in Para. 2.4.1 shall apply.



2.6 <u>INTERMEDIATE AND END-POINT ELECTRICAL MEASUREMENTS</u>

Unless otherwise specified, the measurements shall be performed at $T_{amb} = +22 \pm 3$ °C.

Unless otherwise specified the test methods and test conditions shall be as per the corresponding test defined in Para. 2.4.1 Room Temperature Electrical Measurements.

| Test Reference per | Characteristics | Symbols | Limits | | Units |
|--------------------|-------------------------------|---------------------------------|--------|-------|-------|
| ESCC No. 3601 | | | Min | Max | |
| Thermal Shock | During 5th Cycle | | | | |
| | Pick-up Voltage | Uc | Note 2 | | V |
| | Drop-out Voltage | U _D | Ν | ote 2 | V |
| | Operate Time | t _C | N | ote 2 | ms |
| | Release Time | t₀ | N | ote 2 | ms |
| | Final Measurements | | | | |
| | Voltage Proof | VP | N | ote 3 | Vrms |
| | Voltage Proof Leakage Current | I _{LVP} | N | ote 3 | mA |
| Low Level Sine | Final Measurements | | | | |
| Vibration | Pick-up Voltage | Uc | N | ote 3 | V |
| | Pick-up Voltage Drift | ΔU _C /U _C | Ν | ote 1 | % |
| | Drop-out Voltage | U _D | Ν | ote 3 | V |
| | Drop-out Voltage Drift | ΔU _D /U _D | N | ote 1 | % |
| Random Vibration | Final Measurements | | | | |
| | Pick-up Voltage | Uc | N | ote 3 | V |
| | Pick-up Voltage Drift | ΔU _C /U _C | N | ote 1 | % |
| | Drop-out Voltage | U _D | N | ote 3 | V |
| | Drop-out Voltage Drift | ΔU _D /U _D | N | ote 1 | % |
| High Level Sine | Final Measurements | | | | |
| Vibration | Pick-up Voltage | Uc | N | ote 3 | V |
| | Pick-up Voltage Drift | ΔU _C /U _C | N | ote 1 | % |
| | Drop-out Voltage | U_D | N | ote 3 | V |
| | Drop-out Voltage Drift | ΔU _D /U _D | N | ote 1 | % |
| Low Level | Final Measurements | | | | |
| Mechanical Shock | Contact Voltage Drop | V_D | N | ote 3 | V |
| | Pick-up Voltage | Uc | N | ote 3 | V |
| | Pick-up Voltage Drift | ΔU _C /U _C | N | ote 1 | % |
| | Drop-out Voltage | U _D | N | ote 3 | V |
| | Drop-out Voltage Drift | ΔU _D /U _D | N | ote 1 | % |
| | Voltage Proof | VP | Ν | ote 3 | Vrms |
| | Voltage Proof Leakage Current | I _{LVP} | N | ote 3 | mA |



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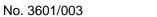
| Test Reference per | Characteristics | Symbols | L | imits | Units |
|--------------------|-------------------------------|---------------------------------|--------|-------------|-------|
| ESCC No. 3601 | | | Min | Max | |
| High Level | Final Measurements | | | | |
| Mechanical Shock | Contact Voltage Drop | V_D | Note 3 | | V |
| | Pick-up Voltage | Uc | N | ote 3 | V |
| | Pick-up Voltage Drift | ΔUc/Uc | N | ote 1 | % |
| | Drop-out Voltage | U _D | N | ote 3 | V |
| | Drop-out Voltage Drift | ΔU _D /U _D | N | ote 1 | % |
| | Voltage Proof | VP | N | ote 3 | Vrms |
| | Voltage Proof Leakage Current | I _{LVP} | N | ote 3 | mA |
| Resistance to | Final Measurements | | | | |
| Soldering Heat | Insulation Resistance | Rı | N | ote 3 | GΩ |
| | Contact Voltage Drop | V_D | N | ote 3 | V |
| | Pick-up Voltage | Uc | N | ote 3 | V |
| | Drop-out Voltage | U_D | N | ote 3 | V |
| | Coil Resistance | R _B | Note 3 | | Ω |
| Low Level Life | Final Measurements | | | | |
| | Contact Voltage Drop | V_D | - | 0.1 x ITEST | V |
| | Insulation Resistance | Rı | 5000 | - | МΩ |
| | Voltage Proof | VP | N | ote 3 | Vrms |
| | Voltage Proof Leakage Current | I _{LVP} | N | ote 3 | mA |
| | Pick-up Voltage | Uc | N | ote 3 | V |
| | Pick-up Voltage Drift | ΔUc/Uc | N | ote 1 | % |
| | Drop-out Voltage | U_D | N | ote 3 | V |
| | Drop-out Voltage Drift | $\Delta U_D/U_D$ | N | ote 1 | % |
| | Operate Time | tc | N | ote 3 | ms |
| | Release Time | t _D | N | ote 3 | ms |
| | Bounce Time | t _B | N | ote 3 | ms |
| | Coil Resistance | R _B | N | ote 3 | Ω |





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| Test Reference per | Characteristics | Symbols | L | imits | Units |
|--------------------|---------------------------------|---------------------------------|------|-------------|-------|
| ESCC No. 3601 | | | Min | Max | |
| Resistive Life | During Monitoring | | | | |
| | Contact Voltage Drop | V_D | - | 2.8 | V |
| | Final Measurements | | | | |
| | Contact Voltage Drop | V_{D} | _ | 0.1 x ITEST | V |
| | Insulation Resistance | Rı | 5000 | - | МΩ |
| | Voltage Proof | VP | | ote 3 | Vrms |
| | Voltage Proof Leakage Current | I _{LVP} | | ote 3 | mA |
| | Pick-up Voltage | Uc | | ote 3 | V |
| | Pick-up Voltage Drift | ΔUc/Uc | N | ote 1 | % |
| | Drop-out Voltage | U_D | N | ote 3 | V |
| | Drop-out Voltage Drift | ΔU _D /U _D | N | ote 1 | % |
| | Operate Time | tc | N | ote 3 | ms |
| | Release Time | t_D | N | ote 3 | ms |
| | Bounce Time | t _B | N | ote 3 | ms |
| | Coil Resistance | Rв | N | ote 3 | Ω |
| Coil Life | During Step 1 of each Cycle | | | | |
| | Contact Voltage Drop | V_D | N | ote 3 | V |
| | Coil Resistance | R _B | N | ote 3 | Ω |
| | During Step 3 of 1st Cycle | | | | |
| | Contact Voltage Drop | V_{D} | N | ote 2 | V |
| | Operate Time | tc | | ote 2 | ms |
| | Release Time | t _D | | ote 2 | ms |
| | Troices Time | | | 0.0 2 | 1110 |
| | During Steps 4 & 5 of 4th Cycle | | | | |
| | Pick-up Voltage | Uc | N | ote 2 | V |
| | Drop-out Voltage | U _D | N | ote 2 | V |
| | Final Measurements | | | | |
| | Voltage Proof | VP | N | ote 3 | Vrms |
| | Voltage Proof Leakage Current | I _{LVP} | | ote 3 | mA |
| | Insulation Resistance | R _I | | ote 3 | GΩ |
| | Contact Voltage Drop | V _D | | ote 3 | V |
| | Coil Resistance | R _B | | ote 3 | Ω |
| | Operate Time | tc | | ote 3 | ms |
| | Release Time | t _D | | ote 3 | ms |
| | Bounce Time | t _B | | ote 3 | ms |
| | | _ | | | |





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| Test Reference per | Characteristics | Symbols | L | imits | Units |
|--------------------|-------------------------------|------------------|------|-------------------------|-------|
| ESCC No. 3601 | | | Min | Max | |
| Intermediate | During Monitoring | | | | |
| Current | Contact Voltage Drop | V_D | - | 300 | mV |
| | Final Measurements | | | I | |
| | Insulation Resistance | Rı | 5000 | - | МΩ |
| | Voltage Proof | VP | N | ote 3 | Vrms |
| | Voltage Proof Leakage Current | I _{LVP} | N | ote 3 | mA |
| | Pick-up Voltage | Uc | N | ote 3 | V |
| | Pick-up Voltage Drift | ΔUc/Uc | N | ote 1 | % |
| | Drop-out Voltage | U _D | N | ote 3 | V |
| | Drop-out Voltage Drift | $\Delta U_D/U_D$ | N | ote 1 | % |
| | Operate Time | tc | N | ote 3 | ms |
| | Release Time | t_D | Ν | ote 3 | ms |
| | Bounce Time | t _B | Ν | ote 3 | ms |
| | Coil Resistance | Rв | Ν | ote 3 | Ω |
| | Contact Voltage Drop | V_D | - | 0.1 x I _{TEST} | V |
| Overload | During Monitoring | | | | |
| | Contact Voltage Drop | V_D | - | 1.4 | V |
| | | | | | |
| | Final Measurements | | | ١ | ., |
| | Contact Voltage Drop | V _D | - | 0.1 x I _{TEST} | V |
| | Insulation Resistance | Rı | 5000 | - | ΜΩ |
| | Voltage Proof | VP | | ote 3 | Vrms |
| | Voltage Proof Leakage Current | I _{LVP} | | ote 3 | mA |
| | Pick-up Voltage | Uc | | ote 3 | V |
| | Pick-up Voltage Drift | ΔUc/Uc | | ote 1 | % |
| | Drop-out Voltage | U_{D} | | ote 3 | V |
| | Drop-out Voltage Drift | $\Delta U_D/U_D$ | | ote 1 | % |
| | Operate Time | t⊨ | | ote 3 | ms |
| | Release Time | t_D | | ote 3 | ms |
| | Bounce Time | t_{B} | N | ote 3 | ms |
| | Coil Resistance | Rв | N | ote 3 | Ω |

- 1. Parameter Drift shall be calculated referenced to the measurement immediately prior to the test in question. An additional initial measurement may be performed prior to the test in question if considered necessary. Drift limits are not specified. Drift Values shall be recorded for information purposes only.
- 2. The limits specified in Para. 2.4.2, as applicable to the same test temperature, shall apply.
- 3. The limits specified in Para. 2.4.1 shall apply.





2.7 RUN-IN CONDITIONS

The test conditions for Run-in, tested as specified in the ESCC Generic Specification, shall be as follows:

(a) Test Temperature: +22 ±3°C.



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APPENDIX A AGREED DEVIATIONS FOR LEACH INTERNATIONAL EUROPE (F)

| ITEMS AFFECTED | DESCRIPTION OF DEVIATIONS |
|--|--|
| Para. 2.1.1 Deviations from the Generic Specification: | Chart F4: Coil Life subgroup test sequence (under Endurance Subgroup 1): |
| Qualification and Periodic Tests - Chart F4 | Coil Life and the subsequent tests shall only be performed for Qualification. They are not required for Periodic Testing except in the case of any significant change to the design. |