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# RELAY, ELECTROMAGNETIC, LATCHING, 28VDC, 25A, 3PDT

# ESCC Detail Specification No. 3602/006

Issue 6	September 2024
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#### **DOCUMENTATION CHANGE NOTICE**

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

DCR No.	CHANGE DESCRIPTION
1656	Specification updated to incorporate changes per DCR.



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#### 1 <u>GENERAL</u>

#### 1.1 <u>SCOPE</u>

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. 3602.

#### 1.3 <u>TERMS, DEFINITIONS, ABBREVIATIONS, SYMBOLS AND UNITS</u> 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 <u>The ESCC Component Number</u> The ESCC Component Number shall be constituted as follows:

Example: 36020060428V

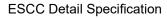
- Detail Specification Reference: 3602006
- Component Type Variant Number: 04 (as required)
- Characteristic code: Rated Coil Voltage (28Vdc): 28V

#### 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) Rated Coil Voltage expressed by means of the following codes:

Rated Coil Voltage (Vdc)	Code
28	28V
12	12V





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#### Component Type Variants and Range of Components 1.4.2

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

Variant Number	Case and Terminal Description (Note 1)	Rated Coil Voltage (Vdc)	Coil Resistance (Ω)	Weight max (g)	
02	Raised Vertical Flange Mount	28	450	82	
	Solder Hook Terminals	12	111.5		
03	Raised Vertical Flange Mount	28	450	82	
	Solder Pin Terminals	12	111.5		
04	Horizontal Flange Mount	28	450	82	
	Solder Hook Terminals	12	111.5		
07	Horizontal Flange Mount	28	450	82	
	Solder Pin Terminals	12	111.5		
12	Raised Vertical Flange Mount	28	300	82	
	Solder Hook Terminals	12	60		
13	Raised Vertical Flange Mount	28	300	82	
	Solder Pin Terminals	12	60		
14	Horizontal Flange Mount	28	300	82	
	Solder Hook Terminals	12	60		
17	Horizontal Flange Mount	28	300	82	
	Solder Pin Terminals	12	60		

NOTES: 1. See Para. 1.6.



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#### 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.

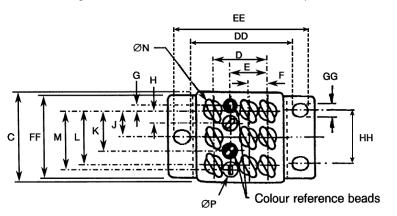
Characteristics	Symbols	Maximum Ratings	Units	Remarks
Coil Voltage Range	V <sub>CR</sub>	26.5 to 32 11 to 14.5	Vdc	Rated Coil Voltage: 28Vdc Rated Coil Voltage: 12Vdc
Rated Resistive Load Contact Current	Icr	25	A	28Vdc resistive Note 1
Rated Inductive Load Contact Current	lc∟	12	A	28Vdc inductive Note 1
Overload Current	IOVERLOAD	50	А	28Vdc resistive
Operating Temperature Range	T <sub>op</sub>	-65 to +125	°C	T <sub>amb</sub>
Storage Temperature Range	T <sub>stg</sub>	-65 to +125	°C	T <sub>amb</sub>
Soldering Temperature	$T_{sol}$	+260	°C	Note 2

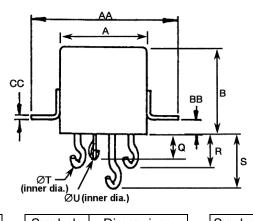
#### NOTES:

- 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 Raised Vertical Flange Mount and Solder Hook Terminals (Variants 02, 12)





Symbols	Dimensions		
	(m	m)	
	Min	Max	
А	-	26	
В	-	25.7	
С	-	26	
D	15.8	16.2	
E	10.8	11.2	
F	5.7	6.1	
G	1.12	1.42	
Н	3.7	3.9	
J	7.4	7.8	

Symbols	Dimer	nsions
	(m	m)
	Min	Max
К	11.2	11.6
L	15	15.4
М	16.3	16.7
ØN	2.3	2.45
ØP	0.95	1.1
Q	7.1	8.1
R	9	10
S	15.4	16.4
ØТ	2.3	2.45

Symbols	Dimensions (mm)				
	Min Max				
ØU	0.95	1.1			
AA	-	43.6			
BB	3.8	4.2			
CC	0.9	1.1			
DD	31.15	32.15			
EE	40	41			
FF	-	24			
GG	3.55	4.05			
HH	15.65	16.15			

#### NOTES:

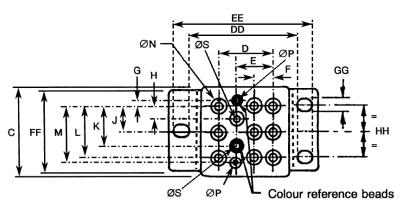
1. Terminal identification is specified by reference to the colour reference beads and the terminals' configuration. See Para. 1.7.

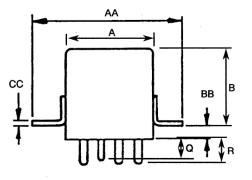




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#### 1.6.2 Raised Vertical Flange Mount and Solder Pin Terminals (Variants 03, 13)



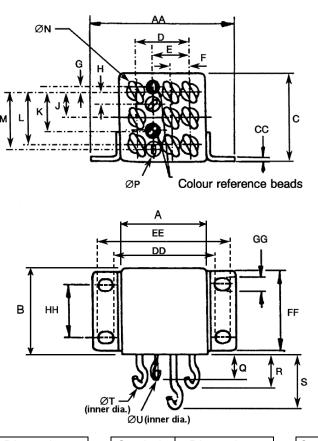


Symbols	Dimensions (mm)		Symbols	Dimensions (mm)				Dimensions (mm)		
	Min	Max			Min	Max			Min	Max
А	-	26		K	11.2	11.6		BB	3.8	4.2
В	-	25.7		L	15	15.4		CC	0.9	1.1
С	-	26		М	16.3	16.7		DD	31.15	32.15
D	15.8	16.2		ØN	2.3	2.41		EE	40	41
E	10.8	11.2		ØP	0.95	1.1		FF	-	24
F	5.7	6.1		Q	6.1	6.6		GG	3.55	4.05
G	1.12	1.42		R	6.6	7.1		HH	15.65	16.15
Н	3.7	3.9		ØS	1.55	1.61				
J	7.4	7.8		AA	-	43.6				

<u>NOTES:</u> 1. Tei Terminal identification is specified by reference to the colour reference beads and the terminals' configuration. See Para. 1.7.



#### 1.6.3 <u>Horizontal Flange Mount and Solder Hook Terminals (Variants 04, 14)</u>



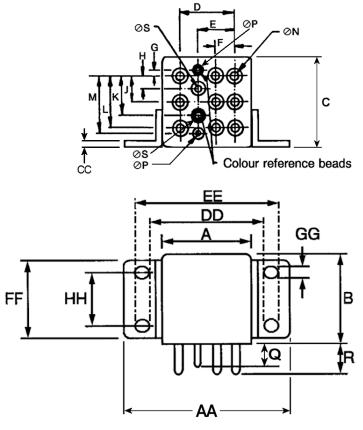
			1				1				
Symbols	Dimer	nsions		Symbols	Dimensions		bols Dimensions		Symbols	Dimer	nsions
	(m	m)			(mm)				(m	m)	
	Min	Max			Min	Max			Min	Max	
Α	-	26	1	K	11.2	11.6		ØU	0.95	1.1	
В	-	25.7		L	15	15.4		AA	-	43.6	
С	-	26	1	М	16.3	16.7		CC	0.9	1.1	
D	15.8	16.2		ØN	2.3	2.45		DD	31.15	32.15	
E	10.8	11.2		ØP	0.95	1.1		EE	40	41	
F	5.7	6.1		Q	7.1	8.1		FF	-	24	
G	1.12	1.42	1	R	9	10		GG	3.55	4.05	
Н	3.7	3.9		S	15.4	16.4		HH	15.65	16.15	
J	7.4	7.8	1	ØT	2.3	2.45					

#### NOTES:

1. Terminal identification is specified by reference to the colour reference beads and the terminals' configuration. See Para. 1.7.



#### 1.6.4 Horizontal Flange Mount and Solder Pin Terminals (Variant 07, 17)



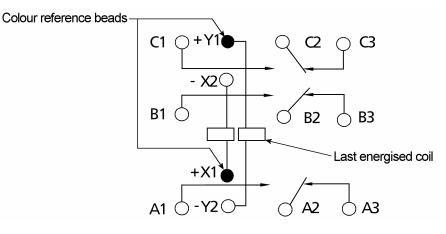
Symbols	Dimer (m	nsions m)	Symbols	Symbols Dimensions (mm)				Symbols		nsions m)
	Min	Max		Min	Max			Min	Max	
Α	-	26	J	7.4	7.8		ØS	1.55	1.61	
В	-	25.7	K	11.2	11.6		AA	-	43.6	
С	-	26	L	15	15.4		CC	0.9	1.1	
D	15.8	16.2	М	16.3	16.7		DD	31.15	32.15	
E	10.8	11.2	ØN	2.3	2.41		EE	40	41	
F	5.7	6.1	ØP	0.95	1.1		FF	-	24	
G	1.12	1.42	Q	6.1	6.6		GG	3.55	4.05	
Н	3.7	3.9	R	6.6	7.1		HH	15.65	16.15	

#### NOTES:

1. Terminal identification is specified by reference to the colour reference beads and the terminals' configuration. See Para. 1.7.



#### 1.7 FUNCTIONAL DIAGRAM



#### NOTES:

- 1. As viewed from the terminal side.
- 2. Individual terminal designations are for reference purposes only.

#### 1.8 MATERIALS AND FINISHES

#### 1.8.1 <u>Case</u>

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 H3, H4 or H19 in accordance with the requirements of ESCC Basic Specification No. 23500.

#### 2 <u>REQUIREMENTS</u>

#### 2.1 <u>GENERAL</u>

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 <u>Deviations from the Generic Specification</u>

#### 2.1.1.1 Deviations from Qualification and Periodic Tests - Chart F4

- (a) Inductive Life: Number of Cycles of Operation shall be 10000.
- (b) Resistive Life: Number of Cycles of Operation shall be 50000.



#### 2.2 <u>MARKING</u>

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 TERMINAL STRENGTH

The terminals of all Variants are defined as rigid.

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

- (a) Pull Test : Applied Force:
  - 50N for > 1.2mm diameter terminals
  - 25N for < 1.2mm diameter terminals

## 2.4 ELECTRICAL MEASUREMENTS AT ROOM, HIGH AND LOW TEMPERATURES

Electrical measurements shall be performed at room, high and low temperatures. Consolidated notes are given in Para. 2.4.3.

#### 2.4.1 <u>Room Temperature Electrical Measurements</u> The measurements shall be performed at $T_{amb}$ = +22 ±3°C.

Characteristics	Symbols	Test Method and	Rated	Lin	nits	Units
		Conditions	Coil Voltage (Vdc)	Min	Max	
Latch Voltage	UL	ESCC No. 3602				V
		Note 1	28	8	14	
			12	3.6	6.6	
Reset Voltage	UR	ESCC No. 3602				V
		Note 1	28	8	14	
			12	3.6	6.6	
Latch Time	t∟	ESCC No. 3602	All	-	15	ms
Reset Time	t <sub>R</sub>	ESCC No. 3602	All	-	15	ms
Bounce Time	tв	ESCC No. 3602	All	-	1	ms
Insulation	Rı	ESCC No. 3602	All	100	-	MΩ
Resistance		V <sub>TEST</sub> = 500Vdc				
Voltage Proof	VP	ESCC No. 3602	All	1250	-	Vrms
(Test Voltage)		Maximum Leakage		1000	-	
		Current I <sub>LVP</sub> = 1mA		(Note 2)		
				500	-	
				(Note 3)		
Voltage Proof	LVP	ESCC No. 3602	All	-	1	mA
Leakage Current		Note 4				
Contact Voltage	VD	ESCC No. 3602	All	-	0.006 x	V
Drop		$100 \text{mA} \le I_{\text{TEST}} \le 25 \text{A}$			ITEST	

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Characteristics	Symbols	Test Method and	Rated	Lin	Limits	
		Conditions	Coil Voltage (Vdc)	Min	Max	
Coil Resistance	R <sub>B</sub>	ESCC No. 3602				Ω
		Both coils				
		Variants 02, 03, 04, 07	28	405	495	
		Variants 02, 03, 04, 07	12	100	123	
		Variants 12, 13, 14, 17	28	270	330	
		Variants 12, 13, 14, 17	12	54	66	

#### 2.4.2 <u>High and Low Temperatures Electrical Measurements</u>

Characteristics	Symbols	Test Method and	Rated	Lin	nits	Units
		Conditions	Coil Voltage (Vdc)	Min	Max	
Latch Voltage	UL	ESCC No. 3602 T <sub>amb</sub> = +125 (+0 -5)°C and -65 (+5 -0)°C Note 1	28 12	-	18 9	V
Reset Voltage	UR	ESCC No. 3602 T <sub>amb</sub> = +125 (+0 -5)°C and -65 (+5 -0)°C Note 1	28 12	-	18 9	V
Latch Time	tL	ESCC No. 3602 T <sub>amb</sub> = +125 (+0 -5)°C and -65 (+5 -0)°C	All	-	15	ms
Reset Time	t <sub>R</sub>	ESCC No. 3602 T <sub>amb</sub> = +125 (+0 -5)°C and -65 (+5 -0)°C	All	-	15	ms
Bounce Time	tΒ	ESCC No. 3602 T <sub>amb</sub> = +125 (+0 -5)°C and -65 (+5 -0)°C	All	-	1	ms
Insulation Resistance	Rı	ESCC No. 3602 T <sub>amb</sub> = +125 (+0 -5)°C V <sub>TEST</sub> = 500Vdc	All	50	-	MΩ
Contact Voltage Drop	VD	ESCC No. 3602 T <sub>amb</sub> = +125 (+0 -5)°C and -65 (+5 -0)°C 100mA ≤ I <sub>TEST</sub> ≤ 25A	All	-	0.006 x I <sub>TEST</sub>	V

<sup>2.4.3</sup> Notes to Electrical Measurements Tables

- 1. The coil voltage rise time shall be less than  $0.1t_L$  or  $0.1t_R$ . The coil voltage shall be maintained for a minimum duration of  $10t_L$  or  $10t_R$ .
- 2. Between coil and case.
- 3. Between latch and reset coils.
- 4. Measured during Voltage Proof test.



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#### 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 ±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		Limits		Units
		Drift Value	Absolute		
		Δ	Min	Max	
Latch Voltage	UL	Note 1	Note 2	Note 2	V
Reset Voltage	U <sub>R</sub>	Note 1	Note 2	Note 2	V

#### NOTES:

- 1. Drift Value ( $\Delta$ ) 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 INTERMEDIATE AND END-POINT ELECTRICAL MEASUREMENTS

Unless otherwise specified, the measurements shall be performed at  $T_{amb}$  = +22 ±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	Lin	nits	Units
ESCC No. 3602	(Note 1)		Min	Max	
Thermal Shock	During 5th Cycle				
	Latch Voltage	U∟	Not	e 2	V
	Reset Voltage	UR	Not	e 2	V
	Latch Time	tL	Not	e 2	ms
	Reset Time	t <sub>R</sub>	Not	e 2	ms
	Final Measurements				
	Voltage Proof	VP	Not	e 3	Vrms
	Voltage Proof Leakage Current	ILVP	Not	e 3	mA
Low Level Sine	Final Measurements				
Vibration	Latch Voltage	U∟	Not	e 3	V
	Latch Voltage Drift	$\Delta U_L/U_L$	Not	e 1	%
	Reset Voltage	UR	Not	ie 3	V
	Reset Voltage Drift	$\Delta U_R/U_R$	Note 1		%

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Test Reference per	Characteristics	Symbols	Lin	nits	Units
ESCC No. 3602	(Note 1)		Min	Max	
High Level Sine	Final Measurements			•	
Vibration	Latch Voltage	U∟	Not	te 3	V
	Latch Voltage Drift	$\Delta U_L/U_L$	Not	te 1	%
	Reset Voltage	UR	Not	Note 3	
	Reset Voltage Drift	$\Delta U_R/U_R$	Not	te 1	%
Low Level	Final Measurements				
Mechanical Shock	Contact Voltage Drop	VD	Not	te 3	V
	Latch Voltage	U∟	Not	te 3	V
	Latch Voltage Drift	$\Delta U_L/U_L$	Not	te 1	%
	Reset Voltage	UR	Not	te 3	V
	Reset Voltage Drift	$\Delta U_R/U_R$	Not	te 1	%
	Voltage Proof	VP	Not	te 3	Vrms
	Voltage Proof Leakage Current	ILVP	Not	te 3	mA
High Level	Final Measurements				
Mechanical Shock	Contact Voltage Drop	VD	Not	te 3	V
	Latch Voltage	U∟	Not	te 3	V
	Latch Voltage Drift	$\Delta U_L/U_L$	Not	te 1	%
	Reset Voltage	UR	Not	te 3	V
	Reset Voltage Drift	$\Delta U_R/U_R$	Not	te 1	%
	Voltage Proof	VP	Not	te 3	Vrms
	Voltage Proof Leakage Current	ILVP	No	te 3	mA
Resistance to	Final Measurements				
Soldering Heat	Insulation Resistance	R	Not	te 3	MΩ
	Contact Voltage Drop	VD	Not	te 3	V
	Latch Voltage	U∟	No	te 3	V
	Reset Voltage	U <sub>R</sub>	Not	te 3	V
	Coil Resistance	R <sub>B</sub>	Not	te 3	Ω



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Test Reference per	Characteristics	Symbols	Lin	nits	Units
ESCC No. 3602	(Note 1)		Min	Max	
Inductive Life	During Monitoring				
	Contact Voltage Drop	VD	-	2.8	V
	Final Measurements			I	
	Contact Voltage Drop	VD	-	0.007 х І <sub>теsт</sub>	V
	Insulation Resistance	Rı	50	-	MΩ
	Voltage Proof:	VP			Vrms
	Between latch and reset coils		500	-	
	All other points		1000	-	
	Voltage Proof Leakage Current	I <sub>LVP</sub>	Not	te 3	mA
	Latch Voltage	U∟	Not	te 3	V
	Latch Voltage Drift	$\Delta U_L/U_L$	Not	te 1	%
	Reset Voltage	UR	Not	te 3	V
	Reset Voltage Drift	$\Delta U_R/U_R$	Not	te 1	%
	Latch Time	t∟	Not	te 3	ms
	Reset Time	t <sub>R</sub>	Note 3 Note 3		ms
	Bounce Time	tв			ms
	Coil Resistance	R <sub>B</sub>	Not	te 3	Ω



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Units

V

V

MΩ Vrms

> mA V % V

> > %

ms

ms

ms

Ω

Characteristics	Symbols	Lin	nits
(Note 1)		Min	Max
During Monitoring			
Contact Voltage Drop	$V_{D}$	-	2.8
Final Measurements			l
Contact Voltage Drop	VD	-	0.007 х І <sub>теsт</sub>
Insulation Resistance	Rı	50	-
Voltage Proof:	VP		
Between latch and reset coils		500	-
All other points		1000	-
Voltage Proof Leakage Current	I <sub>LVP</sub>	Not	te 3
Latch Voltage	U∟	Not	te 3
Latch Voltage Drift	$\Delta U_L/U_L$	Not	te 1
Reset Voltage	UR	Not	te 3
	(Note 1) During Monitoring Contact Voltage Drop Final Measurements Contact Voltage Drop Insulation Resistance Voltage Proof: Between latch and reset coils All other points Voltage Proof Leakage Current Latch Voltage Latch Voltage Drift	(Note 1)Image: Contact Voltage DropVDFinal MeasurementsVDContact Voltage DropVDInsulation ResistanceRIVoltage Proof:VPBetween latch and reset coilsVPAll other pointsULVoltage Proof Leakage CurrentULLatch Voltage Drift $\Delta UL/UL$	(Note 1)MinDuring Monitoring Contact Voltage Drop $V_D$ -Final Measurements Contact Voltage Drop $V_D$ -Final Measurements Contact Voltage Drop $V_D$ -Insulation Resistance $R_1$ 50Voltage Proof: $VP$ 500All other points1000Voltage Proof Leakage Current $I_{LVP}$ NotLatch Voltage Drift $\Delta U_L/U_L$ Not

 $\Delta U_R/U_R$ 

t∟

t<sub>R</sub>

tΒ

 $\mathsf{R}_\mathsf{B}$ 

Note 1

Note 3

Note 3

Note 3

Note 3

Reset Voltage Drift

Latch Time

**Reset Time** 

Bounce Time

**Coil Resistance** 



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Test Reference per	Characteristics	Symbols	Lin	nits	Units
ESCC No. 3602	(Note 1)		Min	Max	
Coil Life	During Step 1 of each Cycle				
	Contact Voltage Drop	VD	Not	e 3	V
	Coil Resistance	R <sub>B</sub>	Not	e 3	Ω
	During Step 3 of 1st Cycle				
	Contact Voltage Drop	VD	Not	e 2	V
	Latch Time	t⊨	Not	e 2	ms
	Reset Time	tD	Not	e 2	ms
	During Steps 4 & 5 of 4th Cycle				
	Latch Voltage	U∟	Not	e 2	V
	Reset Voltage	UR	Not	e 2	V
	Final Measurements				
	Voltage Proof	VP	Not	e 3	Vrms
	Voltage Proof Leakage Current	ILVP	Not	e 3	mA
	Insulation Resistance	Rı	Not	e 3	MΩ
	Contact Voltage Drop	VD	Not	e 3	V
	Coil Resistance	R <sub>B</sub>	Not	e 3	Ω
	Latch Time	t∟	Not	e 3	ms
	Reset Time	t <sub>R</sub>	Not	e 3	ms
	Bounce Time	t <sub>B</sub>	Not	e 3	ms



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Test Reference per	Characteristics	Symbols	Lin	nits	Units
ESCC No. 3602	(Note 1)		Min	Max	
Intermediate Current	During Monitoring Contact Voltage Drop	VD		200	mV
	Final Measurements				
	Insulation Resistance	Rı	50	-	MΩ
	Voltage Proof:	VP			Vrms
	Between latch and reset coils All other points		500 1000	-	
	Voltage Proof Leakage Current	ILVP	Not	te 3	mA
	Latch Voltage	U∟	Not	te 3	V
	Latch Voltage Drift	$\Delta U_L/U_L$	Not	te 1	%
	Reset Voltage	UR	Not	te 3	V
	Reset Voltage Drift	$\Delta U_R/U_R$	Note 1		%
	Latch Time	t∟	Note 3		ms
	Reset Time	t <sub>R</sub>	Note 3		ms
	Bounce Time	tв	Note 3		ms
	Coil Resistance	R <sub>B</sub>	Not	te 3	Ω
	Contact Voltage Drop	VD	-	0.007 х І <sub>теst</sub>	V
Mechanical Life	Final Measurements				
	Contact Voltage Drop	VD	-	0.007 x I <sub>TEST</sub>	V
	Latch Voltage	U∟	Not	te 3	V
	Latch Voltage Drift	$\Delta U_L/U_L$	Not	te 1	%
	Reset Voltage	UR	No	te 3	V
	Reset Voltage Drift	$\Delta U_R/U_R$	Not	te 1	%
	Latch Time	t∟	Not	te 3	ms
	Reset Time	t <sub>R</sub>	Not	te 3	ms
	Bounce Time	tв	Not	te 3	ms
	Coil Resistance	Rв	Not	te 3	Ω



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Test Reference per	Characteristics	Symbols	Lin	nits	Units
ESCC No. 3602	(Note 1)		Min	Max	
Overload	During Monitoring				
	Contact Voltage Drop	VD	-	2.8	V
	Final Measurements			l	
	Contact Voltage Drop	VD	-	0.007 x I <sub>TEST</sub>	V
	Insulation Resistance	Rı	50	-	MΩ
	Voltage Proof:	VP			Vrms
	Between latch and reset coils		500	-	
	All other points		1000	-	
	Voltage Proof Leakage Current	ILVP	Not	te 3	mA
	Latch Voltage	U∟	Not	te 3	V
	Latch Voltage Drift	$\Delta U_L/U_L$	Not	te 1	%
	Reset Voltage	UR	Not	te 3	V
	Reset Voltage Drift	$\Delta U_R/U_R$	Not	te 1	%
	Latch Time	t∟	Note 3 Note 3 Note 3		ms
	Reset Time	t <sub>R</sub>			ms
	Bounce Time	tв			ms
	Coil Resistance	Rв	Not	te 3	Ω

#### NOTES:

- 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 <u>RUN-IN CONDITIONS</u>

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

(a) Test Temperature: +22 ±3°C.

ESCC Detail Specification



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#### <u>APPENDIX A</u>

## AGREED DEVIATIONS FOR LEACH INTERNATIONAL EUROPE (F)

ITEMS AFFECTED	DESCRIPTION OF DEVIATIONS
Para. 1.8.2 Materials and Finishes: Terminals	Terminal material shall be Iron-Cobolt.
Para. 2.1.1 Deviations from the Generic Specification: Lot Validation Testing – Chart F4	High Level Sine Vibration: Not Applicable
	High Level Mechanical Shock: Not Applicable

ESCC Detail Specification



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#### APPENDIX B AGREED DEVIATIONS FOR REL STPI (F)

ITEMS AFFECTED	DESCRIPTION OF DEVIATIONS
Para. 2.1.1 Deviations from the Generic Specification: Lot Validation Testing – Chart F4	High Level Sine Vibration: Not Applicable
	High Level Mechanical Shock: Not Applicable