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1 GENERAL

Performance Data to:
IEC60255-6, IEC60255-6A and IEC60255-16.

2 AUXILIARY ENERGIZING QUANTITY

2.1 DC Power Supply

	Nominal	Operating Range
VAUX	50/110/125V	37.5V to 137.5V dc
VAUX	220/250/260V	175V to 286V dc

2.2 DC Status Inputs

Nominal Voltage	Operating Range
30/34	18V to 37.5V
48/54	37.5V to 60V
110/125	87.5V to 137.5V
220/250	175 to 286V

Status Input Performance (30V and 48V)

Minimum DC current for operation	10mA
Reset/Operate Voltage Ratio	≥ 90%

Status Input Performance (110V and 220V)

Minimum DC current for operation	1mA
Reset/Operate Voltage Ratio	≥ 90%

NB Status operating voltage need not be the same as the main energising voltage. 48/54 volt rated status inputs can be supplied with external dropper resistors, for use with 110V or 220V dc supplies, as follows:-

Status Input External Resistances

Nominal Voltage	Resistor Value;Wattage
110/125V	2k7 ± 5% ; 2.5W
220/250V	8k2 ± 5% ; 6.0W

Two types of status inputs are provided, and can be set by operation of DIL switch viz:-

- a) High speed status inputs.

Typical response time	<5ms
Typical drop off time	<5ms
Typical response time when programmed to energise an output relay contact	<10ms

- b) Scheme status inputs. These status inputs will not respond to either 250V RMS 50/60 Hz applied for 1 second or to the discharge of a 10µF capacitor charged to maximum DC auxiliary supply voltage.

Typical response time	<25ms
Typical Drop off time	<25ms

Typical response time when programmed to energise an output relay contact	<30ms
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3 ACCURACY

3.1 Accuracy Influencing Factors

Temperature

Ambient range	-10°C to +55°C
Variation over range	≤ 5%

Auxiliary DC Supply – IEC 60255-11

Allowable superimposed ac component	≤ 12% of DC voltage
Allowable breaks/dips in supply (collapse to zero from nominal voltage)	≤ 20ms

4 BURDENS

4.1 D.C. Burden

	DC Burden (watts)
Quiescent (Typical)	15
Max	27

5 OUTPUT CONTACT PERFORMANCE

Contact rating to IEC 60255-0-2.

Carry continuously 5A ac or dc

Make and Carry

(limit L/R ≤ 40ms and V ≤ 300 volts)

for 0.5 sec	20A ac or dc
for 0.2 sec	30A ac or dc

Break

(limit ≤ 5A or ≤ 300 volts)

ac resistive	1250VA
ac inductive	250VA @ PF ≤ 0.4
dc resistive	75W
dc inductive	30W @ L/R ≤ 40 ms 50W @ L/R ≤ 10 ms

Minimum number of operations	1000 at maximum load
Minimum recommended load	0.5W, limits 10mA or 5V

6 ENVIRONMENTAL WITHSTAND

Temperature - IEC 6068-2-1/2

Operating range	-10°C to +55°C
Storage range	-25°C to +70°C

Humidity - IEC 6068-2-3

Operational test	56 days at 40°C and 95% RH
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Bump test	10 gn 16ms	≤ 5%
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Transient Overvoltage –IEC 60255-5

Between all terminals and earth or between any two independent circuits without damage or flashover	5kV 1.2/50µs 0.5J
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Seismic – IEC 60255-21-3 Class 1

		Variation
Seismic Response	1gn	≤ 5%

Insulation - IEC 60255-5

Between all terminals and earth	2.0kV rms for 1 min
Between independent circuits	2.0kV rms for 1 min
Across normally open contacts	1.0kV rms for 1 min

Mechanical Classification

Durability	In excess of 10 ⁶ operations
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High Frequency Disturbance - IEC 60255-22-1 Class III

	Variation
2.5kV Common (Longitudinal) Mode	≤ 3%
1.0kV Series (Transverse) Mode	≤ 3%

Electrostatic Discharge - IEC 60255-22-2 Class IV

	Variation
8kV contact discharge	≤ 5%

Conducted & Radiated Emissions - EN 55022 Class A

Conducted	0.15MHz to 30MHz
Radiated	30MHz to 1000MHz

Conducted Immunity - IEC 60255-22-6 Class A

0.15MHz to 80MHz, 10V/m 80% Modulated

Radiated Immunity - IEC 60255-22-3 Class III

	Variation
80MHz to 1000MHz, 10V/m 80% Modulated	≤ 5%

Fast Transient – IEC 60255-22-4 Class IV

	Variation
4kV 5/50ns 2.5kHz repetitive	≤ 3%

Surge Impulse –IEC61000-4-5 Class IV

	Variation
4kV Line-Earth	≤ 10%
2kV Line-Line	≤ 10%

Vibration (Sinusoidal) –IEC 60255-21-1 Class 1

		Variation
Vibration response	0.5gn	≤ 5%
Vibration endurance	1.0gn	≤ 5%

Shock and Bump–IEC 60255-21-2 Class 1

		Variation
Shock response	5 gn 11ms	≤ 5%
Shock withstand	15 gn 11ms	≤ 5%