



-power in control

DEIF A/S

Type Certificate

4124010027C / ref. JFL

Type:	Insulation monitor AAL-2, AAL-111Q96-2
-------	---

Technical specifications

Measuring circuit:	
* DC resistance (R_i):	22k Ω or 220k Ω \pm 5% (dependent on scale range)
* AC impedance (Z_i):	>100k Ω at 50Hz
Measuring output voltage:	12V DC \pm 10%
Mains input voltage:	Max. 440V AC +20% continuously
Instrument:	
Measuring scale range:	1M Ω with scale centre at 0.022M Ω or 10M Ω with scale centre at 0.22M Ω
Accuracy:	\pm 2% of scale length
Temperature drift:	Max. 0.5% of scale length per 10 $^{\circ}$ C
Voltage drift:	Max. 0.2% of scale length at U_s \pm 20%
Response time:	0.1k Ω /V: 1 s, 1k Ω /V: 3 s
* Scale:	Exchangeable, with red section
Relay function:	
* Setpoint:	0...1000k Ω for 1M Ω scale range 0...10,000k Ω (x10) for 10M Ω scale range
Accuracy:	\pm 5% of scale length
Reproduceability:	\pm 1% of scale length
Hysteresis:	\pm 2% of scale length
Temperature drift:	Max. 0.2% of scale length per 10 $^{\circ}$ C
Voltage drift:	Max. 0.2% of scale length at U_s \pm 20%
Response time:	0.1k Ω /V: 1 s, 1k Ω /V: 3 s
* Indication:	Red LED is lit when resistance is lower than setpoint
Delay:	0 sec. or 4 sec. (change with a jumper)
Relay output:	Change-over contact
Contact rating:	250V - 2A - 400VA (AC). 250V - 1A - 50W (DC)
Relay coupling:	Normally energised (NE) or normally De-energised (ND) (change with a jumper)
General technical spec.	
Auxiliary voltage:	AC: 100, 110, 220, 230, 240, 380, 415, 440V AC \pm 20%, 45...65Hz (ca. 4VA)
"READY" indication:	Green LED is lit, when auxiliary voltage is present
* Galvanic separation:	Between Aux. voltage and other I/O's: 2200V, 50Hz, 1 minute Between Measuring circuit and other I/O's: 2200V, 50Hz, 1 minute Between Relay output and other I/O's: 2200V, 50Hz, 1 minute



-power in control

DEIF A/S

Type Certificate

4124010027C / ref. JFL

Type test specifications		Tested according to:
Temperature:	-25...60°C (operating) -25...65°C (storage)	IEC 60068-2-1 IEC 60068-2-2
Climate:	97% RH	IEC 60068-2-30, test Db
Vibration:	3...13.2Hz: 2mm _{pp} 13.2...100Hz: 1g	IEC 60068-2-6 & IACS UR E10
Shock:	15g, 11msec. half sine Tested with 3 impacts in each direction in all 3 axes. Total 18 impacts per test.	IEC 60068-2-27, test Ea
Safety:	Installation Cat. III 300V Pollution degree 2	IEC/EN 61010-1
EMC:		EN 61000-6-1/2/3/4 IACS UR E10 power distr. zone
Materials:	All plastic parts are self-extinguishing to UL94 (V0)	
Protection:	Instrument: IP52 (IP54 as option). Electronics: IP20. Terminals: IP20	IEC/EN 60529

*) Tested on all units according to specifications. Remaining specifications are tested regularly by test sampling

21 May 2015
DEIF A/S



Søren Madsen
Manager R&D Product Approval