

Type: **Uni-line Paralleling Relay
HAS-111DG**

Technical specifications

* Measuring voltage (U_n)	57.7-63.5-100-110-127-200-220-230-240--380-400-415-440-450 660-690V AC $\pm 20\%$, Load: 2k Ω /V
Overvoltage:	2 x U_n for 10 s
* Acceptable voltage diff. (ΔU_{max}):	$\pm 2 \dots \pm 12\%$ of U_n , scaleable
Frequency range:	40...45...65...70Hz
Acceptable phase angle difference:	Negative: -25...-5° el. Positive: 5...25° el.
Acceptable frequency difference:	Negative: -1...0Hz Positive: 0...1Hz
* Supply voltage (U_n):	57.7-63.5-100-110-127-200-220-230-240-380-400-415-440-450 660-690V AC $\pm 20\%$, (max. 3,5VA) 24-48-110-220V DC -25/+30% (max. 2W)
Mounting:	35mm DIN rail or base

Type Test specifications

Tested according to:

Insulation	500V DC, >1000M Ω	DNV, GL and LR
Vibration:	2...13.2Hz: 3 mm 13.2...100Hz: 1.0 g	DNV, GL and LR Test 1.
Shock:	6 attempts with 50 g (in 3 directions)	IEC 60068-2-27
Climate:	97% RH	IEC 60098-2-30, test Db
Protection:	Case: IP40 Terminals: IP20	IEC/EN 60529
Temperature:	-10...55°C (nominal) -25...70°C (operating) -40...70°C (storage)	DNV, GL and LR
* Galvanic Separation:	3250V-50Hz - 1m between inputs and outputs	IEC/EN 61010-1
EMC:	Immunity / Emission	EN 61000-6-1/2/3/4 IEC 60255-26 IEC 60533 power distr. Zone IACS UR E10 power distr. zone

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



Martin S. Mallan
Type Test Manager

Ref.: MSM

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