

Issued by : NMI Certin B.V.
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Applicant : Schneider Electric
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Grenoble cedex 9
FRANCE

Measuring instrument : **A performance measuring and monitoring devices (PMD)**

Manufacturer : Schneider Electric
Type : MasterPact MTZ3 UL489 Type H, L
MasterPact MTZ3 ANSI C37 Type H2, H3, L1,
equipped with control units:
Micrologic X: 3.0 X – 5.0 X – 6.0 X
Micrologic Xi : 3.0 Xi – 5.0 Xi – 6.0 Xi

Characteristics : PMD-III / DD / K70 / 1 and see page 2 and further.

In accordance with : **IEC 61557-12 Ed. 2.0 (2018)**
“Electrical safety in low voltage distribution systems up to 1000 V a.c. and 1500 V d.c. - Equipment for testing, measuring or monitoring of protective measures - Part 12: Performance measuring and monitoring devices (PMD)”

Measurement class : See page 2 and further for an overview of the function performances classes.

The undersigned declares that the described product is tested according to the above-mentioned standard and meet their requirements, based on a non-recurrent examination. The appertaining test data is presented in type evaluation report number NMI-15200628-02 and NMI-1902588-01 and NMI-2618991-01, granted by NMI Certin B.V.

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General characteristics

Description	Air circuit breaker (ACB) embedding IEC 61557-12 measurement functions. Number of poles: 3 or 4
Structure of PMD	PMD/DD (Direct insertion)
Functional classification	PMD-III
Voltage range	$U_n = 400 V_{AC\ L-L}$ $U_{min} = 208 V_{AC\ L-L}$ $U_{max} = 480 V_{AC\ L-L}$ with VPS (Voltage Power Supply) $U_{max} = 690 V_{AC\ L-L}$ without VPS (Voltage Power Supply)
Current	$I_b = 800 A$ $I_{max} = 7560 A$
Rated frequency	$f_n = 50 Hz$ and $60 Hz$
P and E_a performance class	1
Meter constant	n.a.
Start-up time	$\leq 40 s$
Supply voltage	24 Vdc

Function performance classes

Function symbol	Function	Function Performance Class IEC 61557-12	Measuring range	Other complementary characteristics
P	total active power	1	$5\% I_b \leq I < I_{max}$	
Q_A	total reactive power	2	$5\% I_b \leq I < I_{max}$	
S_A	total apparent power	1	$5\% I_b \leq I < I_{max}$	
E_a	total active energy	1	$5\% I_b \leq I < I_{max}$	
E_{rA}	total reactive energy	2	$5\% I_b \leq I < I_{max}$	
E_{apA}	total apparent energy	1	$5\% I_b \leq I < I_{max}$	
F	frequency	0.1	45 Hz - 65 Hz	
I	phase current	0.5	$20\% I_b$ to I_{max}	
I_N	measured neutral current	0.5	$20\% I_b$ to I_{max}	
U	voltage	0.5	208 V to 480 V with VPS 208 V to 690 V without VPS	
PF_A	power factor	10	From 0,5 ind to 0,8 cap	
U_{nba}	voltage Unbalance amplitude	0.5	80% - 120% U_n	
THD_u	total harmonic distortion voltage related to fundamental	2	0% to 20%	
$THD-R_u$	total harmonic distortion voltage related to r.m.s. value	2	0% to 20%	

THD_i	total harmonic current related to fundamental	5	0% to 20%	
$THD-R_i$	total harmonic current related to r.m.s. value	5	0% to 200%	
Demand	P_{demand} and Q_{demand}	1 and 2	5 % $I_b \leq I < I_{max}$	
	Thermal current demand	0,5	20% I_b to I_{max}	

Environmental conditions, mechanical and EMC

Temperature	Rated operation range (with specified uncertainty)	-25°C to +70°C	IEC 61557-12 Temperature class K70
	Limit range of operation (No hardware failures)	-25°C to +70°C	
	Limit range for storage and shipping	-40°C to +85°C	
Humidity	Rated operation range (with specified uncertainty)	0 to 75 % RH	IEC 61557-12 Standard conditions
	Limit range of operation 30 days/Y	0 to 90 % RH	
	Limit range for storage and shipping	0 to 90 % RH	
Altitude	0 to 2000 m		IEC 61557-12 Standard conditions
EMC	Emission	IEC 61326-1	CISPR 11
	Immunity	IEC 61326-1	Table 2

Safety

Product safety	IEC 61010-1:2010:2010 + AMD1:2016, IEC 61010-2-30:2017
Protective class	II
Rated impulse voltage	Up to 12 kV
IP rating	IEC 60529 IP20 (front face)

Overall system uncertainty

The overall system uncertainty includes operating uncertainty, uncertainty due to impedance of wires and uncertainty due to sensors.

As a PMD-DD device, class 1 performance of the MasterPact MTZ3 covers the voltage as well the current sensor. Therefore, the overall system uncertainty is equal to operating uncertainty.

