

## Type Certificate for Generation Unit

No.: ZN14081.01.01

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**Manufacturer** R Schmitt Enertec GmbH  
Siemensstraße 13  
56743 Mendig  
GERMANY

**Quality management system:** ISO 9001:2008, valid until 12.11.2017

**Type** Family certificate for a total of 53 combustion engine units of type „ENERGIN“ with voltage regulator of type Leroy Somer D510 C and similar control unit, see back page

**Technical Data**  
**Nominal active power:** 115 – 500 kW  
**Maximal apparent power:** 144 – 625 kVA  
**Nominal voltage / -frequency:** 400 V / 50 Hz  
**Software-version:** ENERSCREEN 3.0-fast\_act\_Netzschutz\_ver\_1\_20

**Topics of Assessment**

- Power quality
- Active and reactive power regulation
- Reactive power capability
- Dynamic grid support
- Grid protection

The assessment was performed according to /FGW TR3/ Rev. 23 and /FGW TR8/ Rev. 6.

**Guidelines** Technical Guideline, “Generation Plants Connected to the Medium-Voltage Network - Guideline for generating plants’ connection to and parallel operation with the medium-voltage network”, June 2008, issued by: BDEW /BDEW MSR/ and supplement of January 2013 /BDEW MSR E2013/; TransmissionCode 2007, “Network and System Rules of the German Transmission System Operators”, August 2007, issued by: VDN /TC2007/.

**Basis of Assessment** Evaluation report of type certificate for generation unit ZN14081.02.01.

**Declaration/ Validity** The experts of the certification body confirm by their signature that the listed generation units (see back page) can be integrated into a power production plant according to the above mentioned guidelines. Due to the missing unit model, the validity of this certificate is limited to power plants with a connection capacity of  $\leq 1$  MVA or a line length of the installation of the connectee up to the grid connection point of  $\leq 2$  km. This certificate is valid until 01.05.2021, provided no relevant changes are made to the units and the quality management system of the manufacturer remains valid.



Varel, 05.05.2017



*Martin Küch*

Dipl.-Ing. K. Küch  
(Evaluator)

*R. Klosse*

Dipl.-Ing. (FH) R. Klosse  
(Certifier)

**WindGuard Certification GmbH**  
**Type Certificate for a Generation Unit ZN14081.01.01**

PGU-Type	Pel. Gross kW	Pel. Net kW	Auxilia-ries kW	Generator-Type	Motor-Type
GEN x115	115	112.4	2.6	LSA 46.3 S4	M06-xT0W21
GEN+ x115	115	112.6	2.4	LSA 46.3 S4	M06-xT0W21
CHP x115	115	112.6	2.4	LSA 46.3 S4	M06-xT0W21
CHP x122	122	119.6	2.4	LSA 46.3 S4	M06-xNOW22
CHP x122	122	119.6	2.4	LSA 46.2 M3	M06-xNOW22
GEN x140	140	136.9	3.1	LSA 46.3 S4	M06-xM0D41
GEN+ x140	140	136.9	3.1	LSA 46.3 S4	M06-xM0D41
CHP x140	140	136.9	3.1	LSA 46.3 S4	M06-xM0D41
CHP x151	151	147.9	3.1	LSA 46.2 L9	M08-xNOW22
CHP x151	151	147.9	3.1	LSA 46.3 S4	M08-xNOW22
CHP x166	166	162.0	4.0	LSA 46.3 M8	M08-xT2D22
GEN+ x173	173	169.3	3.7	LSA 46.3 M8	M06-xTIW22
GEN x173	173	168.9	4.1	LSA 46.3 M8	M06-xTIW22
CHP x173	173	169.3	3.7	LSA 46.3 M8	M06-xTIW22
GEN x185	185	180.6	4.4	LSA 46.3 M8	M06-xT2W22
GEN+ x185	185	181.0	4.0	LSA 46.3 M8	M06-xT2W22
CHP x185	185	181.0	4.0	LSA 46.3 M8	M06-xT2W22
GEN x205	205	200.6	4.4	LSA 46.3 M8	M06-xT2D22
GEN+ x205	205	201.0	4.0	LSA 46.3 M8	M06-xT2D22
CHP x205	205	201.0	4.0	LSA 46.3 M8	M06-xT2D22
GEN x205	205	200.6	4.4	LSA 46.2 L9	M06-xT2D22
GEN+ x205	205	201.0	4.0	LSA 46.2 L9	M06-xT2D22
CHP x205	205	201.0	4.0	LSA 46.2 L9	M06-xT2D22
GEN x200	200	195.6	4.4	LSA 46.3 L11	M06-xMID41
GEN+ x200	200	196.0	4.0	LSA 46.3 L11	M06-xMID41
CHP x200	200	196.0	4.0	LSA 46.3 L11	M06-xMID41
GEN x250	250	245.6	4.4	LSA 46.3 L11	M06-xM2D41
GEN+ x250	250	246.0	4.0	LSA 46.3 L11	M06-xM2D41
CHP x250	250	246.0	4.0	LSA 46.3 L11	M06-xM2D41
CHP x220	220	216.2	3.8	LSA 47.2 VS2	M08-xTIW22
GEN x233	233	227.2	5.8	LSA 47.2 VS2	M08-xT2W22
GEN+ x233	233	227.0	6.0	LSA 47.2 VS2	M08-xT2W22
CHP x233	233	227.0	6.0	LSA 47.2 VS2	M08-xT2W22
GEN x260	260	254.2	5.8	LSA 47.2 M8	M08-xMID41
GEN+ x260	260	254.0	6.0	LSA 47.2 M8	M08-x MID41
CHP x260	260	254.0	6.0	LSA 47.2 M8	M08-x MID41
GEN x260	260	254.2	5.8	LSA 47.2 VS2	M08-xT2D22
GEN+ x260	260	254.0	6.0	LSA 47.2 VS2	M08-xT2D22
CHP x260	260	254.0	6.0	LSA 47.2 VS2	M08-xT2D22
GEN x333	333	327.2	5.8	LSA 47.2 M8	M08-xM2D41
GEN+ x333	333	327.0	6.0	LSA 47.2 M8	M08-xM2D41
CHP x333	333	327.0	6.0	LSA 47.2 M8	M08-xM2D41
GENH250	250	243.0	7.0	LSA 47.2 VS2	M12-xT2D22
CHP x334	334	329.6	4.4	LSA 47.2 M8	M12-xTIW22
GEN x350	350	343.0	7.0	LSA 47.2 M8	M12-xT2W22
GEN+ x350	350	342.2	7.8	LSA 47.2 M8	M12-xT2W22
CHP x350	350	342.2	7.8	LSA 47.2 M8	M12-xT2W22
GEN x400	400	393.0	7.0	LSA 47.2 M8	M12-xT2D22
GEN+ x400	400	392.2	7.8	LSA 47.2 M8	M12-xT2D22
CHP x400	400	392.2	7.8	LSA 47.2 M8	M12-xT2D22
GEN x500	500	492.5	7.5	LSA 49.3 M6	M12-xM2D21
GEN+ x500	500	492.2	7.8	LSA 49.3 M6	M12-xM2D21
CHP x500	500	491.7	8.3	LSA 49.3 M6	M12-xM2D21

Table: List of combustion engine aggregates covered by unit certificate ZN14081.01.01, including power (gross and net), own power consumption (auxiliaries) and types of generator and motor used.

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