



TCDS No.:  
Issue: 03

Lightwing AC4

06 August 2015



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# TYPE-CERTIFICATE DATA SHEET

EASA.A.588

for  
**LIGHTWING AC4**

**Type Certificate Holder**

Light Wing AG

Riedenmatt 11  
6370 Stans  
Switzerland

For models:   Lightwing AC4





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## **SECTION A: LIGHTWING AC4**

### **A.I. General**

1. Type/ Model/ Variant

Type: Lightwing AC4  
Model: Lightwing AC4

2. Airworthiness Category:

Restricted

3. Manufacturer:

Lightwing AG  
Riedenmatt 1  
6370 Stans  
SWITZERLAND

4. EASA Certification

Application Date: 23 December 2011

### **A.II. EASA Certification Basis**

1. Reference Date for determining

the applicable requirements: 23 December 2011

2. Airworthiness Requirements: Certification Specification for Light Sport Aeroplanes (CS-LSA), initial issue

3. Special Conditions: SC-LSA.2012-01 Requirements to the fuel system in LSA equipped with fuel injected engines

4. Exemptions: None

5. Deviations: None

6. Equivalent Safety Findings: None

7. Environmental Protection

Requirements: Chapter 10 of ICAO Annex 16, Volume I. For details see TCDSN EASA.A.588





### **A.III. Technical Characteristics and Operational Limitations**

1. Type Design Definition: Master document list ADxC-48-001-MDL 14-05-14

2. Description: The Lightwing AC4 features:

- Conventional high strutted wing configuration;
- Conventional strutted tail;
- Single piston tractor engine;
- Fixed pitch propeller;
- 2 seats, side by side;
- Fixed tricycle landing gear with steerable nose wheel and streamlined wheel covers.

3. Equipment: Minimum equipment list according to flight manual (ADxC-48-001-AFM, latest approved revision)

4. Dimensions:

Total length:	6.97	m
Maximum height:	2.67	m
Maximum fuselage width:	1.25	m
Wing span:	9.45	m
Wing area:	12.70	m <sup>2</sup>

5. Engine:

Model:	Rotax 912 iS
Type Certificate:	Certified as part of the aircraft
Limitations:	None

6. Load factors:

+4g, -2g	(clean)
+2g, 0g	(flapped)

7. Propeller

Model:	Neuform, CR-75-(IP)-47-101.6
Manufacturer:	Neuform Composites GmbH
Type Certificate:	Certified as part of the airplane
Number of blades:	3, ground adjustable
Diameter:	1.75 m
Sense of Rotation:	Right (in flight direction)
Weight:	6.4 kg





## 8. Fluids

Fuel:	MOGAS EN 228 Super / EN 228 Super plus
<i>Alternative:</i>	AVGAS 100 LL = ASTM D910-76 = MIL-G5772
Oil:	API classification "SG" or higher
Coolant:	Conventional (see Rotax SI-91 i-001)

## 9. Fluid capacities

Fuel:	90 L (usable)
Oil:	3 L
Coolant system:	1.5 L (approximately)

## 10. Air Speeds (IAS):

$V_{S0}$	Stall speed flap DWN	76 km/h	(41 kts)
$V_{S1}$	Stall speed clean	82 km/h	(44 kts)
$V_F$	Flap speed	165 km/h	(89 kts)
$V_A$	Manoeuvring speed	176 km/h	(95 kts)
$V_C$	Cruise speed	176 km/h	(95 kts)
$V_{NE}$	Never exceed speed	210 km/h	(113 kts)

## 11. Flight Envelope

Maximum altitude 12.000 ft

## 12. Approved Operations

Capability: Day-VFR

## 13. Maximum Masses:

Maximum permissible empty mass	405 kg
Maximum take-off mass	600 kg

## 14. Centre of Gravity Range:

Forward CG (max. 495kg)	2885 mm (12% MAC)
Forward CG (@600kg)	2940 mm (16% MAC)
Aft CG limit	3008 mm (21% MAC)

## 15. Datum (origin):

X (aft positive)	1000mm in front of propeller flange
Y (right positive)	on centre line
Z (up positive).	2000mm below propeller flange

## 16. Control surface deflections:

Aileron	21.2° up, 23.6° down (+/- 2°)
Flap	0°, 10°, 24° down (+/- 2°)
Elevator	30° up, 30° down (+/- 2°)
Rudder	25° left/right (+/- 2°)







#### **A.IV. Operating and Service Instructions**

- |                                |   |
|--------------------------------|---|
| 1. Flight Manual               | ADxC-48-001-AFM, 1 <sup>st</sup> edition or later approved revision |
| 2. Maintenance Manual          | ADxC-48-001-AMM, 1 <sup>st</sup> edition or later approved revision |
| 3. Structural Repair Manual    | N.A.  |
| 4. Weight and Balance Manual   | ADxC-48-001-AFM, 1 <sup>st</sup> edition or later approved revision |
| 5. Illustrated Parts Catalogue | N.A.  |

#### **A.V. Notes**

None





## **ADMINISTRATIVE SECTION**

### **I. Acronyms & Abbreviations**

AFM	Airplane Flight Manual
AMM	Airplane Maintenance Manual
CG	Centre of Gravity
CS-LSA	Certification specification for Light Sport Aeroplanes
DWN	down
IAS	Indicated Airspeed
ICAO	International Civil Aviation Organization
kg	kilograms
km/h	kilometres per hour
MAC	Mean Aerodynamic Chord
RON/ROZ	Research Octane Number/ Research Oktanzahl
SC	Special Condition
VFR	Visual Flight Rules

### **II. Type Certificate Holder Record**

Aircraft Design & Certification Ltd.  
Reichensteinstrasse 48  
69151 Neckargemünd  
Germany

Light Wing AG  
Riedenmatt 11  
6370 Stans  
Switzerland

### **III. Change Record**

<b>Issue</b>	<b>Date</b>	<b>Changes</b>
Issue 01	17 June 2014	Initial Issue
Issue 02	24 June 2014	Correction
Issue 03	06 August 2015	Transfer of TC holder

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