



Compiled/Updated	LL
Approved	CD
Issued Date	26-05-2026
Revision	3

Product Data Sheet - BIRDFLAPPA

Helps prevent bird collisions with transmission and distribution powerlines

Key Features:

- Most durable dynamic bird flight diverter on the market
- When installing from the ground, a special quick release tool can be attached to industry standard telescopic hot sticks, for fast and efficient installation and removal from line
- Lab based slip tests prove better performance than alternate products on the market
- Duration tested to 114mph
- Fatigue tested to over 5 million cycles
- Built in reflector flashes sunlight increasing visibility
- Glow-in-Dark material supports performance in post-dusk and low light environments
- Range taking clamp fits most powerline conductors
- Installable via drone (coming soon)

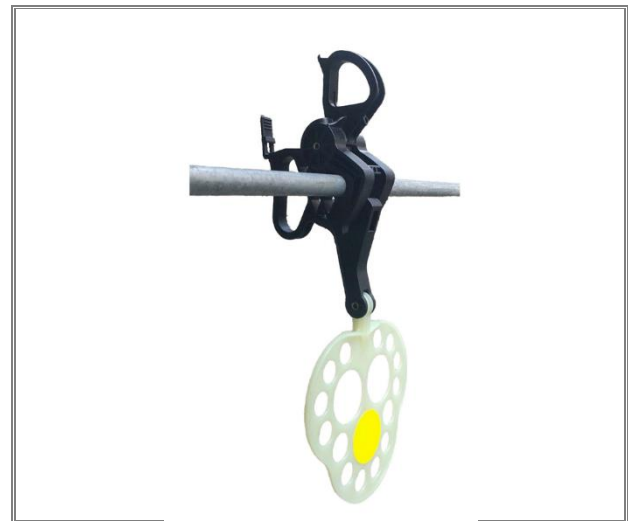


Figure 1 BIRDFLAPPA
P/No BD-SC-1K-GID



Applications:

- Tragically it is estimated that millions of birds are killed each year in collisions with power lines & wires. These bird collisions have a human impact as well, as they can disturb the power grid leading to outages.
- The **BIRDFLAPPA** has been developed in response to this significant issue. Studies have shown that properly installed bird flight diverters can reduce bird collisions by up to 90%.
- The **BIRDFLAPPA** is a dynamic bird flight diverter (BFD) combining wind-driven movement with reflective properties to increase visibility of powerlines and cables
- Scientific studies have shown that dynamic flapper style BFDs are more effective the static BFDs at reducing bird mortality (NABU, 2013; Liesenjohann et al, 2019; Martin 2022)

Scan for instructions



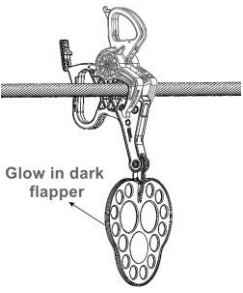
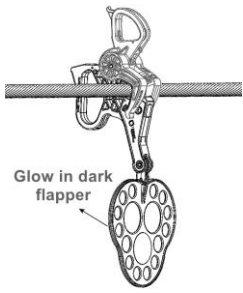
Part description:

BIRDFLAPPA
BD-SC-1K-GID
BD-SC-1K0-GID

FLAGMARKA
WM-SC-1J-O

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Part No. Table (A)

Part No.	BD-SC-1K-GID	BD-SC-1K0-GID
<u>Description</u>	BIRDFLAPPA Spring clamp with glow in dark flapper*	BIRDFLAPPA Spring clamp with glow in dark flapper, V-0 Flame Retardant grade without trigger*
<u>Image</u>		

*The glow in dark flapper contains fluorescent pigment which will emit a glow-in-the-dark light after dusk.

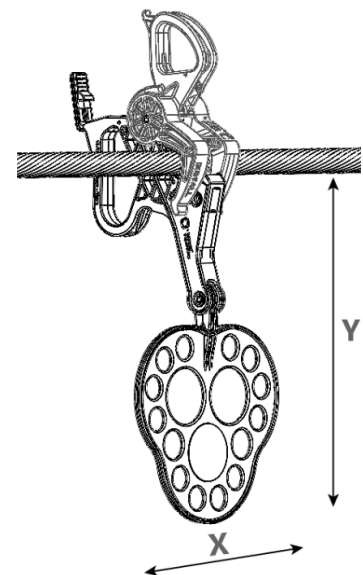
Dimensions Table (B)

X	Y	Clamp Closes To**	Clamp Opens To**	Weight
175mm	280mm	2mm	50mm	330 g

X = The width of the flapper
Y = Drop from conductor when installed as depicted adjacent

**Suitability of the conductor are subject to the engineering requirements of the asset owner.

Note: Any dimensions or weights figure are estimates only.


Materials Table (C)

Part No.	BD-SC-1K-GID	BD-SC-1K0-GID
Components		
Clamps	Nylon 6, V-2 Grade	Nylon 6, V-0 Grade
Flapper	Nylon 6 with glow in dark pigment, non-FR	Nylon 6 with glow in dark pigment, V-0 Grade
Cylinder	Nylon 6, V0 Grade	
Soft Jaws	TPE, V0 Grade	
Spring	Stainless Steel	
Hinge Pins	Brass	
Reflectors	3M Diamond Grade Reflective Sheeting	

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Spacing

The general recommendation is to space the devices 15ft to 30ft or 5 meters to 10 metres apart. However, please refer to our Instructions For Use (IFU) for more detailed information.

This recommendation is subject to the requirements of the asset owner and dependent on environmental conditions.

Ratings Table (D)

1	Withstand voltage test IEC 60060-1:2010, AS 1931.1-1996, AS 2225-1994	No flash over occurred up to an equivalent of 178kV Ø-Ø	2	Max. horizontal visible area of reflective element surface area	~1,963.5mm ²
3	Salt spray corrosion test ISO 9227, ISO 10289	Brass = 7 - 8 Stainless Steel = 10	4	Ozone resistance of Clamps and Flapper Material 1000 hours	No visual signs of damage(a)
5	Testing of clamp assembly on 247°F/120°C heated rod for 1h	No adverse functional effect on unit	6	Slip test (load when device started to slip) IEC 61897-2020 test method	145 N(b)
7	Testing of clamp assembly to -35°C IEEE 1656-2010	No adverse functional effect on unit	8	Wind Tunnel testing at a maximum of 51m/s (114mph/183kph) in accordance with standardised testing protocols	No adverse functional effect on unit(c)
9	Snow and ice testing	No adverse functional effect on unit, approx. 5g additional load(d)	10	Coefficient of drag	1.17 (e)
11	Ice loading effect on 22mm conductor EN 50341-2-4:2016	1.3% increase at 10m spacing(f)	12	Line load (per unit) at a wind speed of: 1. 0kph 2. 18kph 3. 36kph 4. 108kph	1. 3.24 N (330g) (e) 2. 3.26 N (333g) (e) 3. 3.58 N (365g) (e) 4. 9.23 N (941g) (e)
13	Radio interference voltage (RIV) test IEC 61284-1997	•162.2µV at 173kV Ø-Ø •98.9µV at 116kV Ø-Ø •81.3µV at 43kV Ø-Ø	14	Reflectors Colour and Retro Reflectivity	ASTM D4956 Type XI, AS/NZS 1906.1 Class 1W, DTMR QLD Class 1X, RTA NSW Class 1X(g)
15	Corona inception test IEC 61284-1997	Occurred at an equivalent of 188kV Ø-Ø	16	UV aging test of Clamps and Flapper 1000 hours ISO 4892-3, ASTM D 638, ISO 4582	Changes in colour (Colour Fastness Grading): 4 Changes in other appearance properties: Slight



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17	Corona extinction test IEC 61284-1997	Occurred at an equivalent of 176kV Ø-Ø	18	Michelson contrast (BD-SC-1K-GID)	≈ 0.971(f)
19	Max. projected area of the unit in a single plane	~21,770mm ²	20	Phosphorescent pigment decay timeDIN 67510-1:2009	Over 16hours(h)
21	Max. horizontal visible area of phosphorescent element surface area	~14,028mm ²	22	UL Flame Retardant Rating (all Non-Metal components of BD-SC-1K0-GID)	UL 94 V-0(i)
23	Flapper Swing Fatigue test over 5 million cycles	No adverse functional effect on unit(j)	24		

- (a) Results obtained from standardised indoor lab tests performed on the material specimens.
- (b) Results obtained from standardised indoor lab tests performed on the same Spring Clamp tested on Ø21.6mm OD ASCR conductor.
- (c) Results obtained from the device performance conducted in a leading Australian University Wind Tunnel Test lab.
- (d) Testing performed in Hokkaido, Japan. Load inclusive of snow/ice build-up on device per unit.
- (e) The Line load is inclusive of the device weight; it's calculated based on the given Coefficient of Drag and the maximum projected area of the device at different wind speeds. The actual value may vary depending on the state of the device at different wind speeds.
- (f) Results obtained from Balmoral inhouse test.
- (g) Results obtained from the 3M Reflective Sheeting Datasheet. Same series of sheeting specimens passed ASTM E162 Flame Spread test.
- (h) Results obtained from the phosphorescent pigment manufacturer lab test.
- (i) Results obtained from the Non-Metal Components of BD-SC-1K0-GID materials datasheet.
- (j) Results obtained from Balmoral inhouse test.

The data herein is an indication of product capabilities in known predetermined lab conditions and actual outdoor environments may vary. Where stated, "unit" refers to a BIRDFLAPPA device.

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