GEIGER AIR PRODUCTS

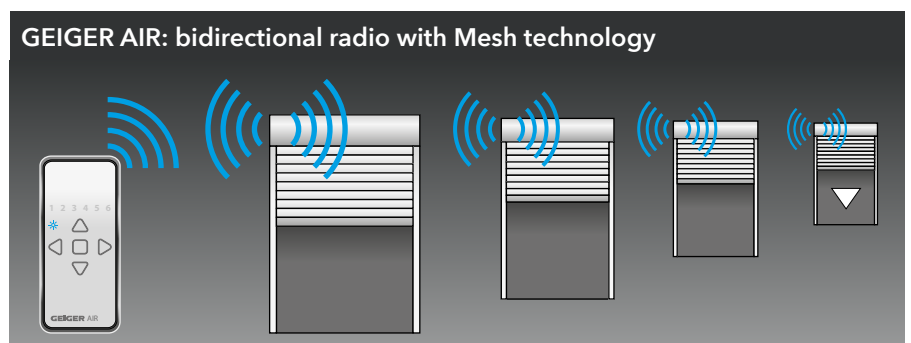## Product Datasheet

GEIGER
ANTRIEBSTECHNIK

LOXONE

THE SUN PROTECTION DRIVES OF THE FUTURE

Current buildings must be able to meet the standards of high energy efficiency – thus enabling cost reduction and environmental protection. Smart Home controls are the only ones that are able to connect the building technology in order to benefit from a fully automatic, centralized and energy efficient control system. Effectively controlled buildings are the buildings of the future.

Benefits for the end users

▶ Invest in future-proof sun protection.
▶ Start with a small solution and extend at any time with the Smart Home extensible solutions.
▶ No dependence on sun protection manufacturers and their Smart Home solutions.
▶ Broad approach with the comprehensive Smart Home concept.

Bidirectional

Unidirectional radio

GEIGER AIR: bidirectional radio with Mesh technology

The new radio system GEIGER AIR is a bidirectional radio system with Mesh technology. The orders sent to a motor are confirmed after execution. Errors that may occur are also reported. Each motor also works as a wireless signal repeater. This means that having multiple motors guarantees a wireless coverage across the whole house, which makes it easy to overcome construction-related constraints such as thick concrete walls.

The stand-alone-solution with classic operation: GEIGER AIR

The new radio concept GEIGER AIR has been designed for the integration of the sun protection drive. GEIGER AIR is a bidirectional radio system.

With this system it is not only possible to send orders from the transmitter to the motor but also to receive and evaluate feedback from the motor.

Each wireless command is acknowledged when executed, which eliminates sources of error. You can also control the position of the sun protection and check the possible presence of an obstacle.

Moreover, each motor serves as amplifier (Mesh technology). The use of mesh networking means that you have a much larger coverage area than other wireless standards. Commands and messages are sent from the sender to each available AIR motor which can act as a router and pass the signal on to other devices.

The range of the radio system increases by a multiple.

What means Smart Home Ready?

The GEIGER AIR motors are compatible at each expansion level with the Loxone Miniserver-based Smart Home System.

The motors can be connected via radio at any time with a Miniserver. No time-consuming and labour-intensive laying of control lines is needed.

The GEIGER AIR products and all Loxone products such as heating regulators, smoke detectors, radio sockets and lighting controls (and many more) can be combined together to create a Smart Home Control.

For building renovation: Miniserver GO + GEIGER AIR

The easy solution for the modernization or retrofitting of buildings. Along with Smart sockets, smoke detectors and heating valves from the Loxone AIR range, up to 125 GEIGER AIR motors can be connected and controlled through the integration of a Loxone Miniserver GO for a compact Smart Home Control.

Energy for heating and air conditioning can be saved depending on the season and the sunlight.

At the same time by using the Loxone Miniserver GO the sun protection can be operated via Smartphone, Tablet or PC - even if the customer is not at home.

For new buildings or comprehensive building renovation: Miniserver + AIR Base Extension + GEIGER AIR

At this configuration level, just everything is possible.

The Smart Home automatically detects situations such as presence, temperature, weather, fire, intrusion, sunset and even more.

It knows autonomously what to do and makes your home intelligent.

When nobody is home, the Smart home is still busy: switching off energy guzzlers, turning down the temperature, activating the alarm in case of burglary or fire, shading by hot weather.

It helps – without assistance – to save energy: for example, lowering the temperature in rooms that are not being used, switching off the light automatically after some time, turning off energy guzzlers etc. ...

At the same time by using the Loxone Miniserver with the AIR Base Extension the complete Smart Home can be operated via Smartphone, Tablet or PC – even if the customer is not at home.

Venetian blind motors, series GJ56..

Our electric motors GJ56.. have proved successful in daily use millions of times. Both drives are characterized by their reliable and proven components, the safe and quick installation in all standard head rails and the optimum torque values.

Application:

- Venetian blinds

Characteristics:

- Adjustable end positions with any AIR transmitter
- With limit stop switch for safety shutdown
- With optional limit stop switch as reference point for belt length adjustment
- Middle position with adjustable slat angle
- Dynamic torque shutdown
- Parallel connection
- With 6, 10 and 20 Nm, different cable lengths are available

Your advantage – 5-fold safety through:

▶ Bidirectional radio system
▶ Proven engine and braking system
▶ Motor intelligence: torque shutdown in case of overload
▶ Shutdown via limit stop switch: operating errors are excluded
▶ Anti-freeze protection

Technical data GJ56.. AIR with bidirectional radio-controlled end stop			
	GJ5606k F03	GJ5610 F03	GJ5620 F03
Voltage	230 V~/50 Hz	230 V~/50 Hz	230 V~/50 Hz
Current	0,40 A	0,60 A	0,85 A
Cos Phi (cosφ)	> 0,95	> 0,95	> 0,95
Inrush current (factor)	x 1,2	x 1,2	x 1,2
Power	93 W	135 W	190 W
Torque	6 Nm	10 Nm	2 x 10 Nm
Speed	26 rpm	26 rpm	26 rpm
Protection class	IP 54	IP 54	IP 54
Limit switch range	> 200 rotations	> 200 rotations	> 200 rotations
Operating mode	S2 4 min.	S2 4 min.	S2 4 min.
Total length (with coupling)	319,5 mm	329,5 mm	356,7 mm
Diameter	55 mm	55 mm	55 mm
Weight	approx 1,50 kg	approx 1,70 kg	approx 2,20 kg

Subject to technical modifications

SOLIDline Soft functions

Plug & Play

Only one operation to the lower and the upper end stop for the rolling shutters with stops and anti-lift device. Done! Plug & Play!
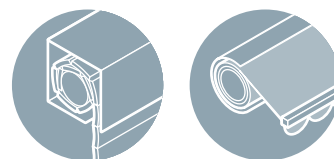
Soft motor intelligence

The **SOLIDline AIR** has a very sensitive intelligence which provides the typical GEIGER „soft shutdown" in the end positions, in order to achieve optimal protection of the curtain.

Soft Position

Torque shutdowns stress the rolling shutter system more than position shutdowns. Therefore, the **SOLIDline AIR** uses torque shutdowns only when absolute necessary. Torque shutdowns in the upper end position are only made for the programming run and the reference runs after 50 cycles. After installation, there are no further torque shutdowns in the lower end position.
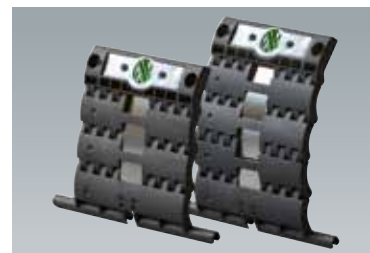
SOLIDline Flex AIR

Application:

- Rolling shutters (with or without stops/ anti-lift device)
- Screens (facade awnings etc.)
- Open style folding arm awnings

Characteristics:

- Setting of the end stops with any AIR transmitter
- Intermediary position can be modified at any time
- Flexible learning of the end stops (free positioning or torque shutoff)
- Can operated in parallel
- Plug-in connection cable in different lengths
- Available with 10, 20, 30, 40 or 50 Nm
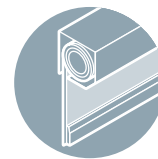
GEIGER anti-lift device

Available with 2 or 3 elements for mini and maxi profiles.

Your advantage – 7-fold safety through:

- ▶ Bidirectional radio system
- ▶ Burglar resistant anti-lift device
- ▶ Flexible in use (rolling shutters, screens, open style folding arm awnings)
- ▶ Soft Position (for cloth protection)
- ▶ Plug&Play (rolling shutters with stoppers and anti-lift device)
- ▶ Blocking detection in UP direction
- ▶ Anti-freeze protection

SOLIDline Zip AIR

Application:

- Screens with ZIP guidance

Characteristics:

- Setting of the end stops with any AIR transmitter
- Intermediary position can be modified at any time
- Can be operated in parallel
- Plug-in connection cable in different lengths
- Available with 10, 20 or 30 Nm

Your advantage – 8-fold safety through:

- ▶ Bidirectional radio system
- ▶ Dual stop control
- ▶ Automatic detection left and right installation
- ▶ Soft Position (for cloth protection)
- ▶ Plug & Play
- ▶ Sensitive obstacle detection in DOWN direction
- ▶ Blocking detection in UP direction
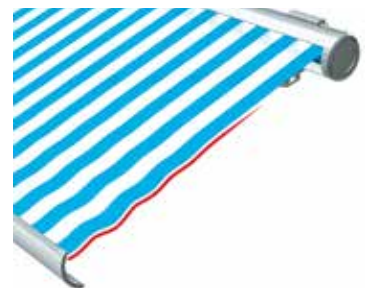- ▶ Anti-freeze protection

SOLIDline Sun AIR

The cassette closes reliably.

Application:

- Cassette awnings
- Screens (facade awnings etc.)

Characteristics:

- Setting of the end stops with any AIR transmitter
- Intermediary position can be modified at any time
- Can operated in parallel
- Plug-in connection cable in different lengths
- Available with 10, 20, 30, 40 or 50 Nm

The closing force minimization protects the cloth and thus extends the lifetime of the awning.

Your advantage – 4-fold safety through:

- ▶ Bidirectional radio system
- ▶ Locking power reduction (for cloth protection)
- ▶ Obstacle detection in UP direction
- ▶ Anti-freeze protection

Technical data Flex & Zip & Sun AIR

Technical data of tubular motor SOLIDline SOC (GU45..)					
	GU4510	GU4520	GU4530	GU4540	GU4550
Voltage	230 V~/50 Hz				
Current	0,47 A	0,63 A	0,8 A	1,0 A	1,0 A
Cos Phi (cosφ)	>0,95				
Inrush current (factor)	x 1,2				
Power	105 W	140 W	180 W	220 W	220 W
Torque	10 Nm	20 Nm	30 Nm	40 Nm	50 Nm
Speed	16 rpm	16 rpm	16 rpm	16 rpm	12 rpm
Protection class	IP 44				
Total length[1]	519,5 mm	549,5 mm	569,5 mm	589,5 mm	589,5 mm
Operating mode	S2 4 min	S2 5 min	S2 4 min	S2 4 min	S2 4 min
Sound pressure level[2]	39 dB(A)	41 dB(A)	41 dB(A)	43 dB(A)	-
Diameter	45 mm				
Weight	approx 1,90 kg	approx 2,20 kg	approx 2,40 kg	approx 2,70 kg	approx 2,70 kg
Air humidity	dry and non-condensing place				
Storage temperature	T = -15°C .. +70°C				

[1] **SOLIDline-COM:** + 0,5 mm

[2] The average sound pressure level data are intended for guidance only. The values were determined by GEIGER at a distance of 1 m, with a hanging motor at idle speed and averaged over 10 seconds. There is no reference to any specific test standard.

Subject to technical modifications. Please find information to the ambient temperature range of our GEIGER motors under www.geiger.de

Weather station AIR

Ambient Light Sensor

Upon reaching the preset brightness values, assigned drives move to their shading or protection position.

Windmill

When the set wind speed is reached the assigned drives move to their protection position.

Rain sensor

If rain is detected, the drives will run in their protection position.

Temperature sensor (Loxone mode)

In combination with the Loxone Miniserver the drives respond to the individual stored command when a set temperature is reached.

Alive function

The alive signal is an integrated early warning system that, in the event of a power failure, moves all AIR drives connected to the weather station to the safety position.
By means of a delayed driving command, the drive also signals optically that no alive-signal is received.
After installing new batteries, all pre-set commands of the weather station will work perfectly again.

Mesh technology

With a 24V power supply, the weather station and all drives communicate via mesh technology. By means of this bi-directional radio system, the commands that are sent to a drive are confirmed after execution. Errors that may occur are also reported.

Application:

- Weather-dependent, automatic control of the sun protection
- Textile sun protection (screens, screens with ZIP guidance and awnings)
- Rolling shutters and Venetian blinds

Advantages and characteristics:

- Detection of external environmental influences: sun, wind, rain and temperature
- Wind speed measurable up to 145 km/h
- Heated rain sensor (24V)
- Battery and mains operation (24V) possible
- Can be used with all GEIGER AIR drives
- Incl. batteries and mounting accessories for wall and pole mounting (max. ø 50mm)

Technical specifications Weather station AIR	
Power supply	24V DC or 2x1,5V AA batteries
Power consumption	70mW max. 1.1W (24V DC), 14µW / 39mW (battery operation)
Frequency	868 MHz (SRD Band Europe), 915 MHz (ISM Band region 2)
Outdoor range	up to 30 meters (battery operation), up to 145 meters (24V DC)
Ambient temperature	-20°C ... 54°C (battery operation), -30°C ... 85°C (24V DC)
Wind measuring range	20 ... 65km/h (in Loxone mode 9 ... 145 km/h)
Brightness measuring range	0 ... 188.000 Lux
Temperature measuring range	-40°C ... 125°C (Loxone mode)
Protection class	IP44

Subject to technical modifications

Handheld transmitter Remote AIR

Application:

- Setting and operation of sun protection systems

Characteristics:

- 3 channels
- Motor feedback with one coloured LED
- Controls the sun automatic function

Handheld and wall transmitters LC AIR

Application:

- Setting and operation of sun protection systems

Characteristics:

- 6 channels with channel display
- Motor feedback with coloured LEDs
- Control the sun automatic function
- Soft Touch surface
- Including magnetic holder (handheld transmitter) and fixations

The alliance

This alliance represents the union of two strong partners characterized by their innovative thinking together with high quality awareness and extensive experience in their field. Both companies have in the past repeatedly set trends and influenced the market.

The goal of this alliance is to integrate the intelligent sun protection into the Smart Home to significantly increase comfort and energy efficiency.

For the user it is much easier and smarter to control light and shade than ever before – according to weather, season and outdoor temperature.

Smart Home customers can for the first time control the sun protection with the same high precision that was previously limited to heating, light or access control.

The name GEIGER Antriebstechnik is synonymous worldwide for drive solutions in the sun protection area.

Today we are with more than 320 employees one of the leading manufacturers of mechanical and electrical drives for Venetian blinds, awnings and rolling shutters.

GEIGER is a well-known, mid-sized company which offers worldwide drive components for the sun protection systems.

Loxone Electronics, founded in 2009, has revolutionized with his green Miniserver the Smart Home market. Located in Kollerschlag, Austria, Loxone today counts with more than 250 employees at 12 locations to one of the fastest growing companies in the sector.

With the Miniserver-based home automation, the Loxone Smart Home provides hardwired and radio-controlled components in order to monitor and control the house.

GEIGER
ANTRIEBSTECHNIK

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