



LF RFID Long Range Reader
134 kHz FDX-B HDX
ISO ANIMAL (BDE) STANDARD
ISO/IEC 11784/785
ISO/IEC 18000-2

Frequency:	134 kHz +/- 0.5% (at RT)
Antenna:	For one or two Antennas (Gate), for two antennas only with antenna splitter TPF-21-AS
Read Distance:	Up to 90 cm (depending on the transponder shape, power supply and antenna design)
Housing:	Plastic with IP65, two external LED's (Power, TAG read)
Dimensions:	260 x 230 x 80 mm
Power supply:	Optional 110 /240 VAC power supply board TAC-12-12 (Page 2)
Operating temperature:	-25°C to +55°C
Transponder types:	All ISO 11784 / 5 , FDX-B and HDX, Like : ZOODIAC, EM4x05 HITAG-S in FDX-B mode Texas Instruments TIRIS
Marketing tool:	The TPF-21 is a ISO 11784 /5 long range reader (designed to meet ICAR and JRC). TPF-21 is a true ISO 11784 /5 reader for FDX-B and HDX transponders, based on the latest developments in DSP technology. The optional powers supply board TAC-12-12 for 110VAC /230VAC is optimized to offer a maximum performance with the TPF-21 product. Reading distances of up to 0,9 m (depending on transponder shape) can be achieved.
Features:	• Reader drives up to 2 Antennas (with antenna Splitter TPF-21-AS) • High performance power supply available • Full ISO 11784 /5 • Long range performance with FDX-B • Long range performance with HDX
Technical certificates:	 The integrated reader board hardware is compliant with: FCC part 15 subpart C (USA), RSS-210 (Canada), AS 4268.1 (Australia) AS/NZS 3548(1997), Edition 3, 1995 Class B (New Zealand),
Interface:	RS232
Part names:	TPF-21-AA TPF-21-AS (Antenna splitter) TPA-48-AA (Antenna 600 x 800 mm) TAC-12-12 Analogue power supply for long range reading.



LF RFID Long Range Reader
134 kHz FDX-B HDX
ISO ANIMAL (BDE) STANDARD
ISO/IEC 11784/785
ISO/IEC 18000-2

TPF-21:	Dimensions (LxWxH) 260x230x80 mm Input : 11,6...27 V DC / 7 Watt Operating Temperature -25°C to +55°C		
Read distance:	Transponder Type: GLASS TAG FDX-B 134 kHz 2x12 mm GLASS TAG FDX-B 134 kHz 3x13 mm GLASS TAG FDX-B 134 kHz 3x15 mm GLASS TAG FDX-B 134 kHz 4x22 mm GLASS TAG FDX-B 134 kHz 4x34 mm Standard Female Air Coil EAR TAG FDX-B 134 kHz	Read distance with one TPA-48-AA antenna 80x60 cm: 45 cm 45 cm 57 cm 70 cm 90 cm 90 cm	
	Optional Power Supply		
Description:	Industrial Power Supply for TECTUS Industrial Readers		
Primary voltage:	115 / 230 V AC (Voltage selector)		
Secondary voltage:	12 V DC		
Output current:	Max. 2 Ampere		
Typ. supply Current:	1 A		
Housing:	Aluminium IP 65		
Dimensions:	190 x 112 x 51 mm		
Operating temperature:	-20°C....+50°C		
Technical certifications:			
Part number:	TAC-12-12		

**TPA-48-AA**

**RFID ANTENNA 800 x 600 mm
for
TLB / TPF21-AA
INDUSTRIAL OEM
RFID READER**

Description:	Industrial antenna	
Frequency:	134 kHz	
Reader:	TPF-21-AA, TPB-21-AA	
Read distance:	Up to 900 mm	
Housing:	Plastic IP 66 Blue	
Dimensions:	800 x 600 x 20 mm	
Temperature:	-20°C....+55°C	
Technical certifications:	CE	 RoHS
Special:	Air coil antenna	
Part number:	TPA-48-AA	



SET UP INSTRUCTIONS

TPF-21-AS DUAL ANTENNA SPLITTER for TLB / TPF21-AA INDUSTRIAL OEM RFID READER

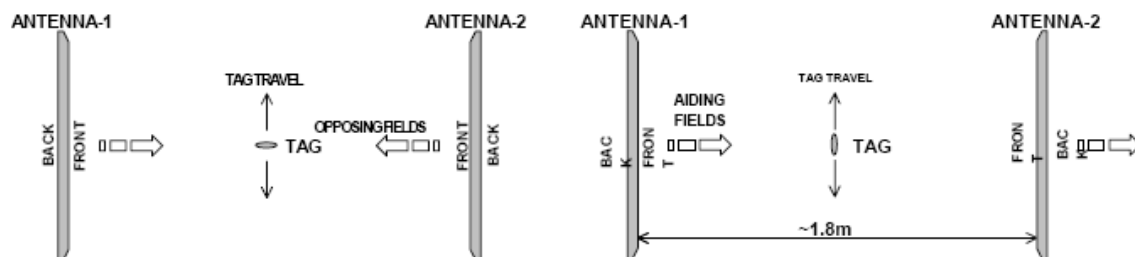
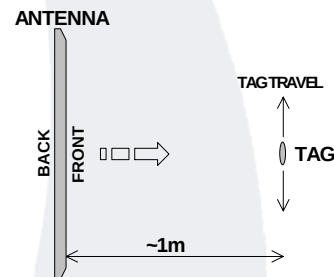
Introduction

The “Dual Antenna Splitter” allows you to increase operating area of the TLB/TPF-21-AA RFID reader by using two antennae connected to the same reader. This is a low cost alternative to the “Dynamic Field Operation” which requires two readers.

Simply connect the adapter to the reader antenna port, and two standard antennae into the adapter’s ports. When you connect the two antennae to the Antenna Adapter they are both instantly active. Exactly the same when you plug one antenna directly into the TLB/TPF-21-AA circuit. When a tag is read the Reader does not determine which antenna actually read the tag. They both operate as one. You must not use the reader with the adapter and only one antenna connected. This will result in reduced performance and possibly damage your reader.

Where a single antenna may read tags as far as 1m, a second antenna in parallel configuration positioned on the same axis (see diagrams below) can almost double the read area.

The antennae can be arranged such that the magnetic fields are either “aiding” or “opposing”. Note the change in optimum tag orientation. This setup is done in the adapter, rather than the antennae.

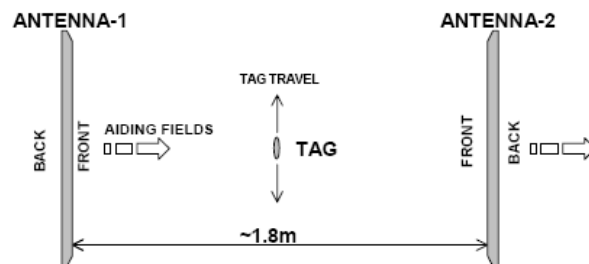


Opposing fields

Aiding fields

Although paralleled antennae can have a significantly larger operating range than a single antenna system, the field arrangement (i.e. aiding or opposing) is fixed and not alternating as can be achieved with the “Dynamic Field Operation”, therefore this dual antenna system does not have the same benefits as “Dynamic Field Operation”.

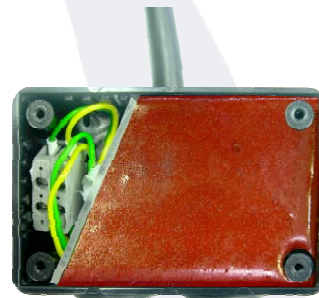
Please see your reader manual for further details and additional information on the use of multiple antennae, on aiding and opposing fields and on tag orientation.



When the adapter is delivered it is configured so antennae set up as in the picture above left i.e. antennae facing each other and have opposing fields.

To change this, please remove the four screws on the flanged side of the adapter.

You will see two terminal blocks in a small compartment - pull them out.



The wires will be connected like this (i.e. green wire to green wire, yellow to yellow):

Remove the wires one side of the terminals and swap them over.



This shows the “opposing” configuration

This shows the “aiding” configuration

Re-assemble in reverse order.

For a given set-up this configuration only needs to be done once. If you find it is necessary to do this often, you should consider the “Dynamic Field” method with two readers.