

## GPSoF1

## Description

The GPS-over-Fiber Links offer a very high stability in addition to excellent performance in phase noise and frequency jitter in applications such as remote antenna connection in GNSS receiving systems.

## Features

- For GPS, Galileo, Glonass, BeiDou, IRNSS, QZSS and other GNSS systems
- No external control circuits required
- Efficient analog signal to optical convert and back



## Order Information

Item Number	Item Description	Description
85135572	GPSoF1 (TX)	GPSoF1 (TX) with LC/PC connector and L1+L2 band transmission
85135573	GPSoF1 (RX)	GPSoF1 (RX) with LC/PC connector and L1+L2 band transmission
85065409	GPSoF1 (TX)	GPSoF1 (TX) with FC/APC connector
85065397	GPSoF1 (RX)	GPSoF1 (RX) with FC/APC connector
85072905	GPSoF1 (TX)	GPSoF1 (TX) with FC/APC connector and L1+L2 band transmission
85072906	GPSoF1 (RX)	GPSoF1 (RX) with FC/APC connector and L1+L2 band transmission
85145805	GPSoF1 (TX)	GPSoF1 (TX) with LC/PC connector, outdoor version AC support
85145804	GPSoF1 (TX)	GPSoF1 (TX) with LC/PC connector, outdoor version DC support
85179728	GPSoF1 (TX)	GPSoF1 (TX) with FC/APC connector, 5VDC antenna support
85154592	GPSoF IP66 Mastmount Kit	Accessories: Mast mount kit for outdoor version

## Electrical Data

Parameters		Value			Remarks
		Min.	Typ.	Max.	
All specifications at 25°C case temperature T <sub>c</sub> , unless otherwise specified					
GNSS band			L1+L2		L1 only versions available see order information
Gain	dB	4	7	10	
Gain flatness	dB		< 2		
Noise figure	dB		14		
Max. input at 1dB compression	dBm		-20		
Max. input power for no damage	dBm		+15		
VSWR (input and output)			< 1.8		
Time delay TX <sup>1</sup>	ns		5.4		
Time delay RX <sup>1</sup>	ns		5.4		
Time delay single mode fiber (1310nm) <sup>1</sup>	ns/m		4.9		
Antenna supply for active antennas	V	3.0		3.3	max. 60 mA
Antenna supply for active antennas (85179728)	V	4.5		5	max. 60 mA
Ri for antenna detection	Ohm		390		
Supply voltage V <sub>s</sub>	VAC	100		240	Plug in power supply
Supply voltage V <sub>s</sub> (Transmitter 85145805)	VAC	100		240	5m cable, end open
Supply voltage V <sub>s</sub> (Transmitter 85145804)	VDC	18	48	75	5m cable, end open
Temperature range operating	°C	- 5		+ 55	
Temperature range storage	°C	- 40		+ 85	
RF input impedance	Ohm	50			
Module weight	kg / lbs	0.27 / 0.6			Transmitter and Receiver
Module dimensions	mm / inches	90 x 95 x 23 / 3.5 x 3.7 x 0.9			
RF connectors		SMA female			

<sup>1</sup> Total link time delay calculation: Total delay [ns] = time Delay TX [ns] + time Delay RX [ns] + time delay single mode fiber 1310nm [ns/m] \* link length [m]  
 Example 100m link delay = 5.4 ns + 5.4 ns + 100m \* 4.9 ns/m = 500.8 ns

## Optical Data

Parameters		Value			Remarks
		Min.	Typ.	Max.	
All specifications at 25°C case temperature T <sub>c</sub> , unless otherwise specified					
Fiber optic connectors		LC/PC			simplex
Fiber		standard single mode 9/125 um			
Optical power in fiber	mW	6	8	10	
Side mode suppression ratio	dB	30	40		

GPSoF1

Mechanical Data

GPSoF1 (TX)

Dimensions outline drawing: DOU-00398603

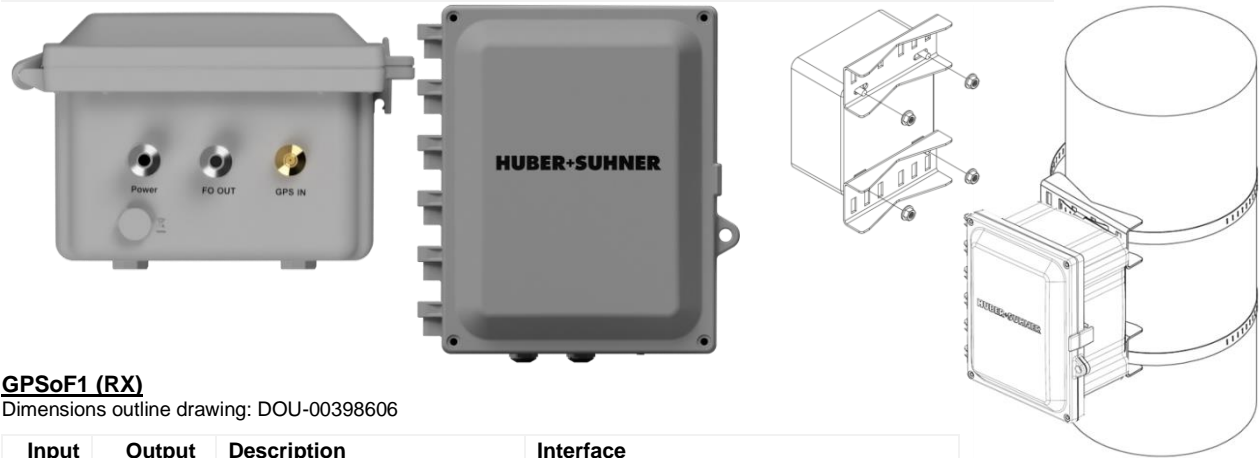
Input	Output	Description	Interface
X		GPS In	SMA (female)
	X	FO Out	LC/PC (bulkhead)
X		12 VDC In	



GPSoF1 (TX) IP66 and Mastmount Kit

Mastmount installation kit for GPSoF1 (TX) IP66 products. Allows to install the GPSoF IP66 box on masts with 3.8 cm (1.5 inch) up to 38.1 cm (15 inch) diameter. The kit includes two support plates and pipe clamps for simple installation.

Input	Output	Description	Interface
X		GPS In	SMA (female)
	X	FO Out	LC/PC (bulkhead) / cable feedthrough
X		Power IN (AC or DC)	cable feedthrough (5m cable end open included)



GPSoF1 (RX)

Dimensions outline drawing: DOU-00398606

Input	Output	Description	Interface
	X	GPS Out	SMA (female)
X		FO In	LC/PC (bulkhead)
X		12 VDC In	



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