

300-470MHz / 690-2700MHz DIPLEXER FILTER

The use of proFIL™ family of antenna combiners and splitters makes the design of communication system trouble free and easy. It helps reducing the interference between communication system.

HIGHLIGHTS

- Reduced co-site interference
- Reduced intermodulation
- Saved space
- Reduced installation cost and time



DESCRIPTION

proFIL5230 is a compact and high performance duplex type antenna combiner from 300MHz up to 3GHz. It is ideally used with proTAC5315 wideband LTE antenna to split it between 380MHz TETRA or 450MHz LTE modem and 4G LTE modem.

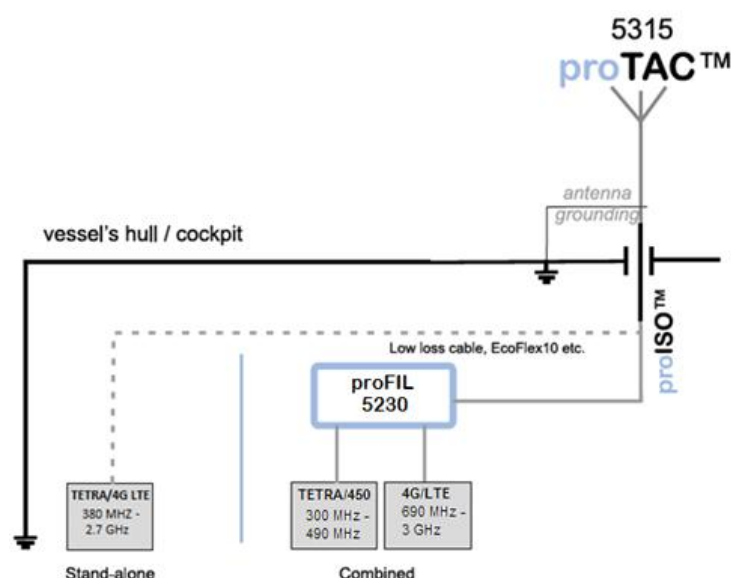
OPERATION

proFIL antenna combiners are completely passive with no wearing or serviceable parts, thus maximizing the reliability. They all feature high RF-isolation between radio ports and steep band pass characteristics towards antenna thus minimizing the risk for spurious transmissions.

Diplex type filters enable simultaneous transmission and reception within the same antenna port. They also enable simultaneous transmission and/or reception in adjacent radio ports if specified for transmitters.

As they are frequency division combiners, they don't create any extra splitting losses except the normal insertion loss comparable to small length of an antenna cable.

CONNECTION EXAMPLE



TECHNICAL SPECIFICATIONS

Electrical Specifications (TA=25°C)	proFIL5220 (FIL5220)	proFIL5230 (FIL5230)	proISO1010 (GLI1010)
Antenna Port	10MHz - 6GHz	300MHz – 2.7GHz	600MHz – 6GHz
Radio Ports	LTE: 10 - 2700MHz Return loss: < -10...-20dB Insertion loss: < 0.7...2dB (avg) WLAN 5 - 6GHz: Return loss: < -9dB (avg) Insertion loss: 1...-2dB	LTE Low: 300 – 490MHz Return loss: <-13...-18dB Insertion loss: < 1dB LTE high: 690 - 2700Mhz Return loss: < -15...-25dB Insertion loss: < 1dB	800 – 2700MHz Return loss: - 20dB Insertion Loss: 0.5-1dB @ 0.6 - 2.7 GHz 1-2dB @ 3.3 - 3.6 GHz 2dB @ 5.15 - 5.85 GHz
Power Handling	2W (max. simultaneous)	5W (max. simultaneous)	50W peak 25W @ 0.6 - 1GHz 12.5W @ 1 - 3GHz 5W @ 3 - 4GHz 2W @ 4 - 6GHz
Port Isolation (between outputs)	25dB @ LTE 35dB @ 5 - 6GHz	> 30...40dB	-
Port Impedance	50 Ohm	50 Ohm	50 Ohm
Connectors	N-female	N-female	N-female
Resistance to ground	Connector shield connected to case ground	Connector shield connected to case ground	Connector shields isolated from each other. Antenna port shield connected to case ground.

Mechanical Specifications	proFIL5220 (FIL5220)	proFIL5230 (FIL5230)	proISO1010 (GLI1010)
Dimensions	Width = 148mm with mounting flanges Depth = 116mm including connectors Height= 34mm		42 x 42mm (w x h) Length = 132mm including connectors
Weight	370g	390g	200g
Materials	Aluminium Body		
Environment	-20°C...40°C, IP50		-30°C...60°C, IP65
Mounting	Wall mounting flanges with 4xM4 holes integrated.		Hanging, cable rail. Din rail/wall mounting options available.
Standards	All proFIL™ and proISO™ products are to the standard of IEC60945 to ensure safe operation in the environment on relevant parts. Some of the criteria is operating and storage temperature, humidity, vibration, and electromagnetic compatibility.		