

## XP14N/24-48

DS 7327156-EN - Rev. 1801

WEATHERPROOF AMPLIFIED LOUDSPEAKER

## FITRE S.p.A. • Divisione DSI

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- Execution in plastic case, IP55 protection for outdoor or indoor use
- Internal amplifier power 15W
- Built-in power amplifier, adjustment from 160mW to 15W
- Power supply 24 to 48Vdc
- Consumption at 24Vdc .....900mA at 48Vdc .....450mA

The loudspeaker **XP14N/24-48** is in a plastic housing with a protection rating of IP55 according to the standard IEC529, and contains internally a power amplifier.

Volume adjustment takes place by means of dip switches which are reachable by dismounting the housing.

The magnetodynamic unit permits excellent frequency response (in the range 300 to 10.000kHz) and an operating power of 15W.

The loudspeaker is fitted with fixing brackets and a hindrance device that blocks changes in the selected inclination in cases of impacts or vibrations.

Inside the housing a power amplifier is mounted that utilises special components capable of supporting high temperatures.

Its circuit is covered by a patent.

The amplifier is equipped with protection against transients in both the power supply and audio inputs.

The audio inputs are a high impedance balanced differential type using a transformer as a galvanic separation between the line and the actual amplifier.

Furthermore all the electrical parts (inputs, outputs



and power supply) are insulated from the external metallic parts.

A particular active filter with a variable bandwidth in function of the volume levels blocks high values that would otherwise damage the mobile equipment in the presence of high energy at low frequencies.

Rather, at low values the bandwidth is broadened thus ensuring excellent sound quality reproduction, especially in a medium dimension ambient.

The amplifier is made of a circuit that helps avoid transients on the speaker when switched ON or OFF.

Furthermore there is total thermal protection with an automatically timed reactivation circuit and the internal circuits are protected with the use of blade type rapid fuses.

### Installation, Operation and Maintenance Procedures

- When mounting the loudspeaker please ensure that it is re-assembled in the same manner in which it was received.
- Fasten bracket with minimum 2 screws.
- To open the loudspeaker turn the front gently counter clockwise and pull.
- To close the loudspeaker, align the two marks on the front and rear parts, and turn the front gently clockwise till it stops.
- Use the attached stop screw to secure the front from undesirable opening during operation. (Optional)
- For optimum performance, always use the correct voltage / power and operate within the frequency limits as stated.
- Do not open loudspeaker when energized.
- This loudspeaker is supplied with a 2 year warranty against defective workmanship.

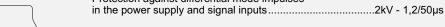
#### **Specifications**

Material / Colour	ABS V0 / RAL7035
Mounting	Bracket
Termination	Internal fastom
Weight	1,84kg
IP-rating	
SPL 1W/1m	
SPI_rated power	104dB

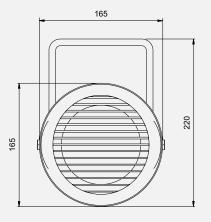
Amplifier	Switching class "D"				
	wer supplyfrom 24 to 48Vdc				
Operating limits	from 24V-15% to 48V +20% (20.8 to 57.6Vdc)				
Consumption	at quiescence, Vps = 24V				
·	at quiescence, Vps = 48V≤25mA				
	at the nominal power, Vps = 24V≤900mA				
	at the nominal power, Vps = 48V				
Nominal sensitivity	0dB (0.775Vrms) ±0,2dB				
	e≥10kohm				
Signal to noise ratio	≥90dB				
	.at nominal power, -1dB450Hz to >10kHz				
	at nominal power, -3dB250Hz to >10kHz				
Nominal output Power, rn	ns, continous (f = 450 to 10kHz)15W				
Maximum distortion at nominal power and band					
	with Vps = 24V≤1.4%				
	with Vps = 48V≤1%				
Climatic apparating conditions in range of popularly voltages					

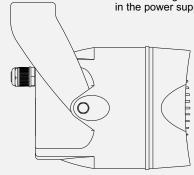
Climatic operating conditions in range of nominal voltages (sinusoidal mode, Pmax).....-25 to +55°C

Protection against differential mode impulses

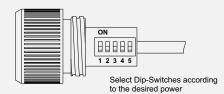


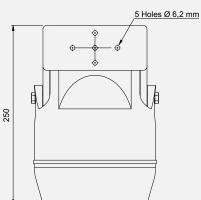
## Frontal view





## Setting output power





Top view

# **Connections description**

- 1 Acoustic signal input +
- 2 Not used
- 3 Power supply +24 to +48 VDC
- 4 Acoustic signal input -
- 5 Shield
- 6 Power supply -24 to -48 VDC

SW1	SW2	SW3	SW4	SW5	Output power
OFF	OFF	OFF	OFF	ON	15W
ON	OFF	OFF	OFF	ON	7,5W
OFF	ON	OFF	OFF	ON	3,6W
ON	ON	OFF	OFF	ON	2,5W
OFF	OFF	ON	OFF	ON	1,8W
ON	OFF	ON	OFF	ON	1,4W
OFF	ON	ON	OFF	ON	1W
ON	ON	ON	OFF	ON	0,8W
OFF	OFF	OFF	ON	ON	0,4W
ON	OFF	OFF	ON	ON	0,35W
OFF	ON	OFF	ON	ON	0,3W
ON	ON	OFF	ON	ON	0,25W
OFF	OFF	ON	ON	ON	0,23W
ON	OFF	ON	ON	ON	0,2W
OFF	ON	ON	ON	ON	0,18W
ON	ON	ON	ON	ON	0,16W

#### Amplitude - Frequency response diagram

