

# DIGITAL PYROELECTRIC FOUR ELEMENT DETECTORS FOR MOTION SENSING



## PYQ 5868 – DigiPyro® Dual Channel

### Applications

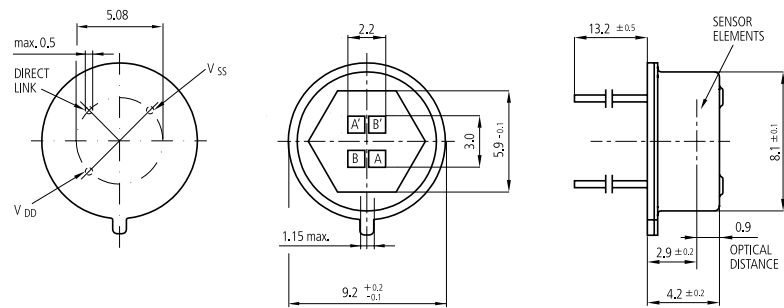
- Passive intrusion alarm
- High-end motion sensing
- Ceiling mount sensors

### Features and Benefits

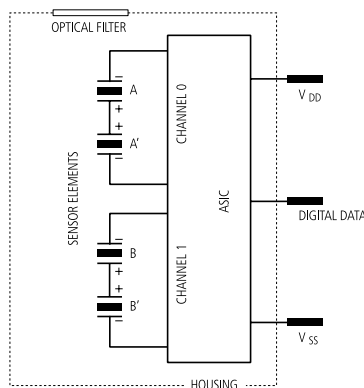
- Digital direct link
- Different element configurations
- Excellent EMI protection

### Product Description

The PYQ 5868 series with “Quad” configuration offers two independent dual element signals in a diagonal geometric arrangement. For ceiling mount applications with suitable ceiling mount design optics, this enables separate signal processing for the two channels to provide signal levels independent of movement direction. The PYQ 5868 offers a wide field of view due to its large window.



All dimensions in mm



### PYQ 5868 – DigiPyro® Dual Channel

Main Parameter	Symbol	PYQ 5868	Unit	Remark
Responsivity, min.	R <sub>min</sub>	6.0	kV / W	f = 1 Hz
Responsivity, typ.	R	8.0	kV / W	f = 1 Hz
Match, max.	M <sub>max</sub>	10	%	
Noise, max. / typ.		100 / 40	μV <sub>pp</sub>	0.4 ... 10 Hz / 20° C
Field of view, horizontal	FoV	110°		Unobstructed
Field of view, vertical	FoV	110°		Unobstructed
Operating voltage	V <sub>DD</sub>	2.7 ... 3.6	V	
Supply current	I <sub>DDmax</sub>	15	μA	V <sub>DD</sub> = 3.3 V
<b>Digital Data</b>				
Serial interface update time	t <sub>REP</sub>	14	ms	
ADC resolution		14	Bits	Max. count = 2 <sup>14</sup> - 1
Output data format		3 x 14	Bits	
ADC sensitivity		6.1 ... 7	μV/count	
ADC output offset		7000 ... 9200	Counts	
ADC output offset, typ.		8192	Counts	
<b>Temperature Reference</b>				
Gain (temperature)		80	Counts/K	-20° C to +80° C
Linearity		-5 ... +5	%	-20° C to +80° C
<b>Filter</b>				
Digital filter cut off		10	Hz	