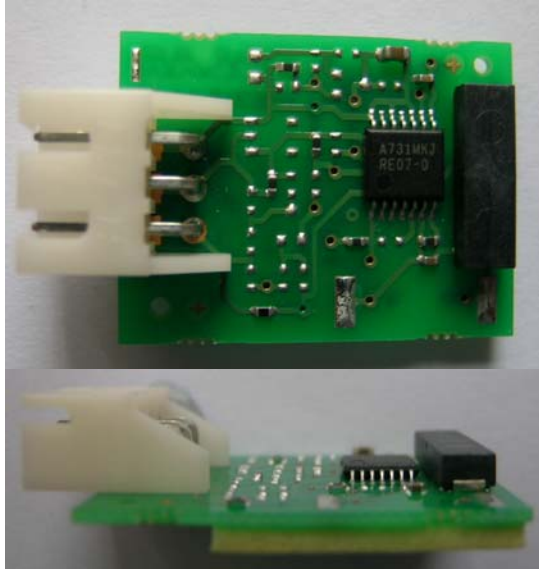

RE07S

Wireless receiver module, coded or non coded



RE07S receiver module with connector and coil oriented along the short edge

APPLICATIONS:

- Home exercise equipment
- Commercial exercise equipment

FEATURES

- Wireless heart rate receiver module
- Coded or non coded receiver
- Code signal filtering available
- Reduced range on code search sequence

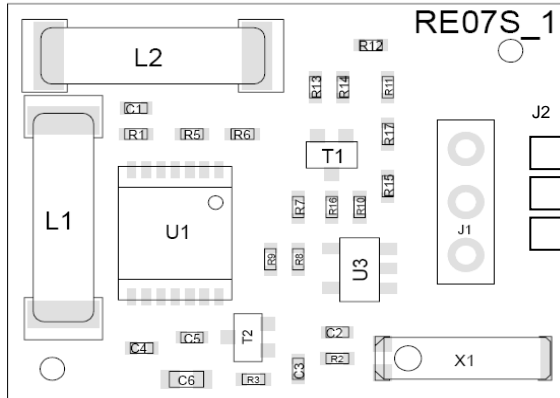
DESCRIPTION

RE07S is a family of Polar wireless receiver products. The basic operation of the system is to detect the heart rate of a user from the transmitter belt the user wears while exercising. The system detects the transmission bursts from the Polar transmitter belt and outputs it as digital pulses. The exercise equipment software calculates the time between the pulses, averages the calculated value and converts it to heart rate value. This family has different versions, some of them coded. This means that after one coded transmitter belt is locked into a receiver, only that code signal heart rate value is outputted. System has also a special feature on code search sequence; the reception range is reduced to ensure noise free code locking.

The RE07S receiver family will operate in environments where low current consumption is required. This family operates at voltages from 3V to 5.5V on standard settings, but higher input voltages are available also upon request.

The available options are listed on the last page of this datasheet. Please contact your local sales representative to discuss your requirements. Contact information is found on the footer of each page.

PIN CONFIGURATION



J1(3) J2(3)
 J1(2) J2(2)
 J1(1) J2(1)

PIN DESCRIPTION

Pin name	Function
J1(1)	Ground connector pin (GND)
J1(2)	Voltage connector pin (Vcc)
J1(3)	Output pulse pin (OUT)
J2(1)	Ground connector pin (GND)
J2(2)	Voltage connector pin (Vcc)
J2(3)	Output pulse pin (OUT)

ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Min	Max	Unit
Supply voltage	Vcc	3	5,5	V
Storage temperature	T _s	-25	+80	°C
Operating temperature	T _o	+5	+50	°C



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V 3.7 20 May 2011

RECOMMENDED OPERATING CONDITIONS

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Supply voltage	V _{cc}	T=25°C	3		5	V
Supply current average	I _{avg+}	T=25°C V _{cc} =5.0V		200		uA
Storage temperature	T _s			+25		°C
Operating temperature	T _o			+25		°C
Pulse width (typical)	PW	L=80cm	14.6	15.6	16.6	ms
Wireless reception range (standard)	L	T=25°C V _{cc} =5.0V		80	105	cm
Wireless reception range (extended)	L	T=25°C V _{cc} =5.0V		100	125	cm
Lock in reception range for coded	L _{R80}	T=25°C V _{cc} =5.0V L=80cm	45	50	55	cm
Lock in reception range for coded	L _{R90}	T=25°C V _{cc} =5.0V L=90cm	52	57	62	cm
Lock in reception range for coded	L _{R100}	T=25°C V _{cc} =5.0V L=100cm	58	63	68	cm
Lock in reception range for coded	L _{R110}	T=25°C V _{cc} =5.0V L=110cm	64	69	74	cm
Lock in reception range for coded	L _{R120}	T=25°C V _{cc} =5.0V L=120cm	71	76	81	cm
Lock in reception range for coded	L _{R130}	T=25°C V _{cc} =5.0V L=130cm	77	82	87	cm

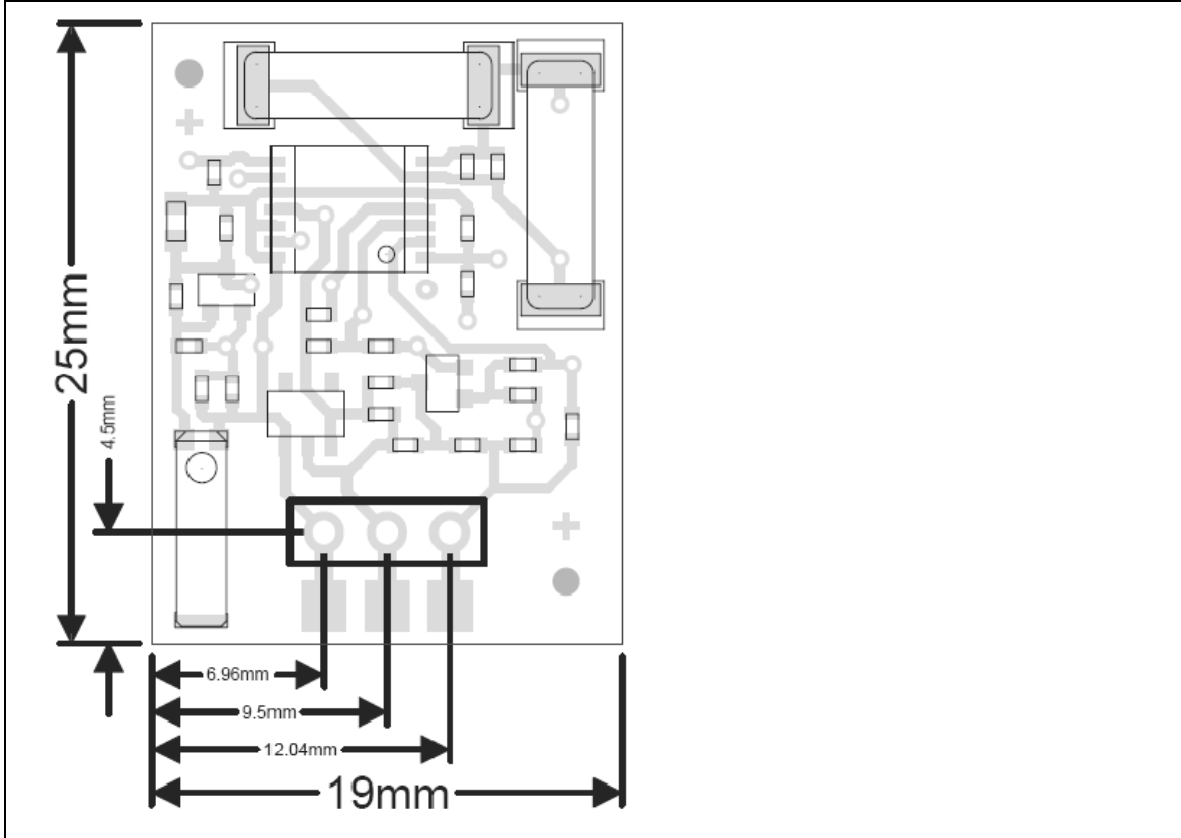
ELECTRICAL CHARACTERISTICS BY PIN

Pin name	Function
J1(1)	Ground connector pin (GND). Connect ground voltage here.
J1(2)	Voltage connector pin (V _{cc}). Connect operating voltage here.
J1(3)	Output pulse pin (OUT). Receive output pulses here.
J2(1)	Ground connector pin (GND). Connect ground voltage here.
J2(2)	Voltage connector pin (V _{cc}). Connect operating voltage here.
J2(3)	Output pulse pin (OUT). Receive output pulses here.

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BOARD DIMENSIONS



Dimension	Value
Length	25 mm
Width	19 mm
Height	3.50 mm
Connector spacing	2.54 mm

NOTE: Connectors excluded



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V 3.7 20 May 2011

ORDERING INFORMATION

Currently available versions from stock

Board number	Board name
94032280	RE07S PSNI NC T CXW250
94032392	RE07S ILNI C
94032393	RE07S ILNI C MOLEX
94032394	RE07S ILNI C WIRES
94032395	RE07S PSWI C
94032396	RE07S PSWI NC
94032397	RE07S ILNI NC
94032398	RE07S ILNI NC MOLEX
94032399	RE07S ILNI NC WIRES
94032400	RE07S PSWI NC JSTS3B
94032401	RE07S PSNI NC
94035936	RE07S PSNI Leadframes
94035980	RE07S PLNI NC JST
94036516	RE07S PLNI NC CS3
94036695	RE07S ISNI NC
94037404	RE07S PLNI NC M2034
94038210	RE07S ILNI NC FR M
94038292	RE07S PSNI NC FR CXW250
94038325	RE07S ISNI NC CS4
94038331	RE07S ISNI C
94038996	RE07S PLNI NC FR CXW250
94039098	RE07S PSNI NC FR

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List of functions on standard models

Function	94032280	94032392	94032393	94032394	94032395	94032396	94032397	94032398	94032399	94032400	94032401	94032936	94032980	94036516	94036695	94037404	94038210	94038292	94038325	94038331	94038996	94039098
Reception range 80-105cm	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X			
Reception range 100-125cm																X	X				X	X
Positive output pulse 5V 15ms	X				X	X				X	X	X	X	X	X		X				X	X
Negative output pulse 5V 15ms		X	X	X			X	X	X					X		X		X	X			
Positive output pulse 3V 15ms																						
Negative output pulse 3V 15ms																						
No connector		X			X	X	X			X				X					X		X	
J1 Molex 70553-0037			X				X									X						
J1 Cable assembly 3 wires				X				X														
J1 CXW250	X															X	X				X	
J1 JST S3B									X													
J1 JST B3B												X										
J1 CS1																						
J1 CS2																						
J1 CS3													X									
J1 22-12-2034																X						
J2 Leadframes											X											
Tape M3 4016 17x12mm	X																		X			X
5.5V max supply	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
12V max supply																						
Coil orientation along long side		X	X	X			X	X	X				X	X		X	X					X
Coil orientation along short side	X				X	X				X	X	X		X			X	X	X	X	X	X
Coded system		X	X	X	X															X		
Non coded system	X					X	X	X	X	X	X	X	X	X	X	X	X	X			X	X

Alternate configurations are available upon request

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