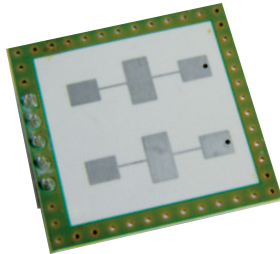




RADAR TRANSCEIVER K-LC5



FEATURES

- » 24 GHz short range transceiver
- » Beam aperture 80°/34°
- » Pin-compatible with K-LC2
- » 150 MHz typical sweep rate
- » High sensitive LNA receiver
- » More than double K-LC2 sensitivity
- » I/Q IF outputs
- » Low cost design
- » Compact size: 25mm × 25mm × 6mm
- » Detection distance for persons: 25 m
- » Detection distance for cars: 60 m
- » Type K-LC5-V2 with additional internal amplifier but without VCO

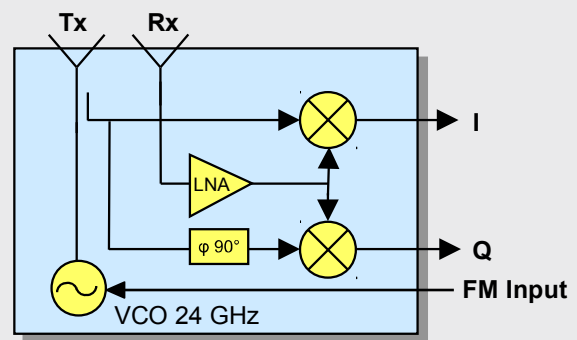
APPLICATIONS

- » Security systems
- » Directional object speed measurement systems
- » Directional movement detectors
- » Ranging of moving objects
- » Industrial sensors

K-LC5 is an extended range dual channel Doppler Radar module with an asymmetrical beam for short distance sensors. It is ideally suited for person movement sensors. Dual IF I and Q allow movement direction detection and high performance signal processing. FM input allows FSK ranging applications.

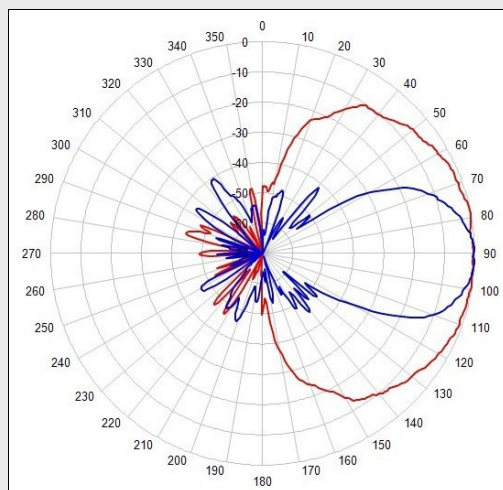
An extremely slim construction with only 6 mm depth gives you maximum flexibility in your equipment design. Powerful starterkits with signal conditioning and visualization are also available.

K-LC5 BLOCK DIAGRAM

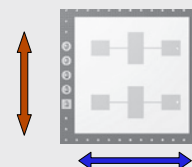


ANTENNA SYSTEM DIAGRAM (LOGARITHMIC SCALE)

This diagram shows module sensitivity (output voltage) in both azimuth and elevation directions. It incorporates the transmitter and receiver antenna characteristics.



Azimuth 34° , Elevation 80°
At IF output voltage -6dB
(corresponds to -3dB Tx power)

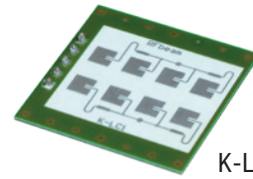




RADAR SENSORS – PRODUCT SELECTION

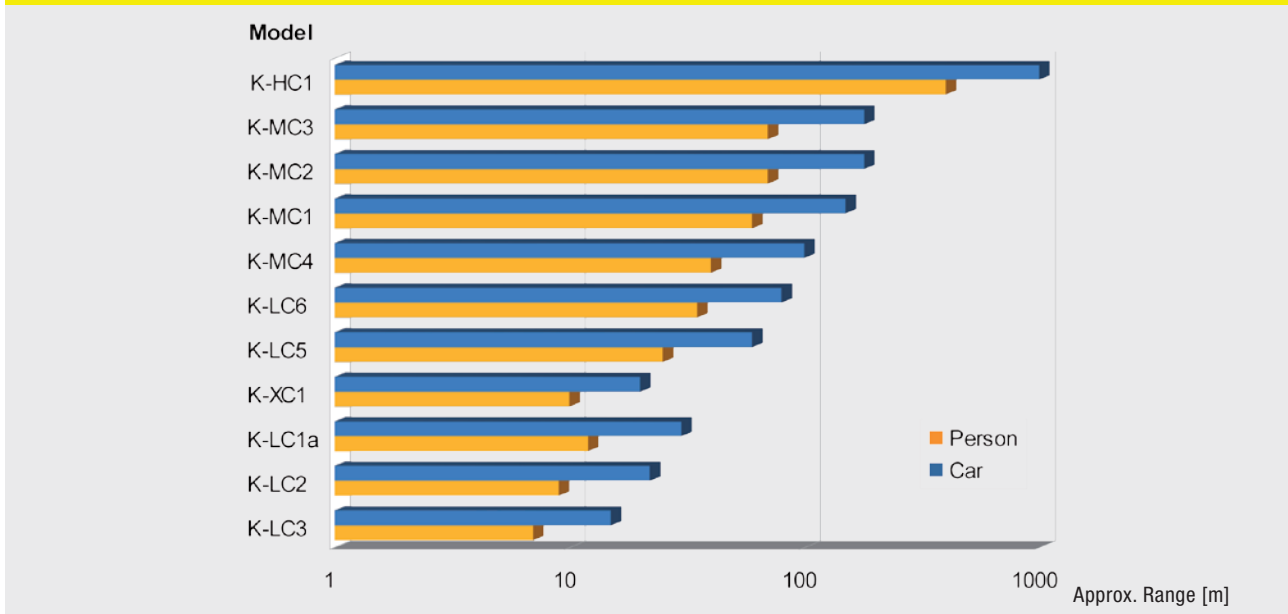
SELECTION BY DETECTION RANGE

These are indicative values only and cannot be guaranteed. Range depends on many parameters like size of object, direction of movement and data processing method.



K-LC1a

Selection by detection range



SELECTION BY PARAMETERS

	PART NUMBER	MIN. RANGE PERSON [m] ¹	MIN. RANGE CAR [m]	FIELD PATTERN VERTICAL [°]	FIELD PATTERN HORIZONTAL [°]	OUTPUT I/Q	IF AMPLIFIER	SUPPLY VOLTAGE [VDC] ²	CURRENT CONSUMPT. [mA]	FMVCO	SIZE [mm]
K-LC3	7	15	138	132	no	no	5	35	no		25 × 25 × 6
K-LC2	9	22	80	34	yes	no	5	35	yes		25 × 25 × 6
K-LC1a	12	30	80	34	no	no	5	35	yes		25 × 25 × 6
K-XC1	10	20	Ext. ant.	Ext. ant.	yes	yes	12...24	300	n. a.		
K-LC5	25	60	80	34	yes	no	5	45	yes		25 × 25 × 6
K-LC5-v2	25	60	80	34	yes	no	5	45	no		25 × 25 × 6
K-LC6	35	80	80	12	yes	no	5	45	yes		66 × 25 × 6
K-LC6-v2	35	80	80	12	yes	yes	5	47	yes		66 × 25 × 6
K-MC4	40	100	30	12	yes	yes	5	120/10	yes		98 × 78 × 7
K-MC1	60	150	25	12	yes	yes	5	100/10	yes		65 × 65 × 6
K-MC2	70	180	25	7	yes	yes	5	100/10	yes		138 × 65 × 6
K-MC3	70	180	25	7	yes	yes	5	100/10	yes		105 × 85 × 5
K-HC1	400	1000	25	12	yes	yes	15...30	220	digital		110 × 77 × 19
NEW K-MC1-LP	50	140	25	12	yes	yes	3.3...5	7.5	no		65 × 65 × 8.5
NEW K-MC5	38	100	6.5	5	yes	yes	3.3...5	8	no		186 × 143 × 10

¹ - values with simple comparator detector, ² - 3.3 V on request