

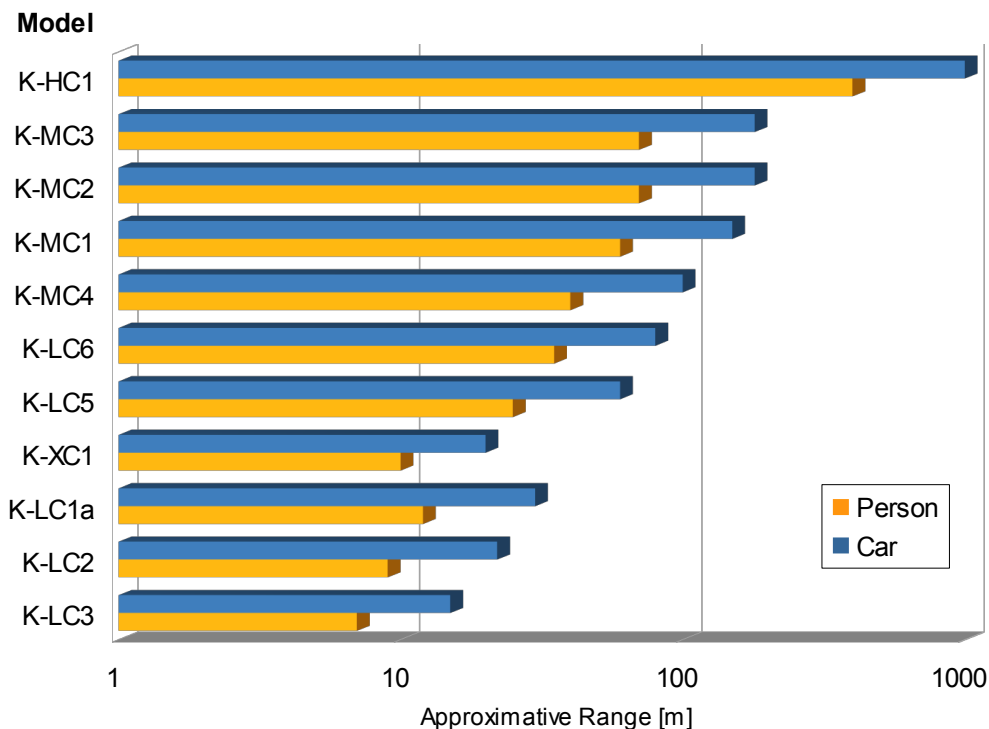
PRODUCT DOCUMENTATION

Please find detailed information on all RFbeam products on our website www.RFbeam.ch in the Download area.

RFBEAM RADAR SENSORS

Selection by Detection Range

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



Selection by Parameter

Model	Min. Range [m] ¹⁾		Field Pattern		Output I / Q	IF Amplifier	Supply ²⁾		FM/VCO	Size [mm]
	Person	Car	vert °	horiz °			[VDC]	[mA]		
K-LC3	7	15	138	132	no	no	5	35	no	25x25x6
K-LC2	9	22	80	34	yes	no	5	35	yes	25x25x6
K-LC1a	12	30	80	34	no	no	5	35	yes	25x25x6
K-XC1	10	20	External antenna		yes	yes	12...24	300	n.a.	
K-LC5	25	60	80	34	yes	no	5	45	yes	25x25x6
K-LC5-v2	25	60	80	34	yes	no	5	45	no	25x25x6
K-LC6	35	80	80	12	yes	no	5	45	yes	66x25x6
K-LC6-v2	35	80	80	12	yes	yes	5	47	yes	66x25x6
K-MC4	40	100	30	12	yes	yes	5	120/10	yes	98x78x7
K-MC1	60	150	25	12	yes	yes	5	100/10	yes	65x65x6
K-MC1_LP	60	150	25	12	yes	yes	3 .. 6	7.5	n.a.	65x65x6
K-MC2	70	180	25	7	yes	yes	5	100/10	yes	138x65x6
K-MC3	70	180	25	7	yes	yes	5	100/10	yes	105x85x5
K-HC1	400	1000	25	12	yes	yes	15..30	220	digital	110x77x19

Notes: 1) Values with simple comparator detector.

2) 3.3V on request

*) Product under development

Selection by Application

There is no general rule for sensor selection. Each application has its own requirements. Please contact RFbeam to discuss the optimal solution for your specific needs.

Product Family	Typical Applications				
	Traffic	Building	Lighting	Consumer	Others
Evaluation and starter kits	x	x	x	x	x
K-LCx Low complexity sensors		x	x	x	x
K-MCx Medium complexity sensors	x				x
K-HCx High complexity sensors	x				x
K-XC Digital sensors					x
Test systems K-TS1, K-DT1	x	x	x	x	x

DEVELOPMENT TOOLS

ST100 Starterkit vs ST200 Evaluation Kit

These kits allow learning Radar basics and evaluating Radar technology for your specific application. STxxx kits can save a lot of initial time and money in order to get first Radar experience.

Application	ST100	ST200	Comments
Learning Doppler basics	x	x	
Exploring Doppler Sensors	x	x	
Developing movement sensors	x	x	
Analyzing Doppler frequency spectra	x	x	
Working with complex FFT		x	Important for separating multiple objects, suppressing interferences ...
Recording and playback of Doppler signals	x	x	
Output of recorded Doppler signals	x		Very helpful for analyzing real world signals in the laboratory
Exploring FSK ranging		x	Ranging of moving objects
Exploring FMCW ranging		x	Ranging of moving and stationary objects
Exploring different sampling conditions		x	Predict behavior of final embedded solutions
Exploring Monopulse principle		x	Detect direction angle of moving objects
Kit contains K-LC1a module	x	x	Good for learning basics
Kit contains also K-LC2 and K-MC1 modules		x	For advanced investigations

TEST AND MEASURING SYSTEMS

K-DT1 Portable Doppler Simulator

K-DT1 is a portable moving target simulator for K-band Radar transceivers.

It can be used for calibrating and testing speed displays, door openers, safety systems and other radar based Doppler sensors.

K-DT1 comes with the Windows software DT-Remote. This software allows configuring and real time speed simulations with the K-DT1 device connected via USB port.

System features:

- Handheld K-Band Doppler Target Simulator
- Battery Operation
- Programmable Speed Range 1 ... 200km/h
- Programmable Movement Direction
- Programmable Signal Time
- 3 Programmable Presets
- Standalone or Hosted Operation via USB interface
- DT1-Remote PC Software included

Typical applications:

- Mobile Test Equipments
- Production Final Inspection
- Incoming Components Inspection
- System Tuning and Adjustment

K-TS1 Radar Test System

K-TS1 is a multi-functional test system for K-Band transceivers.

System features:

- Multifunctional K-Band Testsystem
- CW VCO Transmitter 23...25GHz, 20dBm
- Received Signal Frequency Measurement
- Received Signal Power Meter
- Active Doppler Target Simulator
- Auxiliary IF Power Meter
- Standalone or Hosted Operation via USB interface

Typical applications:

- Complete Radar Test Systems Including Power and Frequency Measurement
- Production Final Inspection
- System Tuning and Adjustment
- Automatic Microwave Test Equipment

TSview Lite Software

TSviewLite is a graphical user interface for the ultra compact RFbeam K-TS1 testsystem. It communicates with K-TS1 via a serial USB interface. Measuring results are presented by large analog and digital readouts.