LINEPULS-COD

Linear Encoders

lika®

Smart encoders & actuators

Product range

lika

A comprehensive range of products, designed and manufactured from one hand.

ROTAPULS

Incremental rotary encoders

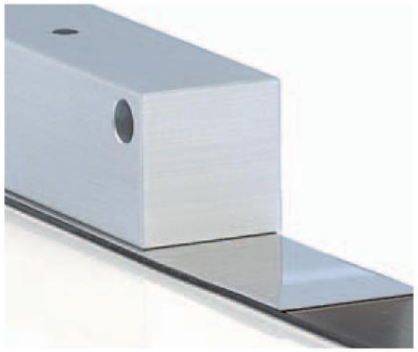
ROTACOD

Absolute rotary & Fieldbus encoders

ROTAMAG

Rotary Magnetic encoder &

Encoder modules



LINEPULS – LINECOD

Linear Absolute & Incremental encoders

DRAW-WIRE

Draw-wire encoders & potentiometers

POSICONTROL

Displays & Signal converters

Encoder Interfaces

DRIVECOD

Rotary Actuators & Positioning units

COUPLINGS

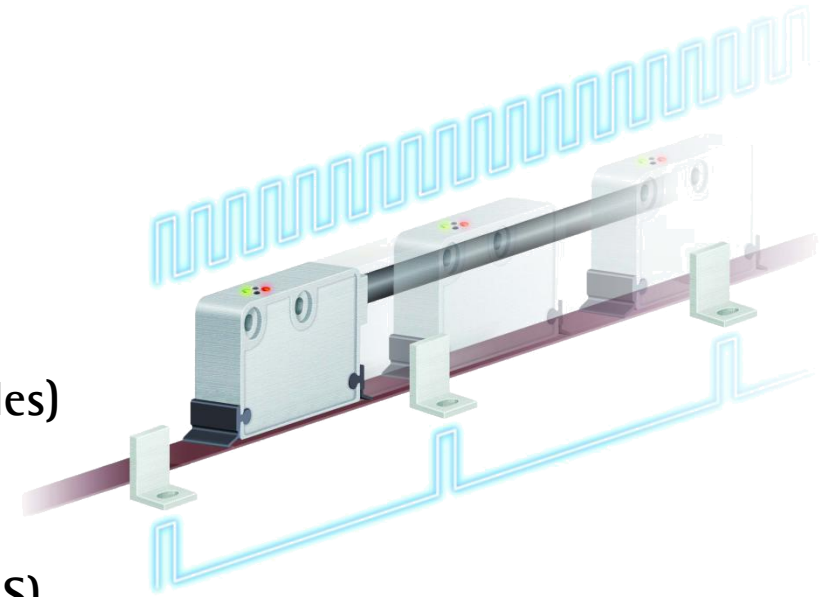
Flexible & Transmission couplings

LINEPULS incremental linear encoders

lika

General specifications for SME & SMS sensors:

HTL	Push-Pull output, +10Vdc +30Vdc
RS422	Line Driver output, +5Vdc±5%
1Vpp	Sine/Cosine output, +5Vdc±5%
IP67	Overall protection (sealed circuit)
	Aluminium die-cast housing
PUR	Hi-flex cable (>10 m/s, >6 m/s², 1M cycles)
M12	Inline connector available
LED	Error, Reference, LS1, LS2, A+B (only SMS)
	Tape wipers (optional)



Product overview

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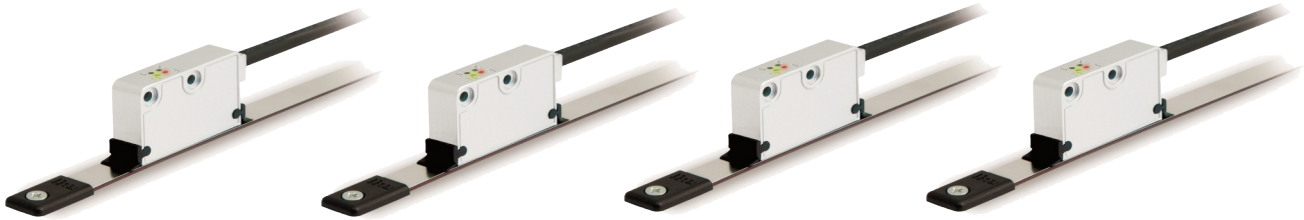
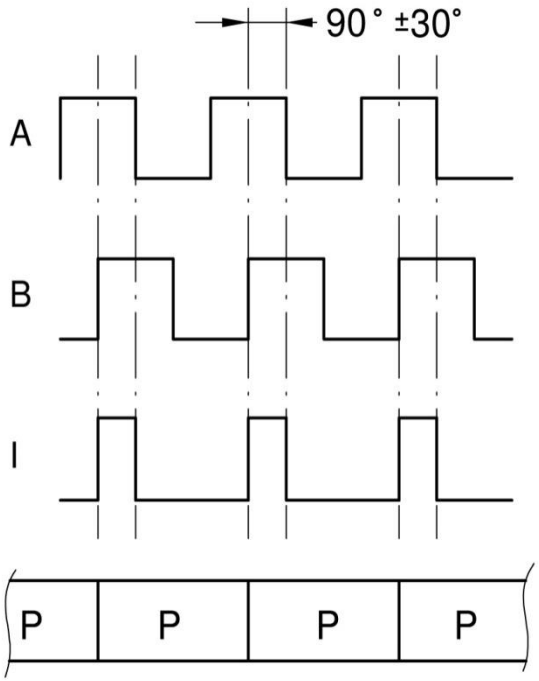


	SME51 SME52	SME21 SME22	SME11 SME12	SMS11 SMS12	
Output	PP, LD	PP, LD	PP, LD	1Vpp	AB0 /AB0
Resolution	50, 10, 25, 5	50, 10, 2, 1	10, 5, 2, 1, 0.5	1000	µm
Tape	MT50 (5mm)	MT20 (2mm)	MT10 (1mm)	MT10 (1mm)	
Gap to tape	<2mm	<1mm	<0,3mm	<0,3mm	
Index	✓				only SMxx1
Reference	✓ with reference pole support LKM1309/x				all
Limit switch	✓ with limit switch support LKM1309/LS				only SMxx2

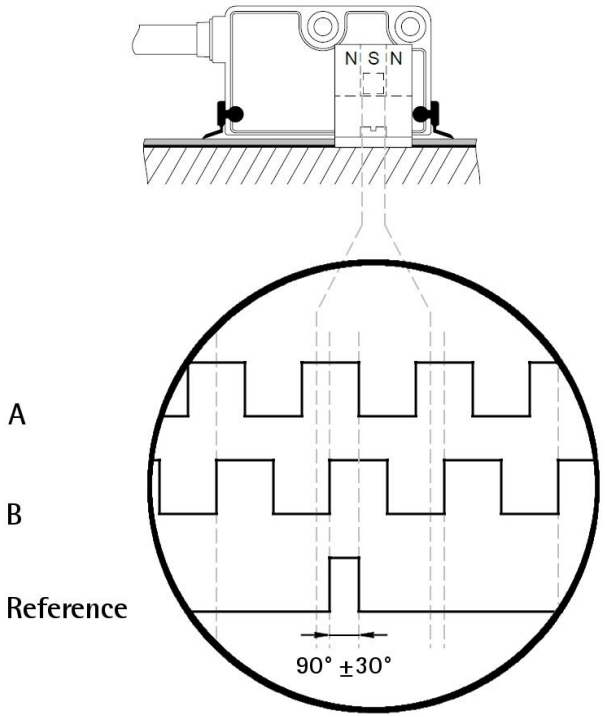
Periodic index output



- Ordering code "I"
- Generated electronically, gated with A & B
- Precise!
- SME51 index "I" every 5 mm
- SME21 index "I" every 2 mm
- SME11 index "I" every 1 mm
- SMS11 index "I"/"K" every 1 mm

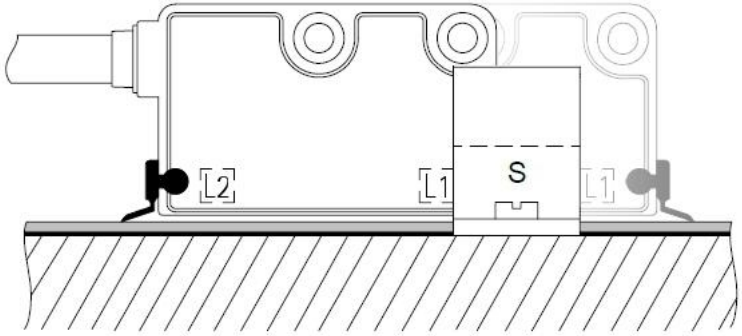
  I = TTL level, K = 1Vpp level

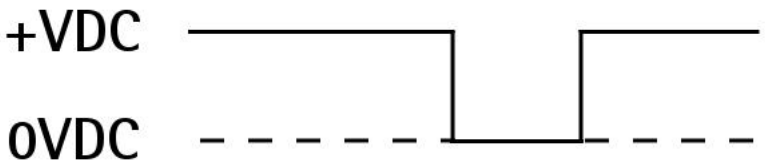
Reference output



- Ordering code “R”
- Requires LKM1309/x “reference pole support”
- LKM1309/x “enables” a selected index signal
- SME51 with LKM1309/5
- SME21 with LKM1309/2
- SME11, SMS11 with LKM1309/1
- (!) Multiple references possible

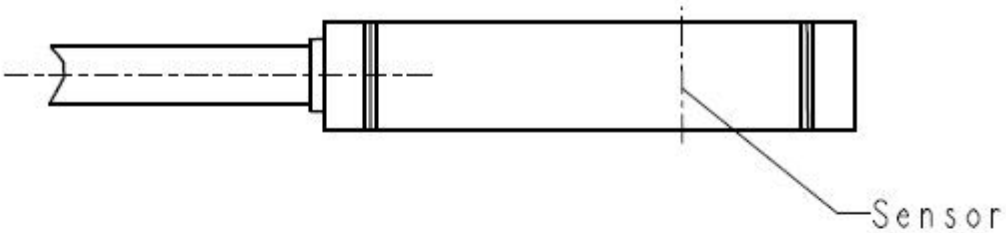
Limit switch outputs LS

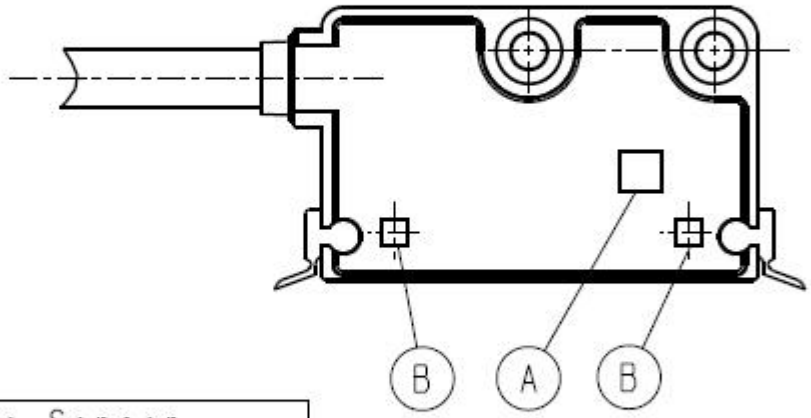




- Available on SMEx2 & SMSx2 series
- Requires 2 LKM1309/LS "limit switch support"
- No interference with reference
- Reference is standard with LS
- 10 leads wire (AB /AB, +Vdc, 0Vdc, R /R, L1, L2)

Outline

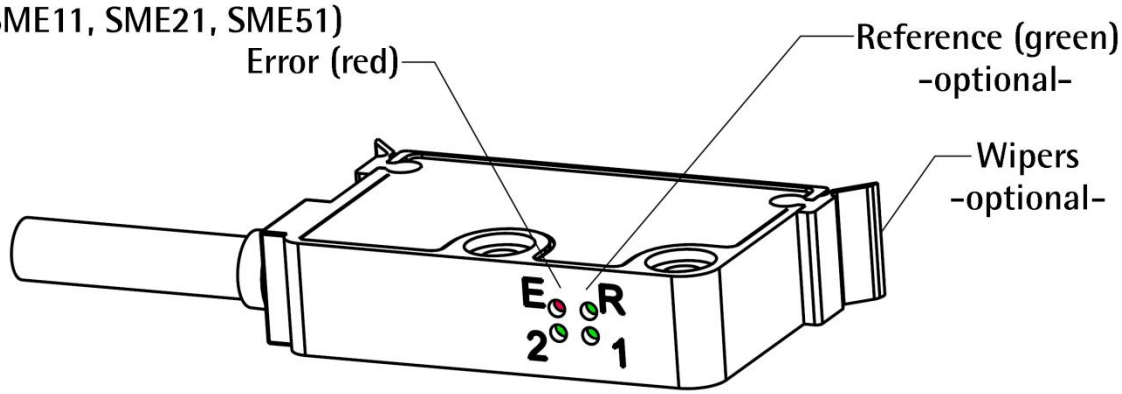




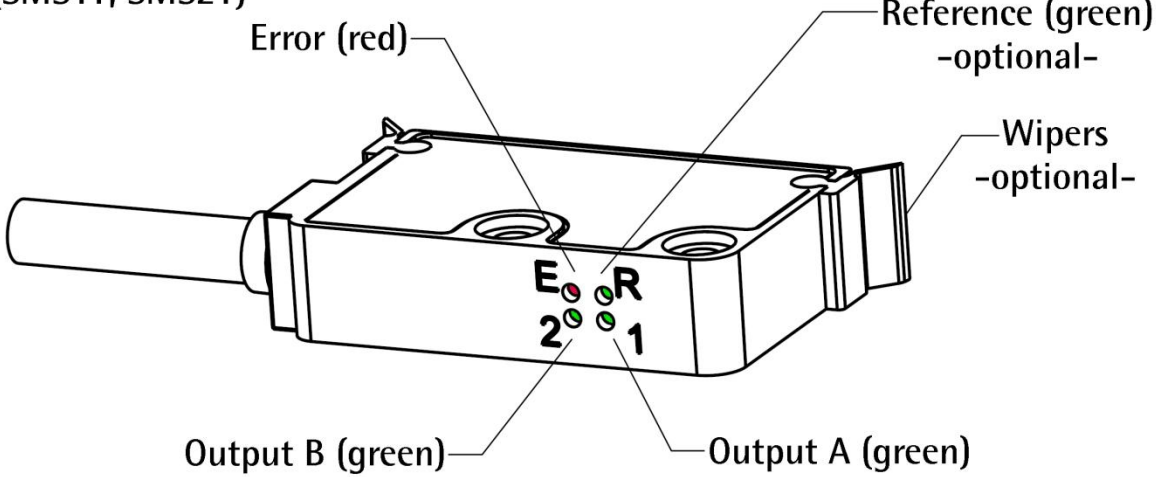
A	Reference Sensor
B	Limit Switch (L1, L2)

LED information...

SMEx1
(SME11, SME21, SME51)



SMSx1
(SMS11, SMS21)



Special sensors

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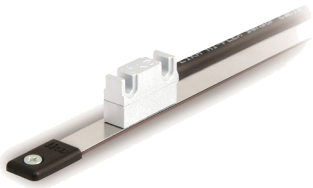

	SMI2, SMI5	SMB UHV	SMP	SMSR
Output	PP, LD		PP, LD	1Vpp
Resolution	selectable SMI2: 2 ÷ 20µm SMI5: 5 ÷ 50µm	selectable by external converter	250,125, 62.5, 50, 25, 12.5 µm	1000µm
Tape	SMI2: MT20 SMI5: MT50	MT50	MT50	MT10
Gap to tape	SMI2: < 1mm SMI5: < 2mm	< 2mm	< 2mm	< 0,4mm
Index	I	--	--	K

“Low-end” sensors

lika

	SMK	SML	SMH	SMX2 SMX5	
Output	PP, LD	PP, LD	PP, LD	Universal	AB0 /AB0
Resolution	1, 0.5, 0.1, 0.05, 0.025, 0.01	0.1	1, 0.5, 0.25	1.25 0.5	mm
Tape	MT50 (5mm)	MT32 (3.2mm)	MT40 (4mm)	MT50 (5mm) MT20 (2mm)	
Gap to tape	>4	>2	>2	>2/3	mm
Index	✓	✓	✓	--	
Travel speed	2.5	10	10	7.5	m/s
Cross ref.	MSK500	MSK320	MSK400		SIKO

Guided sensors

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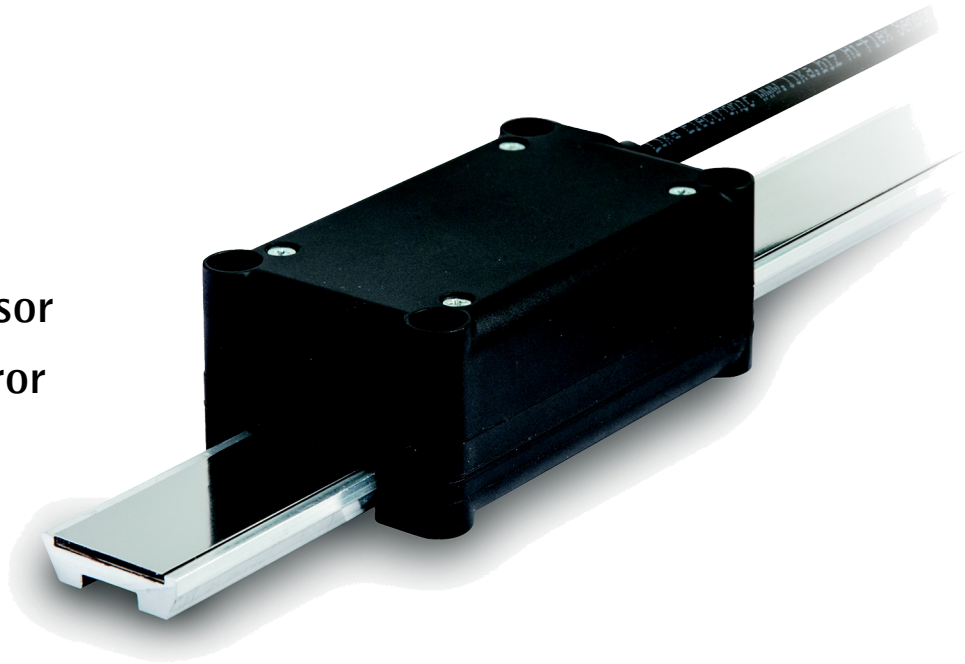
Absolute version SMAG, MTAG:

SSI	100-50-10-5µm resolution
CANopen	5um resolution (scalable)
570mm	max. measure length
M12	8 pin inline connector available

- Easy installation, self guiding cursor
- Asymmetric profile, no pairing error



Incremental version SMIG, MTIG:

PP, LD	Push-Pull or Line Driver output
5µm	best available resolution
650	mm max. measuring length

- same benefits of SMAG

NEW

SSI SYNCHRONOUS SERIAL INTERFACE CANopen

LINECOD absolute linear encoders

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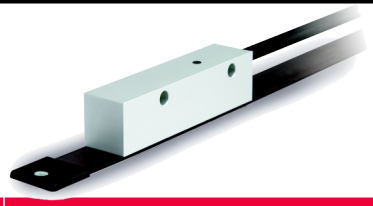

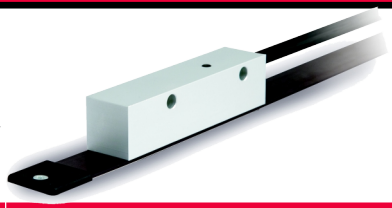

	SMA5	SMA2	SMA1	SMAX-SMAZ
Interface	SSI, RS485 on req.	SSI, BiSS-C	BiSS-B/C	SSI, ModBus, 4-20mA, 0-10V
Output code	Gray	Gray, Binary (SSI)	--	Gray, Binary (SSI)
Resolution	100, 10, 5 µm	50, 10, 5, 2, 1 µm	5 µm	100 µm
Incr. Track	--	NPN	1Vpp	--
Tape	MTA5	MTA2	MTA1	MTAX-MTAZ
Gap to tape	<1.5 mm	<0.6 mm	<0.3 mm	<2.5 mm
Max Meas length	5.1 m	8.1 m	5.1 m	1,2 m
LED errors	gap, mounting, overlapping	--	gap, mounting, overlapping	gap, mounting, overlapping
Functions	Counting dir., Preset	--	Counting dir., Preset	Counting dir., Preset Teach in

Contact

Smart encoders & actuators

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