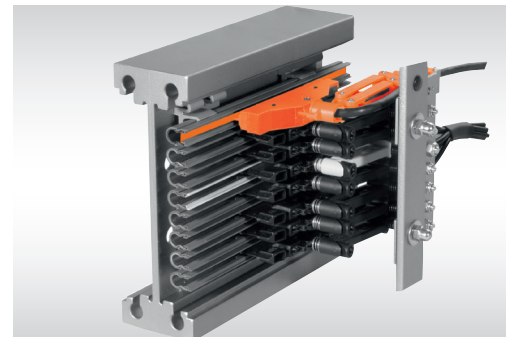


**VAHLE**

## APOS Absolute Positioning System

**SYSTEMS IN MOTION**

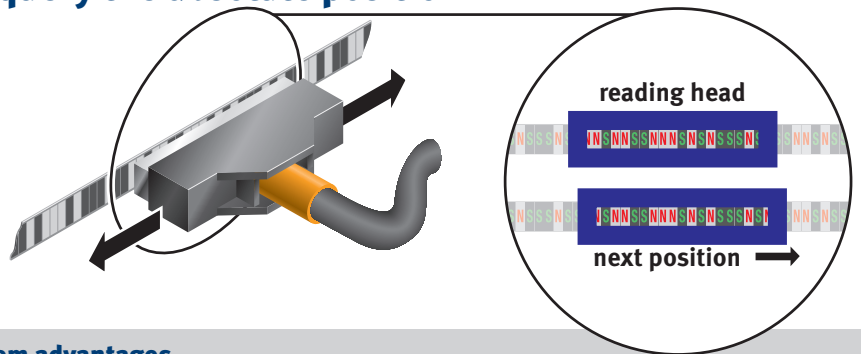


# APOS Positioning Systems

were developed for automated handling systems in material flow technology. The control system can constantly query the absolute position of the mobile consumer.

## Operation

**Vahle-APOS** consists of a code strip with magnetic coding and a reading head with integrated logic, which transmits the position to the control system via the interface. The intelligent reading head determines the position from the code strip and evaluates it for downstream control systems for processing.

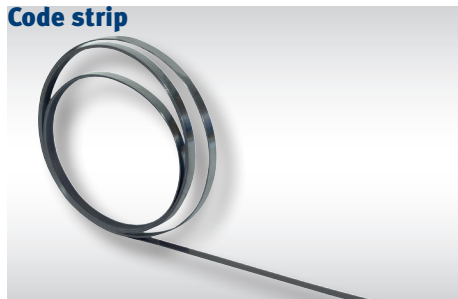


## System advantages

- absolute position determination up to 515 m
- Integration with conductor bar systems for spacing saving solutions or independently in parallel to the runway
- retrofit to existing systems
- absolute position immediately available when switching on or after a power failure
- travel speed up to 12 m/s
- resistant to environmental conditions such as dust or humidity
- unaffected by lighting conditions
- optical version available - see catalog 7b

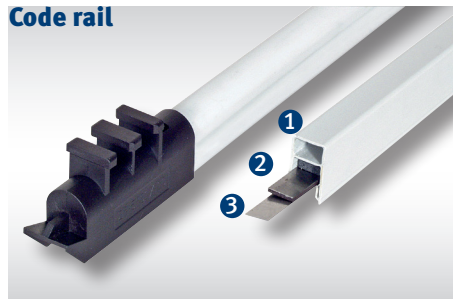
## Overview of APOS components

### Code strip



The code strip comes factory assembled with a cross-magnetized specified code and given a digital length coding.

### Code rail



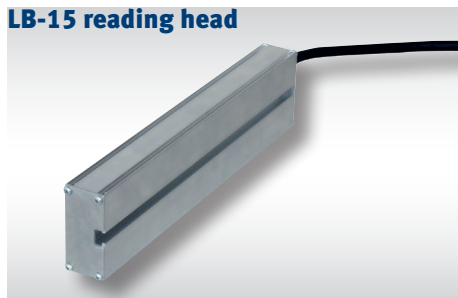
The code rail consists of the support profile (1), the code strip (2), and the sliding strip (3). The sliding strip provides guidance for the APOS LKG-17 reading head.

### LKG-17 reading head



Sliding scanner for powerail systems U 10 and VKS 10.

### LB-15 reading head



Contactless scanning for powerail systems KBH and MKH.

### Reading head carrier LW



Guide carrier for the mounting of the LB contactless reading head for KBH and MKH conductor line

### SU interface module



Logging of APOS to CANopen, Profibus DP and others.

# Intelligent solutions... Integrated VAHLE conductor bar and APOS positioning systems

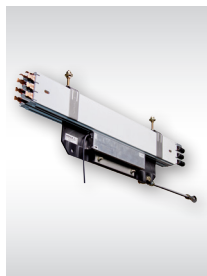
**U 10**



**KBH**



**MKH**



**VKS 10**



**10-pole**



**11-pole**

Type	Details	Interface	U 10	KBH	MKH	VKS 10		Order-no.
						10-pole	11-pole	

### Contactless reading head

LB15-RS485	Standard-Schutz	RS485		●	●			2823159
LB15-SSI Gray	Standard-Schutz	SSI (Gray Code)		●	●			2823252
LB15-SSI binary	Standard-Schutz	SSI (binary code)		●	●			2823557
LB15-RS485 IP54	IP54-Schutz	RS485		●	●			2823555
LB15-SSI Gray IP54	IP54-Schutz	SSI (Gray Code)		●	●			2823554

### Sliding reading head

LLG-C 17	Single Arm (Long)	SSI(Gray Code)	●			●	●	2823696
LLG-C 17	Single Arm (Long)	RS485	●			●	●	2823693
LKG-A 17	Single Arm (Short)	SSI (Gray Code)	●			●	●	2823681
LKG-A 17	Single Arm (Short)	RS485	●			●	●	2823626

### Accessories

SU - CAN	Interface module		○			○	○	2823262
SU - Profibus für LB	Interface module			○	○			2823263
SU - Profibus f. LKG u. LLG	Interface module		○			○	○	2518699
SU - Interbus	Interface module		○			○	○	2823264
CB 75	Code band 7.5 mm			●	●			2823254
CB 80	Sliding rail 8 mm		●			●	●	2823255
FP 20	Fixing profile							2823280
FP 25	Fixing profile			●	●			2823257
GB 80	Sliding rail 8 mm		●			●	●	2823446
TPA - U 10 - 6	Support profile		●					2823258
TPA - FABA 100 - 4	Support profile							2806571
TPA - VKS 10/10 - 6	Support profile					●		2823259
TPA - VKS 10/11 - 6	Support profile						●	2823265
LWK	Reading head carrier			●				2823445
LWM	Reading head carrier				●			2823261
ZAK	Accessories			●	●			2823281
ZAM	Accessories							2823282

\*Consult factory for additional model types

● = required , ○ = optional

<b>1 Open Conductor Systems</b>	
Open conductor systems	1a
<b>2 Insulated Conductor Systems</b>	
U10	2a
U15, U25, U35	2c
U20, U30, U40	2d
<b>3 Compact Conductor Systems</b>	
VKS 10	3a
VKS - VKL	3b
<b>4 Enclosed Conductor Systems</b>	
KSL(T)	4a
KBH	4b
MKH	4c
LSV - LSVG	4d
<b>5 Contactless Power Supply</b>	
Contactless power supply (CPS®)	5a
<b>6 Data Transmission</b>	
VAHLE Powercom®	6a
Slotted Microwave Guide (SMG, SMGM, SMGX)	6b
<b>7 Positioning Systems</b>	
VAHLE APOS®	7a
VAHLE APOS Optic	7b
<b>8 Festoon Systems</b>	
Light duty festoon systems - □ tracks & ◇ tracks	8a
Heavy duty festoon systems - I Beam tracks	8b
<b>9 Reels</b>	
Spring operated cable reels	9a
Motor powered cable reels	9b
<b>10 Port Technology</b>	
eRTG Solutions	10a
<b>11 Control Systems</b>	
VAHLE-DETO	11a
<b>12 Other</b>	
Battery charging contacts	12a
VMT	12b
BOK	12c
Specialty Components	Misc
Conductor Rings , Heavy Enclosed, Handling Systems, Cleaning Components, Polarity Protection	
<b>13 Services</b>	
Installation Services - On site supervision & training, pre-assembly, and commissioning	
Troubleshooting - Site inspection, maintenance, and repair	