

# APOS

Positioning systems  
for VAHLE conductor lines

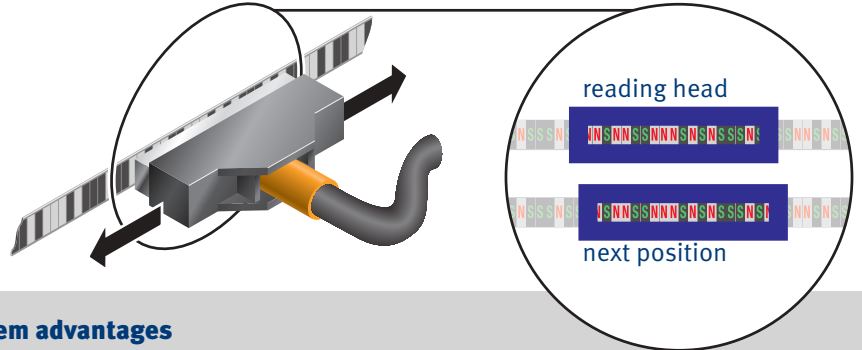
## SYSTEMS IN MOTION



# APOS positioning systems with VAHLE conductor lines were developed for automated handling systems in material flow technology. The control system can constantly query the absolute position of the mobile consumer.

## Operating principle

**Vahle-APOS** consists of a code strip with a magnetic length coding as 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.

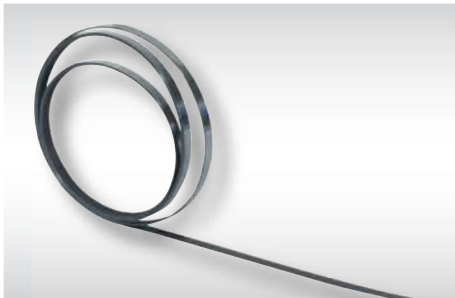


## System advantages

- absolute position determination up to 524 m (sliding version) and 262 m (contactless version)
- Space-saving solutions for integration into the powerail system or for installation in parallel to the runway
- retrofittable
- absolute position immediately available when switching on or after a power failure
- reliable position detection even in humid or dusty environments
- trouble-free functionality even in poor lighting conditions
- travel speed up to 6 m/s
- the system enables the combination of horizontally and vertically combined handling equipment

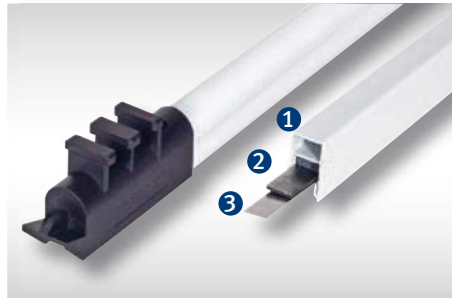
## Overview of APOS components

### Code strip



The code strip comes factory assembled with a cross-magnetised specified code and is thus 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 serves for the mounting and sliding guidance of the APOS LKG-17 reading head.

### LKG-17 reading head



Sliding scanner for powerail systems U 10, VKS 10 and FABA 100.

### LB-15 reading head



Contactless scanning for powerail systems KBH and MKL.

### Reading head carrier LW



Guide carrier for the mounting of the LB contactless reading head for KBH and MKL conductor line systems.

### SU interface module



Logging of APOS to CANopen, Profibus DP and others.

# Intelligent positioning solutions with VAHLE and APOS perfectly integrated and retrofittable

**VKS 10, APOS in 10-pole**



**KBH**



**U 10**



**VKS 10, APOS in 11-pole**



**MKL**



**FABA 100**



Type/Interface	Name	U 10	FABA 100	KBH	MKL	VKS 10		Order-no.
						10-pole	11-pole	
LKG 17 - RS 485	Sliding reading head	●	●					2823156
LKG 17 - RS 485 Steel - 2	Sliding reading head	●	●					2823157
LKG 17 - SSI Gray Code	Sliding reading head	●	●					2823158
LLG 17 - RS 485	Sliding reading head		●			●	●	2823210
LLG 17 - RS 485 Steel - 2	Sliding reading head		●			●	●	2823211
LLG 17 - SSI Gray Code	Sliding reading head		●			●	●	2823212
LB 15 - RS 485	Contactless reading head			●	●			2823159
LB 15 - RS 485 Steel - 2	Contactless reading head			●	●			2823251
LB 15 - SSI Gray Code	Contactless reading head			●	●			2823252
LB 15 - SSI Binär Code	Contactless reading head			●	●			2823556
LB 15 - CAN	Contactless reading head			●	●			2823253
SU - Profibus for LB	Interface module			○	○			2823263
SU - Profibus f. LKG a. LLG	Interface module	○	○			○	○	2823154
CB 75	Code band 7.5 mm			●	●			2823254
CB 80	Code band 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

● = necessary, ○ = optional

# Scope of delivery and services

Catalogue no.

<b>1 Open powerails</b>		
Open powerails		1a
<b>2 Insulated powerails</b>		
U10		2a
FABA 100		2b
U15, U25, U35		2c
U20, U30, U40		2d
<b>3 Compact conductor lines</b>		
VKS 10		3a
VKS - VKL		3b
<b>4 Powerail Enclosed Conductor Systems</b>		
KBSL - KSL		4a
KBH		4b
MKLD - MKLF - MKLS		4c
LSV - LSVG		4d
<b>5 Contactless power system (CPS®)</b>		
Contactless power system (CPS®)		5a
<b>6 Data transfer</b>		
VAHLE Powercom®		6a
Slotted Microwave Guide (SMG)		6b
<b>7 Position Encoding Systems</b>		
VAHLE APOS®		7a
<b>8 Cable carriers and cables</b>		
Cable carriers for □ tracks		8a
Cable carriers for flat cables on I tracks		8b
Cable carriers for round flat cables on I tracks		8c
Cable carriers for ◇ tracks		8d
Cables		8e
<b>9 Reels</b>		
Spring Operated Cable Reels		9a
Motor Powered Cable Reels		9b
<b>10 Other</b>		
Battery charging systems		10a
Heavy enclosed conductor systems		10b
Tender		10c
Contact wire		10d

**Assemblies / Commissioning**

**Spare parts / Maintenance service**



DQS certified in accordance with DIN EN ISO 9001:2000  
OHSAS 18001 (Reg. no. 003140 QM OH)