

VAHLE 
ELECTRIFICATION SYSTEMS

APOS

Positioning systems
for VAHLE conductor lines

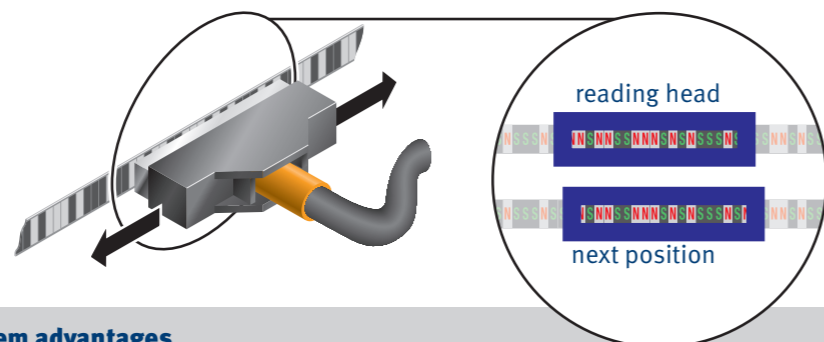
SYSTEMS IN MOTION



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.

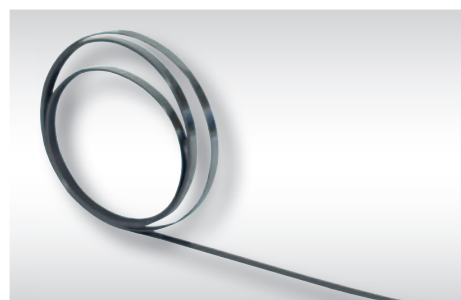


System advantages

- absolute position determination up to 524 m (sliding version)
- Space-saving solutions for integration into the powerail system or for installation in parallel to the runway
- retrofittable for U 10, FABA 100 and VKS 10
- 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

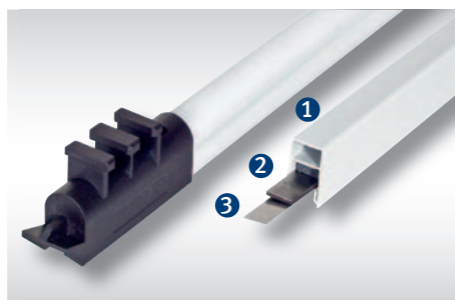
Overview of APOS components

Code strip



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

Code rail



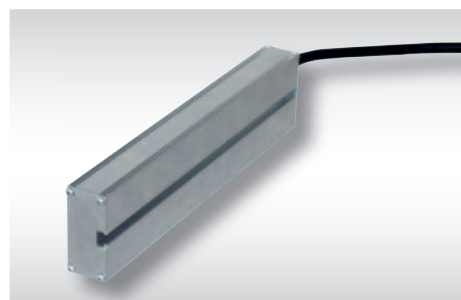
The code rail consists of the support profile (1), the code strip (2) and the sliding strip (3). The sliding strip serves for the mounting and sliding guidance of the APOS LKG-17 reading head.

LKG-17 reading head



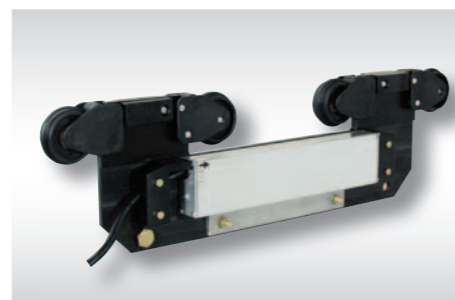
Sliding scanner for powerail systems U 10, VKS 10 and FABA 100.

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

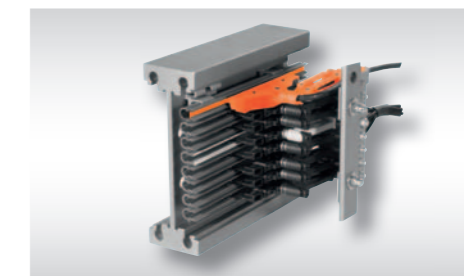
VKS 10, APOS in 10-pole



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 - CAN	Contactless reading head			●	●			2823253
SU - CAN	Interface module	○	○			○	○	2823262
SU - Profibus for LB	Interface module			○	○			2823263
SU - Profibus f. LKG a. LLG	Interface module	○	○			○	○	2823154
SU - Interbus	Interface module	○	○			○	○	2823264
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.

1 Open powerails	
Open powerails	1a
2 Insulated powerails	
U10	2a
FABA 100	2b
U15, U25, U35	2c
U20, U30, U40	2d
3 Compact conductor lines	
VKS 10	3a
VKS - VKL	3b
4 Powerail Enclosed Conductor Systems	
KBSL - KSL	4a
KBH	4b
MKLD - MKLF - MKLS	4c
LSV - LSVG	4d
5 Contactless power system (CPS®)	
Contactless power system (CPS®)	5a
6 Data transfer	
VAHLE Powercom®	6a
Slotted Microwave Guide (SMG)	6b
7 Position Encoding Systems	
VAHLE APOS®	7a
8 Cable carriers and cables	
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
9 Reels	
Spring Operated Cable Reels	9a
Motor Powered Cable Reels	9b
10 Other	
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)