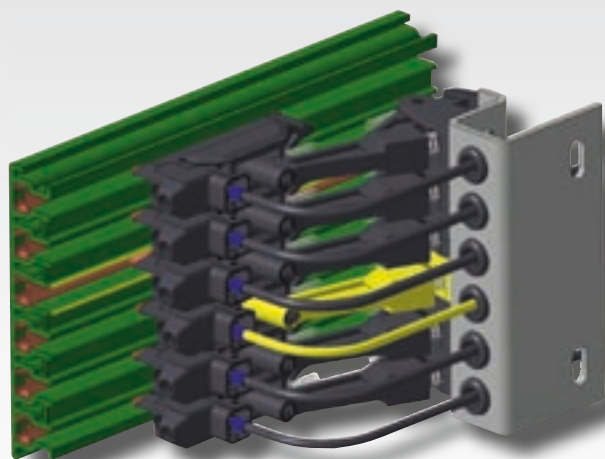
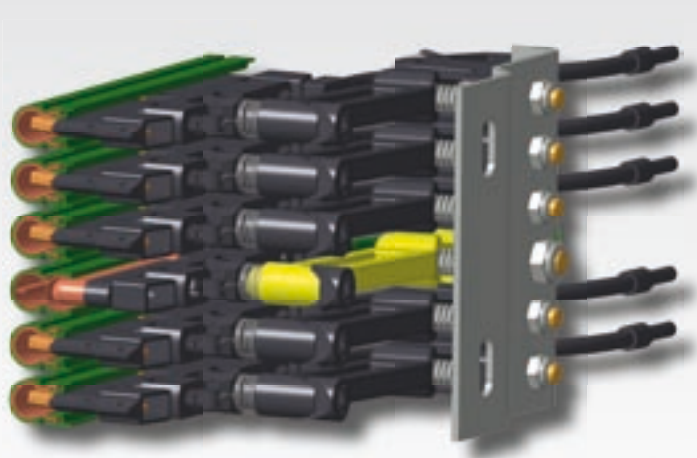




PRODUCT ENCHANGEMENT „GROUND PROTECTED AGAINST POLARITY REVERSAL“

INSULATED CONDUCTOR U 10
PVC CONDUCTOR VKS

PRODUCT-INNOVATION
The special design of PE prevents an electrical contact between the earth collector and the phase rail as well by operating errors, interferences or commissioning!

SYSTEMS IN MOTION



Insulated conductor U 10 PE-VP

Special designed PE prevents an electrical contact between the earth collector and the phase rail as well by operating errors.

Retrofit safety for maximum operator protection

The conductor system U10, which is approved over many years in thousands of system kilometers and is according to all established safety regulations, is now advanced with a retrofit option: The insulated conductor U10 PE-VP prevents through a special geometrical design of the PE, that the equipment even in exceptional operating situations gets under current. Possible operating errors during installation, commissioning and maintainance are therefore prevented.

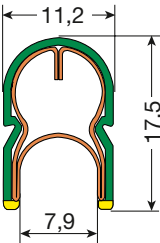
Vahle provides you with this innovation a unique advantage with regards to operator protection – and a considerable advantage to all established safety regulations.

System description

- special design of PE-conductor
- special design of earth collector
- PE collector cannot enter the phase conductor
- No permutability of collectors
- safe carbon guiding through special copper profile (7.5 mm depth of immersion)
- easy retrofit in existing systems
- all advantages of the conductor system U 10 still persist



Section



Conductor code:
U = unipole insulated conductor
10 = shroud size
25 = conductor cross sectional area (mm²)
C = copper conductor
E = stainless steel conductor

Length:
6 m is standard length, shorter lengths are available

Support spacing:
for straight runs 0.6 m
for curves 0.3 m

Curves:
factory prepared, min. radius 400 mm, or in the field with curve tools
BVU 10/15 (min. R = 0.4 m)

Conductor spacing:
on compact hangers 14 mm or variable

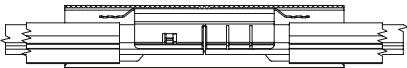
Use:
Only indoor

Type	Weight kg/m	Order No. PE ⁽¹⁾	
		Standard shroud, color green	High temperature shroud, color gray
U 10/25 C-PE-VP	0,267	143 19•	143 20•

⁽¹⁾ Fill-in last number (1, 2, 3, 4, 5 or 6 m suffix) in accordance to bars required

Feed joint

(Max. connecting cable 2 x 6 mm², balances the length extension during temperature fluctuation)

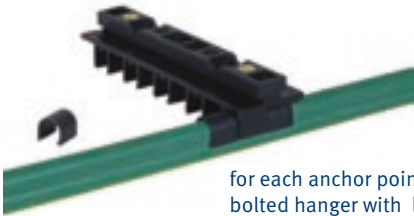


Type	Weight kg	Order No.
UEV 10 PE-VP	0,020	143 213

Accessories and collector for U 10 PE-VP

Locating clamp

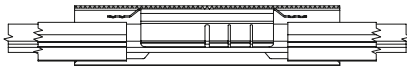
Type	Weight kg	Order No.
USK 10 A	0,006	282 3268



for each anchor point use one bolted hanger with locating clamps per conductor bar

Feed terminal

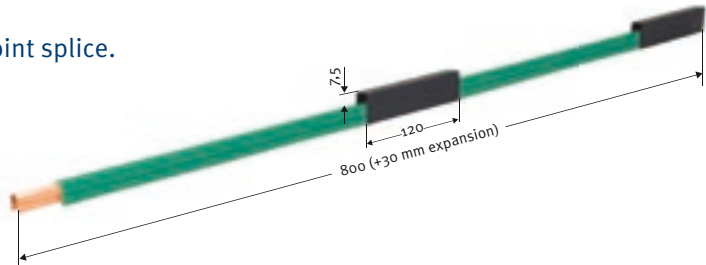
(max. 2 x 50 A continuous current)
Usage: UES10 installed on the conductor section between the joint feeds.



Type	Weight kg	Order No.
UES 10 PE-VP	0,023	143 214

Expansion section

factory assembled to 0.8 m long conductor section incl. one joint splice.
The 0.8 m expansion assembly is part of the system length.



Type	Weight kg	Order No.	
		Standard shrouding, green	High temp. shrouding, gray
UDV 10/25 C-PE-VP	0,254	143 216	143 215

Transfer guide

with or without feed terminal (also serving for end cap and for anchor point in conjunction with BFU).

max. vertical and horizontal offset: ± 3 mm to each other

Type	Weight kg	feed clip	Order No.
US 10 PE-VP	0,004	w/o	143 208
US 10 S-PE-VP	0,005	w/o	143 210
US 10 SP-PE-VP	0,005	w/o	143 212
USE 10 PE-VP ⁽¹⁾	0,009	c/w	143 207
USE 10 S-PE-VP ⁽¹⁾	0,010	c/w	143 209
USE 10 SP-PE-VP ⁽¹⁾	0,010	c/w	143 211

⁽¹⁾ Connecting cable with flat pin bushing FLA or FKA have to be ordered seprately



w/o feed: US 10 PE-VP



c/w feed: USE 10 PE-VP (feed cable 6,3 x 0,8 mm)



w/o feed: US 10 SP-PE-VP

Accessories and collector for U 10 PE-VP

Double collector
Ampacity:
1 Plug terminal 25 A
2 Plug terminals 2 x 20 A

swivel ± 15 mm · lift ± 15 mm;
contact pressure ca. 3.5 N per brush
feed cable WFLA 2.5 mm2
0.5 m long high-flexible incl.

Type	Weight kg	Order No.
KDS 2/40 PE-VP	0,080	143 217



Installation tools U 10

Curve tool
for bending of conductor U10 and U15 vertically and horizontally. The filling rod has to be ordered seperatly.

Type	Weight kg	Order No.
BVU 10 VP	10,000	143 318
Filler rod FU 10 SVP (4m)	0,340	143 279
Filler rod FU 10 VP (4m)	0,200	143 280



Conductor punch tool
With removable ground plate to punch the joint holes in the conductor profile at short length.

Type	Weight kg	Order No.
LZ 10 PE-VP	2,400	143 223



Locking pin driver
To adopt the split pins while using the anchor bar for transfer guide (Aluminium).

Type	Weight kg	Order No.
ED 10	0,010	165 277



Drill jig for fixpoint

Type	Weight kg	Order No.
BS 10 A	0,150	282 3266

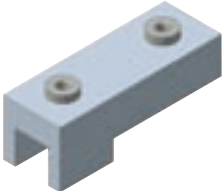


Table saw
To cut the isolating and conductor profiles with length gauge. Connection: 220 V, 50 Hz..

Type	Weight kg	Order No.
KS	6,500	165 276
Spare blade SB	0,070	165 263



Conductor joint assembling tool
1. To push the conductor profile in the joint.
2. If necessary, to expand the conductor opening.
3. To move the joint cap

Type	Weight kg	Order No.
MG-SW 10	0,125	165 093



Deburring tool EGM
for the inner side of the conductor profile at short length.



Half-round file HRF
for deburring and bevelling of conductor outside.

Type	Weight kg	Order No.
EGM	0,018	165 275
HRF	0,085	165 264

PVC conductor VKS 6/...HSVP

Special designed PE prevents an electrical contact between the earth collector and the phase rail as well by operating errors.

Additional safety for maximum operator protection

The conductor system VKS 6, which is approved over many years in thousands of system kilometers and is according to all established safety regulations, is now advanced with a further option: The PVC conductor VKS 6/...HSVP prevents through a special geometrical design of the PE, that the equipment even in exceptional operating situations gets under current. Possible operating errors during installation, commissioning and maintenance are therefore prevented.

Vahle provides you with this innovation a unique advantage with regards to operator protection – and a considerable advantage to all established safety regulations.

System description

- special designed isolating housing
- special design of earth collector
- PE collector cannot enter the phase conductor
- No permutability of collectors
- easy retrofit in existing systems
- all advantages of the conductor system VKS 6 still persist

PE Before

PE After

Collectors

Phase VKS

PE VKS

Conductor profile

Straight sections

Type	Weight kg	Order No. PE ⁽¹⁾
VKS 6/60- ...HSVP	2,202	157 37•
VKS 6/100- ...HSVP	2,436	157 40•
VKS 6/120- ...HSVP	2,571	157 41•
VKS 6/140- ...HSVP	2,693	157 42•

⁽¹⁾ Fill-in last number (1, 2, 3, 4, 5 or 6 m suffix) in accordance to bars required

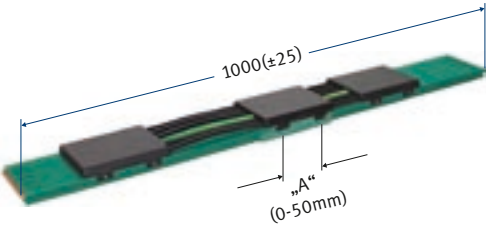
Joint material

Type	Weight kg	Order No.
SVN 6/60-100VP	0,194	157 383
SVN 6/120-140VP	0,194	157 394

Accessories and collectors for VKS 6/...HSVP

Expansion joints

Type	Weight kg	Order No.
DVKS 6/60 HSVP	3,582	157 395
DVKS 6/100 HSVP	3,962	157 396
DVKS 6/120 HSVP	4,242	157 397
DVKS 6/140 HSVP	4,504	157 398



Entry (L=left hand version, R=right hand version, w/o conductor)

Type	Weight kg	Order No.
EF V6-KESR-VP L		157 385
EF V6-KESR-VP R		157 386



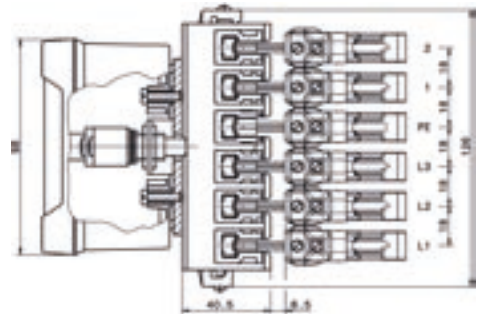
Exit (L=left hand version, R=right hand version, w/o conductor)

Type	Weight kg	Order No.
AF V6-KESR-VP L		157 387
AF V6-KESR-VP R		157 388



Carbon wear indicator

Type	Weight kg	Order No.
KVT-VKS6-VP		157 391



Collector HS04=PE at No.4, HS03 = PE at No.3, incl. connecting length 2.5 mm², 1 m long

Type	Weight kg	Order No.
KESR 32S-VP-6-18HS04		157 392/0
KESR 32S-VP-6-18HS03		157 392/0-C

Note:
Technical parameter and not shown accessories can be found in the VAHLE catalogue 3b (PVC conductor VKS – VKL).



Scope of delivery and services

Catalogue no.

1 Open conductor systems	
Open conductor systems	1a
2 Insulated conductor systems	
U10	2a
FABA 100	2b
U15, U25, U35	2c
U20, U30, U40	2d
3 Compact conductor systems	
VKS 10	3a
VKS - VKL	3b
4 Enclosed conductor systems	
KBSL - KSL	4a
KBH	4b
MKLD - MKLF - MKLS	4c
LSV - LSVG	4d
5 Contactless power system	
Contactless power system (CPS®)	5a
6 Data transmission	
VAHLE Powercom®	6a
Slotted Microwave Guide (SMG)	6b
7 Position Encoding Systems	
VAHLE APOS®	7a
8 Festoon systems and cables	
Festoon systems for □ tracks	8a
Festoon systems for flat cables on I tracks	8b
Festoon systems for round flat cables on I tracks	8c
Festoon systems 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)

