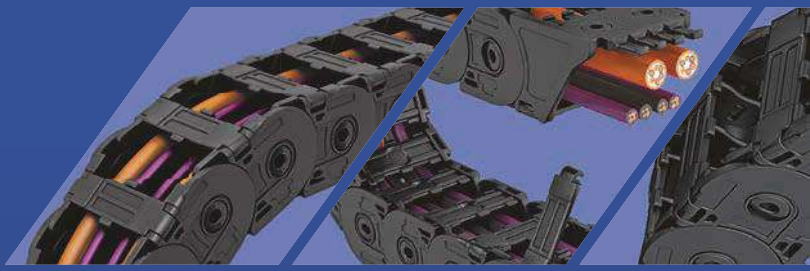
Innovation in Motion

TSUBAKI

KABELSCHLEPP

TKP35 series



VARIABLE INNER DISTRIBUTION

QUICK AND EASY TO OPEN

ROBUST ALL-ROUNDER

TKP35 series

Robust all-rounder with variable inner distribution

Inner height
32 mm

Inner widths
16 – 50 mm

Pitch
35 mm

Additional load
up to 2 kg/m

Travel length unsupported
up to 2.4 m

Travel acceleration
up to 20 m/s²

Travel speed
up to 5 m/s

All technical data and features depend on application and type. Let us know your requirements – we are here to help!

Fon: +49 (0) 2762 4003-0 or
e-mail: technik@kabelschlepp.de

TKP35 series | Overview

Features

- Robust and extremely rigid stroke system
- Extensive unsupported length
- Low noise operation due to internal damping system
- Weight-optimized cable carrier geometry
- Interior without sharp edges, design gentle on the cables
- Variable inner distribution
- Vertical moveable dividers or with locking cams, can be attached at 2 mm increments (not B_i 16)
- Easy to open versions, left or right (not B_i 16)
- Quick and easy to open
- Optional strain relief can be completely integrated into the connecting element

Reliable cable separation using fixable dividers

Model 030 with outside opening and detachable crossbars on both sides

Model 040 with inside opening and detachable crossbars on both sides

Optimized utilization of the interior space; vertical and horizontal inner distribution possible

TKP35 series | Overview

1 Dividers and height separation for separating the cables
2 Designs with inward or outward opening crossbars
3 Quick and easy opening from any position
4 Integrated noise damper
5 Interior gentle on the cables without projecting edges
6 End connectors with optional strain relief

Example of inner distribution

Selection criteria for the TKP35

- If a greater inner height is required for a narrower inner width
- If a smaller bending radius is required for a greater inner height
- If inner distribution is desired
- If divider fixing is to be possible
- If very smooth operation of the cable carrier is required
- If no cover on the cable carrier is required
- If no gliding arrangement is required
- If no steel cable carrier is required (e.g. at extremely high temperatures)

Type	h_i [mm]	B_i [mm]	t [mm]	Page
TKP35	32	16 – 50	35	6

TKP35

Pitch
35 mm

Height
32 mm

Width
16 – 50 mm

Bending radius
48 – 125 mm

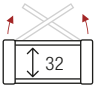
Stay variants

Design 030

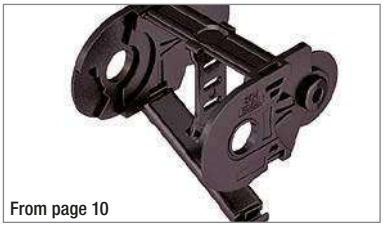
From page 8

Frame with outside opening crossbars on both sides
- Weight-optimized plastic frame with particularly high torsional rigidity.
- Swivable on both sides in any position.

Opening options
outside: Hinged and detachable brackets.



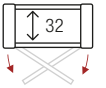
Design 040



From page 10

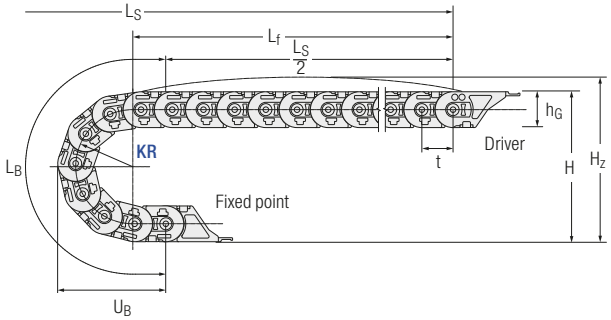
Frame with inside opening crossbars on both sides
- Weight-optimized plastic frame with particularly high torsional rigidity.
- Swivable on both sides in any position.

Opening options
inside: Hinged and detachable brackets.

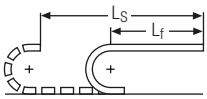


Technical data on p. 7

Unsupported arrangement



Unsupported length L_f



A sagging of the cable carrier is technically permitted for extended travel lengths, depending on the specific application.

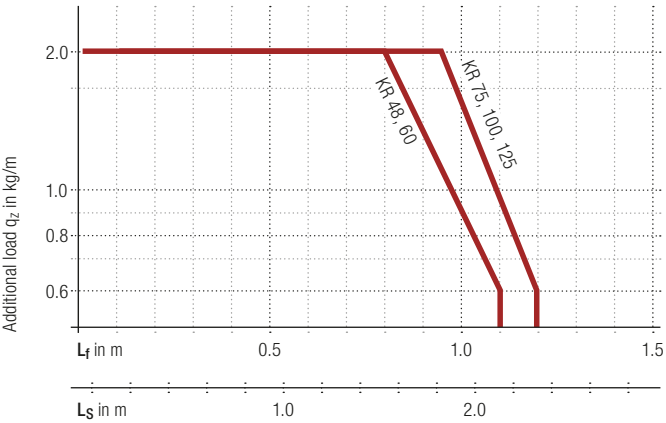
Dynamics of unsupported arrangement		t
v_{max} [m/s]	a_{max} [m/s²]	[mm]
5	20	35

Installation dimensions unsupported

KR [mm]	H [mm]	H_z [mm]	L_B [mm]	U_B [mm]
48	146	176	220	103
60	170	200	258	115
75	200	230	306	130
100	250	280	384	155
125	300	330	463	180

Load diagram

for unsupported length depending on additional load



Intrinsic cable carrier weight q_k = 0.2 kg/m with B_i 16 mm.
For other inner widths the maximum additional load changes.

Calculating the cable carrier length

Cable carrier length L_k

$$L_k \approx \frac{L_S}{2} + L_B$$

Cable carrier length L_k rounded to pitch t

Unsupported length L_f

$$L_f = \frac{L_S}{2} + t$$

Fixed point offset L_v:
For off-center fixed point connections please contact us.

TKP35
Inner heights 32
Inner widths 16 – 50
Key for abbreviations on page 18
Assembly instructions on kabelschlepp.de/assembly
Order key on page 16

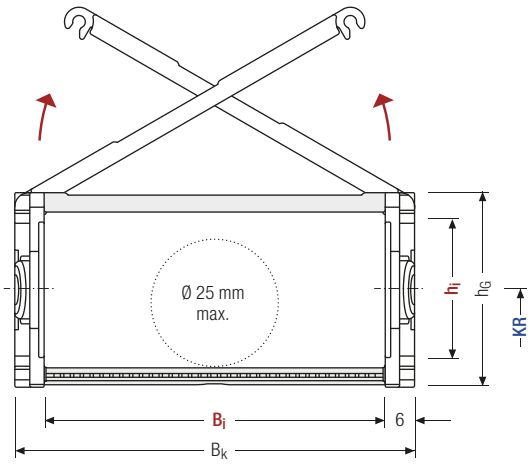
TKP35.030 | Overview

Stay variant 030 – with outside opening and detachable crossbars

- Weight-optimized plastic frame with particularly high torsional rigidity.
- Swivable on both sides in any position.
- **Opening options**
  outside: Hinged and detachable brackets.

Stay arrangement on every chain link **(VS)**

B_i from 16 – 50 mm



Calculating the cable carrier width

Outer width B_k

$B_k = B_i + 12$ mm

Outer width B_k (B_i 16)

$B_k = B_i + 10$ mm

The maximum cable diameter strongly depends on the bending radius and the desired cable type. Please contact us.

Information on the inner distribution of the cable carrier can be found on page 12 f.

TKP35.030 | Dimensions · Technical Data

Pitch, inner height and chain link height

t [mm]	h_i [mm]	h_G [mm]
35	32	40

Bend radii

KR [mm]				
48	60	75	100	125

Inner/outer width and intrinsic cable carrier weight

B_i [mm]	B_k [mm]	q_k [kg/m]
16	26	0.2
25	37	0.6
38	50	0.7
50	62	0.8

Order example

TKP35	.	030	.	50	.	100	-	700
Type		Stay variant		B_i [mm]		KR [mm]		L_K [mm]

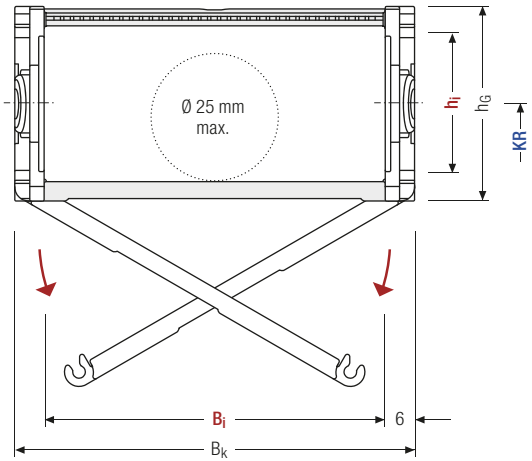
TKP35.040 | Overview

Stay variant 040 – with inside opening and detachable crossbars

- Weight-optimized plastic frame with particularly high torsional rigidity.
- Swivable on both sides in any position.
- **Opening options inside:** Hinged and detachable brackets.

Stay arrangement on every chain link **(VS)**

B_i from 25 – 50 mm



Calculating the cable carrier width

Outer width B_k

$B_k = B_i + 12$ mm

The maximum cable diameter strongly depends on the bending radius and the desired cable type. Please contact us.

Information on the inner distribution of the cable carrier can be found on page 12 f.

TKP35.040 | Dimensions · Technical Data

Pitch, inner height and chain link height

t [mm]	h_i [mm]	h_G [mm]
35	32	40

Bend radii

KR [mm]				
48	60	75	100	125

Inner/outer width and intrinsic cable carrier weight

B_i [mm]	B_k [mm]	q_k [kg/m]
25	37	0.6
38	50	0.7
50	62	0.8

Order example

TKP35	.	030	.	50	.	100	-	700
Type		Stay variant		B_i [mm]		KR [mm]		L_K [mm]

Inner heights
32
Inner widths
25 - 50
Key for abbreviations on page 18
Assembly instructions on kabelschlepp.de/assembly
Order key on page 16

TKP35 | Inner Distribution | TS0

Divider systems

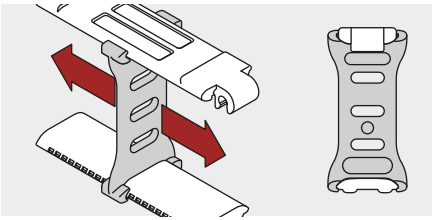
As standard, the divider system is assembled at each 2nd chain link.

As standard, dividers and the complete divider system (dividers with height separations) can be moved in the cross section **(version A).**

The dividers are easily attached to the stay for applications with transverse acceleration and for laterally recumbent applications by simply turning them. The locking cams click into place in the locking grids in the crossbars **(version B)**.

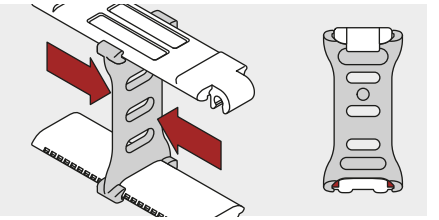
Movable divider

Version A (Standard)



Fixable divider (2 mm grid)

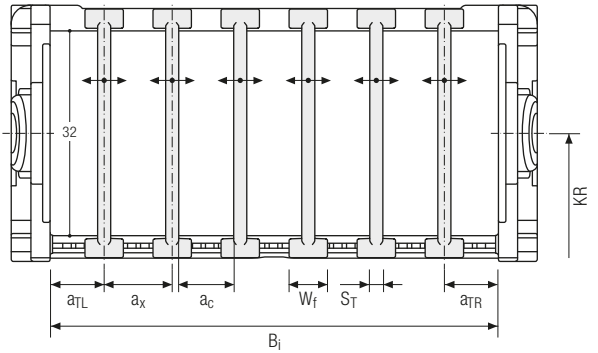
Version B

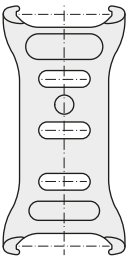


Divider system TS0 without height separation

		Version A			Version B			
S_T [mm]	W_f [mm]	$a_{TL}/a_{TR\ min}$ [mm]	$a_{x\ min}$ [mm]	$a_{c\ min}$ [mm]	$a_{TL}/a_{TR\ min}$ [mm]	$a_{x\ min}$ [mm]	$a_{c\ min}$ [mm]	$a_{x\ grid}$ [mm]
2	6	3	6	4	4.5* / 5	6	4	2

* Only B_i 25





Chamber width a_c

$a_c = a_x - S_T$

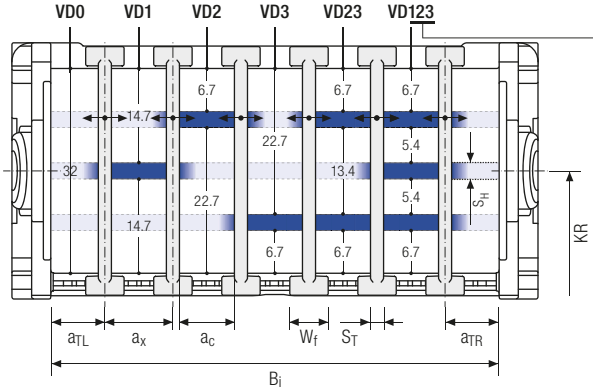
Information on the connection dimensions for the cable carrier can be found on page 14 f.

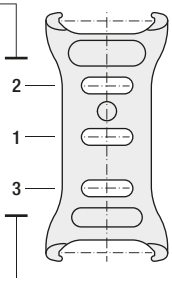
TKP35 | Inner Distribution | TS1

Divider system TS1 with continuous height separation

S_T [mm]	W_f [mm]	S_H [mm]	Version A: a_{TL}/a_{TR} min [mm]	Version A: a_{TL}/a_{TR} max [mm]	Version A: a_x min [mm]	Version B: a_{TL}/a_{TR} min [mm]	Version B: a_{TL}/a_{TR} max [mm]	Version B: a_x min [mm]	Version B: a_x grid [mm]
2	6	2.6	3	16* / 21	6	14.5* / 21	4.5* / 5	6	2

* Only B_i 25





Position of the partition(s) in the divider

Standard height separation with **aluminum profile 7.8 × 2.6 mm**. The dividers can be moved in the cross section.

Chamber width a_c

$a_c = a_x - S_T$

TRAXLINE® cables in motion

Hi-flex electric cables which were especially developed, optimized and tested for use in cable carriers can be found at **traxline.de**

More product information online

Assembly instructions etc.: Receive additional info via your smartphone or check online at **kabelschlepp.de/support**

Configure your custom cable carrier: **onlineengineer.de**

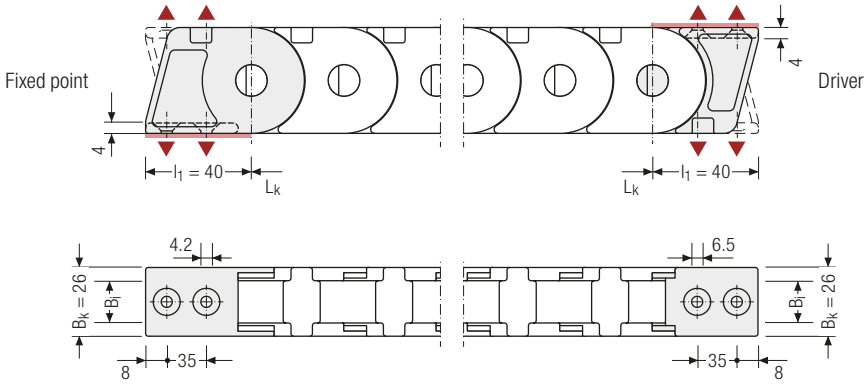
Information on the connection dimensions for the cable carrier can be found on page 14 f.

Inner heights 32
Inner widths 16 – 50
Key for abbreviations on page 18
Assembly instructions on kabelschlepp.de/assembly
Order key on page 16

TKP35 | End Connectors

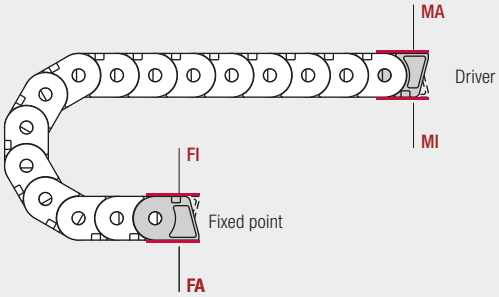
One part end connectors – plastic (suitable for B_i 16)

The plastic end connectors can be **connected from above or below**. The connection type can be changed by reconnecting the end connector.



▲ Assembly options

Connection variants



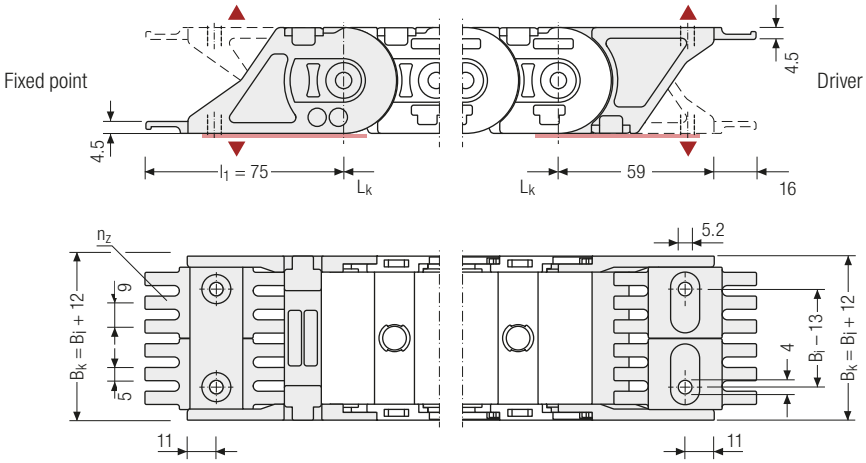
Connection point
F – fixed point
M – driver

Connection type
A – threaded joint outside (standard)
I – threaded joint inside

TKP35 | End Connectors

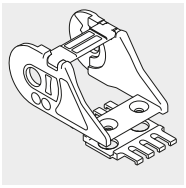
One part end connectors – plastic (suitable for B_i 25 – 50)

The plastic end connectors can be **connected from above or below**. The connection type can be changed by reconnecting the end connector.



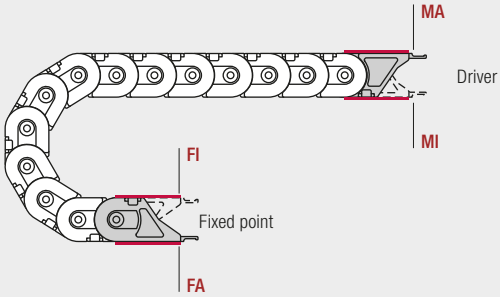
▲ Assembly options

B_i [mm]	B_k [mm]	n_z
25	37	3
38	50	4
50	62	6



The end connectors are also available as an option **without** strain relief comb.
Please state when ordering.

Connection variants



Connection point
F – fixed point
M – driver

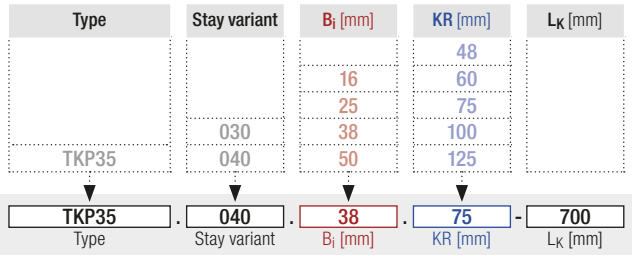
Connection type
A – threaded joint outside (standard)
I – threaded joint inside

Inner heights
32
Inner widths
16
50
Key for abbreviations on page 18
Assembly instructions on kabelschlepp.de/assembly
Order key on page 16

TKP35 | Order Key

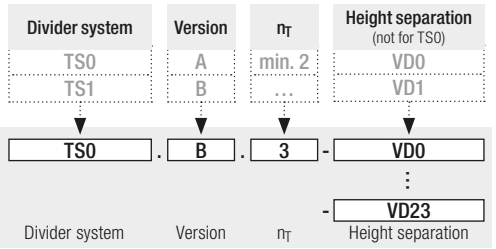
Order

Cable carrier



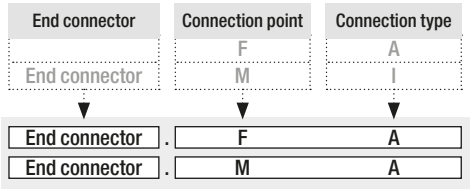
International order specification INTOK:
Information about the International Order Key can be found in the chapter "International Order Key" from page 1.

Divider system



Please state the designation of the divider system **(TS0, TS1)**, version and number of dividers per cross section [n_T].

Connection variant

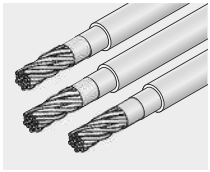


Please state the desired connection variant as well as the desired strain relief type for the fixed point and for the driver.

Accessories

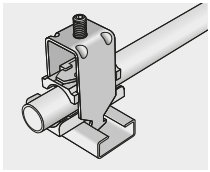
TRAXLINE® cables in motion

Hi-flex electric cables which were especially developed, optimized and tested for use in cable carriers.



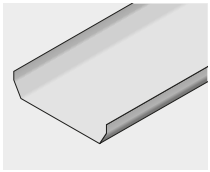
LineFix® clamps

LineFix® clamps are fixed to the C-rail. The serve as a separate strain relief or separate attachment of the cables outside the cable carrier.



Support trays

An even surface is required for safe unrolling of the cable carrier. This is ensured by a support tray.



TOTALTRAX® complete systems

Benefit from the advantages of a TOTALTRAX® complete system. Complete delivery from a single source – with a guarantee certificate on request! Learn more at **kabelschlepp.de/totaltrax**

More product information online

Assembly instructions etc.: Receive additional info via your smartphone or check online at **kabelschlepp.de/support**

Configure your custom cable carrier: **onlineengineer.de**

TKP35 | General abbreviations

General abbreviations

a_c = nominal width inner chamber
a_{max} = max. travel acceleration
a_{TL} = distance lateral tabs inside to center of first divider
a_{TR} = distance lateral tabs inside to center of last divider
a_x = divider center to center distance
b_1 = inner width of guide channel
b_A = distance between connection boreholes
B_{EF} = overall width of cable carrier incl. attachments
B_i = inner width
B_k = outer width
B_{KA} = outer width of guide channel
B_p = width of hole stay inserts
B_{St} = stay width
c = distance between hole stay bores
d = diameter
D = bore diameter
d_R = pipe diameter
H = connection height
H' = reduced connection height
h_G = chain link height
$h_{G'}$ = chain link height incl. glide shoe
h_i = inner height
H_i = inner height of frame stay assembly
h_{KA} = outer height of guide channel
HS = half-stayed
H_z = installation height
KR = bending radius
l_1 = connection length
l_{2-5} = connection dimensions
l_A = length of end connector
L_B = length of carrier in bend
L_D = length of permitted sag
L_f = unsupported length
L_{ES} = length of energy conduit
L_k = cable carrier length without connection
L_S = travel length
L_V = fixed point offset
n_p = number of hole stay inserts
n_{RKR} = number of RKR links
n_T = number of dividers
n_Z = number of comb teeth for strain relief
q_k = intrinsic cable carrier weight
q_z = additional load
RKR = reverse bending radius
s = sheet metal thickness
S_H = thickness of height separation
S_T = thickness of divider
t = pitch
U_B = loop overhang
VD = position of continuous height separations in divider
VR = position of partial height separations in divider
v_{max} = max. travel speed
VS = fully-stayed
W_f = base width of divider
z = pretension

Definitions

Driver view = view into the driver connection

Pictographs


inner height


inner width

inner width (B_i)
in x mm increments


pitch


bending radius


long travel length


travel length unsupported


travel length gliding


high additional load


high travel acceleration


high travel velocity


stay arrangement on
every 2nd chain link


stay arrangement on
every chain link


cannot be opened


opens outward


opens inward


opens inward/outward


covered cable carrier


sliding dividers


fixable dividers

fixable dividers
in x mm grid


height separation possible

height separation
in 1 mm increments


guide channel required


strain relief

clean room suitable


quiet running/low noise


sold by the meter


ESD material


suitable for explosive
atmospheres


heat-resistant


cold-resistant


resistant to hot chips

flame-resistant V0
(UL94)

flame-resistant V2
(UL94)


order code


important information