



**Professional online catalog with data  
merging and enrichment via PIM**

**Torsten Hansen**



Key Facts



Leopold Kostal **founds** the parent company LK in Lüdenschaid



LK designs and produces its first **parts** for the **automotive industry**



Beginning of business activities in the **first foreign subsidiary** (Mexico)



Transfer of the four **business divisions** into own entities

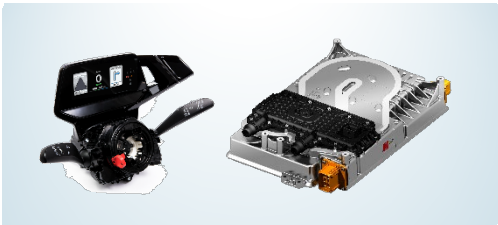
**2.774 bn EUR**  
Revenues

**18,457**  
Employees

**46**  
Sites

**20**  
Countries

Business Units



KOSTAL Automobil Elektrik



KOSTAL Connectors



KOSTAL Industrial Electronics

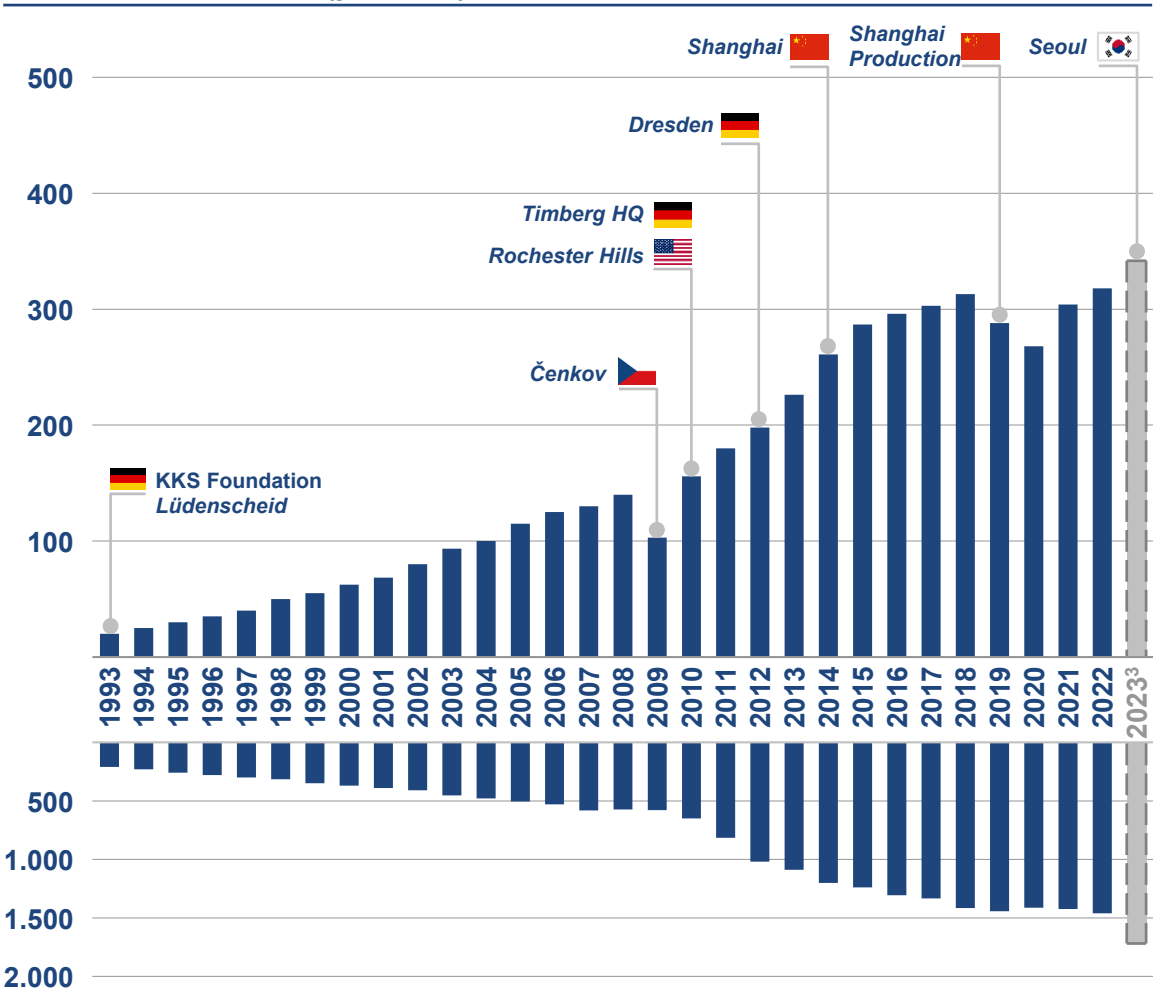


SOMA

Product portfolio



Turnover and headcount development  
in m EUR, 1993-2023 (planned), consolidated



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## OEM



## T1 / T2





## Goals:

- Efficient, user-friendly, central maintenance of products and product variants
- Assurance of data quality
- Automatic creation of information sheets and customer-specific catalogs



- **Import information from existing systems** (ERP, PDM, EXCEL lists)
- **Centralization of all product information in the PIM at item level**
  - Supplementation and optimization of characteristics
  - Maintenance of product relations
- **More efficient and central maintenance** in the PIM of:
  - Product data incl. product images, document links
  - Relationships between products / product families / references
  - Product hierarchy
- **Construction of an online catalog for customers**
  - User friendly web catalog
  - Extensive search functions
  - Catalogs tailored to customer needs



## Advantages of ANTEROS:

- **Standardization:** in the POC we were able to use a ready-made standard system
- **Very intuitive** to use
- **Flexible adaptability:** in terms of data structure, interfaces, layout of our web catalog, ...
- **Data model can be created and expanded by ourselves:** categories and especially data fields
- **Fully integrated modules:** Product database, media database, web catalog and print - all from one source
- Great search and comparison functions in the ANTEROS **web catalog**
- Best automatic **print generation on demand**

## Advantages of INCONY:

- Supplier and service provider at the same time, **highly competent** project staff
- INCONY has **experience** with many companies in technical industries



- **Market research**, ANTEROS by INCONY was identified as best software
- **Proof-of-Concept (POC)**: ANTEROS test project with our own data and without customizations
- **Decided** on productive project with ANTEROS and INCONY
- **Concept phase**: workshop, system specifications
- **Implementation phase 1:**
  - Import product data from the old web catalog: metadata, images, documents
  - Cleansing/improvement of the data
  - Go live with the new web catalog with selected products
- **Implementation phase 2:**
  - Further cleansing of the data
  - Make more products and more data on products available to the customer, e.g. 3D CAD data
  - Automatic print generation of information sheets
  - Exploded views with hotspots
  - Connection of the Active Directory via Single Sign On





- **Data transfer from old online catalog**

- **Unify data:**

- Before* : sometimes text, sometimes numbers  
different spellings, e.g. upper/lower case

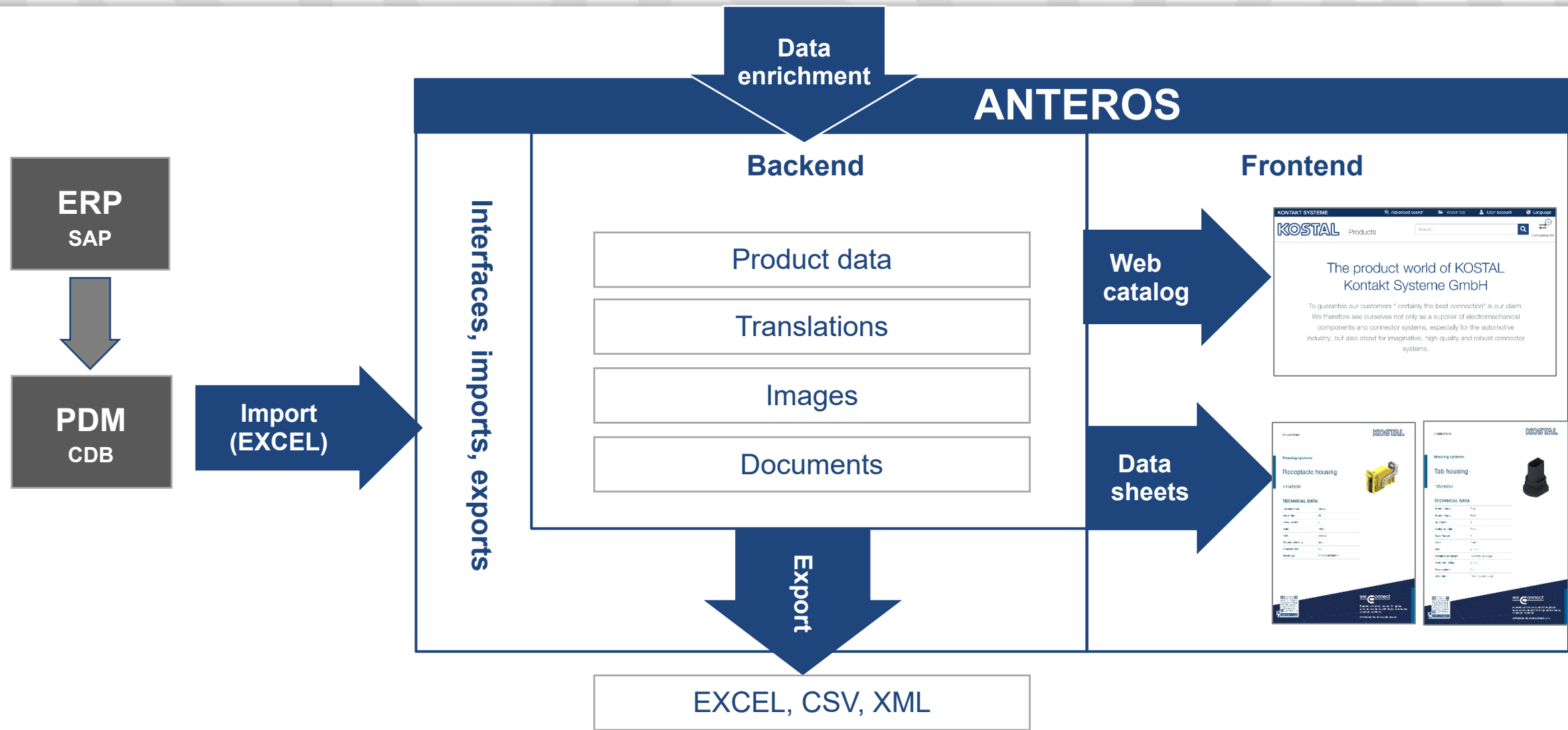
- After* : Uniform parameters and uniform parameter values

- This allows consistent **searches for products** via filters in the PIM and online catalog,  
e.g. *Sealability= sealed and/or wire size min. 12 mm<sup>2</sup>*



- **Data enrichment :**

- Define search tree for online catalog via categories and subcategories etc.
  - Define product families for grouping product variants, making maintenance of common data more efficient
  - Import 3D CAD data, 2D drawings and data sheets
  - Reprocess images, upload to PIM, assign to product (families)





Efficient data maintenance with product families: maintain categories and shared images etc. just once for all product families



ANTEROS  
technologieführende Software  
für PIM, MAM und Crossmedia

Home

Data Management

Print

Web

Import-Export

Admin

Communication

Help

Ticketsystem

Data Management / Product data: 2 lists+editor

KOSTAL

Connectors for HV

x




x

Simple

Advanced

Amount: 8

3

Photo	Code	Number of pr...	Name
	HV_Steckerleiste_KT 22	0	
	HV_SHG_PLK 14,5	72	
	HV_SG_KT 22	19	KT 22 / KS 22

Simple

Advanced

Data

History

Export

Folder

Maintenance

Print

English

General

Web

Categories

Parameter values

Relations

Media

Publications

Translations

Changes

Print

KOSTAL [1]

Web pages [0]

websites [0]

Terminal systems

Housing systems

Connectors for HV applications

Receptacles

Tab headers


Tab housing

Receptacle Housing

Connectors for PCB applications

Transmission Connector Systems

Fiber Optics and FFC/FPC



Product family "HV\_SHG\_PLK 14,5"

Code HV\_SHG\_PLK 14,5

KOSTAL user report on the PIM project with ANTEROS and INCONY

Slide 10

CONNECTORS

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Home Data Management Print Web Import-Export Admin Communication Help Ticketsystem

Data Management / Product data: 2 lists+editor

KOSTAL Connectors for H

Simple Advanced



Amount: 8

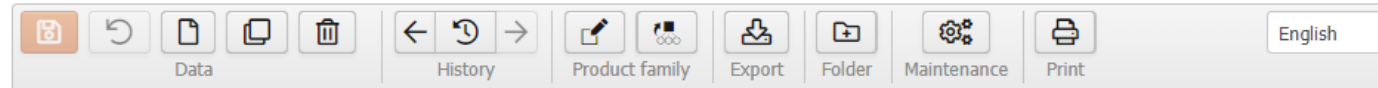
Photo	Code	Number of pr...	Name
	HV_SHG_PLK 14,5	72	
	HV_SG_KT 22	19	KT 22 / KS 22
	HV_SHG_KT 22	10	KT 22 / KS 22

Simple Advanced



Amount: 72

Actions	Photo	Code	Name
		10004101	Receptacle housing
		10007504	Receptacle housing
		10015087	Receptacle housing



General Web Categories Parameter values Relations Media Publications Translations Changes

Receptacle Housing Extra parameters

Terminal family	PLK 14,5
No. of pins	2 - 2
Code / Variant	Ohne/Without
Current carrying capability at 80°...	
Angle [°]	90
Shielding	
Class	3
Connection technology	Crimping
Wire size min [mm²]	
Wire size max [mm²]	
Sealability	Sealed
Sealing principle	Single wire seal (SWS)

## Product data maintenance

- value lists for parameters prevent incorrect entries and allow for search filters in the online catalog
- we can create+expand new parameter definitions and value lists ourselves





KOSTAL [dropdown] [dropdown] [X]

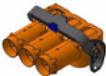
☒ Simple ☐ Advanced

10019158 [search] [refresh]

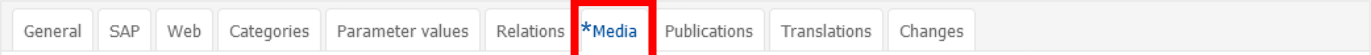
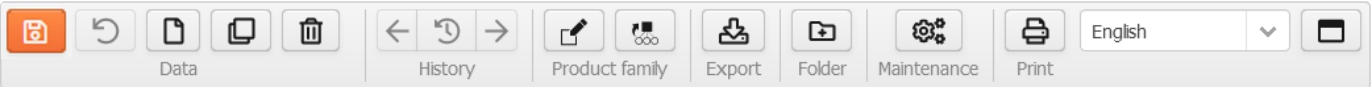


Amount: 5 [refresh] 10 [dropdown]

Photo	Photo of Related product family	Code	Name
		10019158	Receptacle housing
		10019158_12,0-16	Receptacle housing
		10019158_16	Receptacle housing
		10019158_25	Receptacle housing
		10019158_35	Receptacle housing



Product "Receptacle housing (code: 10019158\_12,0-16)"  
Code 10019158\_12,0-16



**\*Image [2]** Document [1] Video [0]

New media object: [upload icon] [dropdown]  
Usage type filter: [dropdown] ☐ Show media objects in current language only

**10019158.JPG**  
10.224 x 8.424 cm  
Photo [dropdown]  
Width in print [cm]  
Height in print [cm]  
Languages [dropdown]

**CTLG10019158.tif**  
41.999 x 29.699 cm  
Drawing [dropdown]  
Width in print [cm]  
Height in print [cm]  
Languages [dropdown]

Upload pictures, drawings and documents to the products  
➔ automatically converted to web formats by ANTEROS

# ANTEROS PIM in Action: Exploded Views with Hotspots

Set hotspots in exploded views and link them to products

**incony** **ANTEROS** Software

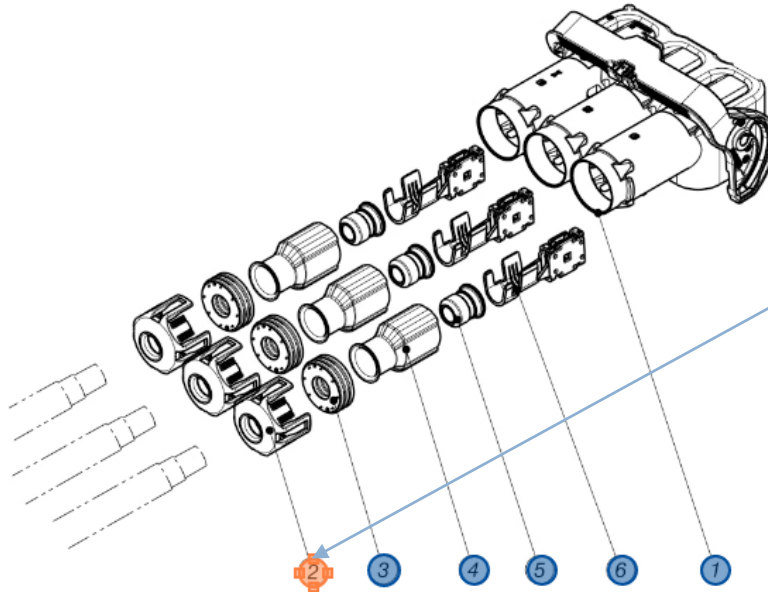
Home Data Management Quality Print Web Import-Export Admin Communication Help

Edit image map

Image Map "IM\_ETzeichnung\_10019158.jpg"

Data Designer English

General Designer



**Areas**

Type	Name
x	ar_Q1XSNHV51X0K1
x	ar_H0KYO6B3LSUDP
x	ar_QKTDQRA39R6Y4
x	ar_3MKGQPJ22X4E6
x	ar_8EDDXYXD703MA


**Product relation**

PR

New relation:

10520290  
Retaining cap  
ar\_Q1XSNHV51X0K1

CommunicationHelpTicketsystem



Product family "HV\_SHG\_PLK 14,5"


Code HV\_SHG\_PLK 14,5

SaveUndoNewCopyDeleteHistoryNavigationExport

FolderMaintenancePrint


GeneralWebCategoriesParameter valuesRelationsMediaPublications

Web\_intern



Web

webkat\_extern




Web

incony

ANTEROS  
technologieführende Software  
für PIM, MAM und Crossmedia

HomeData ManagementPrintWebImport-ExportAdminCommunicationHelpTicketsystem

Data ManagementPublications



Amount: 210

Code	Name
Web_intern	
webkat_extern	

publication "webkat\_extern"

SaveUndoNewCopyDeleteHistoryNavigationExport

GeneralMedia\*Publication treeChanges









\*KOSTALWeb pageswebsites

Expand all categories

Collapse all categories

Keep sub assignments

Override sub assignments

Web	
	▶ Category "Terminal systems (code: K)"
	▼ Category "Housing systems (code: S)"
	▶ Category "Receptacle housing (code: 1544110976575)"
	▶ Category "Tab housing (code: 1544111025264)"
	▶ Category "Socket housings (code: 1544110360772)"
	▶ Category "Pin housings (code: 1544111096932)"
	▶ Category "Receptacle headers (code: 1544111187882)"
	▶ Category "Tab headers (code: 1544111157040)"

Publications for internal  
and external web  
catalog

KOSTAL user report on the PIM project with ANTEROS and INCONY

Slide 14

CONNECTORS

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copy

☐ Simple ☒ Advanced

> General

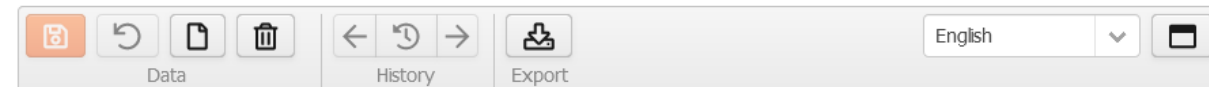
> User data



Amount: 1,785

Name	E-mail	Organization	User status	Creation date	
LIU	cmpp3@chengm	程茂电子 (天	Inactive	Jun 15, 2022 8:18:32 AM	
krystal	krystal.liu@tj-shu	Tianjin Shunj	Active	Jun 15, 2022 8:37:27 AM	
liu xiaowei	xiaowei.liu@tj-shu	tianjin shunjie	Active	Jun 15, 2022 8:52:02 AM	
grace	grace@tj-shunjie	shunjie	Active	Jun 15, 2022 8:56:17 AM	
Eichinger	thomas.eichinger	MAHLE Filters	Active	Jun 15, 2022 10:49:11 AM	
七	1324032431@q	芜湖天海电	Inactive	Jun 15, 2022 10:50:23 AM	
Dietze	je.dietze@kostal	KOSTAL Kont	Active	Jun 15, 2022 2:35:54 PM	
Drouin	purchases@inger	Technologies	Active	Jun 15, 2022 5:26:48 PM	
Karl Frode Ring	karlfrode@brudel	Brudeli Green	Active	Jun 16, 2022 10:08:05 AM	
Eelke	e.ronner@mecs	MECS B.V.	Active	Jun 16, 2022 1:24:29 PM	

User profile "July7937"



General Contact data Delivery address Invoice address Categories Changes

Delivery address



Title

Mr

Academic title

柒月

First name

月

Name

七

Company

芜湖天海电装有限公司

Address addition

User administration for the online catalog with contact data, billing and shipping address, rights restriction possible



CONNECTORS

KOSTAL

Housing systems

Receptacle housing

10343930



TECHNICAL DATA

Terminal family	MQ 0,6
No. of pins	28
Code / Variant	B
Color	Yellow
CPA	pushing
Secondary locking	active
Preassembled	No
Drawing(s)	CTLG10400758320.tif



we connect

Experience how we connect the global automotive industry with high performance connector systems.

www.kostal-kontakt-systeme.com

CONNECTORS

KOSTAL

Housing systems

Tab housing

10519650



TECHNICAL DATA

Terminal family	RK 4
Terminal family	RK 4
No. of pins	2
Sealing principle	Radial
Code / Variant	A
Color	Black
CPA	without
Matching counterpart	*10519919 / 10518822
Secondary locking	without
Preassembled	No
Drawing(s)	12083831-1-0003A.pdf



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Information sheets can be generated fully automatically

- with PIM data
- in the KOSTAL design
- without Design software

KONTAKT SYSTEME

KOSTAL

Products

Advanced search

Watch list

User account

Language

Search...

Comparison list

# The product world of KOSTAL Kontakt Systeme GmbH

To guarantee our customers " certainly the best connection" is our claim. We therefore see ourselves not only as a supplier of electromechanical components and connector systems, especially for the automotive industry, but also stand for imaginative, high-quality and robust connector systems.

Customer approach and main categories on the home page



Terminal systems [21]



Housing systems [296]



HV Connectors [89]



Transmission Connector Systems [23]



Company Customers Innovations Product World Career

Without doubt the best connection:  
KOSTAL Kontakt Systeme GmbH

KOSTAL Kontakt Systeme GmbH is a company belonging to the KOSTAL Group, which engages in designing, manufacturing and sales of plug connectors systems for the automotive industry.

Contact Systems Plug Connector Systems Rugged Plug Connectors Electromobility Miniaturization



Electromobility

KOSTAL Kontakt Systeme GmbH is a leading supplier of innovative plug connector systems for electromobility applications, including electric vehicles, hybrid vehicles and 48 V applications.

View Connectors for HV applications

Seamlessly integrated into KOSTAL website, category-specific

KONTAKT SYSTEME

KOSTAL

Products

Advanced search Watch list User account Language

Search... Comparison list

Connectors for HV applications

Filter

Sealability

Shielding

Wire size min in mm<sup>2</sup>

Terminal family

Counterpart available

Sealing principle

Angle in °

No. of pins

Availability

Wire size max in mm<sup>2</sup>

Connection technology

Code / Variant

Current carrying capability at 80° i...

Class

Connectors for HV applications

High Voltage - Sure!

Based on existing vehicle-compatible, terminals, KOSTAL offers standardized connector systems. For High voltage applications.

The KOSTAL - solution is characterized by it's handling security. EMC - requirements are taken into account as well as all other application related requirements.

89 products in category

Tab headers [54]

Tab housing [22]

Receptacle Housings [13]

## Connectors for HV applications

### Filter



#### Sealability

☒ Sealed

#### Wire size min [mm²]

☐ 0

☒ 12

☐ 25

☐ 70

#### Counterpart available

#### Sealing principle

#### No. of pins

#### Availability

#### Connection technology

#### Code / Variant

## Connectors for HV applications



Data export



Print generation

### High Voltage - Sure!

Based on existing vehicle-compatible, terminals, KOSTAL offers standardized connector systems. For High voltage applications.

The KOSTAL - solution is characterized by it's handling security. EMC - requirements are taken into account as well as all other application related requirements.

32 out of 89 products in category

Reset: **All** Sealability: **Sealed** Wire size min [mm²]: **12**



Tab headers [30]

Tab housing [2]

### Search via

- Keywords
- Product categories
- Parameters/Filters

Filter specifications reduce products and other filters



Connectors for HV applications » Tab headers » PLK 14,5

Filter



PLK 14,5

Data export Print generation

Sealability

Sealed

Reset: All Sealability: Sealed

1 - 6 (54)

1 2 3

Number: 6

Wire size min [mm²]

Terminal family

Counterpart available

Sealing principle

No. of pins

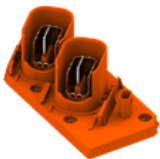
Availability

Wire size max [mm²]

Connection technology

Code / Variant

Product Terminal family No. of pins Code / Variant Connection technology Counterpart available Availability



Tab header 10010499

PLK 14,5

2

Ohne/Without

Soldering / Welding

Yes

On request

Comparison list

Watch list



Tab header 10019506

PLK 14,5

2

Z

Screwing

Yes

On request

Comparison list

Watch list



Tab header 10019863

PLK 14,5

2

Ohne/Without

Overview of important product information (public)

Comparison list

Watch list

KONTAKT SYSTEME

Advanced searchWatch listUser accountLanguage


KOSTAL

Products

Search...

Comparison list

Housing systems » Receptacle housing » MK 0,5 » Receptacle housing MK 0,5 / 2-row



Receptacle housing MK 0,5 / 2-row

Article number: 10337275





Information Sheet

Add product to comparison list

Add product to watch list

Share

FeaturesDescriptionVariantsDocuments

Document type	Last name	Preview	
Packaging data	10337275-10-0000A.CATPart		<a href="#">Download</a>
Specifications	DOC01485097_MK_0_5.pdf		<a href="#">Download</a>
STP	10337275-10-0000A.stp		<a href="#">Download</a>
Data Sheet	12099057-1-0003A.pdf		<a href="#">Download</a>

Product information for customers/partners (requires registration)

KONTAKT SYSTEME

KOSTAL

Produkte

Erweiterte Suche

Sammelmappe

Benutzerkonto

Sprache

Suche...

Produktvergleich

Steckverbinder für Hochvolt-Anwendungen - Steckerteile - PLK 14,5 - Steckerteile

Receptacle housing

Artikelnummer: 10010499

Informationsblatt

Add product to comparison list

Add product to watch list

Exploded drawings

Share

Kenndaten

Varianten

Zeichnungen

KONTAKT SYSTEME

KOSTAL

Produkte

Erweiterte Suche

Sammelmappe

Benutzerkonto

Sprache

Suche...

Produktvergleich


Steckverbinder für Hochvolt-Anwendungen - Steckerteile - PLK 14,5

Receptacle housing

Article number: 10019158

Produkt

Price



Retaining cap


3x 12031415

Price on application

3

Comparison list

Watch list



Clamp sleeve

3x 12085769

Price on application

3

Comparison list

Watch list



Single wire seal

3x 168429108

709,35 €

3

Comparison list

Watch list

Exploded view:  
Parts can be directly  
clicked on via hotspots

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Housing systems » Receptacle housing » MK 0,5 » Receptacle housing MK 0,5 / 2-row



Receptacle housing MK 0,5 / 2-row

Article number: 10337275

[Information Sheet](#)

- [Add product to comparison list](#)
- [Add product to watch list](#)
- [Share](#)

Features	Description	Variants	Documents
Document type	Last name	Preview	
Packaging data	10337275-10-0000A.CATPart		
Specifications	DOC01485097_MK_0_5.pdf		
STP	10337275-10-0000A.stp		
Data Sheet	12099057-1-0003A.pdf		

KOSTAL

CONNECTORS

Housing systems

Receptacle housing MK 0,5 / 2-row

10337275

TECHNICAL DATA

Terminal family	MK 0,5
No. of pins	20
Sealing principle	Unsealed
Code / Variant	A
Color	Black
CPA	with
Matching counterpart	10447563
Preassembled	No
Document(s)	10337275-10-0000A.CATPart DOC01485097_MK_0_5.pdf 10337275-10-0000A.stp

VIEW OUR CATALOG

we connect

Experience how we connect the global automotive industry with high performance connector systems.

www.kostal-kontakt-systeme.com

Information sheet:  
generated on-demand  
with the ANTEROS print  
engine

## Watch list



**Receptacle housing**  
10343930



**Socket housing**  
10098911



**Tab housing**  
10519650

### Watch list:

- as a wish list
- for information sheets for several products (customer catalog on-demand)
- list fully available for comparison



Connectors for HV applications » Tab housing » PLK 14,5 » Tab housing

# Comparison list

Product comparison:  
Parameters with  
different values are  
highlighted in color

Product			
	Tab header 48 V 2-way PLK 14,5 (straight tabs)	Tab housing 48V 90°	Tab housing
Article number	10508214	10509981	10022948
Picture			
Terminal family	PLK 14,5	PLK 14,5	PLK 14,5
No. of pins	2	2	2
Code / Variant	A	A	A
Current carrying capability at 80° [A]	214		
Angle [°]			180
Connection technology	Screwing	Screwing	Screwing
Wire size min [mm²]	12	12	
Wire size max [mm²]	50	50	
Sealability	Sealed	Sealed	Sealed

**ANTEROS offers fully integrated PIM, print automation and professional web catalogs**

### **Efficient data maintenance in the PIM:**

- Existing data regularly transferred from SAP and PDM
- Custom data models with categories and parameters (data fields) can be created by us and extended any time
- Simple, efficient input possible via inheritance, product families and value lists
- Images are automatically converted into various web formats

**Information sheets and customer catalogs at the touch of a button: according to our CI, with data from PIM**

### **Professional online catalog:**

- Online catalog seamlessly integrated into the KOSTAL website
- In our CI, with data from PIM
- Good search functions, product comparison, page recommendation, exploded view with hotspots,...



we **E**onnect



Dresden  
Lüdenscheid  
Čenkov  
Detroit  
Seoul  
Shanghai

**We enjoy working with ANTEROS!**