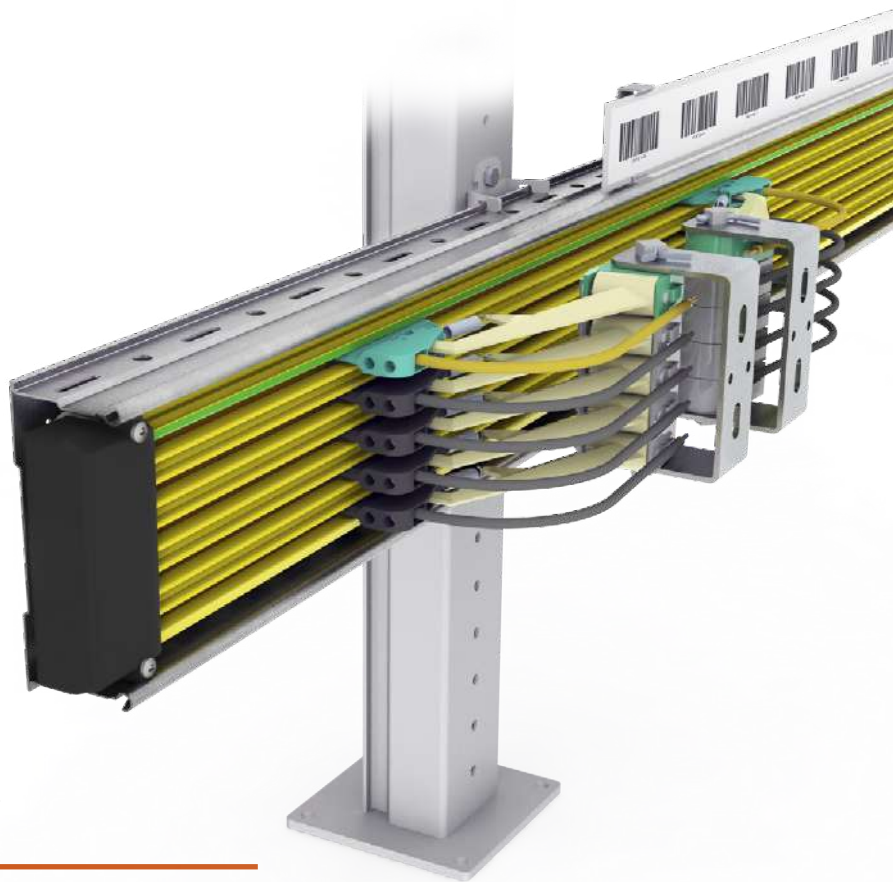


ProShell Support Profile for AS/RS and Transfer Cars

An Option for Conductix-Wampfler Conductor Rail Systems



CONDUCTIX
wampfler

Ⓞ DELACHAUX GROUP

Table of Contents

System Description	4
System Advantages	5
Technical Data	6
Modular Concept	6
Basic Modules	7
ProShell Basic Module 0812.....	7
ProShell Basic Module 0831.....	7
Strain Relief	8
Extension Modules	8
Profile Fasteners	9
Customized Fasteners	9
Slotted Floor Uprights	10
Rail Brackets	10
Tool Set	11
Positioning System	12
Barcode Placement	13
Current Collectors	14
Current Collector 0812.....	14
Current Collector 0831.....	15
System Diagrams	16
System Diagram – ProShell with Conductor Rail System 0812	16
System Diagram – ProShell with Conductor Rail System 0831	17
System Installation Plans	18
System Installation Plan – ProShell with Conductor Rail System 0812	18
System Installation Plan – ProShell with Conductor Rail System 0831	19
ProShell – FAQ	20
Conductor Rail Program Summary	22

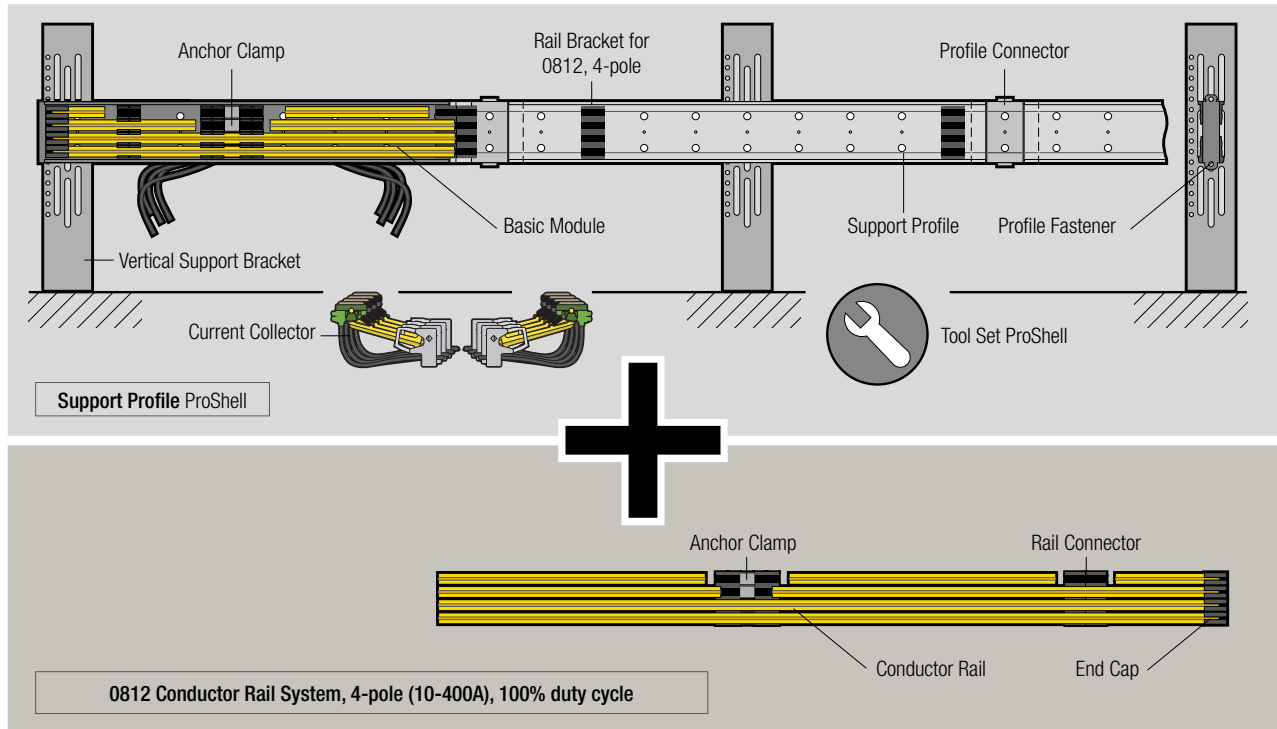
ProShell Support Profile

System Description

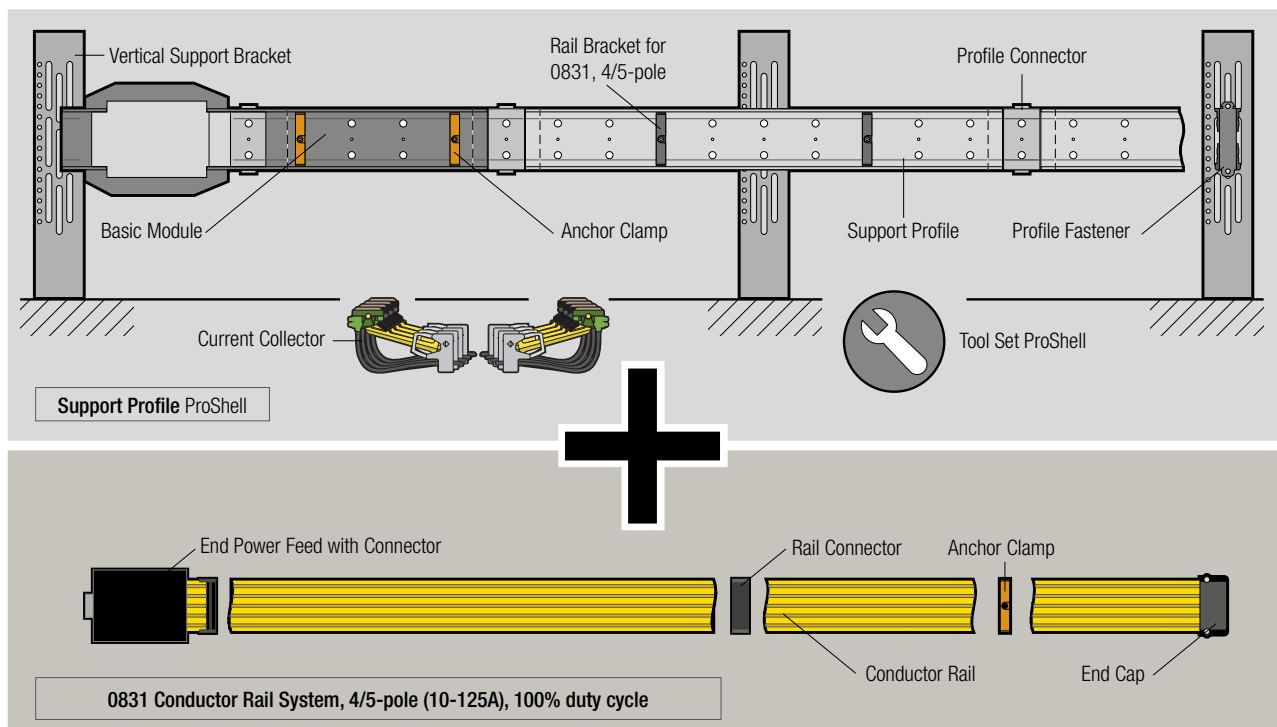
The ProShell Support Profile has been designed as a substructure for Conductor Rail Systems 0812 and 0831 – to supply automated storage and retrieval systems, transfer cars, and similar applications with electrical power.

ProShell is a modular, quick-assembly system that allows fast and secure integration of the conductor rails into the AS/RS. It includes components to easily connect the rail system to the shelf uprights or floor mounting brackets. The system consists of support profiles, profile connectors, profile fasteners, and clip-on rail brackets to accommodate the conductor rails, as well as optional slotted floor uprights.

ProShell with Conductor Rail System 0812



ProShell with Conductor Rail System 0831



ProShell Support Profile

The Clever Mounting Solution

The support profile system protects the conductor rails and permits easy integration into warehouse and logistics applications with preferably straight track layouts. For the planner, this means a standardized, flexible interface and installation space for various numbers of poles and amperages. Elaborate installation plans are a thing of the past due to variable positioning of the connecting points (quick system fastening) on present shelves, or the optionally available single-hole system consoles. ProShell is synonymous with robust, sophisticated mounting of conductor rails, as well as economical planning and installation.

System Advantages

- Straight forward handling
- Fast, economical, and easy installation
- Adjustable to the conditions on location
- Supporting structure and protection for Conductix-Wampfler conductor rails
- One system for all capacity ranges 4 or 5-pole up to 400 A (100% duty cycle)
- Suitable for higher capacities when using energy recovery
- Rounded edges and an optimized assembly load help to prevent injuries
- Easy handling of 4 m component lengths (can be assembled by one person and no excess lengths)
- Variable positioning of the connecting points throughout the system
- Accommodates various standard conductor rail types
- Long support distances (up to 3.2 m)
- Highly flexible and expandable
- Compact modules to accommodate various Conductix-Wampfler conductor rails up to 400 A rated current
- Customized profile fasteners for installation on shelves available by request
- Ready for electrical bonding
- Additional functions are easily integrated, e.g. position detection, data transmission and position markings
- Large cross-sections are energy efficient (aluminum or copper)



ProShell Support Profile

Technical Data

Material:	Roll-formed galvanized steel profile with rounded edges and high torsional stiffness
Installation dimensions:	Height: 123 mm, depth: 183 mm (including 0831 Current Collector in compact design) Height: 123 mm, depth: 212 mm (including 0812 Current Collector in compact design)
Rated suspension spacing:	3200 mm
Connection to shelves:	By means of screwed-on profile fasteners (customized clip-on or clamping solutions available)
Conductor rails:	Designed to accommodate 0831 and/or 0812 conductor rail styles (rated current: 10 to 400 A)
Options:	Integrated positioning system and/or leaky cable system for data transmission

Modular Concept

The support profile is provided in convenient modules consisting of a basic module with a power feed for 0812 or 0831 conductor bar systems and extension modules. Also includes track sections and accessories to interface with the customer's structure to include profile fasteners, slotted floor uprights, as well as accessories for positioning, switching marks, etc.

Example bill of materials for a 89 m lane, 3.2 m shelf upright distance, and shelf length of 84 m.

Position	Quantity	Order No.	Designation	Comment
10	1	08-E015-05XX	Basic module	Variant depending on conductor rail type/number of poles (basic modules: see page 7)
20	2	080043-4311-4-1-C8	Extension module 32 m	8 profiles each at 4 m incl. profile connectors
30	3	080043-4311-4-1-C2	Extension module 8 m	2 profiles each at 4 m incl. profile connectors
40	6	080043-11x11x0XXX	Slotted floor uprights	Pack of 5 pcs. for area in front of shelf (height of consoles "H": see page 10)
50	6	080043-4311-11	Profile fasteners	Pack of 5 pcs.
60	5	08-S280-06xx	Rail clamps	Pack of 20 pcs., according to conductor rail type
70 ff.				Conductor rail components from programs 0812 or 0831



ProShell Support Profile

Basic Module for 0812 Conductor Rail

Basic modules contain power feed connectors, anchor clamps for the support profile, cut-to-length material, a small parts package that includes selected spare small parts and the installation guide. Different designs are used depending on the conductor rails used and the number of poles.

- Parts included with a 2 m module:
- Basic framework for power feed
- One 1 m long ProShell support profile and 2 profile connectors
- 2 ProShell anchor clamps
- Strain relief
- Conductor rail and power feed
- Connecting cable, 2 m, 2 x 50 mm²
- 4 anchor clamps for conductor rails
- 8 end caps for conductor rails
- 4 rail connectors
- 4 rail brackets



Order No.	Description	Weight [kg]
08-E015-0526 *	Basic 0812 module, 4-pole 320A aluminum rail	17.8
08-E015-0530	Basic 0812 module, 4-pole 400A copper rail	22.8

* Standard range

Basic Module for 0831 Conductor Rail

Basic modules contain power feed connectors, anchor clamps for the support profile, cut-to-length material, a small parts package that includes selected spare small parts and the installation guide. Different designs are used depending on the conductor rails used and the number of poles.

- Parts included with a 1.5 m module:
- Basic framework for power feed
- One 1 m long ProShell support profile and 1 profile connector
- 2 ProShell anchor clamps
- 2 anchor clamps for conductor rails
- 2 end caps for conductor rails



Order No.	Description	Weight [kg]
08-E015-0528 *	Basic 0831 module, 4-pole	4
08-E015-0529 *	Basic 0831 module, 5-pole	4

* Standard range

ProShell Support Profile

Strain Relief for Type 0831 Power Feed

For power feeds type 083154 up to 35 mm².



Order No.	Description	Weight [kg]
08-Z008-0001	Strain relief for 0831 ProShell, 4- and 5-pole	0.2

Extension Modules

Extension modules contain the number of 4 m long support profiles indicated and include necessary connectors. Available in three different packaging sizes.



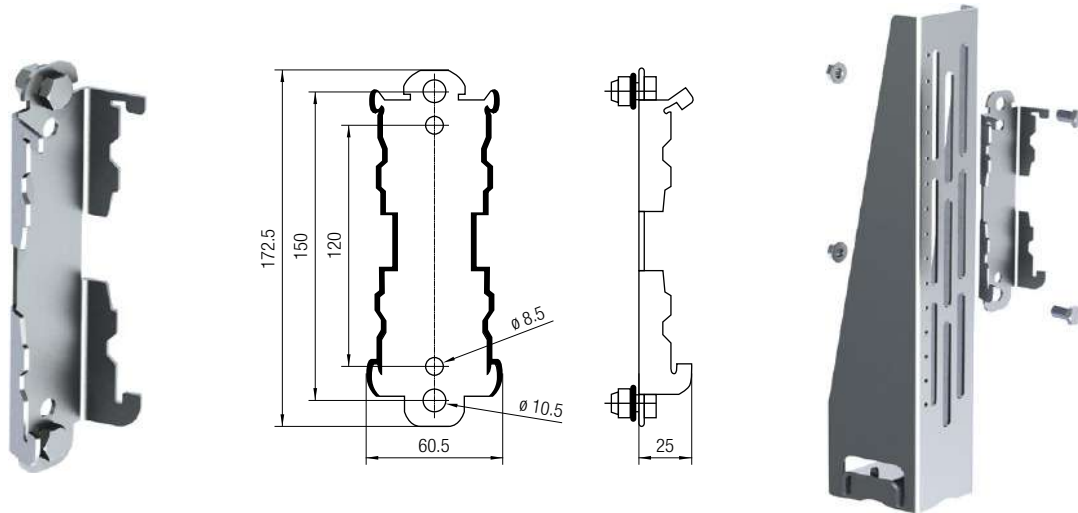
Order No.	Description	Number of profiles	Weight [kg]
080043-4311-4-1-C64	Extension module 256 m incl. profile connectors	64	528
080043-4311-4-1-C8 *	Extension module 32 m incl. profile connectors	8	66
080043-4311-4-1-C2 *	Extension module 8 m incl. profile connectors	2	16.5
080043-4311-1-1-C2	Profile section 2 x 1 m incl. profile connector	2	3.9

* Standard range

ProShell Support Profile

Profile Fastener

Profile fasteners are used to mount the support profiles on shelf uprights or slotted floor uprights. After the fastener is screwed to the upright/vertical support bracket, the horizontal support profile is clipped on, and the fastener closed with the latching tool.



Order No.	Description	Weight [kg]
080043-4314-11C5 *	Profile fasteners package, 5 pcs. with screws (mounting to uprights/slotted floor uprights)	0.8

* Standard range

Customized Fasteners

Profile fasteners interfacing with the customer's structure can be customized, to fit the shelves' hole pattern or as a clip-on solution.

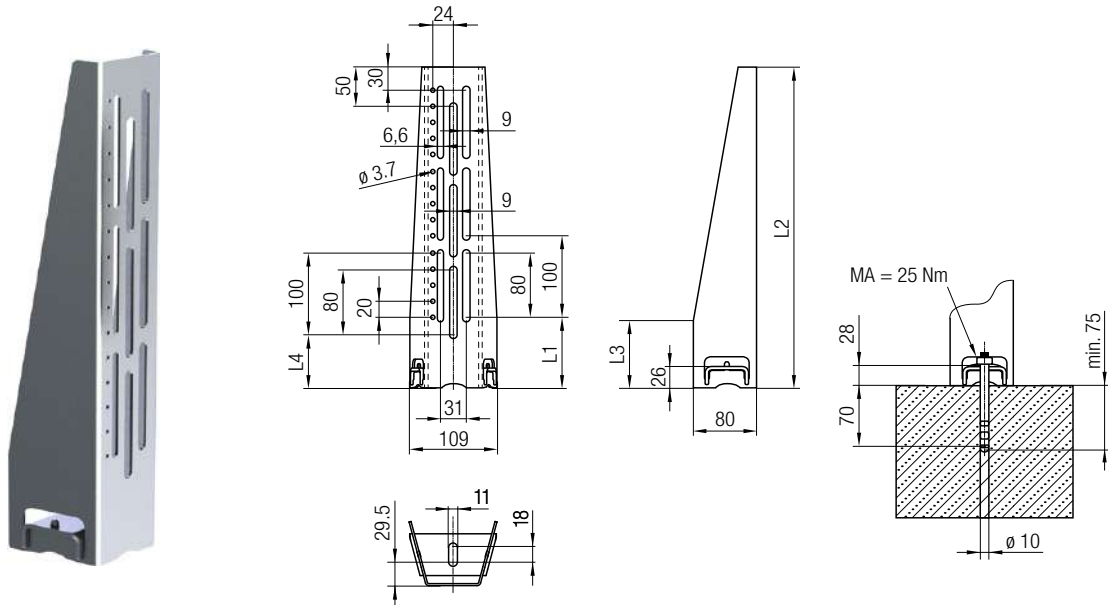
Customized fasteners are available with a minimum order of 200 units. With your request, please include a drawing of existing structures, installation space, and the desired order quantity.



ProShell Support Profile

Slotted Floor Uprights

Floor uprights with universal hole pattern and single-hole installation. Provided with heavy-duty dowel HSA M10x113 50/40/10 and washer. Suitable for uncracked concrete floors only. For common concrete grades: min. C20/25 up to max. C50/60.

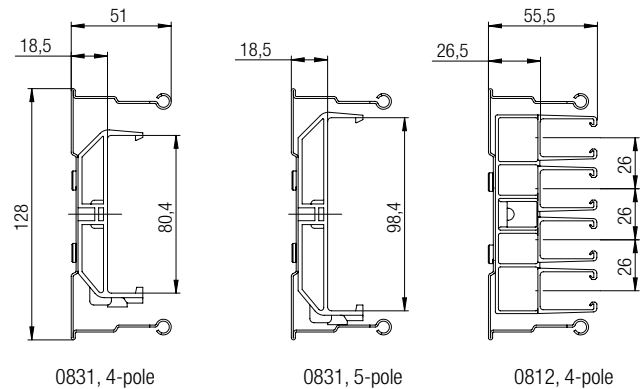


Order No.	Description	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	Packaging size [Pcs.]	Weight [kg]
080043-11x11x0300	Bracket H = 300	90	300	80	70	5	5.5
080043-11x11x0400 *	Bracket H = 400	90	400	80	70		7.5
080043-11x11x0500 *	Bracket H = 500	90	500	80	70		9.5
080043-11x11x0600	Bracket H = 600	190	600	180	170		11
080043-11x11x0700	Bracket H = 700	290	700	280	270		12

* Standard range

Rail Brackets

Rail brackets connect the support profile with the conductor rail system and can be installed without tools (installation with screws optional).



Order No.	Description	Number of Poles	Rated spacing [m]	Packaging size [Pcs.]	Weight [kg]
08-S280-0651 *	Rail bracket für 0831	4	1	20	0.3
08-S280-0652 *	Rail bracket für 0831	5			0.4
08-S280-0656 *	Rail bracket für 0812	4			0.8

* Standard range

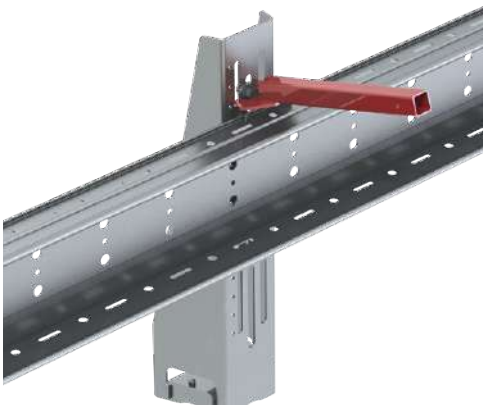
ProShell Support Profile

Tool Set

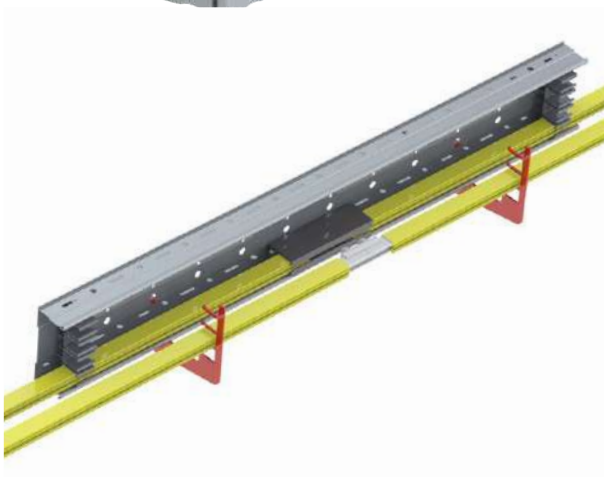
In addition to standard tools, this tool set is necessary for locking the profile fasteners and connecting the support profiles.



Connecting support profiles



Locking profile fasteners



Support bracket hinged to support profile,
to position conductor rails during installation



Order No.	Description	Contents	Weight [kg]
08-W100-0592 *	ProShell Tool Set	Assembly tool for profile connectors Locking tool for profile fasteners Set of 5 Support brackets to position conductor rails	2.6

* Standard range

ProShell Support Profile

Positioning System

The positioning module permits fast and flexible integration of the LEUZE barcode tape for positioning with barcode readers BPS 34 and 37. The barcode tape is affixed to a stainless steel strip at our factory according to customer specifications. It is securely fastened to the ProShell system with clip-on holders and two clamping elements. The barcode tape is 50 mm wide and can be fastened above or below the support profiles.

The module is configured according to the customer's order and contains all parts needed for attachment to the support profile. Bonding of the barcode tape occurs automatically under ideal conditions to avoid elongation of the tape and subsequent measuring errors. Since the support profile and barcode strip are separate units, assembly errors are virtually impossible. Repairs of the barcode strip, particularly in refrigeration plants, can be done quickly and easily. By request, the positioning system can be delivered with barcode unattached.

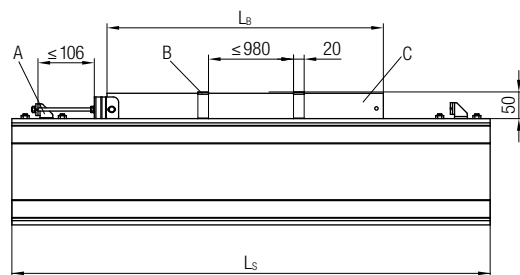
Positioning Module



Order No.	Length [m]	Weight [kg/m]
080243-1	10 to 150	0.08

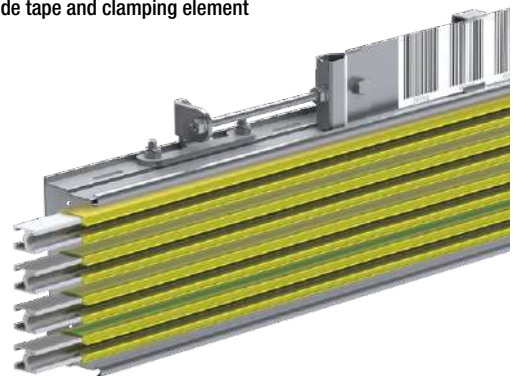
Positioning System

Fastening above the support profile

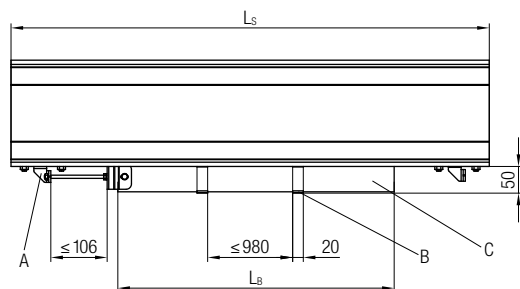


L_B = Length of barcode tape L_S = System length
 A = Clamping element B = Clip-on holder C = Barcode tape

Barcode tape and clamping element



Fastening below the support profile



ProShell Support Profile

Positioning System

Contents of packaging unit

- Qty. 1: stainless steel strip 50 x 0.2 mm with affixed barcode tape up to 150 m length
- Qty. 2: clamping elements for attachment to support profile
- Qty. 1/meter: Clip-on holders for barcode strip guidance
- Delivery includes marking of the stated delivery identification/installation site (e.g. Warehouse Alpha LOG/Lane 12)

Necessary order information

- Installation position (above or below the support profile)
- Length of barcode tape
- Desired start or end code
- Delivery identification, e.g. Warehouse Alpha LOG/Lane 12

Notes

- Barcode reader not included
- For exact positioning and mounting of barcode readers, please follow the manufacturer's notes and tolerances

Overview Barcode Supply

The mounting kit for the stainless steel strip of positioning system WCS from Pepperl + Fuchs is available by request.

Supplied with code tape ¹⁾	Length [m] ²⁾	Standard coding	Special coding ³⁾
BCB 020	20	ascending from 0 to the right	starting position according to customer specifications
BCB 030	30		
BCB 040 to 130	10 m pattern		
BCB 150	150		

¹⁾ Code tape design according to product identification and specifications of Leuze electronic GmbH & Co. KG

²⁾ Intermediate lengths available by request

³⁾ Special coding available by request (total quantity minimum 150 m, not in stock)

ProShell Support Profile

0812 Current Collector



Technical Data

Type: Dual current collector for reversible operation, distance between poles: 26 mm

Max. current capacity: 160 A (for aluminum rails in standstill mode at 100% duty cycle: 80 A)

Max. travel speed: 400 m/min

Spring force: 10 N

Lateral deviation: ± 20 mm

Working stroke in insertion direction: ± 30 mm

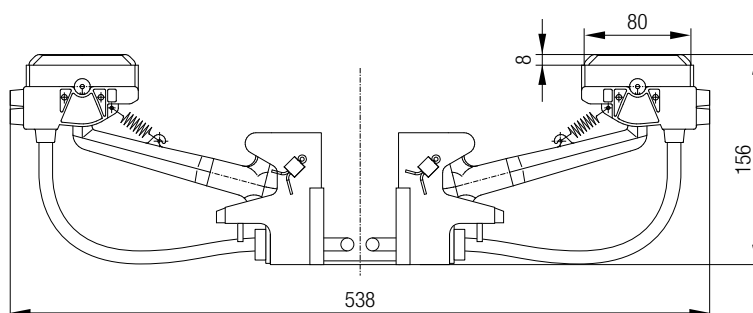
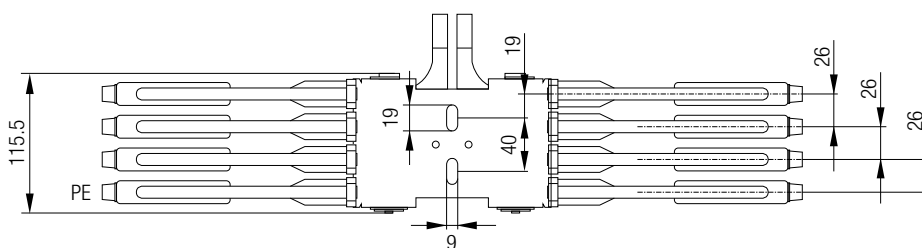
Connection line: 16 mm², high-flexibility, 4 m long

Standard temperature version: -15° to +55°C, PVC connection line 16 mm², high-flexibility, 4 m long

Low-temperature version: -30° to +55°C, silicone connection line 16 mm², high-flexibility, 4 m long

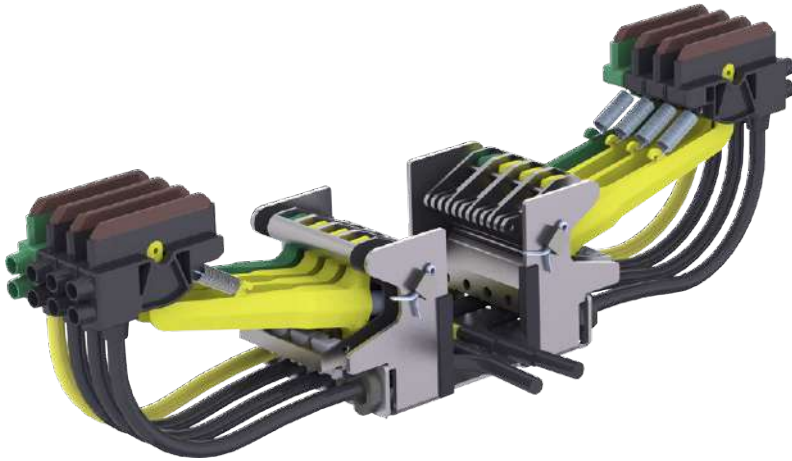
Order No.	Description	Weight [kg]
08-S265-2226 *	0812 Current Collector, 2 x 4-pole 80A, Collector unit 3 x phase + 1 x earth for reverse travel mode in galvanized steel version, standard temperature version	8.75
08-S265-2237	0812 Current Collector, 2 x 4-pole 80A, Collector unit 3 x phase + 1 x earth for reverse travel mode in galvanized steel version, low-temperature version	8.75

* Standard range



ProShell Support Profile

0831 Current Collector



Technical Data

Type: Dual current collector for reversible operation, distance between poles: 18 mm

Max. current capacity: 160 A (for aluminum rails in standstill mode at 100% duty cycle: 80 A)

Max. travel speed: 400 m/min

Spring force: 10 N

Lateral deviation: ± 20 mm

Working stroke in insertion direction: ± 30 mm

Connection line: 16 mm², high-flexibility, 4 m long

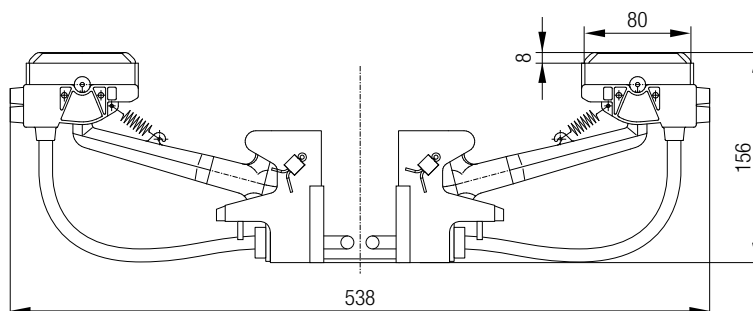
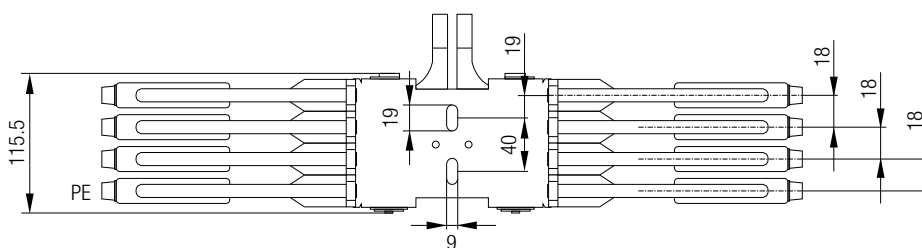
Standard temperature version: -15° to +55°C, PVC connection line 16 mm², high-flexibility, 4 m long

Low-temperature version: -30° to +55°C, silicone connection line 16 mm², high-flexibility, 4 m long

Order No.	Description	Weight [kg]
08-S265-2258 *	0831 Current Collector, 2 x 4-pole 80A, Collector unit 3 x phase + 1 x earth for reverse travel mode in galvanized steel version, standard temperature version	8.75
08-S265-2259	0831 Current Collector, 2 x 4-pole 80A Collector unit 3 x phase + 1 x earth for reverse travel mode in galvanized steel version, low-temperature version	8.75

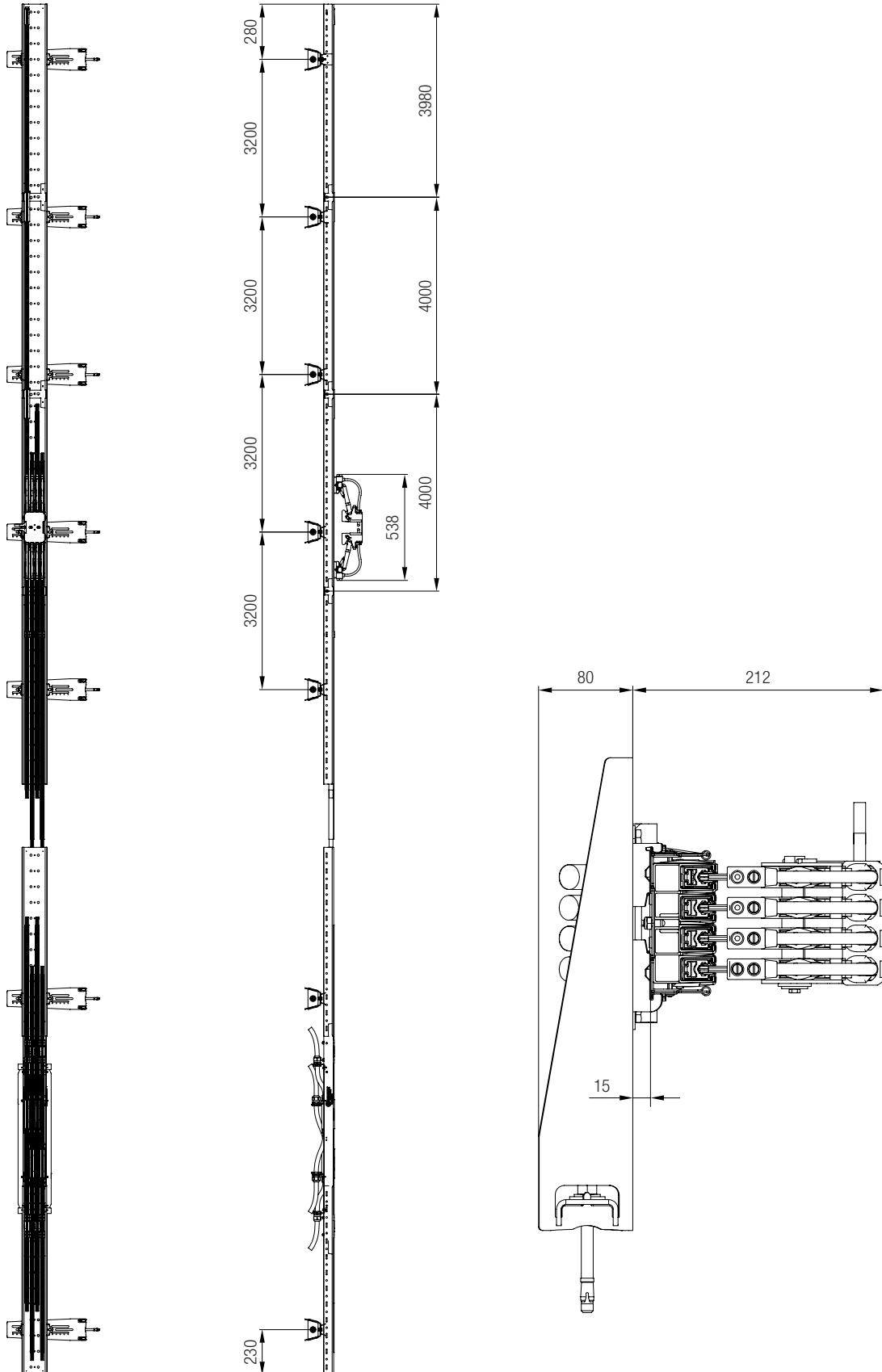
* Standard range

For other current collectors in compact design, 1-pole, as well as 4- and 5-pole see catalog KAT0831.



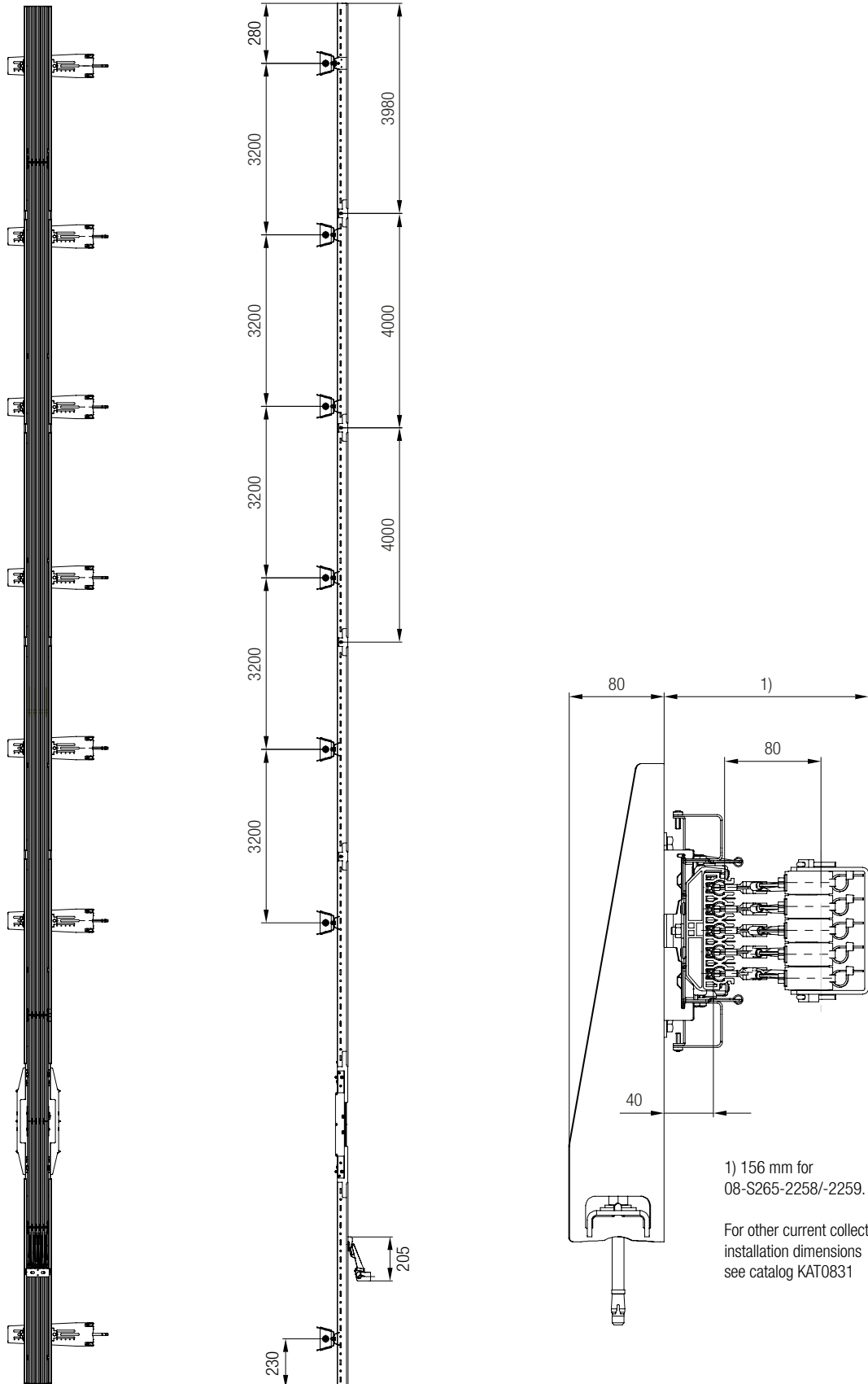
ProShell Support Profile

System Diagram – ProShell with 0812 Conductor Rail System



ProShell Support Profile

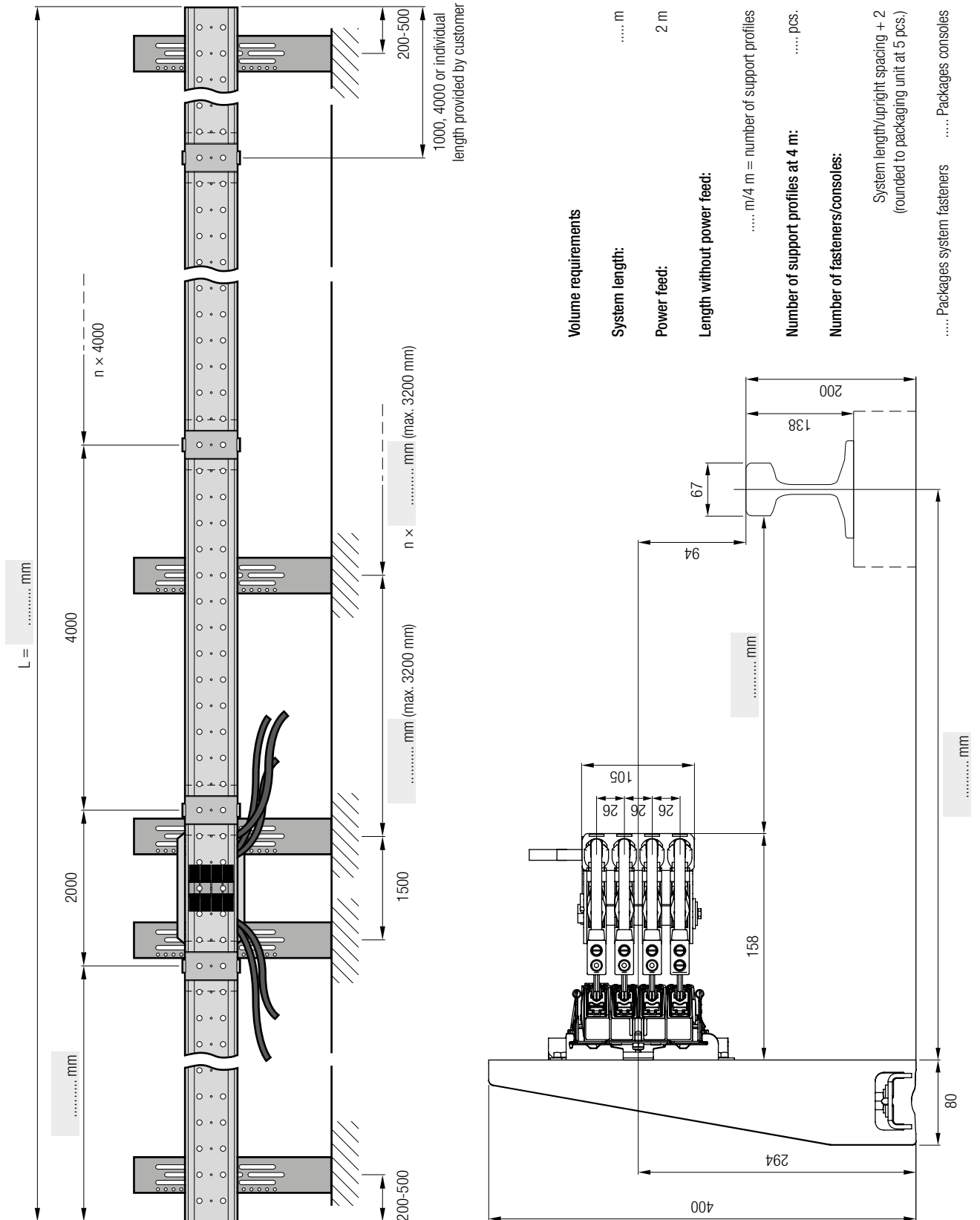
System Diagram – ProShell with 0831 Conductor Rail System



ProShell Support Profile

System Installation Plan – ProShell with 0812 Conductor Rail System

As a modular system, ProShell permits a user-defined, infinitely adjustable connection to shelf or floor uprights, or free choice of the upright positions, respectively. This means fasteners can be positioned anywhere along the support profile, except at Power Feed locations. Individual installation plans and as-builts are not necessary.



ProShell Support Profile - FAQ

What is the correct interval between slotted floor uprights?

One of the main advantages of the ProShell support system is that it allows the conductor rails to be supported at greater intervals between the slotted floor uprights.

When positioning the slotted floor uprights, only two factors have to be taken into account:

- a) Location of the power feed
- b) Maintaining a maximum support distance of 3.2 m

Observing these two factors, slotted floor uprights can be connected to the shell profile anywhere along the track, including the locations of profile connectors.

Are specific installation drawings included in the scope of delivery?

The ProShell system is defined by the length of the host system and position of the power feed, according to customers' requirements. Positioning of the slotted floor uprights and or connections to existing shelf uprights can be done anywhere along the track, except at the location of the power feed. Thus, installation plans are unnecessary and are not included in the scope of delivery.

Are installation plans available as an optional extra?

Installation plans, if desired, are available for a fee based upon our hourly rates for engineering services.

What is the lowest feasible voltage/amperage for data transmission?

Conductor rail systems are unshielded, contact-based systems and therefore of limited use in lower power ranges. Signal voltage should be high enough to accommodate the voltage drop and to ensure an appropriate disturbance-free voltage range. Currents should be higher than 1A, optimally higher than 3A, to ensure necessary "cleansing" of contact surfaces. Please consult us in regards of data transmission, and use appropriate transparent power amplifiers, such as the Powertrans system from Conductix-Wampfler.

Is it possible to install ProShell horizontally to allow collector insertion from below, or vertically, as on a mast?

No, the standard ProShell system is not configured for insertion from below or vertical installation. Proper fixation and expansion of the profiles cannot be guaranteed when using these installation positions.

Can ProShell be used for curved tracks as well?

The ProShell system is designed for linear tracks, such as warehouse aisles or straight transfer car routes. It is not intended to be used for curved tracks. Please contact us for a different approach.


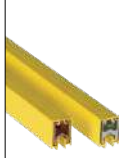
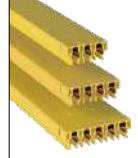

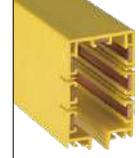
Can ProShell be delivered with a higher number of poles?

The ProShell system is designed for use with up to 5 poles of 0831 Conductor Rail and up to 4 poles of 0812 Conductor Rail. For a higher number of poles, ProShell systems can be installed in parallel – or other solutions from Conductix-Wampfler may be used.



Conductor Rail Program Summary

Conductor Rail Program Summary

System Type	Single pole insulated conductor rails				Compact conductor rails		Enclosed Rail
Conductor Rail System	Program 0811	Program 0815	Program 0812	Program 0813	Program 0831	Program 0832	Program 0842
							
Rated Current ¹⁾ [A]	10-100	100	25 - 400	200 - 1250	10-125 ³⁾	25 - 200 ⁴⁾	35 - 140 ⁵⁾
Rated Voltage [V]	500	500	660	660	500	690	600
Suspension Spacing [m]	0,4-1,0	0,5	1,5	2,5	1	3,2	2
Rail Length ²⁾ [mm]	4000	4000	4000	5000	4000	4000	4000
Outer Dimensions [mm]	14,7 x 15,5	9,6 x 15,2	18 x 26	32 x 42	3-pole: 26 x 62 4-pole: 26 x 80 5-pole: 26 x 98	4-pole: 200 x 50	5-pole: 56 x 90 7-pole: 56 x 90

1) at 100% duty cycle and 35°C

2) Standard

3) 140 A at 80% duty cycle

4) 200 A at 80% duty cycle

5) 160 A at 80% duty cycle

Your applications – our Solutions

Conductor rails are just one component of the many solutions from the broad spectrum of Conductix-Wampfler energy, data, and handling systems. Which solution is the right one for your application always depends on the specific application situation. A combination of multiple Conductix-Wampfler products often provides very attractive advantages. Consulting and engineering competence are at your command in our companies and representatives around the world – as well as our solutions!



Cable reels

Motorized and spring cable reels from Conductix-Wampfler have their place wherever energy, data and media must travel a wide variety of distances in a short time – in any direction, quickly and safely.



Festoon systems

Conductix-Wampfler festoon systems are a fixed part of any industrial application: reliable and robust and available in an enormous variety of dimensions and variants.



Conductor rails

Whether they're a box conductor rail or an extendible single-pole system, familiar Conductix-Wampfler conductor rails get people and material moving reliably.



Non-insulated conductor rails

Extremely robust, non-insulated conductor rails with copper head or stainless steel support surface are the ideal basis for harsh use e.g. in steel plants or ports.



Energy chains

The jack-of-all-trades when it comes to energy, data and media transfer. With the breadth of their product range, energy chains have a permanent place in industrial applications.



Slip ring bodies

Wherever things have to be smooth and round, tried and trusted slip ring bodies from Conductix-Wampfler provide interruption-free energy and data transmission. The focus here is on flexibility and reliability!



Inductive Power Transfer IPT®

The contact-free system for energy and data transmission. For high speeds absolutely free of wear.



Take-up reels and spring balancers

Whether for hoses or cables, as classic take-up reel or high-precision positioning aids for tools – take-up reels and spring balancers from Conductix-Wampfler take the load off you.



Jib booms

Installed with tool transporters, trolleys or complete media feed – safety and flexibility are brought together here when handling tough tasks.



Conveyor systems

Whether manual, semiautomatic or with Power & Free – a high degree of individuality is guaranteed when it comes to layout requirements and the place of use.

www.conductix.com

Conductix-Wampfler

has just one critical mission:
To provide you with energy and
data transmission systems that
will keep your operations up
and running 24/7/365.

To contact your nearest
sales office, please refer to:

[www.conductix.com/
contact-search](http://www.conductix.com/contact-search)



DELACHAUX GROUP