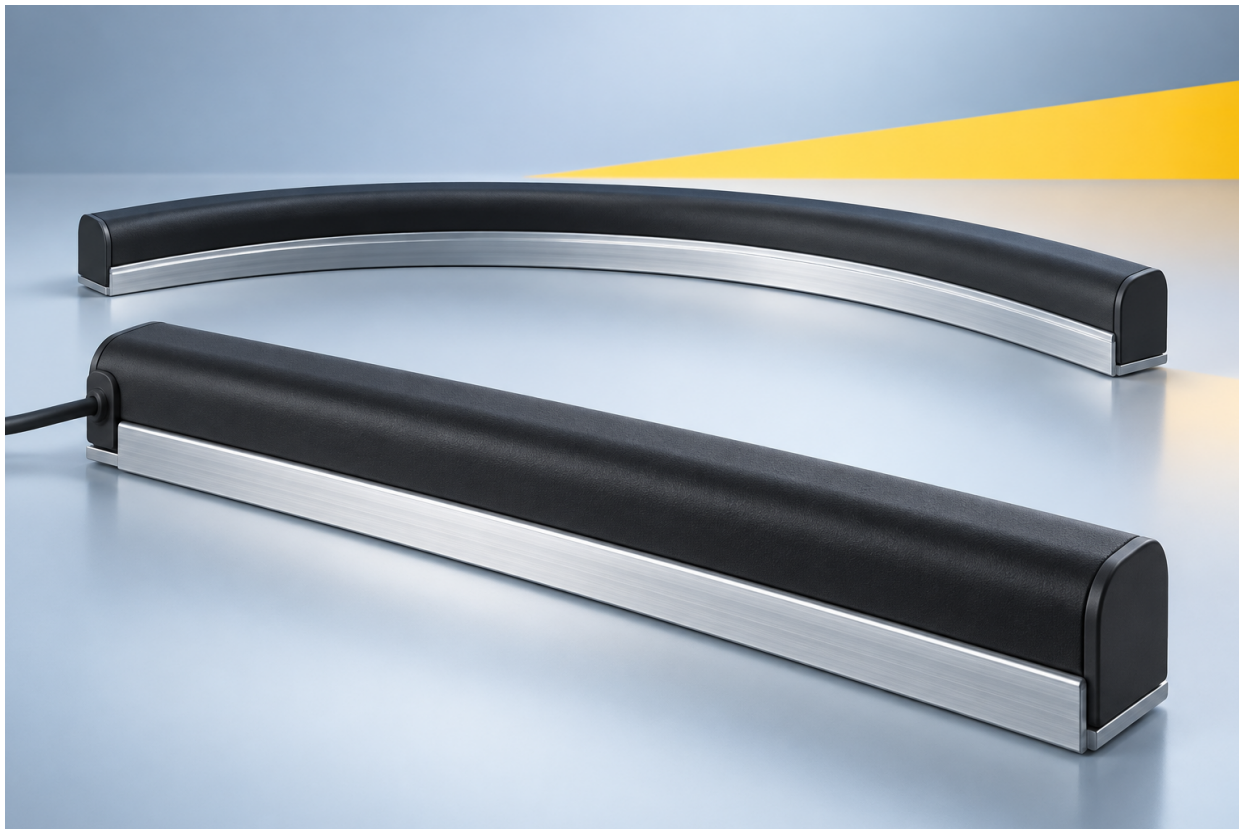


01 / OVERVIEW

Pressure-sensitive safety edges

JH-PSE standard range + DDB custom dual-output range



Contact detection for moving edges

For AGV bumpers, powered-door closing edges and industrial guards. Product selection, profile dimensions, wiring configurations and installation applications in one guide.

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01 / OVERVIEW

Range comparison and selection guide

Select the mechanical profile, then verify the electrical interface and safety system.

Item	JH-PSE	DDB / DDBT
Range	Standard range; main and extension profiles	Custom dual-output range; industrial applications
Profiles	7 main + 37 extension profiles	5 standard + 6 adhesive profiles
Length	Main 30-300cm; extension 20-300cm	200-3000mm
Mounting	Profile-matched mounting bases	Standard base / adhesive mounting
Configuration	R/K configurations; NO contact sensing	2K / 4K / 2R, order-specific

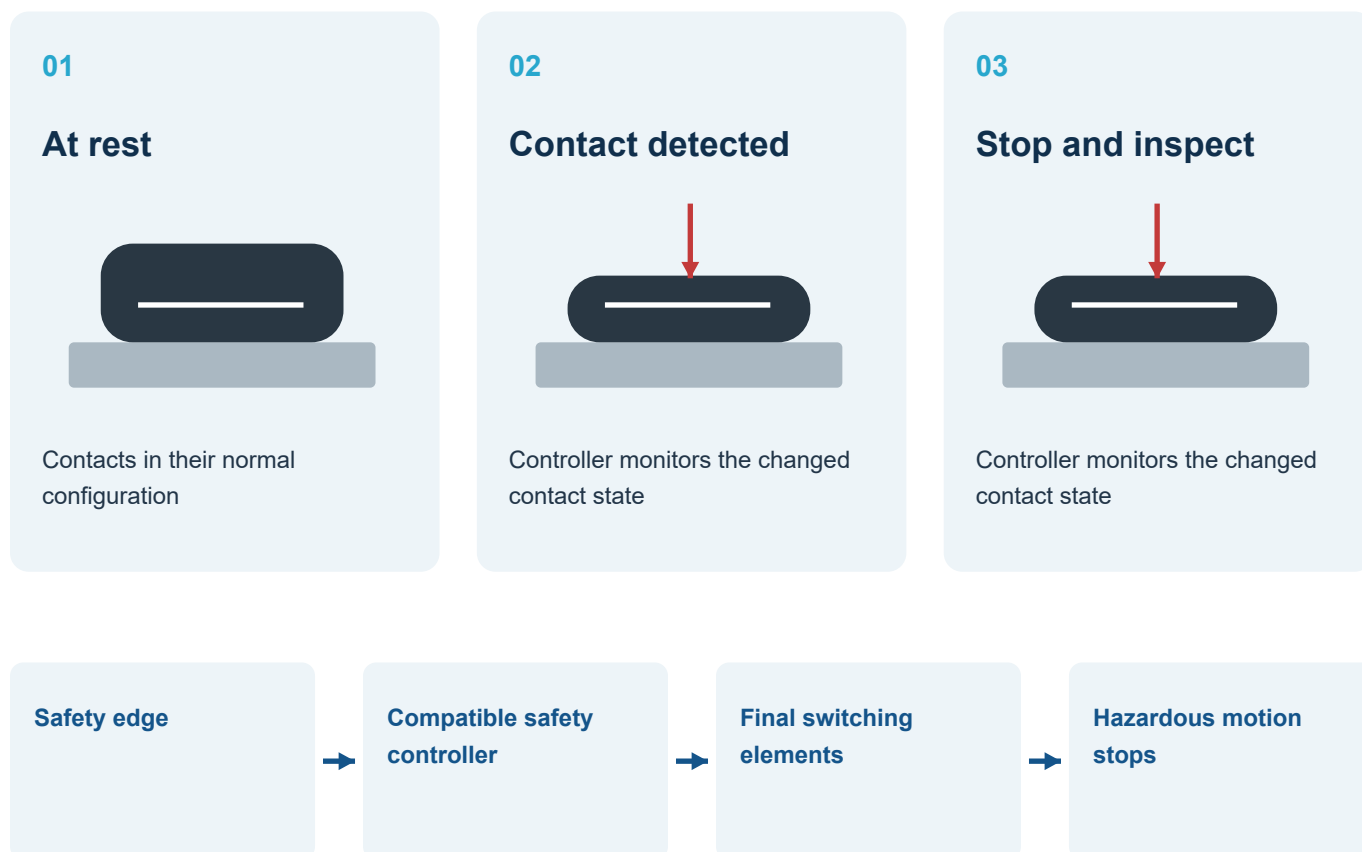
Quick navigation

Section	Pages
Principle, applications and stopping travel	03-06
JH-PSE main profiles, bases and configurations	07-11
37 extension profiles, data and connections	12-19
DDB custom range and DA31 wiring	20-25
Accessories, installation, commissioning and service	26-30

02 / PRINCIPLE

How contact pressure is detected

A contact-sensing device, not a non-contact distance sensor.



Two travel definitions

Actuation travel: compression from first contact until the sensing signal changes.

Overtravel: additional compression available after actuation.

Machine stop: detection does not mean immediate standstill. The controller, switching devices and mechanical inertia all affect stopping.

03 / APPLICATIONS

Closing-edge and AGV demonstrations

Illustrated with foam test objects. Never test crushing protection on a person.



Sliding door / movable guard

Mount the edge on the hazardous closing boundary. Contact is evaluated by a compatible controller, followed by a validated stop or safe reversing function.

Low-speed AGV / mobile equipment

Provide continuous coverage along potential contact edges. Available compression must suit the actual speed, load and stopping performance; shape alone is not enough.

Check	Requirement
Coverage	Check inactive ends, corners and joints for bypassable hazards
Reaction	The machine risk assessment must determine stop/reverse behavior
People	Contact protection may need guards, interlocks or non-contact detection

Application illustration

03 / APPLICATIONS

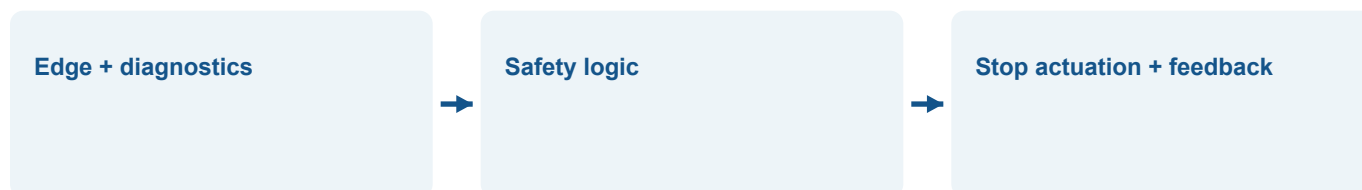
Machine perimeters and integration

Protection is achieved by the complete system, not the rubber edge alone.



Lifting platforms, movable covers and robot-cell edges

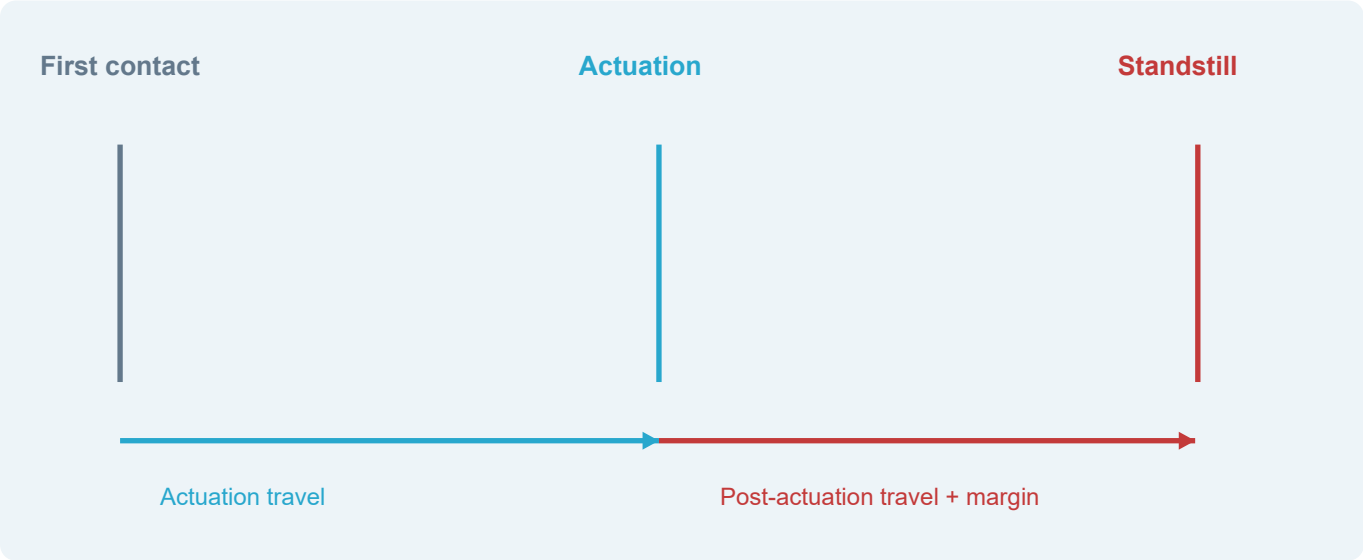
Contact detection for lifting platforms, movable covers and machine perimeters. Check actuation direction, stopping allowance and active coverage. Never access beneath an unprotected lifting mechanism.



04 / SELECTION

Select for travel after actuation

Choose the profile to suit speed, load and actual stopping distance.



Required compression space must accommodate motion after actuation, allowing for tolerances, temperature, speed/load variation and elastic recovery. Measure and validate actual stopping travel; the listed sensor response time is not a substitute.

Step	Confirm
1	Direction, maximum speed, load and crushing hazards
2	Coverage, inactive ends and curved/corner geometry
3	Actuation force, acceptable contact force and overtravel
4	Profile/base, wiring, resistor and controller compatibility
5	Measured stop, fault tests and reset verification

Main range ordering and data

108 / 110 / 215 / 230 / 245 / 345 / 360

JH-PSE-108-30-RS-C

Ordering code example

Field	Meaning
Profile	108 / 110 / 215 / 230 / 245 / 345 / 360
Length	30-300cm, custom lengths
Wiring R/K	R: 2-core with resistor; K: 2-/4-core without resistor
Shape R/S	R standard / S special; interpret by field position
Base	C / CL; CS is also shown in the base table

Main-range technical data

Item	Technical data
Sensing / angle	Pressure sensing / <90°
Mechanical life / response	>3,000,000 operations / 13ms
Temperature / ingress protection	-20 to +55°C / IP65
Material	108 and 110: TPE; other main profiles: EPDM

05 / JH-PSE MAIN

Main profile dimensions and actuation

Rubber and base heights are listed separately. Dimensions: mm; force: N.

Model	Base W	Rubber H	Base H	Actuation	Force	Overtravel
JH-PSE-108	15	8	7	<2	≤25	0
JH-PSE-110	15	10	7	<2	≤25	0
JH-PSE-215	25	15	14	<3	≤25	0
JH-PSE-230	25	30	14	<3	≤25	<19
JH-PSE-245	25	45	14	<3	≤25	<30
JH-PSE-345	35	45	14	<5	≤100	<30
JH-PSE-360	35	60	14	<5	≤100	<45

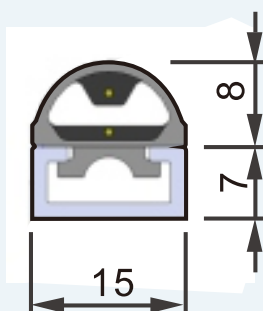
Application references

Models	Applications
108	Small AGVs
110	Small AGVs, garage doors, industrial equipment
215 / 230 / 245	AGVs, powered doors, industrial applications
345 / 360	Large AGVs, heavy doors, robot perimeters

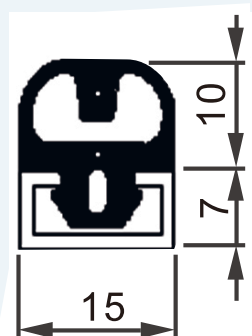
05 / JH-PSE MAIN

Seven main profile drawings

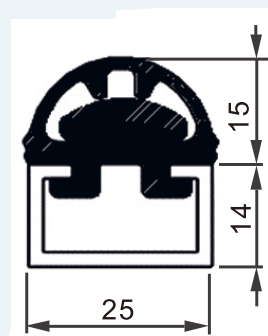
All dimensions in mm.

JH-PSE-108

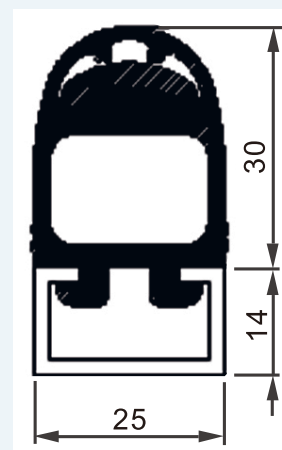
TPE jacket

JH-PSE-110

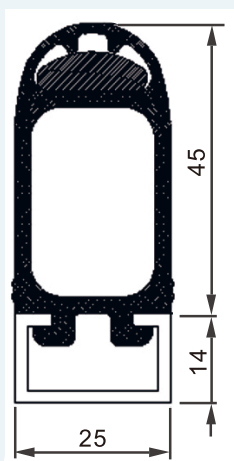
TPE jacket

JH-PSE-215

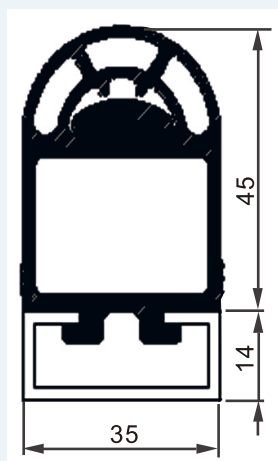
EPDM jacket

JH-PSE-230

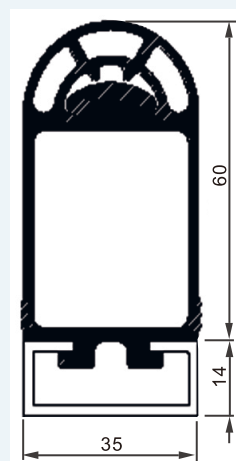
EPDM jacket

JH-PSE-245

EPDM jacket

JH-PSE-345

EPDM jacket

JH-PSE-360

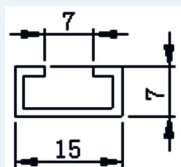
EPDM jacket

06 / MOUNTING BASES

Six mounting bases: match the profile

Dimensions in mm. Match profile width, slot opening and installation space.

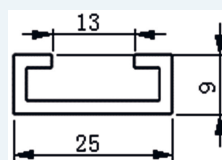
15mm C



Width / total H
15 / 7
Opening 7

110

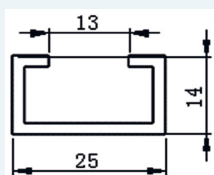
25mm CS



Width / total H
25 / 9
Opening 13

215 / 230 / 245

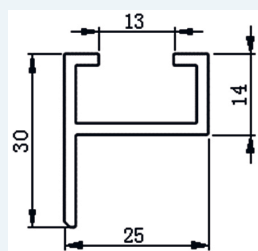
25mm C



Width / total H
25 / 14
Opening 13

215 / 230 / 245

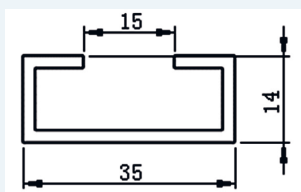
25mm CL



Width / total H
25 / 30
Opening 13

215 / 230 / 245

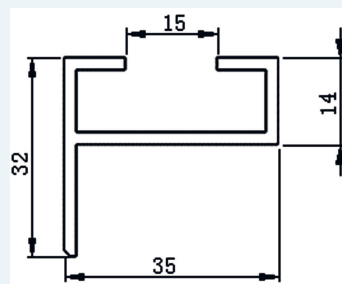
35mm C



Width / total H
35 / 14
Opening 15

345 / 360

35mm CL



Width / total H
35 / 32
Opening 15

345 / 360

07 / JH-PSE CONNECTIONS

Main-range R and K configurations

Select by cable arrangement and end-of-line resistor configuration.

R



R_EOL

Integrated end resistor; one cable end

K



No end resistor; signal cables at both ends

Item	Main-range configuration
Jacket / marking	TPE / VVR
OD / conductors	φ4mm; 2×0.35mm², red/black
Cable length	2m
R-type end resistor	1.2kΩ or 8.2kΩ
K type	Cables at both ends, without end resistor

Match the end-of-line resistor to the controller; do not interchange 1.2kΩ, 8.2kΩ and 5.6kΩ.

08 / EXTENSION PROFILES

Extension profiles 01-37: ordering

37 profiles for straight, curved and shaped installations.

JH-PSE-01-20-2KS

Field	Configuration
Profile	01-37
Length	20-300cm; custom options
R / K	R: 2-core with resistor; K: 2-/4-core without resistor
R / S	Shape: R standard, S special

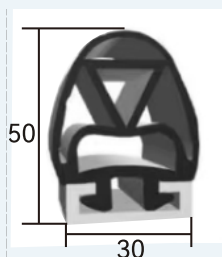
Extension-range technical data

Item	Data
Material / color	Black EPDM
Voltage / current	≤24V / <1A
Inactive end zone	20-30mm at each end
Standard cable	50cm; ø3.5mm; copper 0.25mm ² ; customizable
Ambient temperature	-20 to +80°C
Sensing logic	Normally open (NO); a controller may convert interface logic

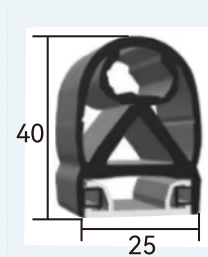
08 / EXTENSION PROFILES

Profile dimensions 01-08

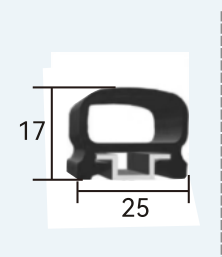
All dimensions in mm.

JH-PSE-01

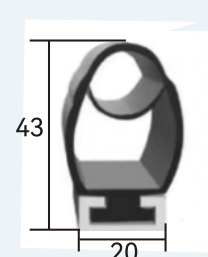
W × H
30 × 50
mm

JH-PSE-02

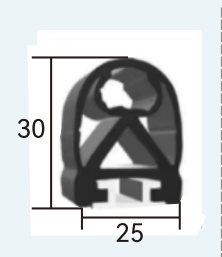
W × H
25 × 40
mm

JH-PSE-03

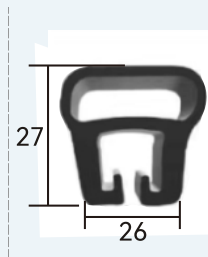
W × H
25 × 17
mm

JH-PSE-04

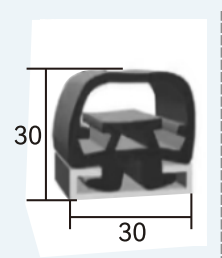
W × H
20 × 43
mm

JH-PSE-05

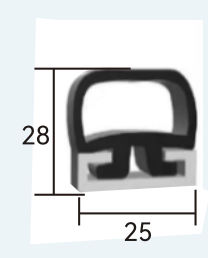
W × H
25 × 30
mm

JH-PSE-06

W × H
26 × 27
mm

JH-PSE-07

W × H
30 × 30
mm

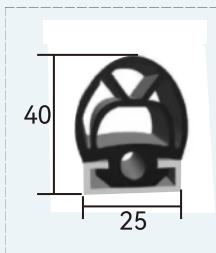
JH-PSE-08

W × H
25 × 28
mm

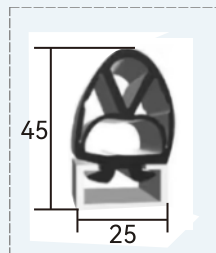
08 / EXTENSION PROFILES

Profile dimensions 09-16

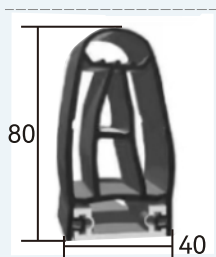
All dimensions in mm.

JH-PSE-09

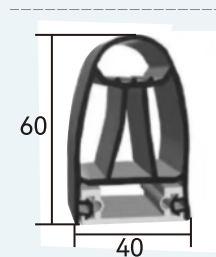
W × H
25 × 40
mm

JH-PSE-10

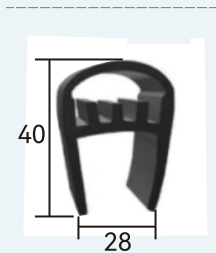
W × H
25 × 45
mm

JH-PSE-11

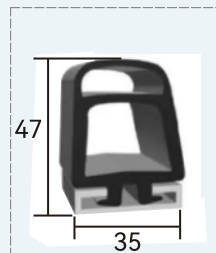
W × H
40 × 80
mm

JH-PSE-12

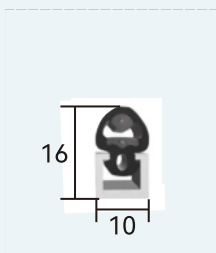
W × H
40 × 60
mm

JH-PSE-13

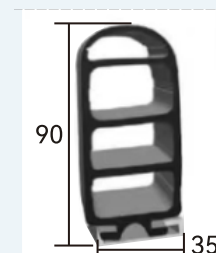
W × H
28 × 40
mm

JH-PSE-14

W × H
35 × 47
mm

JH-PSE-15

W × H
10 × 16
mm

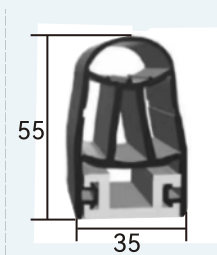
JH-PSE-16

W × H
35 × 90
mm

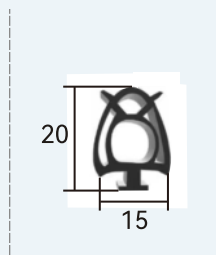
08 / EXTENSION PROFILES

Profile dimensions 17-24

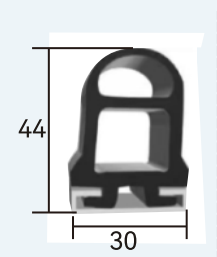
All dimensions in mm.

JH-PSE-17

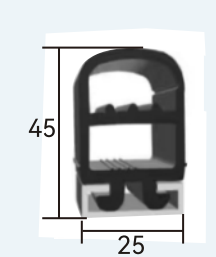
W × H
35 × 55
mm

JH-PSE-18

W × H
15 × 20
mm

JH-PSE-19

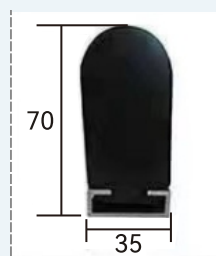
W × H
30 × 44
mm

JH-PSE-20

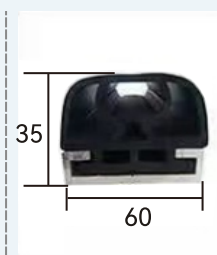
W × H
25 × 45
mm

JH-PSE-21

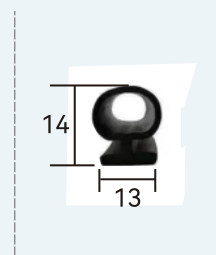
W × H
20 × 35
mm

JH-PSE-22

W × H
35 × 70
mm

JH-PSE-23

W × H
60 × 35
mm

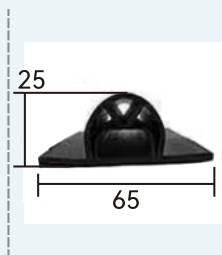
JH-PSE-24

W × H
13 × 14
mm

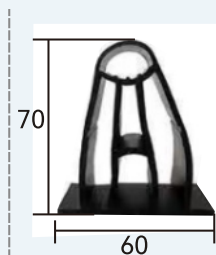
08 / EXTENSION PROFILES

Profile dimensions 25-32

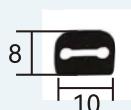
All dimensions in mm.

JH-PSE-25

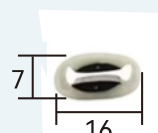
W × H
65 × 25
mm

JH-PSE-26

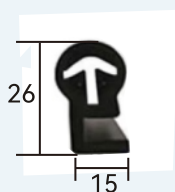
W × H
60 × 70
mm

JH-PSE-27

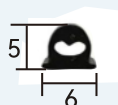
W × H
10 × 8
mm

JH-PSE-28

W × H
16 × 7
mm

JH-PSE-29

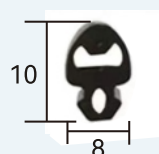
W × H
15 × 26
mm

JH-PSE-30

W × H
6 × 5
mm

JH-PSE-31

W × H
8 × 7
mm

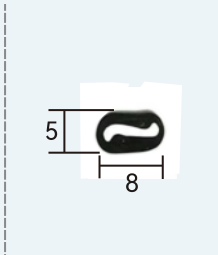
JH-PSE-32

W × H
8 × 10
mm

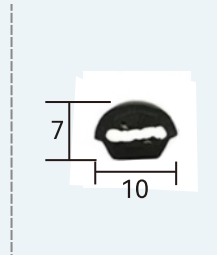
08 / EXTENSION PROFILES

Profile dimensions 33-37

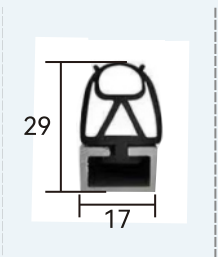
All dimensions in mm.

JH-PSE-33

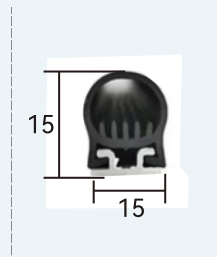
W × H
8 × 5
mm

JH-PSE-34

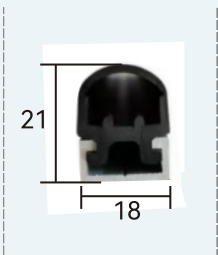
W × H
10 × 7
mm

JH-PSE-35

W × H
17 × 29
mm

JH-PSE-36

W × H
15 × 15
mm

JH-PSE-37

W × H
18 × 21
mm

09 / EXTENSION DATA

Extension profile actuation data

Actuation travel, force and bend radius by profile.

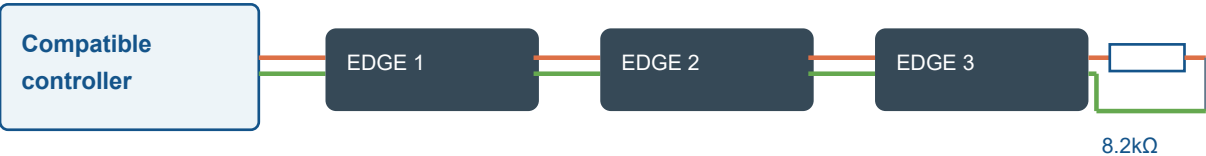
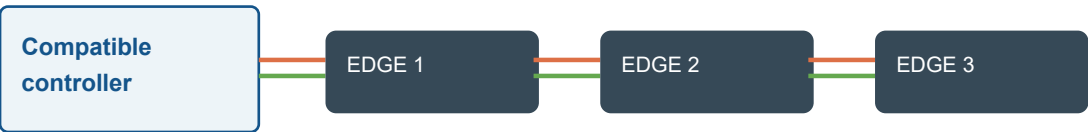
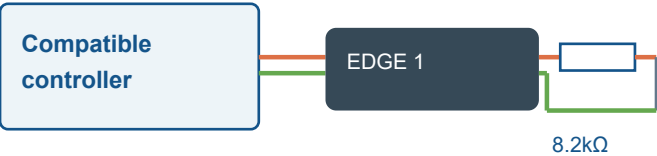
Model	Travel mm	Force N	Bend radius mm
JH-PSE-01	3–5	≤30	≥120
JH-PSE-02	-	-	-
JH-PSE-03	3–5	≤30	≥80
JH-PSE-04	-	-	-
JH-PSE-05	3–5	≤30	≥120
JH-PSE-06	3–5	≤30	-
JH-PSE-07	3–5	≤30	≥80
JH-PSE-08	3–5	≤30	≥60
JH-PSE-09	3–5	≤30	≥100
JH-PSE-10	3–5	≤30	≥100
JH-PSE-11	5–8	≤30	≥350
JH-PSE-12	5–8	≤30	≥350
JH-PSE-13	-	-	-
JH-PSE-14	3–5	≤30	≥120
JH-PSE-15	3–5	≤30	≥55
JH-PSE-16	3–5	≤30	-
JH-PSE-17	5–8	≤30	≥350
JH-PSE-18	-	-	-
JH-PSE-19	3–5	≤30	≥60
JH-PSE-20	3–5	≤30	≥100
JH-PSE-21	3–5	≤30	≥100
JH-PSE-22	5–8	≤30	≥200
JH-PSE-23	3–5	≤30	≥150
JH-PSE-24	3–4	≤30	-
JH-PSE-25	3–5	≤30	≥80
JH-PSE-26	-	-	-
JH-PSE-27	2	≤30	≥60
JH-PSE-28	2	≤30	-
JH-PSE-29	3–5	≤30	-
JH-PSE-30	2	≤30	-
JH-PSE-31	2	≤30	-
JH-PSE-32	2–3	≤30	-
JH-PSE-33	2–3	≤30	-
JH-PSE-34	2–3	≤30	-
JH-PSE-35	2–3	≤30	≥60
JH-PSE-36	-	-	-
JH-PSE-37	3–5	≤30	≥150

10 / EXTENSION CONNECTIONS

Three configurations and connection layouts

Connection layouts; use the supplied controller wiring diagram for installation.

Type	Configuration
1	One end, 2-core, NO, without end resistor
2	2-core at each end; four wires total, NO, no end resistor
3	2-core at one end; 8.2kΩ, 0.25W resistor at the other



11 / DDB CUSTOM RANGE

DDB custom dual-output range

Standard DDB + adhesive DDBT. Define the custom interface in the order.



Left: standard DDB. Right: adhesive DDBT.

DDB-16x27-200-2KR

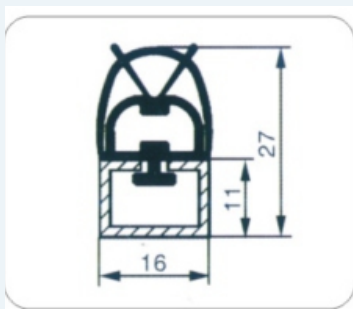
Field	Meaning
Range	DDB standard / DDBT adhesive
Section	Profile dimensions: see section drawings, mm
Length	200-3000mm; custom options
2K / 4K / 2R	2-core no resistor / 4-core no resistor / 2-core with resistor
R / S	Shape: standard / special
Features	Compact construction, contour customization, IP65

11 / DDB DIMENSIONS

DDB standard: all five profiles

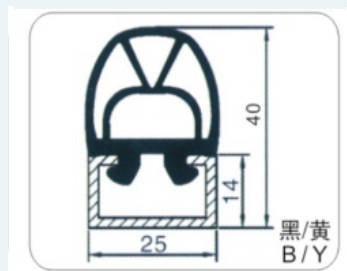
□ denotes length 200-3000mm, with custom options.

DDB-16x27-□-2KR



Outer W × H
16 × 27
mm

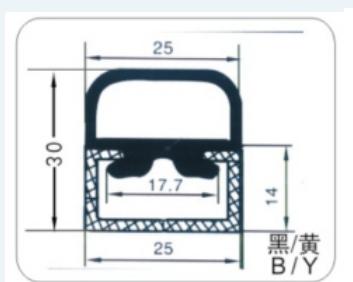
DDB-25x40-□-2KR



Outer W × H
25 × 40
mm

Black/yellow B/Y

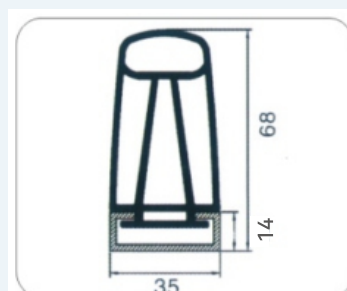
DDB-25x30-□-2KR



Outer W × H
25 × 30
mm

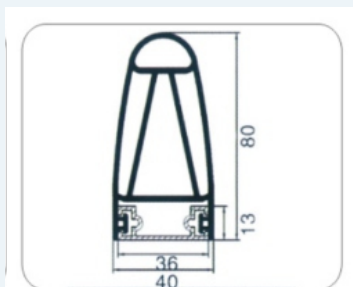
Black/yellow B/Y

DDB-35x68-□-2KR



Outer W × H
35 × 68
mm

DDB-40x80-□-2KR



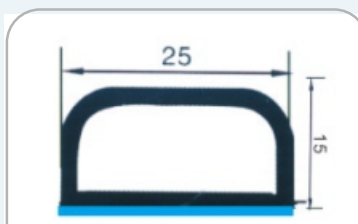
Outer W × H
40 × 80
mm

11 / DDBT DIMENSIONS

DDBT adhesive: all six profiles

Select the section to match the mounting face and required dimensions.

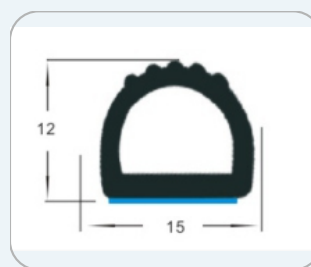
DDBT-25x15-□-2KR



Section W×H
25×15mm

Section A: arch cavity

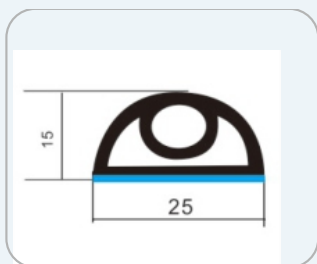
DDBT-12x12-□-2KR



Section W×H
15×12mm

Select by section drawing

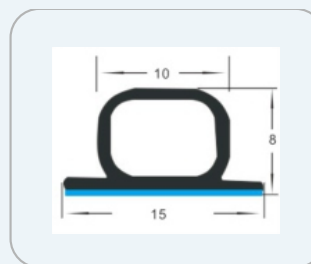
DDBT-25x15-□-2KR



Section W×H
25×15mm

Section B: circular core

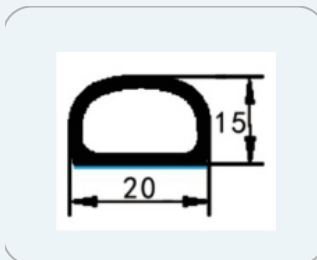
DDBT-15x8-□-2KR



Section W×H
15×8mm

Check mounting face against drawing

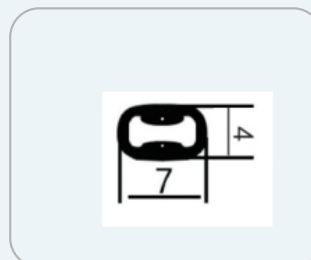
DDBT-20x15-□-2KR



Section W×H
20×15mm

Check mounting face against drawing

DDBT-7x4-□-2KR



Section W×H
7×4mm

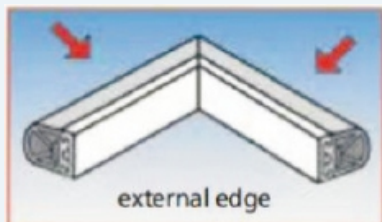
Check mounting face against drawing

Section A: adhesive backing, black/red.

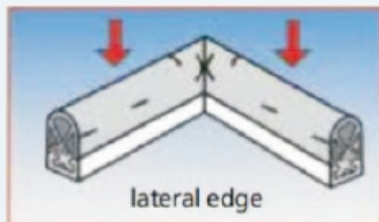
12 / CUSTOM SHAPES

Six custom shapes and actuation directions

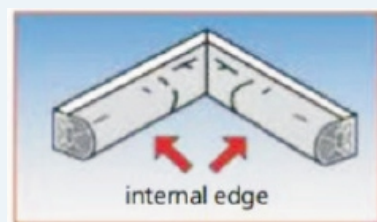
Customization includes contour, actuation direction, cable exit and ends - not length alone.



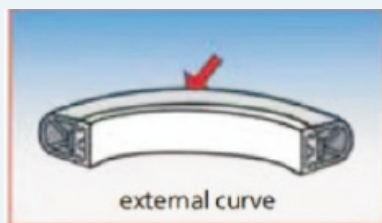
External edge



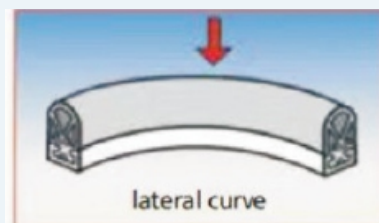
Lateral edge



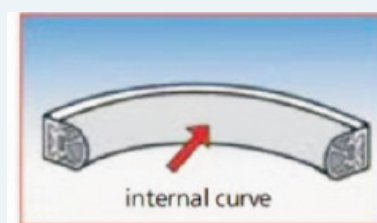
Internal edge



External curve



Lateral curve



Internal curve

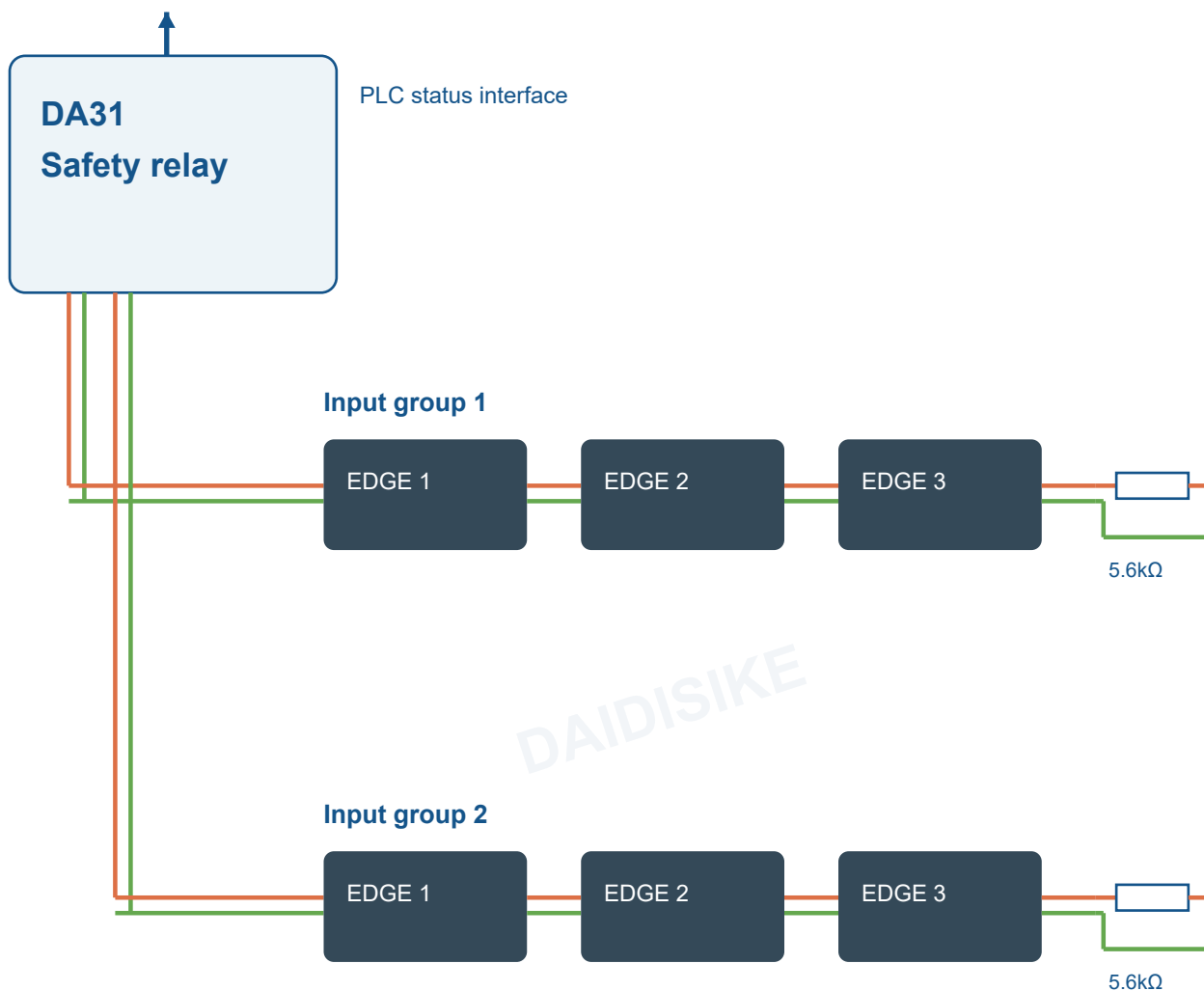
Provide before customization

1. Machine contour and required protected length.
2. Actual force direction/angle, minimum curvature and joint positions.
3. Processed ends, inactive zones, cable exit and sealing requirements.
4. Mounting surface/space, speed/load and post-actuation travel.

13 / DA31 CONNECTION CONCEPT

DA31: two edge-input groups

System connection example with 5.6k Ω end-of-line resistors.



DA31 connects two edge-input groups, each with an end-of-line resistor. Use the supplied DA31 wiring diagram for the permitted quantity, terminals and power supply.

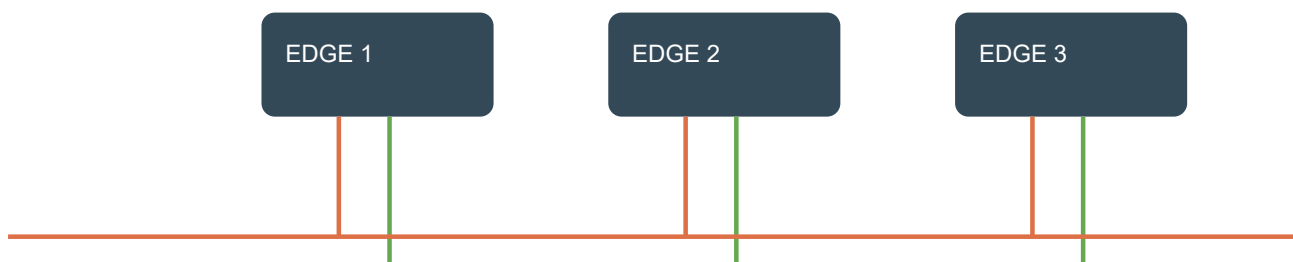
Use the supplied DA31 wiring diagram with matching end resistors and cable configuration.

13 / CONNECTION TOPOLOGIES

Multiple-edge connection layouts

Use a connection method approved for the compatible controller.

Parallel connection



Parallel NO contacts can detect actuation of any edge. Use only a controller-approved layout and verify branch open-circuit monitoring.

Daisy-chain connection



For a daisy-chain layout, configure end termination, return conductors and permitted edge quantity according to the supplied controller wiring diagram.

System accessories and mounting components

Select accessories to suit the application.



01 Edge and sealed ends / 02 Mounting base / 03 Cable and strain relief

Component	Verify
Base and fasteners	Profile fit, holes and smooth edges; no penetration into sensing cavity
End seals, corners, joints	Sealing, inactive length and actuation direction
Cable, connector, conduit	Wiring/cores, sealing, bend radius and flexing life
End resistor	Resistance, power, location and controller compatibility
DA31 / specified controller	Input principle, output definition, reset, diagnostics and diagram
Final elements and feedback	Contactors/drive safety functions, feedback and machine validation

15 / INSTALLATION

Installation and cable protection

Qualified personnel must follow approved drawings. Do not cut open a sealed edge.

1

Check the order

Verify model, section, length, wiring, resistor, shape and accessories.

2

Prepare the surface

Keep the mounting face flat, clean and burr-free. Use the approved adhesive process for DDBT.

3

Fit the base

Fasteners must not press on the rubber or damage sensing elements. Follow the confirmed base drawing.

4

Fit and route

Avoid preload, twisting and tension. Allow motion slack and protect cable exits.

5

Check coverage

Validate ends, corners, joints and low contact points; compensate for inactive areas.

6

Wire and test

Wire with power isolated. Verify resistor/terminals, then perform functional, fault and stopping tests.

16 / COMMISSIONING

Commissioning: test every section

Use suitable test tools, not fingers or body parts exposed to crushing.

Test	Acceptance checks
Contact response	Test all active sections and near joints; sensing state changes correctly
Stopping	Measure stop distance and remaining compression at maximum expected speed/load
Held contact	Hazardous motion must not resume while contact remains
Reset / restart	Release must not cause unsafe automatic restart. Reset per the risk assessment; reset itself must not initiate motion. A separate start command is required.
Open / short circuit	Simulate faults only by the permitted procedure; verify detection and stop
Feedback / final elements	Check contactor/drive feedback so relevant failures are detected

Common symptoms and checks

Symptom	Check first
Always active	Preload, damage, short circuit, wrong resistor
No actuation	Inactive zone, direction, open circuit, input mismatch
Intermittent fault	Flex cable, joints, sealing, mounting, vibration

Stop and service the system if a fault occurs. Never bridge a safety input.

17 / ORDER & MAINTENANCE

Order confirmation and maintenance

Align drawings, the purchase order and the delivered product.

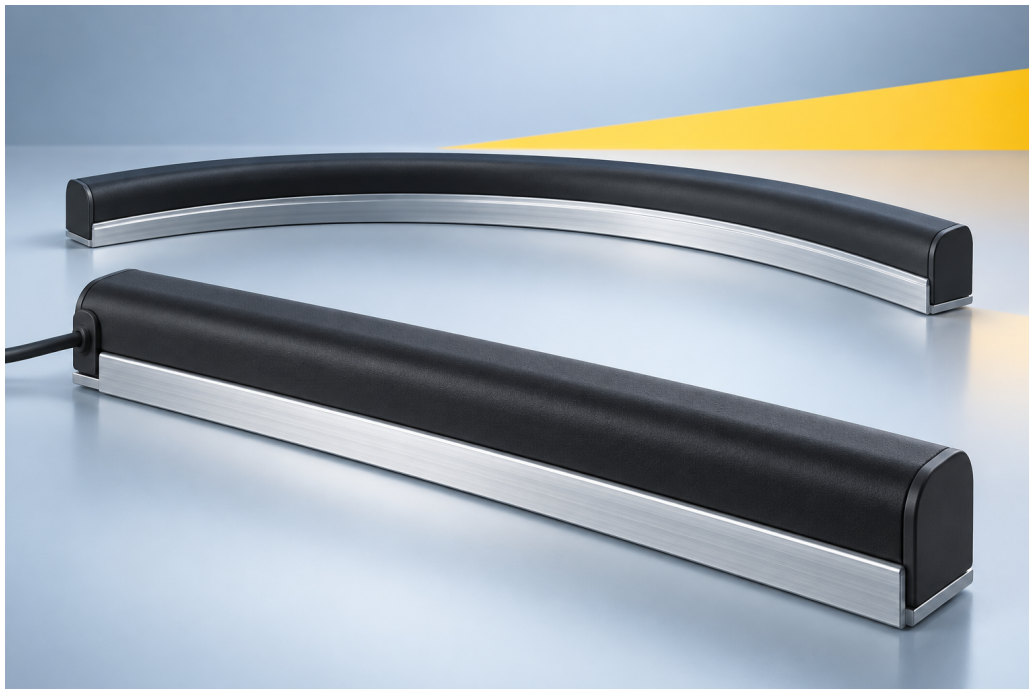
Order item	Record / confirm
Range / full model	JH-PSE / DDB / DDBT; profile and full code
Dimensions / coverage	Width, height, overall length, active area, inactive ends, corner drawing
Custom output	Output type, channel configuration and terminal functions
Electrical configuration	Cores, one/two cable ends, resistor/power, cable length, connector
Control / mounting	DA31/specified controller drawing, base, fasteners, end seals, adhesive
Documents	Wiring diagram, inspection record and operating manual

Maintenance essentials

Set inspection intervals according to machine risk and use. Check for cracking, wear, loose mounting, water ingress and cable damage. Repeat functional tests and controller diagnostics. Revalidate the system after replacing an edge/controller or changing parameters.

Technical service and customization

Profile selection, system configuration and application support.



From the profile to the complete system

Support for profile, length, contour, mounting base, cable and controller selection. Provide the application, mounting dimensions and required electrical configuration for product selection.

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