

# Product data sheet

# Powerchain



Chain drive for large and heavy window elements that need  
large opening widths

**AREAS OF APPLICATION**

- Smoke and heat extraction system and natural ventilation (24 V) in the façade and roof area
- Can be used in the exhaust air and air inlet system
- Inward- and outward-opening windows with bottom-hung, top-hung and side-hung leaves
- Roof window
- Installation on wooden, PVC or metal windows
- Leaf and frame installation
- Synchronisation of up to four drives
- System solution in combination with the Power lock locking drive

**PRODUCT FEATURES**

- Fast opening speeds in the event of smoke and heat extraction, even for very heavy windows
- Continuously adjustable drive stroke and individual speeds for ventilation and smoke and heat extraction
- Available as special version – stroke, cable length and colour configurable
- Synchronisation of max. four drives without external control unit
- DIP switches for changing the mode of operation (Solo and Syncro, master, slave)
- Fast and easy installation with the Smart fix installation system
- IQ windowdrive – intelligent drive control
- Tested as a natural smoke and heat exhaust ventilation device (SHEV) in accordance with EN 12101-2

**TECHNICAL DATA**

Productname	Powerchain
Dimensions	36 x 51 mm
Space needed on frame (min.)	Frame installation inward-opening: 50/61 mm (for swing leaf DIN L), leaf installation inward-opening: 30/41 mm (for swing leaf DIN R), frame installation outward-opening: 50 mm
Space requirement on leaf (min.)	Frame installation inward-opening: 40 mm, leaf installation inward-opening: 50 mm Frame installation outward-opening 30/41 mm (for swing leaf DIN R)
Opening speed RWA	15 mm/s
Opening speed ventilation	5 mm/s
Closing speed (max.)	5 mm/s
Force of pressure (max.)	600 N (depending on stroke), see force-path diagram
Locking force (max.)	3000 N
Tensile force	600 N
Leaf weight	200 kg*



Overlap area	0 - 23 mm (depending on the application and bracket set)
Voltage at operation	24 V ± 25 %
Operating voltage	24 V DC
Current consumption	1.5 A
Current consumption according to area of application	Ventilation (24 V): 1.2 A; RWA (18 V): 1.5 A
Power consumption	36 W
Duty rating	30 %
Special length of connector cable	5 m, 7.5 m
Min. core cross section	0.75 mm <sup>2</sup>
Number of cores	4 cores
Service temperature	-5 - 70 °C
IP rating	IP40
protection rating	III
Syncro function	Yes
Adjustable opening speed (ventilation)	Yes
Additional locking available	Yes
Type of additional locking mechanism	Locking drive
Type of stroke shortening	Synchronising unit, Factory setting
End position cut-off extended	electronic, via internal path sensor
End position cut-off retracted	electronically via current consumption
Overload cut-off	Yes
Complete opening within 60 s	yes, up to 800 mm stroke, including locking drive
NSHEV tested	Yes
NSHEV additional information	yes, up to 800 mm stroke, including locking drive
Number synchronisation drive units	4
KNX ability	Yes
Bottom-hung window INWARD-opening frame installation	Yes
Bottom-hung window inward opening leaf installation	Yes
Bottom-hung window OUTWARD-opening frame installation	Yes
Side-hung window INWARD-opening frame installation	Yes
Side-hung window INWARD-opening door leaf installation	Yes
Side-hung window OUTWARD-opening frame installation	Yes
Top-hung window INWARD-opening frame installation	Yes
Top-hung window INWARD-opening leaf installation	Yes
Top-hung window OUTWARD-opening frame installation	Yes
OUTWARD-opening roof window	Yes

## NETWORKING



## VARIANTS / ORDER INFO

Designation	Description	Ident-No.	Colour	Stroke
Powerchain		147090	EV1	800 mm
Powerchain *		147101	white RAL 9016	1200 mm
Powerchain		147081	white RAL 9016	600 mm
Powerchain		147091	white RAL 9016	800 mm
Powerchain		147080	EV1	600 mm
Powerchain		147100	EV1	1200 mm
Powerchain – special version	Can be configured: Stroke, cable length, colour	147120		

## ACCESSORIES

### BRACKET SET ET POWERCHAIN \*

For top hung windows, inward-opening



Designation	Description	Ident-No.	Colour
Bracket set ET Powerchain *	For top-hung windows frame installation INWARD OPENING	161140	black
Bracket set ET Powerchain *	For top-hung windows frame installation INWARD OPENING	161139	white RAL 9016

### BRACKET SET A POWERCHAIN

For bottom-hung, side-hung and top-hung windows



Designation	Description	Ident-No.	Colour
Bracket set A Powerchain	For bottom-hung, side-hung and top-hung windows, frame installation INWARD OPENING	147111	white RAL 9016
Bracket set A Powerchain	For bottom-hung, side-hung and top-hung windows, frame installation INWARD OPENING	147110	black

## BRACKET SET B POWERCHAIN

For bottom-hung, side-hung and top-hung windows and for different roof profile systems



Designation	Description	Ident-No.	Colour
Bracket set B Powerchain	For bottom-hung, side-hung and top-hung windows, leaf installation INWARD OPENING and frame installation OUTWARD OPENING. Roof profile system: Aluprof MB-SR 50, Reynaers CW 50, Raico Wing 105 DI	147112	black
Bracket set B Powerchain	For bottom-hung, side-hung and top-hung windows, leaf installation INWARD OPENING and frame installation OUTWARD OPENING. Roof profile system: Aluprof MB-SR 50, Reynaers CW 50, Raico Wing 105 DI	147113	white RAL 9016

## BRACKET SET ROOF D1 \*

For roof windows



Designation	Description	Ident-No.	Colour
Bracket set roof D1 Powerchain *	For roof window frame installation OUTWARD OPENING. For roof profile system: Heroal C50, Hueck 85E, Wicona Wictec 50-60	154869	silver-coloured

## BRACKET SET ROOF D2

For roof windows



Designation	Description	Ident-No.	Colour
Bracket set roof D2	For roof window frame installation OUTWARD OPENING. For roof profile system: Akotherm AT 500F, Alcoa AA100, Heroal 180, Hueck VF50, MGlass	154870	silver-coloured



## BRACKET SET ROOF D3 \*

For roof windows



Designation	Description	Ident-No.	Colour
Bracket set roof D3 *	For roof window frame installation OUTWARD OPENING. For roof profile system: Schüco AWS 57RO	158053	silver-coloured

## CHOICE OF BRACKETS FOR POWERCHAIN

Special version can be configured in terms of opening type, opening direction, installation type and colour



Designation	Description	Ident-No.	Colour
Bracket set Powerchain special version	Can be configured: Type of opening, opening direction, installation type, colour	147121	according to RAL
Bracket set Powerchain roof special version	Can be configured: Profile system, colour	159901	according to RAL

## SAFETY SCISSORS NO. 35

For protection of bottom-hung leaves



Designation	Description	Ident-No.	Colour	Leaf weight (max.)
Safety scissors no. 35	Fix pack available from stock (10 pieces), minimum leaf height 300mm	014499	Galvanised	270 kg



## SAFETY SCISSORS NO. 60

For protection of bottom-hung leaves



Designation	Description	Ident-No.	Colour	Leaf weight (max.)
Safety scissors no. 60	Fix pack available from stock (10 pieces), minimum leaf height 700mm	133814	Galvanised	240 kg

## BRACKET SET POWERCHAIN ROOF SPECIAL VERSION

For roof windows



## SERVICE CASE IQ WINDOWDRIVE

For commissioning and parameter setting of the window drives from the IQ windowdrive range



Designation	Description	Ident-No.	Colour	Supply voltage	Output current (max.)
Service case GEZE IQ windowdrive	for commissioning of 24 V window drives and for parameter setting of the IQ windowdrive drives in combination with the ST 220	142586	silver-coloured	100 - 240 V AC	5.5 A

## IQ GEAR \*

Interface for activation of the Slimchain, Powerchain and E 250 NT window drives in ventilation mode



Designation	Description	Ident-No.	Operating voltage
IQ gear *	Interface for activation of the Slimchain, Powerchain and E 250 NT window drives in ventilation mode	151959	24 V DC

### IQ BOX SAFETY \*

Safety module for protecting hazardous areas of power-operated windows



### NT 2.5 A-24 V SM DIR POWER SUPPLY \*

24 V power supply for surface-mounted installation with integrated direction control/polarity reversal



Designation	Description	Ident-No.	Colour	Dimensions	Operating voltage
NT 2.5 A-24 V SM DIR power supply *	Output voltage 24 V DC / W x H x D: 200 x 50 x 25 mm / Surface-mounted installation / With integrated direction control/polarity reversal	195293	grey	200 x 50 x 25 mm	230 V AC

### IQ BOX KNX

Interface module for connecting the Slimchain, Powerchain and E 250 NT window drives in the KNX building bus



Designation	Description	Ident-No.	Dimensions	Type of installation	IP rating
IQ box KNX	Top hat rail variant (space requirement 18 mm/1 horizontal pitch). One IQ box KNX is required for each window (also for Syncro applications and with locking drives).	164437	18 x 98 x 62 mm	Surface-mounted, Flush-mounted installation	IP20
IQ box KNX	Flush-mounted variant. One IQ box KNX is required for each window (also for Syncro applications and with locking drives).	164443	50 x 45 x 19 mm	Surface-mounted, Flush-mounted installation	IP20



## DRIP LOOP \*

Concealed cable transition for power supply of the window drives



Designation	Description	Ident-No.	Colour	Operating voltage	IP rating
Drip loop 4m/6m *	for power supply to window drives	193863	grey	48 V DC	IP67
Drip loop 2m/3m *	for power supply to window drives	193287	grey	48 V DC	IP67

## SURFACE-MOUNTED HOUSING \*

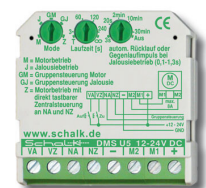
Housing for surface mounting of top hat rail components such as power supply units or control units



Designation	Description	Ident-No.	Colour	Dimensions	IP rating
Surface-mounted housing *	Size: W x H x D = 193 x 130 x 82 mm. For electronic top hat rail components, e.g. power supply units	152010	white	193 x 130 x 82 mm	IP40

## OPEN/CLOSE WINDOW CONTROL \*

Open/Close window controller for simple ventilation control



Designation	Description	Ident-No.	Dimension s	Operating voltage	Type of installation
OPEN/CLOSE window control unit 24 V - HS *	Control unit (individual, group, central, time) for 24 V window drives for installation on a top hat rail. Output current max. 8 A	163812	18 x 88 x 58 mm	24 V	Top hat rail mounting
OPEN/CLOSE window control unit 24 V - UP *	Control unit (individual, group, central, time) for 24 V window drives for installation in a flush-mounted box. Output current max. 8 A	163813	43 x 43 x 18.5 mm	24 V	Flush-mounted installation
OPEN/CLOSE window control unit 230 V - HS *	Control unit (individual, group, central, time) for 230 V window drives for installation on a top hat rail. Output current max. 10 A	163814	18 x 88 x 58 mm	230 V	Top hat rail mounting
OPEN/CLOSE window control unit 230 V - UP *	Control unit (individual, group, central, time) for 230 V window drives for installation in a flush-mounted box. Output current max. 10 A	163815	43 x 43 x 18.5 mm	230 V	Flush-mounted installation
OPEN/CLOSE universal window control 230 V AC - TOP HAT RAIL *	Control unit (individual, group, central, time) with potential-free inputs for 230 V window drives for installation on a top hat rail. Output current max. 10 A	163816	18 x 88 x 58 mm	230 V	Top hat rail mounting

**GEZE POWER SUPPLY NT 1.5A-24V HS \***

24 V power supply for top hat rail mounting



Designation	Description	Ident-No.	Colour	Dimensions	Operating voltage
Power supply NT 1.5 A-24 V HS *	Output voltage 24 V DC / W x H x D: 35 x 90 x 58 mm / Installation on top hat rail, 2 horizontal pitches	151425	black	35 x 90 x 58 mm	230 V AC

**POWER SUPPLY NT 2.5 A-24 V HS \***

24 V power supply for top hat rail mounting



Designation	Description	Ident-No.	Colour	Dimensions	Operating voltage
Power supply NT 2.5 A-24 V HS *	Output voltage 24 V DC W x H x D: 52 x 90 x 58 mm / Installation on top hat rail, 3 horizontal pitches	151424	black	52 x 90 x 58 mm	230 V

**POWER SUPPLY NT 6.25 A-24 V HS \***

24 V power supply for top hat rail mounting



Designation	Description	Ident-No.	Colour	Dimensions	Operating voltage
Power supply NT 6.25 A-24 V HS *	Output voltage 24 V DC / W x H x D: 72 x 95 x 66.5 mm / Installation on top hat rail, 4 horizontal pitches	192113	grey	72 x 95 x 66.5 mm	230 V DC +/- 10%

### WRM-24

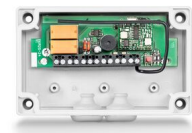
Receiving module for activating automatic doors and window drives with 24 V DC



Designation	Description	Ident-No.	Colour	Dimensions	Output
WRM-24 receiving module	52 x 47 x 23 mm (W x H x D), for installation in a standard flush-mounted socket / 24 V DC operating voltage, pulsed operation or pulsed and continuous operation	131213	black	52 x 52 x 47 x 23 mm	2 potential-free relay contacts

### WRM-24B

Receiving module for activating automatic doors and window drives with 24 V DC



Designation	Description	Ident-No.	Colour	Dimensions	Output
WRM-24B receiving module	130 x 80 x 35 mm (W x H x D), for surface mounting with protection class IP54 / 24 V DC operating voltage, pulsed operation or pulsed and continuous operation	131214	white	130 x 130 x 80 x 35 mm	2 potential-free relay contacts

### WTH

Remote control for activating GEZE automatic doors and window drives via the GEZE wireless programme



Designation	Description	Ident-No.	Dimensions	Operating voltage	Type of installation
WTH-2 remote control 2 channel	with wall fixing and IP rating IP54	131210	78 x 51 x 15 mm	12 V DC	Wall
WTH-4 remote control 4 channel	with wall fixing and IP rating IP54	131211	78 x 51 x 15 mm	12 V DC	Wall
WTH-1 remote control 1 channel	with wall fixing and IP rating IP54	131209	78 x 51 x 15 mm	12 V DC	Wall

## WTM

Transmitting module for activating GEZE automatic doors and window drives via the GEZE wireless programme



Designation	Description	Ident-No.	Dimensions	Operating voltage	Type of installation
WTM transmitting module	44 x 30 x 11 mm (W x H x D), for optional integration in push button	131212	44 x 30 x 11 mm	3 V DC	Integrated

## POWER LOCK

Locking drive in combination with Slimchain, Powerchain or E 250 NT



Designation	Description	Ident-No.	Colour	Stroke	Dimensions
Power lock *	max. locking stroke 24 mm	147021	white RAL 9016		34 x 36 mm
Power lock - special version *	Can be configured: Cable length, colour	147022	according to RAL	22 mm	34 x 36 mm
Power lock	max. locking stroke 24 mm	147020	EV1		34 x 36 mm

## ST 220

Service terminal for the wireless and wired parameter setting of GEZE door and window products



Designation	Description	Ident-No.	Colour	Dimensions	Operating voltage
Service terminal ST 220	For parameter setting and diagnosis for TZ 320, TE 220, automatic door systems, drives from the IQ windowdrive series and THZ N4, THZ Comfort N4, battery operation with 4x AAA cells (not supplied by GEZE), plain text display on illuminated panel, keypad for operation / Parameter changes to GEZE systems may only be carried out by experts who have been authorised by the manufacturer	087261	blue	80 x 125 x 37 mm	24 V

## Powerchain



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\* The products designated above may vary in form, type, characteristics, function, or availability depending on the country. Please get in touch with your GEZE contact person if you have any questions.