STABILUS

YOUR MOTION. OUR SOLUTION.

INDUSTRIAL POWERISE® IPR35

The new class of linear actuators

DATA SHEET

LIFTING AND POSITIONING
AT THE PUSH OF A BUTTON


STABILUS
STABILUS

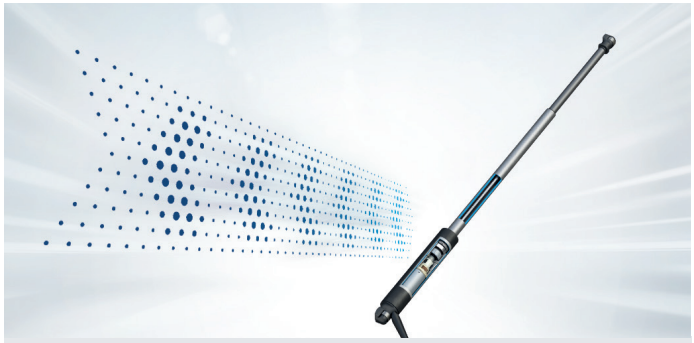
PRODUCTS
A FAMILY WITH POWER

The combination makes the difference

Every industrial application is different. Industrial POWERISE® offers a range of options even in the standard variants: This includes different combinations such as spindle pitch, force, stroke and speed, external or internal control units and/or enhanced communication options up to a CAN bus interface. Even with extensive configuration options, streamlined dimensions allow for ergonomic product design.

You have a choice:

- From the factory by ACE
- Adjustment via Hahn Gasfedern
- Custom development with Stabilus



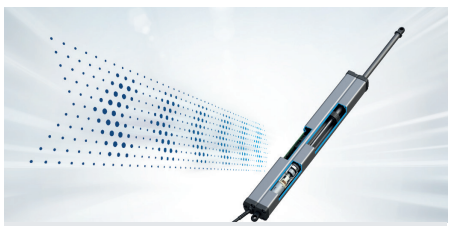
IPR35

- External controller
- Ideal for moderate forces up to 2.5 kN
- Standard products for different applications and configurations

See what's coming next

IPR35 SMART

- Integrated control
- Synchronous operation of up to four actuators
- Simple activation



IPR40

- Built-in limit switch
- Active and passive forces up to 5 kN
- Various connection options

IPR40 SMART

- Internal control
- Safety according to EN ISO 13849-1
- CAN bus communication

INDUSTRIAL POWERISE®

POWER MEETS CONTROL

Industrial POWERISE® is the new class of ergonomic-focused linear actuators designed for manual override, safety, and quick integration in custom applications.
Capable of replacing pneumatic, hydraulic, and manual efforts, they offer fully customizable automatic motion control solutions. With the support and experience of Stabilus engineering, POWERISE® can be designed to accommodate the unique safety needs of operators and technicians.

PROVEN FEATURES AND UNIQUE SYSTEM RANGE

Partnering with Stabilus provides world-class engineering expertise for modern, customer-driven solutions. Our maintenance-free performance, manual adjustment, and electrical movement—paired with our globally recognized pneumatic gas springs—offers a unique system range to create innovative, custom products.

APPLICATION ENGINEERING

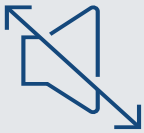
Partnership to develop exactly the right solution for your requirements

ACTUATOR PLUS GAS SPRINGS

Unique combination of dynamic force and load compensation for faster movements, higher weight capacities, and seamless manual adjustments.

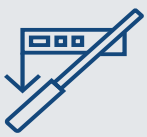
AVAILABLE FROM STOCK

Get the maintenance-free Industrial POWERISE® actuators within short notice



SILENT MOVEMENT

Best-in-class noise performance for sensitive environments



INTEGRATED CONTROL

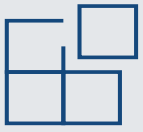
Integration of the ECU (electronic control unit) in the actuators (for SMART models)

SAFETY INTEGRATED

Safe control according to EN ISO 13849-1 (for IPR40 Smart and the external ECU)

AUTOMOTIVE DNA

Stabilus is the OEM No. 1 in the industry with the IATF certified actuator of the Automotive POWERISE®



MODULAR SYSTEM

Custom configuration and simple adjustment on a modular basis

TECHNOLOGY

100% "INDUSTRIAL"

POWERISE® linear actuators are available with spindle pitches between 2 and 30 mm. That means they open up all new application approaches with minimal manual adjustment force and effortless operation – even without power. Industrial POWERISE® remains ready to use, even where actuators with a self-locking feature can no longer be moved, or require complicated uncoupling.

GENERAL SPECIFICATIONS

MAIN FACTS AND FIGURES OF THE SYSTEM

Technical data

Operating voltage: 12 V or 24 V

Rated force range: 250 - 1,000 N

Peak force range: 1,000 - 4,000 N*

Stroke range: 50 - 350 mm; standard in 50 mm increments

Noise level: 55 dB (A), for general applications; exact result is installation-dependent

Duty cycle: Max 10%, 20 sec on, 180 sec off

Lifetime cycles: Min. 50.000, application- and load-dependent based on operating point

Environmental conditions

Operating temperature: -30 °C to +80 °C

Storage temperature: -40 °C to +90 °C

Ingress protection class: Up to IP67, IEC 60529

Corrosion resistance: 144 hours, ISO 9227-NSS

UV Resistance: DIN EN ISO 16474-2

Vibration Resistance: DIN EN 60068-2-64

Shock Resistance: DIN EN 60068-2-27

Regulatory standards: EN 60204-1:2018 Safety - Electrical equipment of machines

EN 60335-1:2012 Safety - Household and similar electrical appliances

EN IEC 55014-1:2021 EMC Emission - Household appliances, electric tools and similar apparatus

EN IEC 61000-6-3:2021 EMC Emission - Residential environments

FCC Part 15 B / IECS-003 EMC Emission

Motor variants

	12 V Motor	24 V Motor
Maximum voltage	16 V	30 V
Peak current (Inrush or momentary use <2sec)	25.2 A	9.7 A
Nominal operating current	7 A	3.5 A

Cable bending radius

Static bend: 37.5 mm (1.5 in)

Continuous bending: 112.5 mm (4.4 in)

*on request

ADDITIONAL TECHNICAL DATA
THERMAL PROTECTION FOR MOTOR

With the bimetallic circuit breaker, you can be sure that your Industrial POWERISE® actuator will not be exposed to thermal overload.

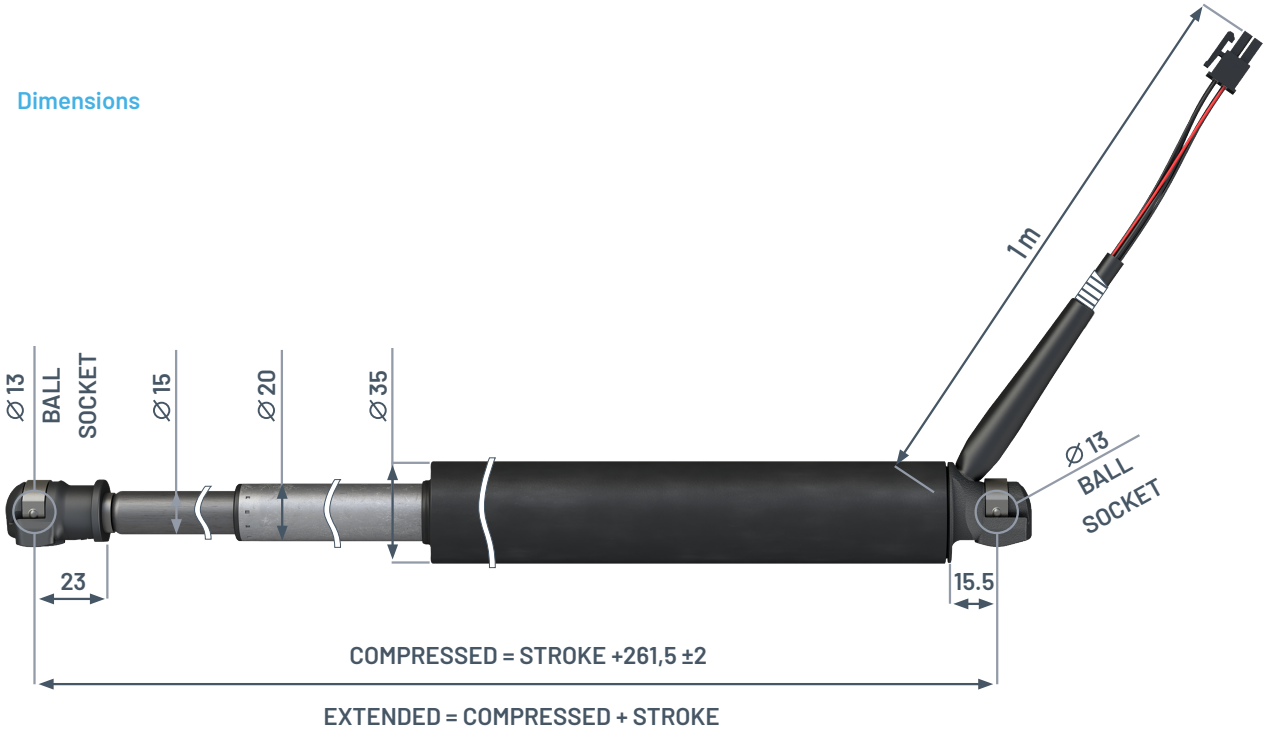
Thermal protection is crucial for the safe function and longevity of your components.

Conditions

Motor thermal protection: Automatic power cutoff via integrated thermal Switch
– Motor function is blocked

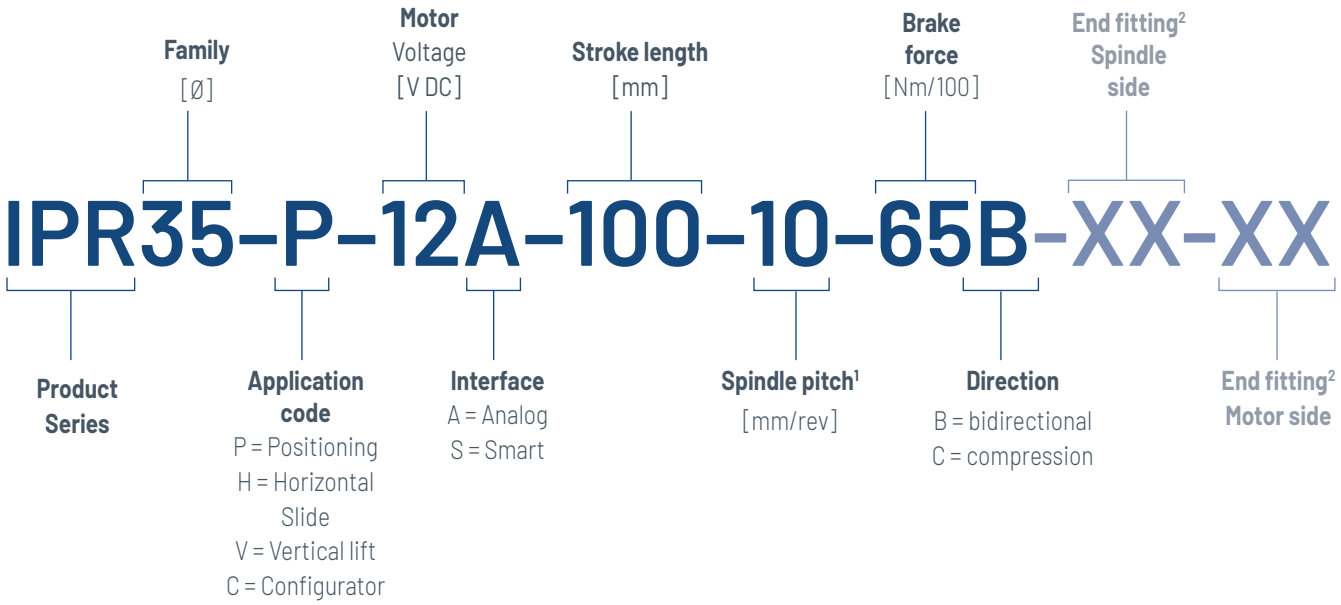
Protection activation: 120 °C (248 °F)

Dimensions



TYPE OVERVIEW

ONE PRODUCT, VARIOUS APPLICATIONS



[1] Further spindle pitches on request
[2] not relevant for IPR35

Description of vertical lift

- Application examples: Hoods and roofs
- Specialized for holding high compression loads and easy manual movement in extension
- Designed with compression brake only

Description of horizontal slide

- Application examples: Doors and entryways
- Low holding force for easy manual movement in either direction
- Designed with high spindle pitches, light brakes

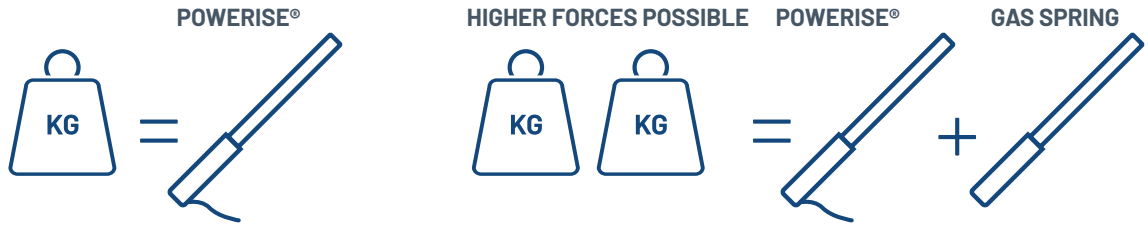
Description of positioning system

- Applications examples: Traditional linear actuators, general purpose
- High holding force in both directions, containing a dual-action friction brake
- Designed with strong brake in both directions

COMBINATION WITH GAS SPRINGS

DYNAMIC FORCE MEETS LOAD COMPENSATION

Industrial POWERISE® delivers the dynamic force – the gas springs add load compensation. This provides you and your application with uniquely ergonomic, force- and energy-saving and safe movement and operation – even in an emergency like a power outage. Generally, you can move objects faster while gently applying manual force. This combination opens the door to new applications that you can use to stand out from the competition.



One Industrial POWERISE® actuator can be combined with different gas springs to suit a range of application sizes. The actuator configuration stays identical.

TECHNICAL DATA
VERTICAL LIFT

PERFORMANCE DATA

For vertical lift [V]

				Rated			Peak [1]		Holding force	
TYPES	Spindle pitch mm/rev	Motor Voltage V DC	No load speed mm/s	pushing force N	pulling force N	speed mm/s	force, push N	force, pull N	extension N	compression N
IPR35-V-12A-XXX-15-65C	15	12	85	390	210	70	1,100	1,050	120	390
IPR35-V-24A-XXX-15-65C	15	24	85	450	280	57	1,050	950	120	390
IPR35-V-12A-XXX-8-65C	8	12	35	750	420	28	2,000	1,700	220	760
IPR35-V-24A-XXX-8-65C	8	24	35	880	550	23	1,900	1,600	220	760

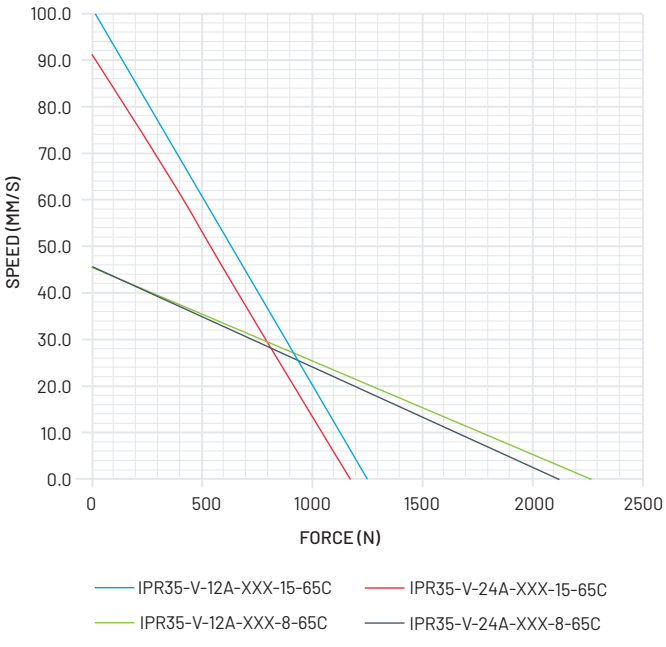
[1] Recommended no more than 2 s

Individual part numbers

	Stroke / Extended length						
TYPES	50 / 361.5 mm	100 / 461.5 mm	150 / 561.5 mm	200 / 661.5 mm	250 / 761.5 mm	300 / 861.5 mm	350 / 961.5 mm
IPR35-V-12A-XXX-15-65C	709410	709171	425953	602332	425714	425475	426192
IPR35-V-24A-XXX-15-65C	706064	705347	720162	187189	720401	720640	720879
IPR35-V-12A-XXX-8-65C	709649	709888	372895	606156	372417	373612	374807
IPR35-V-24A-XXX-8-65C	706303	705825	921160	188384	721357	721596	721118

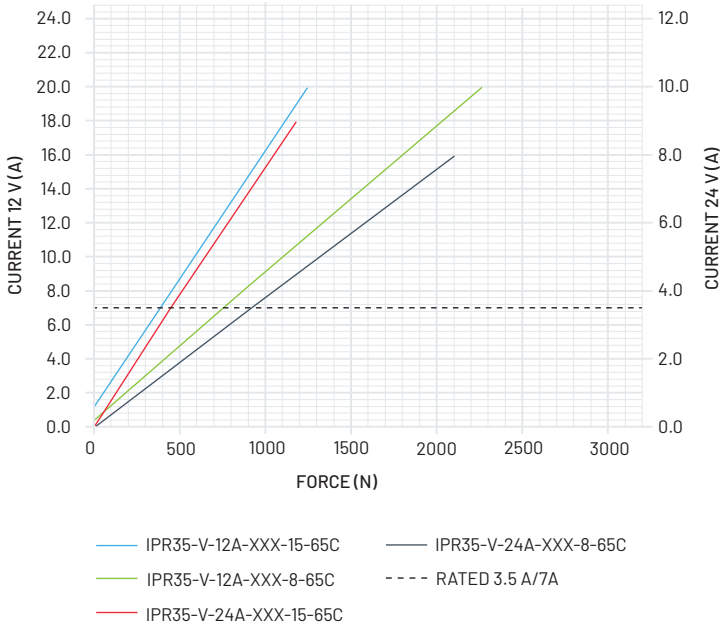
PERFORMANCE DIAGRAMS

Vertical lift – force/speed ratio



Values shown for extension movement

Vertical lift – force/current ratio



TECHNICAL DATA
HORIZONTAL SLIDE

PERFORMANCE DATA

For horizontal slide [H]

				Rated		Peak [1]	Holding force	
TYPES	Spindle pitch mm/rev	Motor Voltage V DC	No load speed mm/s	force N	speed mm/s	force N	extension N	compression N
IPR35-H-12A-XXX-15-20B	15	12	90	340	70	1,050	180	180
IPR35-H-24A-XXX-15-20B	15	24	90	410	57	950	180	180

[1] Recommended no more than 2 s

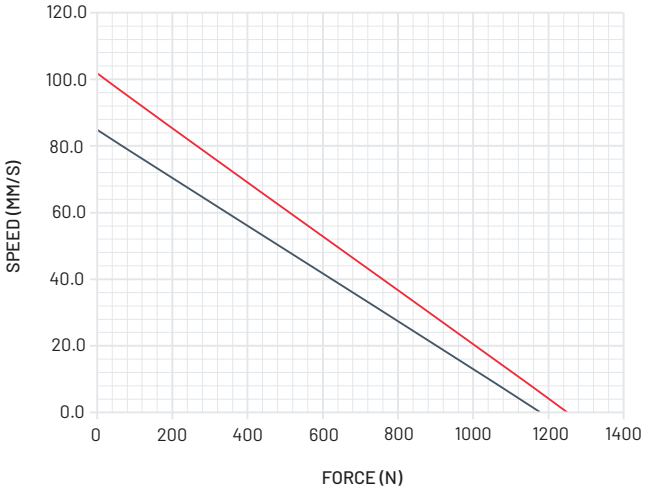
Individual part numbers

	Stroke / Extended length						
TYPES	50 / 361.5 mm	100 / 461.5 mm	150 / 561.5 mm	200 / 661.5 mm	250 / 761.5 mm	300 / 861.5 mm	350 / 961.5 mm
IPR35-H-12A-XXX-15-20B	*	422846	421412	601137	424997	425236	426670
IPR35-H-24A-XXX-15-20B	*	715143	043553	186950	715382	716099	716338

* Contact Stabilus

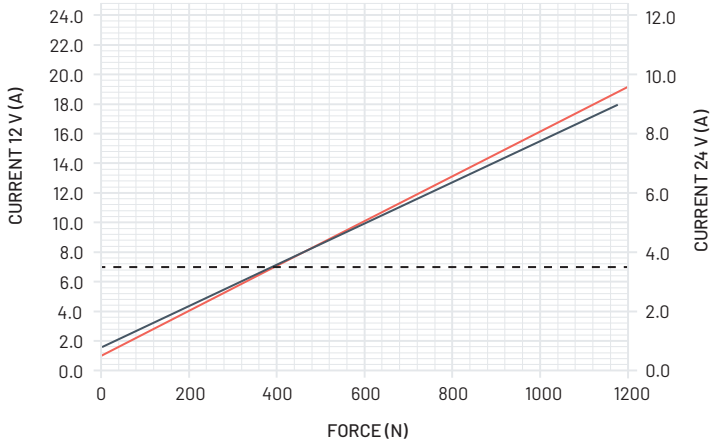
PERFORMANCE DIAGRAMS

Horizontal slide-force/speed ratio



Values shown for extension movement

Horizontal slide-force/current ratio



TECHNICAL DATA
POSITIONING SYSTEM

PERFORMANCE DATA

For positioning system [P]

				Rated		Peak [1]	Holding force	
TYPES	Spindle pitch mm/rev	Motor Voltage V DC	No load speed mm/s	force N	speed mm/s	force N	extension N	compression N
IPR35-P-12A-XXX-10-65B	10	12	50	280	46	1,350	550	550
IPR35-P-24A-XXX-10-65B	10	24	50	380	38	1,250	550	550
IPR35-P-12A-XXX-4-65B	4	12	20	630	18	2,550	1,680	1,680
IPR35-P-24A-XXX-4-65B	4	24	20	860	15	2,400	1,680	1,680

[1] Recommended no more than 2 s

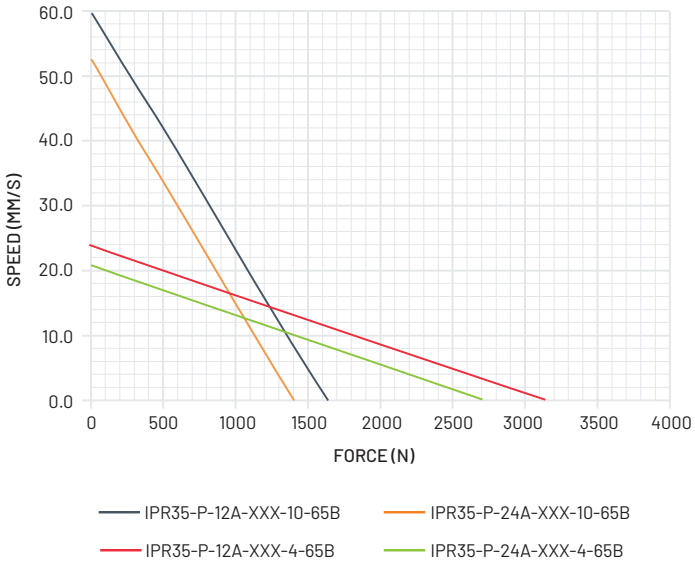
Individual part numbers

	Stroke / Extended length						
TYPES	50 / 361.5 mm	100 / 461.5 mm	150 / 561.5 mm	200 / 661.5 mm	250 / 761.5 mm	300 / 861.5 mm	350 / 961.5 mm
IPR35-P-12A-XXX-10-65B	426909	427148	427865	593967	446268	446507	446746
IPR35-P-24A-XXX-10-65B	713948	703432	703193	548078	714187	714426	714665
IPR35-P-12A-XXX-4-65B	449375	795210	448897	*	*	*	*
IPR35-P-24A-XXX-4-65B	576281	547839	577476	*	*	*	*

* Contact Stabilus

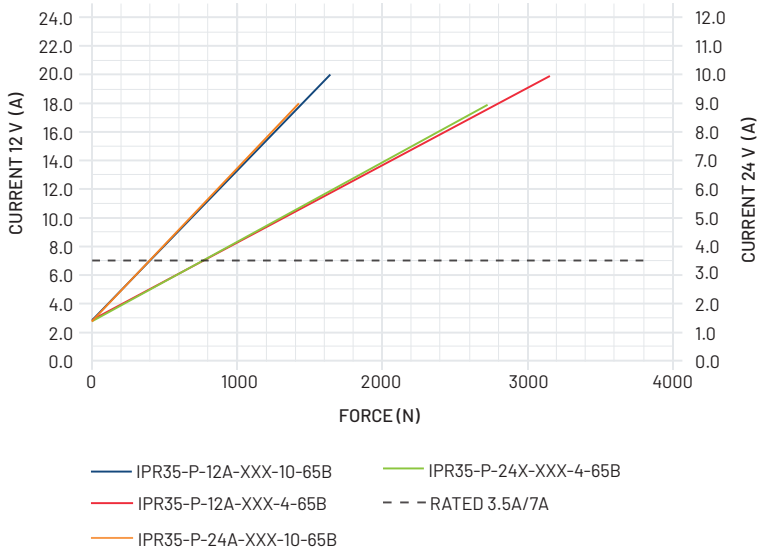
PERFORMANCE DIAGRAMS

Positioning system–force/speed ratio



Values shown for extension movement

Positioning system–force/current ratio



INTERFACES

MAKE YOUR CONNECTIONS!

MECHANICAL INTERFACE

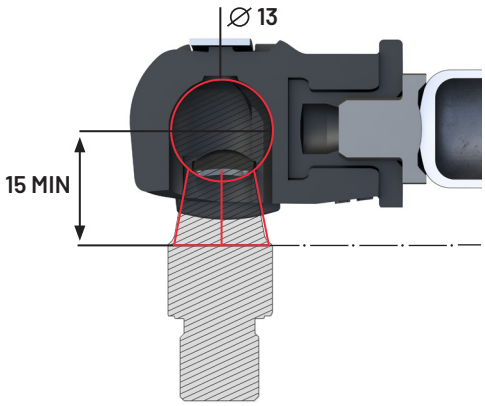
End fittings

Type: 13 mm ball socket with clip

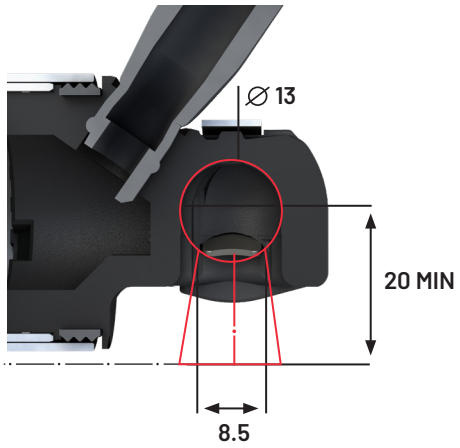
Orientation: 360° rotating on spindle tube end, body side fixed orientation

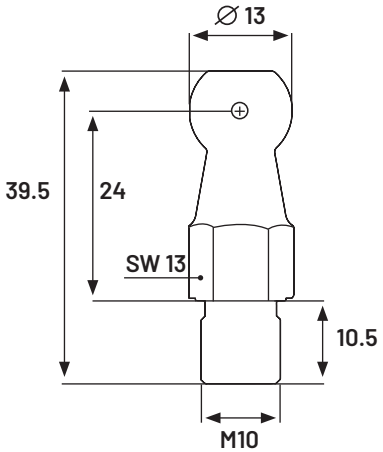
Mounting static bend: Requiring height clearance 20 mm on body end

Rod



Body





Ball Stud Part Number:
373597

INTERFACES

MAKE YOUR CONNECTIONS!

ELECTRICAL INTERFACE

Technical data

Hall sensor resolution: 5 pulses/rev

Hall sensor supply voltage: 4 - 24 V

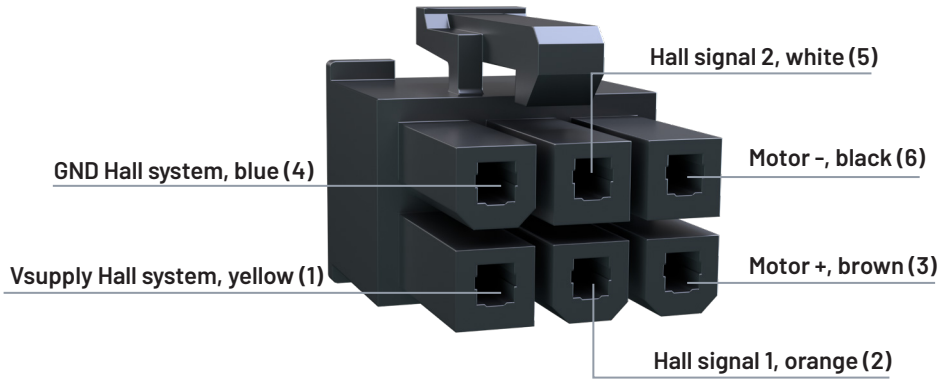
Motor PWM input: 8 - 20 kHz

Connector specification: Molex Mini-Fit Jr. 6-pin (46992-0610)

Polarity assignment

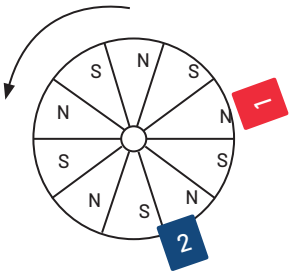
	Plug pin	Polarity
Spindle drive extends	3	+
	6	-

Pin assignment

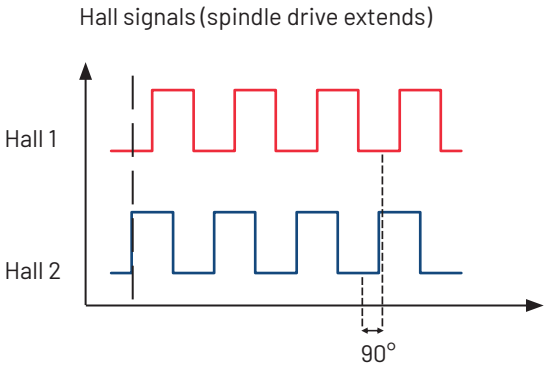


Hall sensor system

- Incremental Hall sensors for position and speed control
- Open-drain outputs
- Phase shift between the two signals indicates direction of rotation



Rotating 10-pole ring magnet



STABILUS REQUEST FORM
INDUSTRIAL POWERISE®

Please submit any project requests to industrial.powerise@stabilus.com.

Customer / Project Information

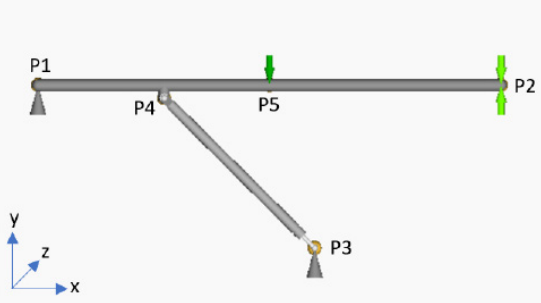
Application Description (Vehicle Name/Model Number, Machine Type, etc.)				
Development phase	Proof of Concept ☐	New Design ☐	Series changeover ☐	Redesign ☐
	Other *(Please Describe)* ☐			
Prototyping Schedule	Project Prototype Delivery Date		Quantity of prototype parts	
Production Schedule	Production Release Date	Annual Quantities	Target price per unit / system	
Legal / Certification Requirements / Norms				
Electromagnetic Compatibility requirements (EMC)				

Application Information

Functional description of the overall system			
Existing version	Manual ☐		Pneumatics ☐
	Gas spring ☐		Hydraulics ☐
	Electric ☐		Other *(please describe):*
Supply voltage	12V ☐	24V ☐	*Note:* *Stabilus can supply a power supply (24V) for Stabilus ECU.*
Control System responsibility	Stabilus ☐	Customer ☐	
Functional requirements of control System			
Manual motion required? Yes ☐ No ☐		**Desired force to operate manually** _____ kg ☐ N ☐	
Required opening / closing time _____ sec.		**Cycle time** _____ sec.	
Lifetime / Number of cycles _____			
Operation temperature _____ °C ☐ °F ☐		**Storage temperature (if necessary)** _____ °C ☐ °F ☐	
Required protection (IP code, etc.)			

Application Information

Geometry
Kinematics (data shown in closed position)
Example: Flap with 90° opening angle (closed position)



Points can be transferred to multiple other applications

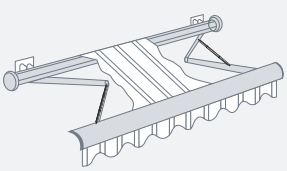
Type of Application / Category		
Positioning	☐	*high holding forces in extension and compression direction necessary*
Horizontal adjustment	☐	*low holding forces necessary*
Vertical adjustment	☐	*high holding force in compression direction necessary*

Point	**Description**	**Coordinate / Value**		
P1	Pivot point	x:	y:	z:
P2	Handle point	x:	y:	z:
P3	Fixation point frame	x:	y:	z:
P4	Fixation point flap	x:	y:	z:
P5	COG	x:	y:	z:
	Opening angle [°]			

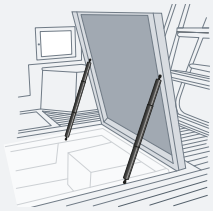
Application weight _____ kg ☐	**Unit, please specify:** _____
Additional weights _____ kg ☐	**Unit, please specify:** _____
Use of gas spring as force support possible? Yes ☐ No ☐	**Use of ball sockets as end-fittings possible?** Yes ☐ No ☐
2D drawings / mounting data available? Yes ☐ No ☐	**3D CAD models / mounting data available?** Yes ☐ No ☐

Illustrations of possible applications and market segments

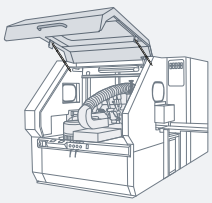
Home-Automation



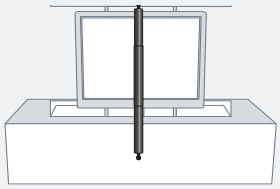
Caravan, Marine, Special Vehicles



Mechanical engineering



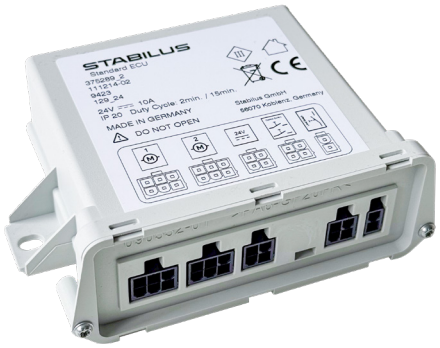
Furniture



YOUR COMPLETE SOLUTION
FROM A SINGLE SOURCE

The controller has been specifically developed by Stabilus for POWERISE® and is manufactured in Germany. It enables the automatic control of two POWERISE® actuators in parallel. Users benefit from three different operation modes:

- **Push-And-Hold = "Jog mode"**
- **Singel Push (Automatic) = One button press**
- **Tip-to-Start (open assist) = Initiate by manual movement**



Technical data

Specification	Value	Units	Notes
Operating Voltage	24	V DC	12 V is available for vehicle usage
Number of actuators	2	Actuators	Driven in parallel
Nominal current*	10	Amps	
Dimensions	132 x 91 x 43	[W x L x H] mm	
Ingress protection rating	IP 20		ISO 20653
Connectors	Molex MiniFit Jr		
Input	Normally open contacts		1 input for extension, 1 input for compression, 1 input for end switch

* Peak current 20 A

Functions

- Speed control
- Virtual End stop
- Soft Start & Stop
- Allows manual movement

Protection and safety features

- Overheat
- Voltage & current level
- Misuse – dynamic brake for overspeed
- Obstacle detection
  - – Reversing after a collision
  - – Overload detection
- Synchronous check (for two actuators)

Standards

- EN 60335-1:2012 Safety - Household and similar electrical appliances
- EN ISO 13849-1:2023 Safety - Machinery control systems*
- EN IEC 55014-1:2021 EMC Emission - Household appliances, electric tools and similar apparatus
- EN IEC 55014-2:2021 EMC Immunity - Household appliances, electric tools and similar apparatus
- EN IEC 61000-6-2:2019 EMC Immunity - Industrial environments
- EN IEC 61000-6-3:2021 EMC Emission - Residential environments
- FCC Part 15 B / IECS-003 EMC Emission

* Depending on the appropriate integration and parametrization of the control unit, it can be used for a performance level up to PLc. For more information, refer to the manual of the control unit

Industrial POWERISE® Component overview

Components	Material number
1 Mechanical end-switch	180244
2 Push button	529444
3 Power supply, 230/110 V AC, 24 V DC	285881
4 Mains cable length 1.80 m	DE/EU 913735 UK 651803 US 651564
5 Standard-ECU 24 V	375289
6 Standard-ECU 12 V	210619
7 Powerise Link	374811

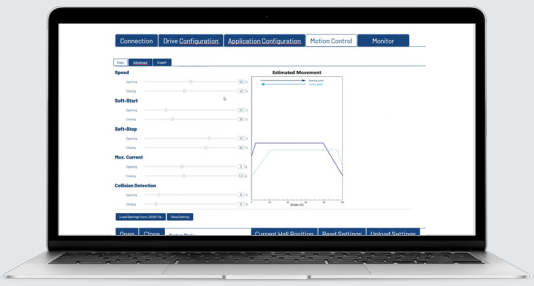
Connection cable and further components are available on request

Powerise Link and Link App

Powerise Link is a programmable adapter for the control unit.
With the Link app, the user can set more than 200 parameters himself.

Parameterization

- Closed loop speed control
- Obstacle detection
- Overload detection
- Slam protection
- Acoustic signals



FROM OUR CATALOG

FIND THE DATA THAT FIT YOUR APPLICATION

Performance data

		Rated			Peak	Holding
APPLICATION CATEGORY	**TYPES**	pushing force **N**	pulling force **N**	speed **mm/s**	force **N**	force **N**
Positioning systems	IPR35-P-12A-XXX-10-65B	280	330	46,0	1,350	550
	IPR35-P-24A-XXX-10-65B	380	440	38,0	1,250	550
	IPR35-P-12A-XXX-4-65B	630	740	18,0	2,550	1,680
	IPR35-P-24A-XXX-4-65B	860	980	15,0	2,400	1,680
Horizontal slide	IPR35-H-12A-XXX-15-20B	340	370	70	1,050	180
	IPR35-H-24A-XXX-15-20B	410	440	57	950	180
Vertical lift	IPR35-V-12A-XXX-15-65C	390	210	70	1,100	120 / 390
	IPR35-V-24A-XXX-15-65C	450	280	57	1,050	120 / 390
	IPR35-V-12A-XXX-8-65C	750	420	28	2,000	220 / 760
	IPR35-V-24A-XXX-8-65C	880	550	23	1,900	220 / 760

* Contact Stabilus

Individual part numbers

Stroke / Extended length						
50 / 361.5 **mm**	100 / 461.5 **mm**	150 / 561.5 **mm**	200 / 661.5 **mm**	250 / 761.5 **mm**	300 / 861.5 **mm**	350 / 961.5 **mm**
426909	427148	427865	593967	446268	446507	446746
713948	703432	703193	548078	714187	714426	714665
449375	795210	448,897	*	*	*	*
576281	547839	577476	*	*	*	*
*	422846	421412	601137	424997	425236	426670
*	715143	043553	186950	715382	716099	716338
709410	709171	425953	602332	425714	425475	426192
706064	705347	720162	187189	720401	720640	720879
709649	709888	372895	606156	372417	373612	374807
706303	705825	921160	188384	721357	721596	721118

INDUSTRIAL POWERISE®

YOUR APPLICATION – YOUR DRIVE

VERTICAL LIFT
TAILGATES AND HOODS

Perfect for tailgates, hoods, and linear adjustments in a vertical direction:

- Various spindle pitches for a multitude of applications
- A combination with gas springs relieves strain on the actuator and allows:
  - Higher weights
  - Ergonomic manual movement
  - Higher travel speeds
- Optimal design for mechanical friction brakes for these applications:
  - Only effective in the direction of movement
  - Keep the application open after the end of movement

HORIZONTAL SLIDE
DOORS & GATES

Only slight braking effect in both directions, for example to be able to move doors and gates smoothly by hand:

- High travel speed
- Easy manual adjustment setting
- Simple and continuous positioning

YOUR MOTION. OUR SOLUTION.

STABILUS

THE GLOBAL MOTION CONTROL SOLUTION PROVIDER TO THE INDUSTRY

- Specialized industrial brands with unique solutions and expertise for each market.
- Wide product range – from simple to complex requirements across all industries.
- Broad global presence that closely connects us with all markets.

Stabilus group of industrial brands

STABILUS

Globally leading series gas spring manufacturer meeting highest automotive quality standards for industrial products in all plants.

ACE

A STABILUS COMPANY

Expert in **industrial damping** and deceleration with **excellent customer support** satisfying most demanding application requirements.

CULTRARO

A STABILUS COMPANY

Global specialists in the **design and manufacture of dampers in compact sizes with high torques** and forces, offering rotary, axial and linear solutions for every damping need.

DESTACO

A STABILUS COMPANY

A global leader in the design and manufacture of **high-performance automation, workholding, and remote handling solutions.**

FABREEKA®

A STABILUS COMPANY

Leading supplier for **individual vibration isolation and shock control** solutions.

General Aerospace

A STABILUS COMPANY

Innovative supplier of distinctive **airline motion control solutions.**

HAHN GASFEDERN

A STABILUS COMPANY

Experienced provider of **customized and special** gas springs with **very fast** time to market.

TECHPRODUCTS

A STABILUS COMPANY

Experienced manufacturer of **elastomeric vibration isolators and shock mounts.**

STABILUS

YOUR MOTION. OUR SOLUTION.

Stabilus GmbH
1201 Tulip Dr,
Gastonia, NC 28052
T (704) 865-7444
info@stabilus.com
www.stabilus.com

QR code takes you to our International Locations

@stabilus

@stabilusgroup