



INDUSTRIAL POWERISE® IPR35

The new class of electromechanical drives

DATA SHEET

LIFTING AND POSITIONING
AT THE PUSH OF A BUTTON

INDUSTRIAL POWERISE®

POWER MEETS CONTROL

Industrial POWERISE® is the new class of electromechanical drives for elegant, precise, and powerful motion control. They deliver safety, comfort, and protection while facilitating maintenance in a wide variety of applications.

PROVEN FEATURES AND UNIQUE SYSTEM RANGE

You will also benefit from proven features like **maintenance-free** performance or convenient **manual adjustment**, in addition to electrical movement. **Combined with** our globally leading **gas springs**, Industrial POWERISE® offers a system range that's unique within the industry.



APPLICATION ENGINEERING

Partnership to develop exactly the right solution for your requirements



ACTUATOR PLUS GAS SPRINGS

Unique combination of dynamic force and load compensation

- Faster movement
- Higher weights possible
- Smoother manual movement



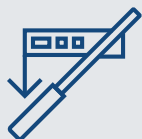
AVAILABLE FROM STOCK

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



SILENT MOVEMENT

Best-in-class noise performance for sensitive environments



INTEGRATED CONTROL

Integration of the ECU (electronic control unit) in the drive (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 drive of the Automotive POWERISE®



MODULAR SYSTEM

Custom configuration and simple adjustment on a modular basis

TECHNOLOGY

100% "INDUSTRIAL"

POWERISE® drives 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 comfortable function – even without power. Industrial Powerise® remains ready to use, even where drives with 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° to +80° C

Ingress protection class: IP67¹, ISO 20653

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

Storage temperature: -40° C to +90° C

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)

ADDITIONAL TECHNICAL DATA

MOTOR THERMAL PROTECTION

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

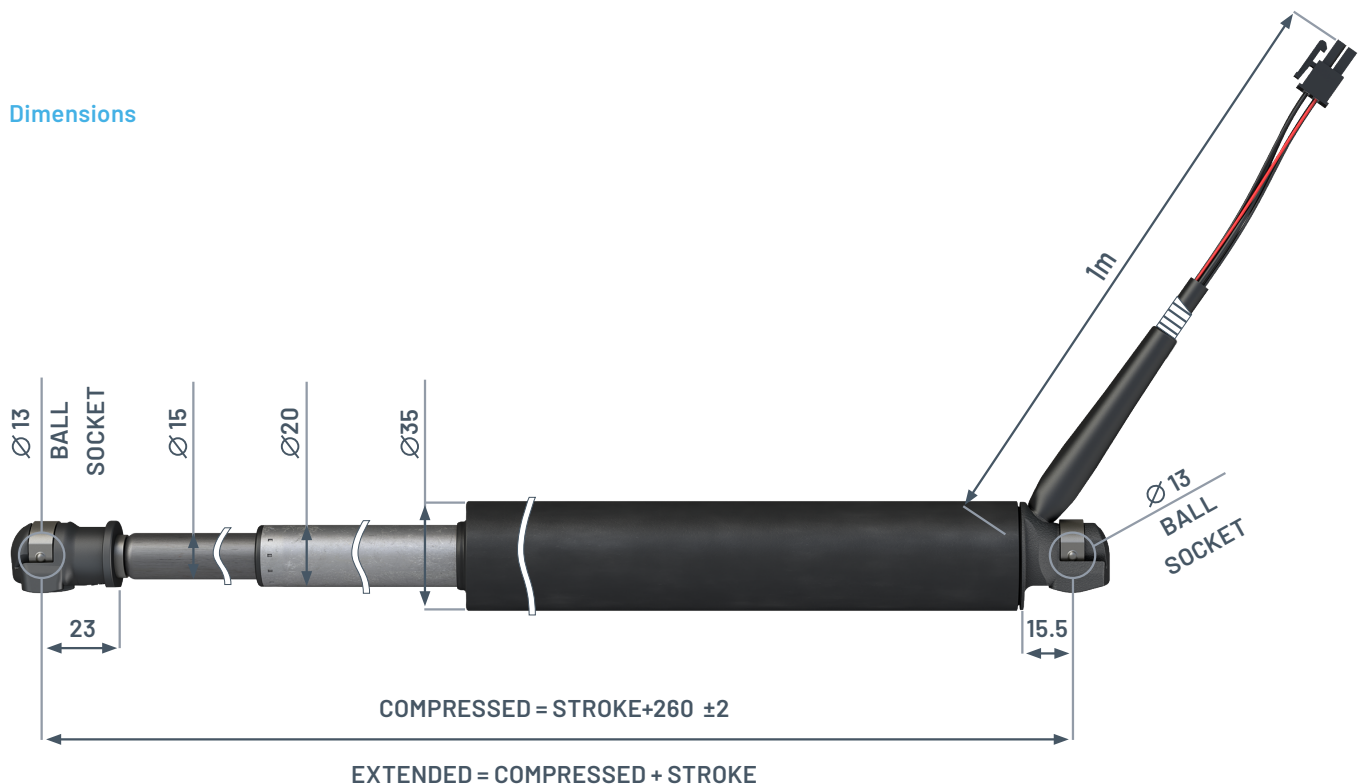
Thermal protection is crucial for the safe function and longevity of your components.

Conditions

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

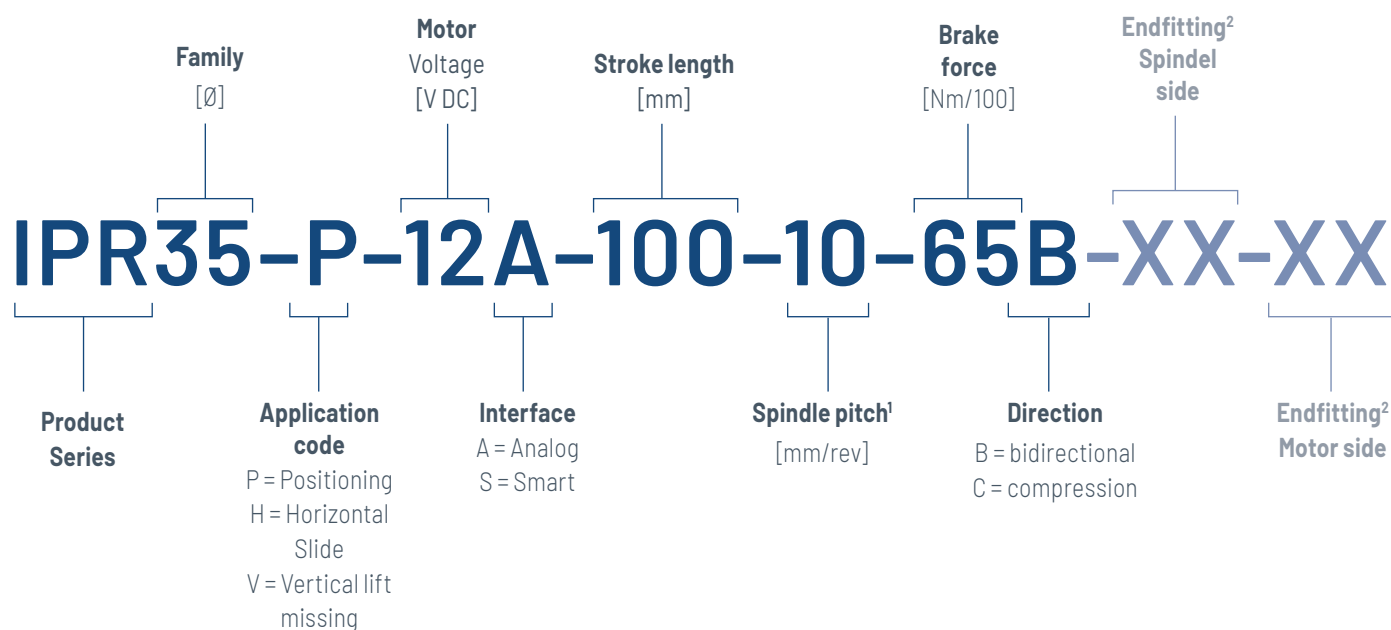
Protection activation: 120° C (248° F)

Dimensions



TYPE OVERVIEW

ONE PRODUCT, VARIOUS APPLICATIONS



¹ Further spindle pitches on request

² not relevant for IPR35



Description 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 Horizontal slide

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



Description 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

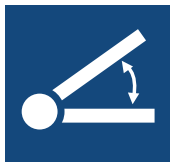
COMBINATION WITH GAS SPRINGS

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 differentiate yourself from the competition.



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



TECHNICAL DATA

VERTICAL LIFT

PERFORMANCE DATA

For vertical lift [V]

TYPES	Spindle pitch mm/rev	Motor Voltage V DC	No load speed mm/s	Rated			Peak ¹			Holding force	
				pushing force N	pulling force N	speed mm/s	force, push N	force, pull N	current A	extension N	compression N
IPR35-V-12A-XXX-15-65c	15	12	90	410	260	70	1,300	1,200	20	110	400
IPR35-V-24A-XXX-15-65c	15	24	80	410	260	57	1,100	1,000	9	110	400
IPR35-V-12A-XXX-6-65c	6	12	90	1,020	630	28	3,200	3,000	20	90	1,050
IPR35-V-24A-XXX-6-65c	6	24	80	1,020	630	23	2,800	2,600	9	80	1,050

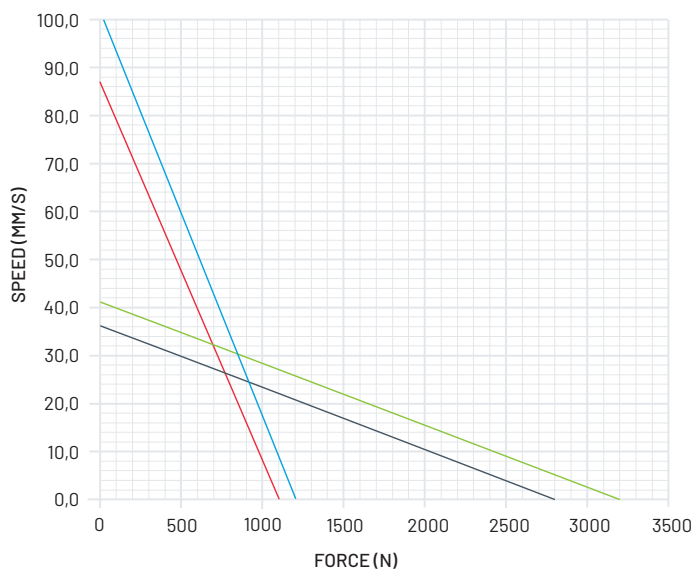
¹ Recommended no more than 2s

Individual part numbers

TYPES	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
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-6-65c	709649	709888	372895	606156	372417	373612	374807
IPR35-V-24A-XXX-6-65c	706303	705825	921160	188384	721357	721596	721118

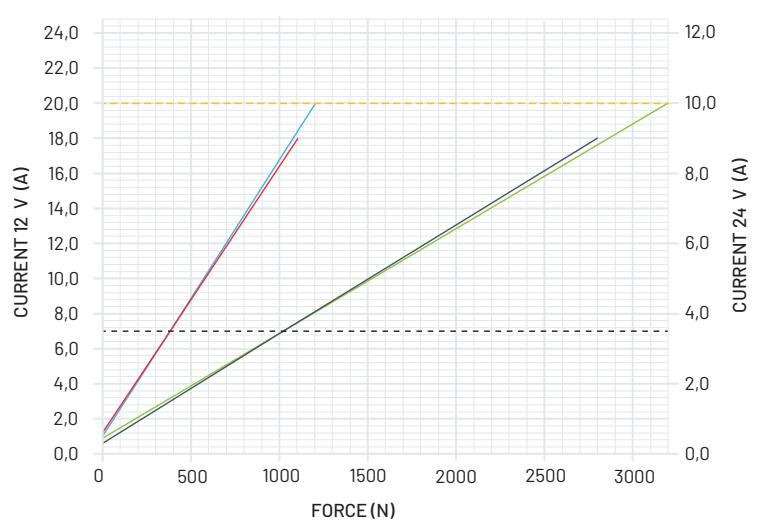
PERFORMANCE DIAGRAMS

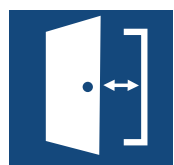
Vertical lift – force/speed ratio



Values shown for extension movement

Vertical lift – force/current ratio





TECHNICAL DATA

HORIZONTAL SLIDE

PERFORMANCE DATA

For horizontal slide [H]

TYPES	Spindle pitch mm/rev	Motor Voltage V DC	No load speed mm/s	Rated		Peak ¹		Holding force	
				force N	speed mm/s	force N	current A	extension N	compression N
IPR35-H-12A-XXX-15-2b	15	12	90	410	70	1,200	20	170	170
IPR35-H-24A-XXX-15-2b	15	24	80	410	57	1,100	9	170	170

¹ Recommended no more than 2s

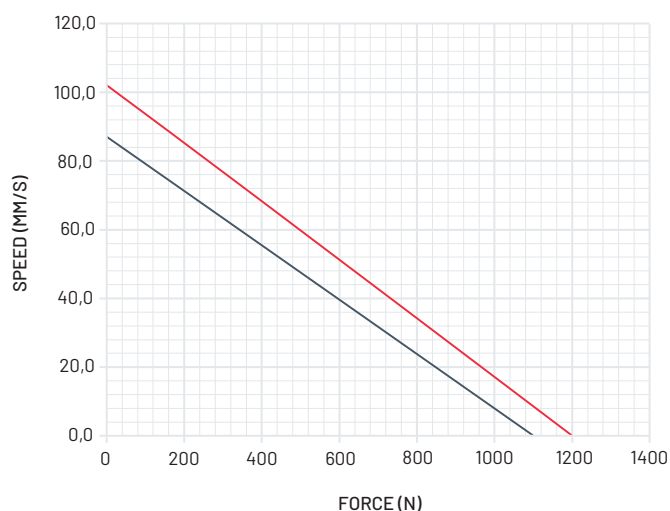
Individual part numbers

TYPES	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
IPR35-H-12A-XXX-15-2b	*	422846	421412	601137	424997	425236	426670
IPR35-H-24A-XXX-15-2b	*	715143	043553	186950	715382	716099	716338

* Contact Stabilus

PERFORMANCE DIAGRAMS

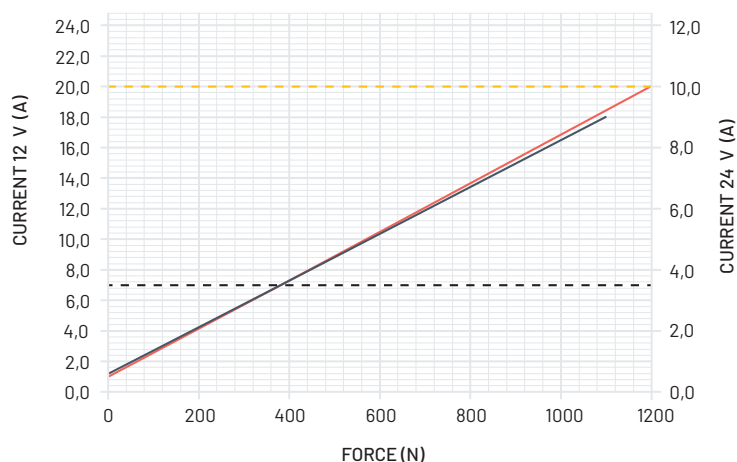
Horizontal slide-force/speed ratio



— IPR35-H-12A-XXX-15-2B
— IPR35-H-24A-XXX-15-2B

Values shown for extension movement

Horizontal slide-force/current ratio



— IPR35-H-12A-XXX-15-2B — PEAK MOMENTARY LIMIT
— IPR35-H-24A-XXX-15-2B - - - RATED 3.5A/7A



TECHNICAL DATA

POSITIONING SYSTEM

PERFORMANCE DATA

For positioning system [P]

TYPES	Spindle pitch mm/rev	Motor Voltage V DC	No load speed mm/s	Rated		Peak ¹		Holding force	
				force N	speed mm/s	force N	current A	extension N	compression N
IPR35-P-12A-XXX-10-65B	10	12	55	390	46	1,700	20	600	600
IPR35-P-24A-XXX-10-65B	10	24	50	390	38	1,400	9	600	600
IPR35-P-12A-XXX-4-65B	4	12	22.5	880	18	3,800	20	1,820	1,820
IPR35-P-24A-XXX-4-65B	4	24	20	880	15	3,300	9	1,820	1,820

¹ Recommended no more than 2s

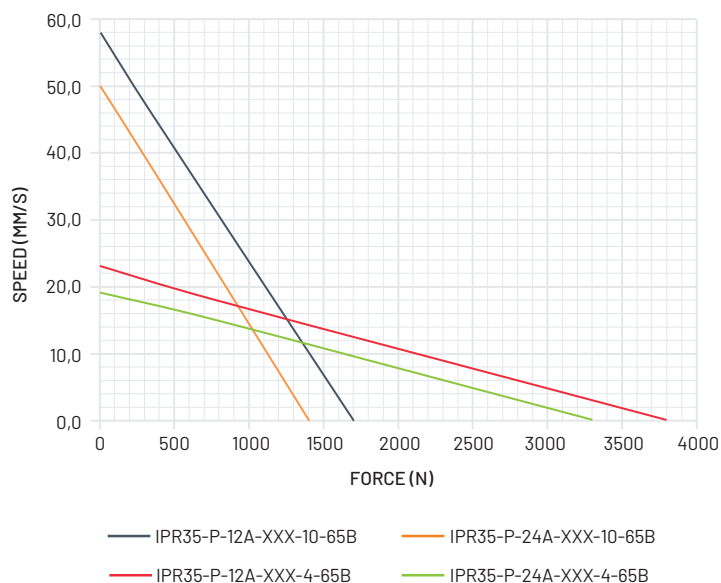
Individual part numbers

TYPES	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
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

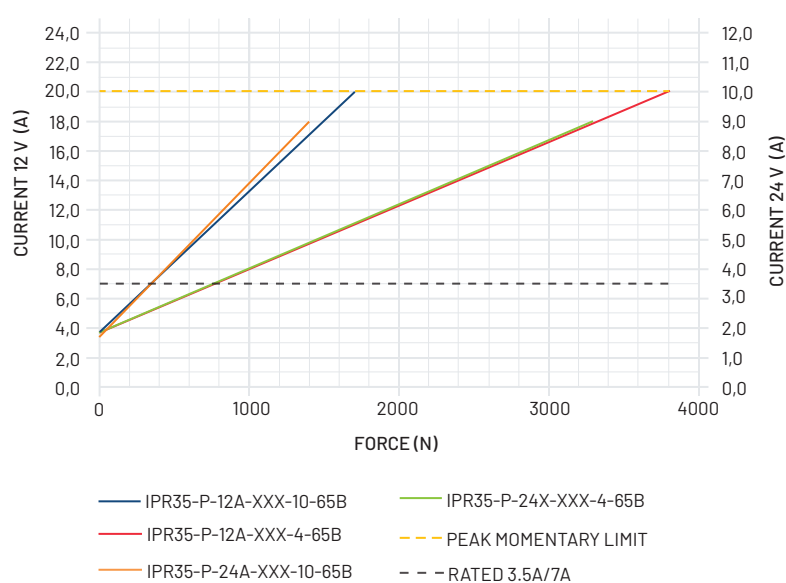
PERFORMANCE DIAGRAMS

Positioning system–force/speed ratio



Values shown for extension movement

Positioning system–force/current ratio



INTERFACES

MAKE YOUR CONNECTIONS!

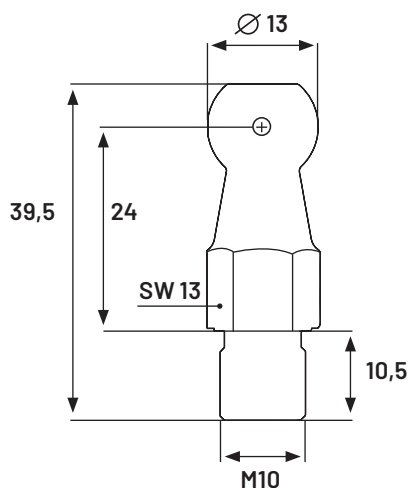
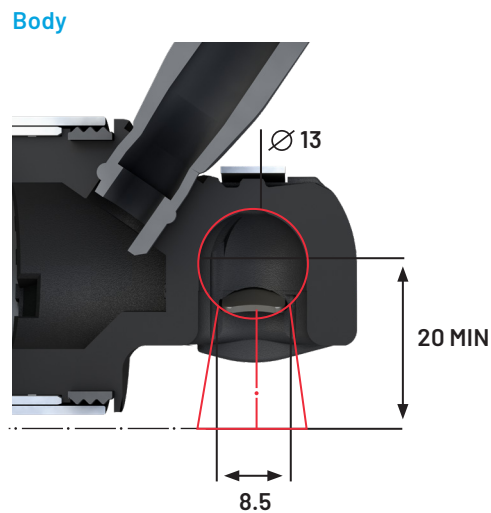
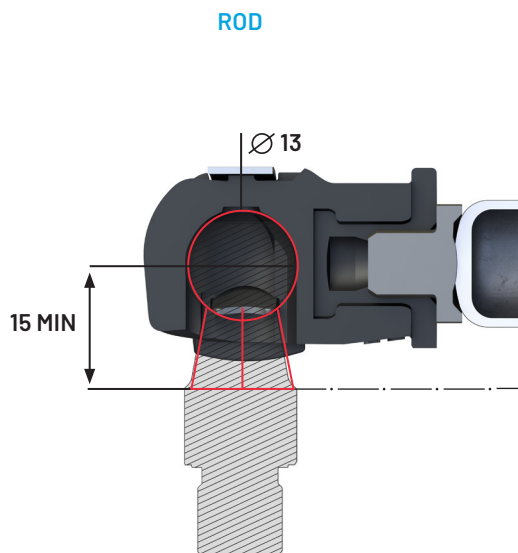
MECHANICAL INTERFACE

End fittings

Type: 13 mm ball socket with Clip

Orientation: 360° rotating on Spindle Tube End, Body side is fixed

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



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

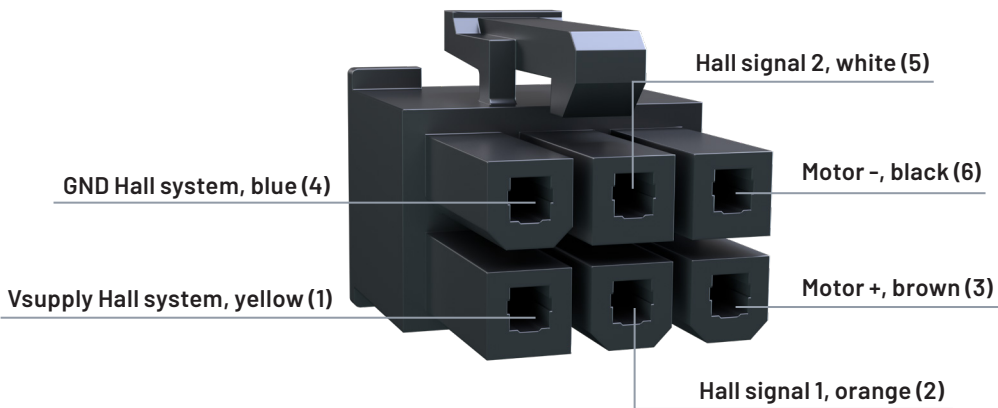
Motor PWM input: 8 - 20 kHz

Connector specification: Molex Mini-Fit Jr. 6-pin, 1 m length

Polarity assignment

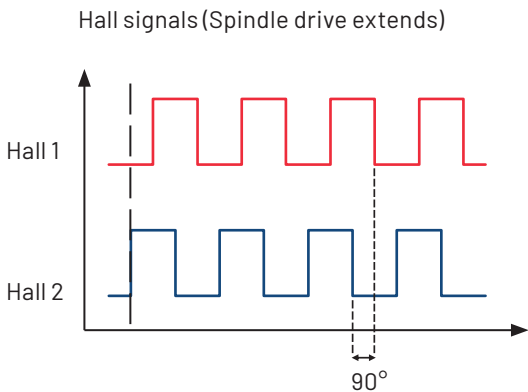
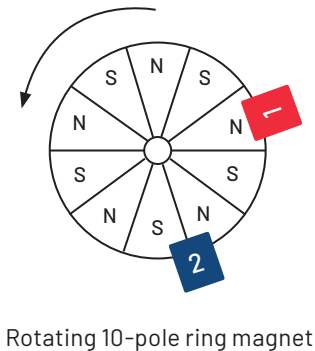
	Plug pin	Polarity
Spindle drive extends	3	+
	6	-

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



STABILUS REQUEST FORM

INDUSTRIAL POWERISE

For project requests, please submit it 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 Release Date	Annual Quantities	Target Price per unit / system	
Legal / Certification Requirements / Norms				
Electromagnetic Compatibility requirements (EMC)				

Application Information

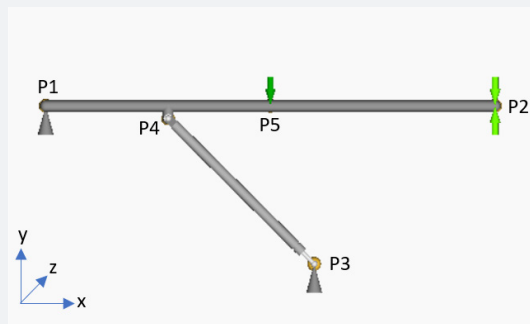
Functional description of the overall system			
Existing version	Manual ☐	Pneumatics ☐	
	Gas spring ☐	Hydraulics ☐	
	Electric ☐	Other (please describe):	
Supply voltage	12V ☐	24V ☐	<i>Note: Stabilus can supply a power supply (24V) for Stabilus ECU.</i>
Control System responsibility	Stabilus ☐	Customer ☐	
Functional requirements 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

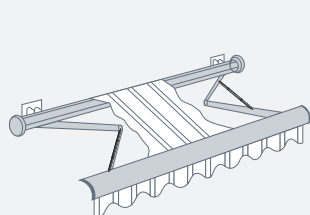
Positioning	☐	high holding forces in extension and compression direction necessary
Horizontal adjustment	☐	low holding forces necessary
Vertical adjustment	☐	high holding force in compression direction necessary

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-fitting possible? Yes ☐ No ☐
2D drawings / mounting data available? Yes ☐ No ☐	3D CAD Models / mounting data available? Yes ☐ No ☐

Illustratives of possible applications and market segments

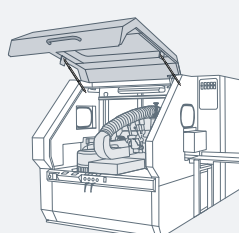
Home-Automation



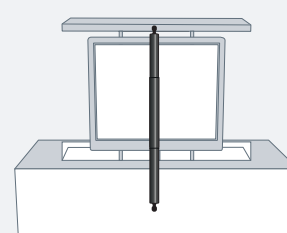
Caravan, Marine, Special Vehicles



Mechanical engineering



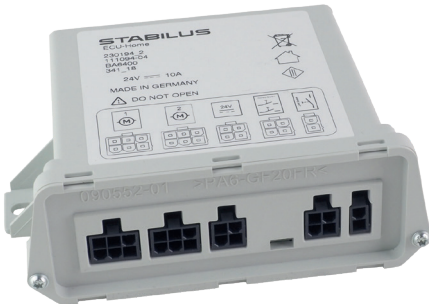
Furniture



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”
- Automatic = One button press
- Tip-to-Run = 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

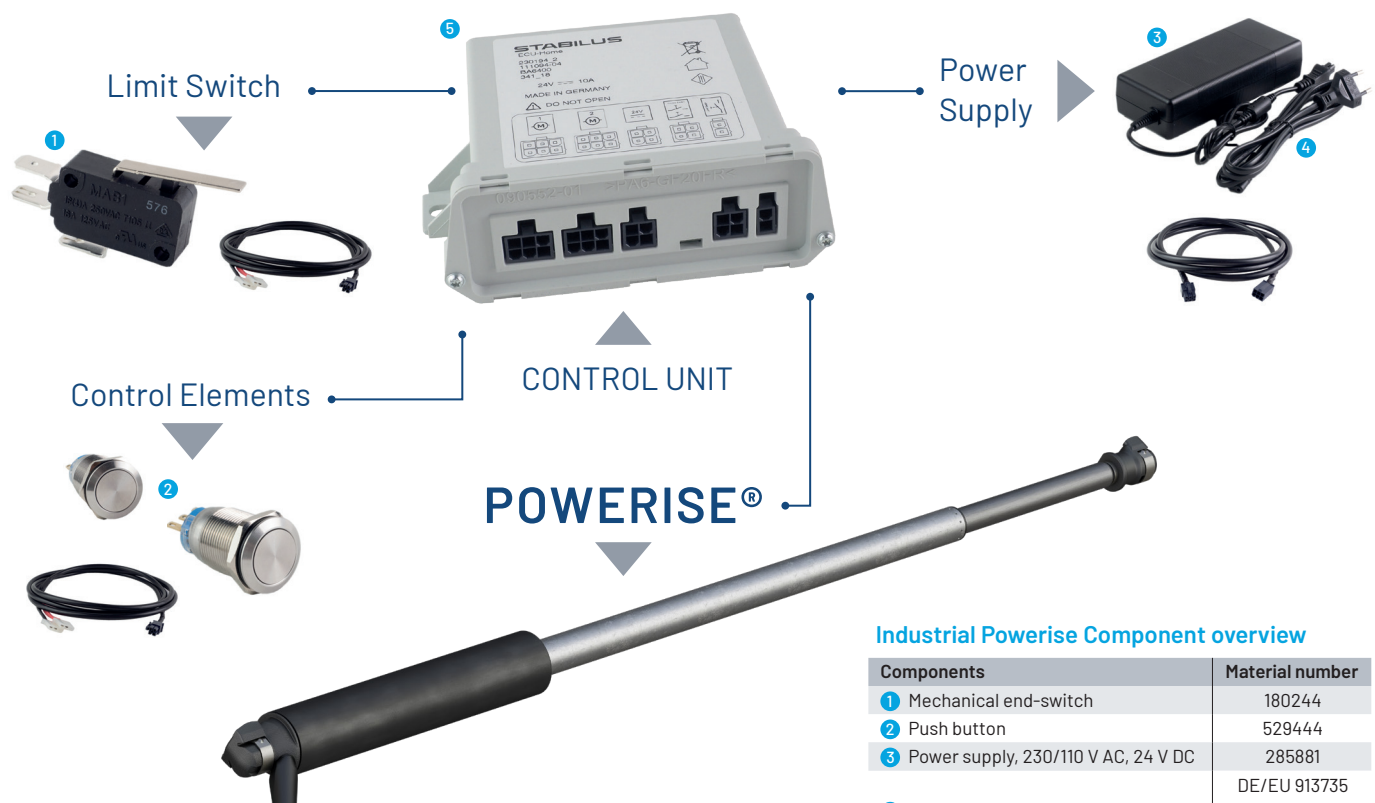
Protection and safety features

- Overheat
- Voltage & current level
- Slam protection – 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
- ...



Available soon

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	340	390	46	1,800	600	
	IPR35-P-24A-XXX-10-65b	340	390	38	1,600	600	
	IPR35-P-12A-XXX-4-65b	760	880	18	4,200*	1,820	
	IPR35-P-24A-XXX-4-65b	760	880	15	3,600*	1,820	
Horizontal slide	IPR35-H-12A-XXX-15-2b	380	410	70	1,300	170	
	IPR35-H-24A-XXX-15-2b	380	410	57	1,200	170	
Vertical lift	IPR35-V-12A-XXX-15-65c	410	260	70	1,300	110 / 400	
	IPR35-V-24A-XXX-15-65c	410	260	57	1,100	110 / 400	
	IPR35-V-12A-XXX-6-65c	1,020	630	28	3,200*	300 / 1,050	
	IPR35-V-24A-XXX-6-65c	1,020	630	23	2,800	300 / 1,050	

* 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

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