

SCHIENLE
MAGNETTECHNIK

Proportionalmagnete für Hydraulikventile
Proportional solenoid for hydraulic valves

Proportionalmagnete für Hydraulikventile

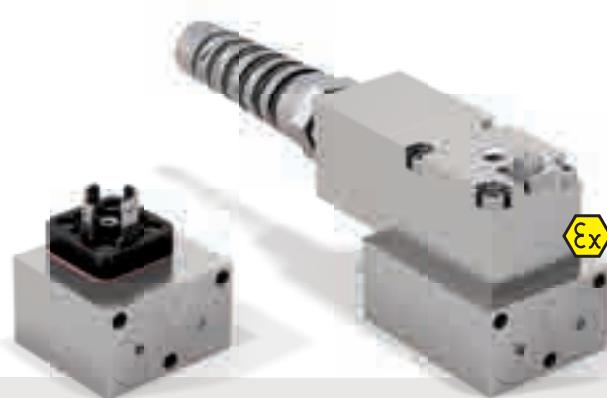
Proportional solenoid for hydraulic valves



Proportionalmagnete Baugröße 25 bis 60
in Non-Ex und Ex-Ausführung
Proportional solenoid Size 25 to 60
in Non-Ex and Ex-Version

10 – 17

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Zwillingsmagnete Baugröße 1 bis 2
in Non-Ex und Ex-Ausführung
Twin solenoid Size 1 to 2
in Non-Ex and Ex-Version

18 – 22

PAGE

Das Unternehmen

The Company

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Die Schienle Magnettechnik + Elektronik GmbH ist ein Unternehmen der HAWE Gruppe. Seit über 40 Jahren entwickelt und produziert Schienle Antriebslösungen und Sensoren für ein breites Anwendungsspektrum.

Unsere Erzeugnisse finden sich weltweit in einer Vielzahl bekannter Produkte namhafter Hersteller aus folgenden Branchen:

- + Rohstoff/Energieträgergewinnung
- + Hydraulik
- + Pneumatik
- + Medizintechnik
- + Nahrungsmittelindustrie

In den vergangenen 15 Jahren haben wir uns zu einem international anerkannten Unternehmen für Explosions-schutzlösungen entwickelt.

Als eines der wenigen Unternehmen der Elektromagnet-branche verfügen wir über sämtliche erforderlichen Zulassungen, welche es uns erlauben, explosionsge-schützte Produkte für alle Regionen weltweit zu entwi-ckeln und zu produzieren, sowie dort zu vertreiben.

Hierbei unterliegen wir einer strengen externen Prozessüberwachung mit einer Vielzahl an Überwachungsaudits durch die unterschiedlichsten Zertifizierungspartner rund um den Globus. Eine derartige Form der Überwachung übertrifft die Anfor-derungen der herkömmlichen DIN ISO Norm 9001 bei weitem.

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Schienle Magnettechnik + Elektronik GmbH is a HAWE Group company. For more than 40 years, Schienle has been developing and producing drive solutions and sensors for a wide range of applications.

Our products can be found worldwide in numerous well-known products from acclaimed manufacturers in the following sectors:

- + Raw material/Energy source extraction
- + Hydraulics
- + Pneumatics
- + Medical technology
- + Foodstuffs industry

During the last 15 years, we have developed into an internationally recognised specialist in explosion protection solutions.

As one of just a few companies in the electromagnet sector, we have been awarded all the necessary approvals, which enables us to develop and produce explosion-proof products for all regions worldwide, as well as to market them in their respective territories.

We are therefore subject to strict external process monitoring with numerous monitoring audits from the widest variety of certification partners around the world. Monitoring on this scale greatly surpasses the requirements of the customary DIN ISO 9001 standard.

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Unsere Kernsegmente

Our core segments



Komponenten
Components

Hubmagnete, Sensoren,
Ventilmagnete,
Haftmagnete etc.

Linear solenoids, sensors,
valve solenoids, holding
solenoids etc.



Explosionsschutz
Explosion protection

Aktuatoren und Sensoren
für den weltweiten Einsatz

Actuators and sensors
for worldwide use



Systemlösungen
System solutions

Busgesteuerte Aktoren,
Aktor- / Sensorkombinationen

Bus-controlled actuators,
actuator/sensor combinations

Unsere Prozesse

Our Processes

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Qualitätsprozess

Neben der Basis-Zertifizierung nach DIN ISO 9001:2015 unterliegt Schienle folgenden internationalen Überwachungsaudits:

- + FM-Approval USA/CDN
- + ATEX
- + IECEx
- + MA Chinese Mining

Als ausgewiesener Spezialist für Explosionsschutzprodukte sind für uns höchste Anforderungen in Sachen Qualität, Zuverlässigkeit sowie Rückverfolgbarkeit üblicher Standard. Das gilt für unser komplettes Produktsortiment.

Quality process

As well as base certification to DIN ISO 9001:2015, Schienle is also subjected to the following international monitoring audits:

- + FM-Approval USA/CDN
- + ATEX
- + IECEx
- + MA Chinese Mining

As a proven specialist in explosion protection products, even the highest demands in respect of quality, reliability and traceability are a matter of course for us. This applies to our complete product range.

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Entwicklung

Gemeinsam mit unseren Partnern entwickeln und zertifizieren wir innovative kundenspezifische Elektromagnetlösungen. Dank jahrzehntelanger Erfahrung und standardisierten Ablaufprozessen steht Schienle für eine termingerechte Durchführung von Aufträgen jeder Größenordnung.

Development

Together with our partners, we develop and certify innovative customer-specific electromagnet solutions. Thanks to decades of experience and standardised workflows, Schienle is able to fulfil orders of any size, and on schedule.

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Fertigung

Wir bauen konsequent auf eine hohe Fertigungstiefe sowie Gleichteilbauweise. Unser Erfolgsgeheimnis lautet: bestens ausgebildete Fachkräfte, moderne Maschinen sowie straffe Prozesse. Das Resultat ist ein Höchstmaß an Effizienz und Flexibilität – für kostengünstige Premiumlösungen.

Manufacturing

We consistently manufacture with a high level of vertical integration and using a common part construction approach. The secret of our success lies in our highly qualified expert personnel, modern machinery and lean processes. The result is the maximum degree of efficiency and flexibility – for economical premium solutions.

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Montage

Bei Kleinserien kommen flexible Kanban-gelenkte Montageinseln zum Einsatz – bei größeren Serien effiziente Montagelinien.

Vor der Auslieferung durchläuft jedes unserer Erzeugnisse je nach Eignung voll- beziehungsweise teilautomatisierte Prüfstände – im Anschluss erfolgt eine präzise Dokumentation der Prüfergebnisse.

Assembly

For small batches we use flexible assembly islands based on the kanban principle. For larger series we use efficient assembly lines.

Before delivery, every single one of our products passes through fully or partially automated test benches, as appropriate. And afterwards, the test results are precisely documented.

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Selbstverständnis:

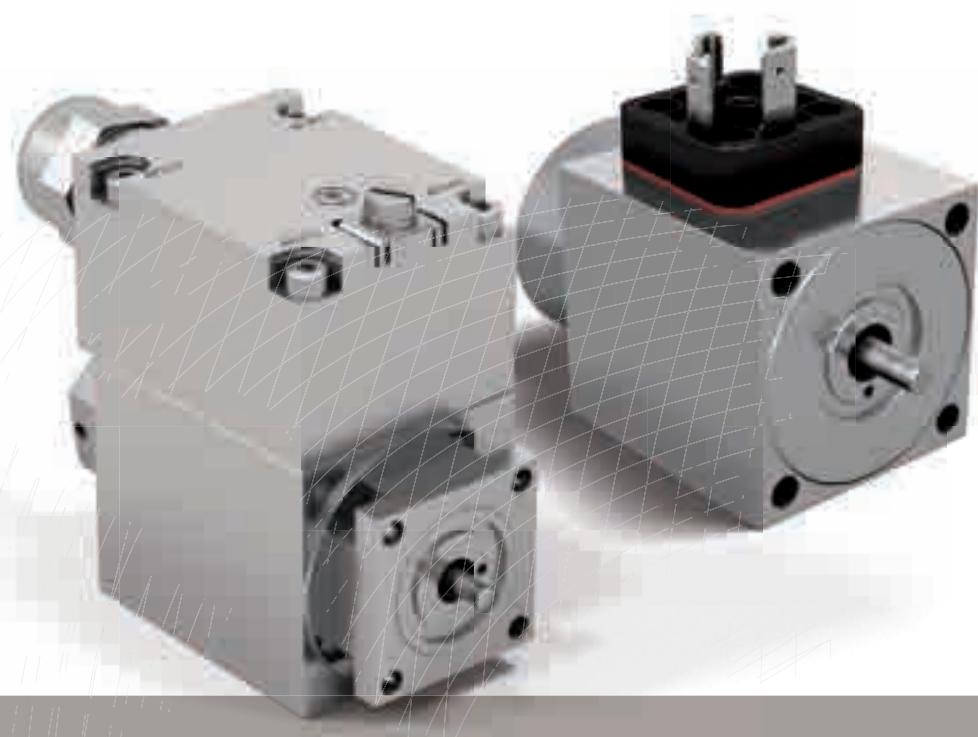
Unsere Motivation ist es, als Ihr Partner und serviceorientierter Systemlieferant für alle Aufgabenstellungen rund um Antriebs- und Sensorlösungen gemeinsam mit Ihnen erfolgreich zu sein.



Our self-image:

Our motivation is to share in your success as your partner and service-orientated system supplier for all requirements relating to drive and sensor-based solutions.





Proportionalmagnete
Proportional solenoids

Proportionalmagnete für Hydraulikventile – in Standard- und explosionsgeschützter Ausführung.

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Proportionalmagnete sind in der Elektrohydraulik die taktgebende Instanz – vergleichbar mit einem Dirigenten. Einerseits bestimmen sie die Dynamik, andererseits lautet die Anforderung, selbst hoher Dynamik unbeschadet standzuhalten. Deswegen müssen Proportionalmagnete robust, langlebig und zuverlässig sein.

Aufgrund langjähriger weltweiter Erfahrung im Bereich explosionsgeschützter Elektromagnete vertrauen unsere Kunden auf den besonderen „Schienle-Qualitätsstandard“ und integrieren unsere Hydraulikmagnet-Lösungen häufig in betont anspruchsvolle Anwendungen.

Mit einem breiten Spektrum an standardisierten Antriebslösungen bieten wir für jede erdenkliche Anforderung das passende Produkt.

Unser Sortiment im Bereich Hydraulische Anwendungen:

- + Schaltmagnete
- + Proportionalmagnete
- + Betätigungsysteme
- + International zertifizierte Ex-Schalt- und Proportionalmagnete sowie Sensoren

Spezifische Lösungen führen wir den individuellen Wünschen und Anforderungen des Kunden entsprechend aus.

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Proportional solenoids for hydraulic valves – in standard and explosion-proof designs.

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In the field of electrohydraulics, proportional solenoids set the pace – comparable to the conductor of an orchestra. On the one hand, they determine the dynamics, but they must also be able to resist even the highest dynamics and remain undamaged. Proportional solenoids therefore need to be robust, long-lasting and reliable.

On the basis of our many years' experience in the field of explosion-proof electromagnets, our customers rely on that particular 'Schienle quality standard', and integrate our hydraulic solenoid solutions into what are often the most decidedly demanding applications.

With a wide range of standardised drive solutions, we have the appropriate product for any conceivable requirement.

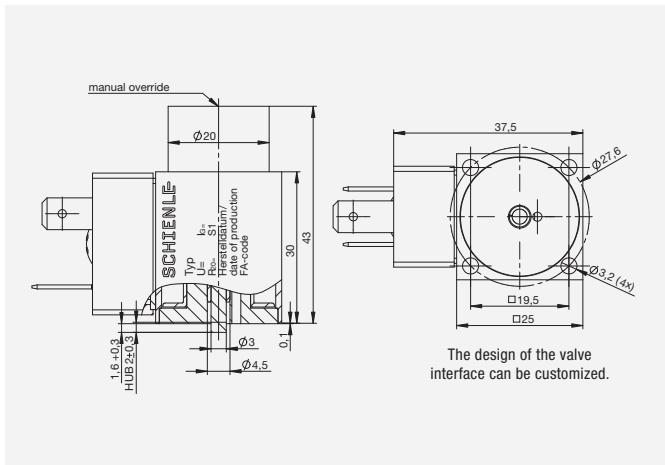
Our range in the area of hydraulic applications:

- + Switching solenoids
- + Proportional solenoids
- + Actuator systems
- + Internationally certified Ex switching and proportional solenoids, plus sensors

We produce custom solutions according to clients' individual desires and requirements.

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Proportional solenoid PDA 025x 0yy



Proportional solenoid for hydraulic valves – Size 25

Square electromagnet in proven sturdy, long-lasting design. Enclosed by solid square housing, which is affixed to the valve with four screws, this pressure-resistant armature tube withstands operating pressure of 320 bar.

The armature's bearings are of high quality with low friction, and in the event of a fault it can be operated via the integrated manual override.

- Electrical design: Construction type and inspection in accordance with VDE 0580
- Electrical connection: DIN EN 175301-803
- Protection class in accordance with DIN VDE 0470, EN 60529

Type code:

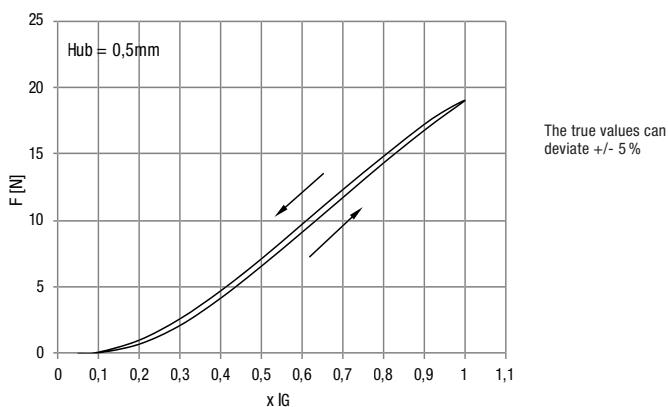
\downarrow x = Type of connector
 \downarrow A-DIN Connector, B-AMP Connector

PDA 025x 0yy

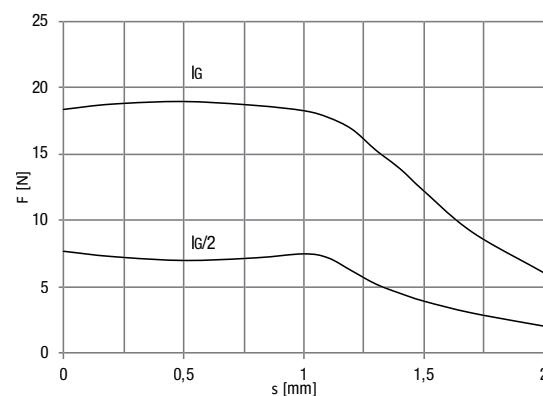
\uparrow $0yy$ = Voltage
 $012 = 12\text{ V}, 024 = 24\text{ V}$

Technical data	24 V	12 V
Duty cycle	S1 (100 %)	S1 (100 %)
Reference temperature	50 °C	50 °C
Pressure seal static	320 bar	320 bar
Total stroke	2 mm	2 mm
Working stroke	1 mm	1 mm
Rated magnetic force	19 N	19 N
Rated magnetic force hysteresis	~5 %	~5 %
Rated current hysteresis	~5 %	~5 %
Nominal resistance	26 Ω	8,5 Ω
Rated current	0,44 A	0,74 A
Rated current	0,44 A	0,74 A
Rated output	5 W	4,7 W
Limit rating	7,6 W	7,1 W
Anchor weight	0,01 kg	0,01 kg
Total weight	0,12 kg	0,12 kg
Protection class	IP65	IP65
Inductivity	45 mH	15 mH

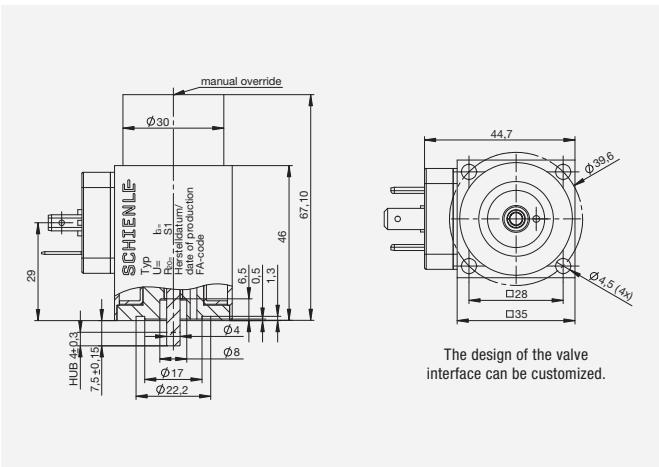
Force vs. current diagram



Force vs. stroke diagram



Proportional solenoid PDA 035x 0yy



Proportional solenoid for hydraulic valves – Size 35

Square electromagnet in proven sturdy, long-lasting design. Enclosed by solid square housing, which is affixed to the valve with four screws, this pressure-resistant armature tube withstands operating pressure of 320 bar.

The armature's bearings are of high quality with low friction, and in the event of a fault it can be operated via the integrated manual override.

- Electrical design: Construction type and inspection in accordance with VDE 0580
- Electrical connection: DIN EN 175301-803
- Protection class in accordance with DIN VDE 0470, EN 60529

Technical data	24 V	12 V
Duty cycle	S1 (100 %)	S1 (100 %)
Reference temperature	50 °C	50 °C
Pressure seal static	320 bar	320 bar
Total stroke	4 mm	4 mm
Working stroke	2 mm	2 mm
Rated magnetic force	59 N	59 N
Rated magnetic force hysteresis	~5,5 %	~5,5 %
Rated current hysteresis	~5 %	~5 %
Nominal resistance	24 Ω	7 Ω
Rated current	0,7 A	1,3 A
Rated current	0,7 A	1,3 A
Rated output	11,8 W	11,8 W
Limit rating	17,7 W	17,8 W
Anchor weight	0,037 kg	0,037 kg
Total weight	0,47 kg	0,47 kg
Protection class	IP65	IP65
Inductivity	72 mH	21 mH

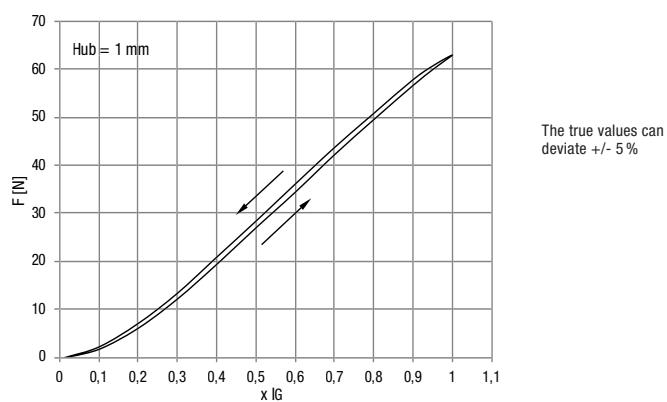
Type code:

↓ x = Type of connector
A-DIN Connector, B-AMP Connector

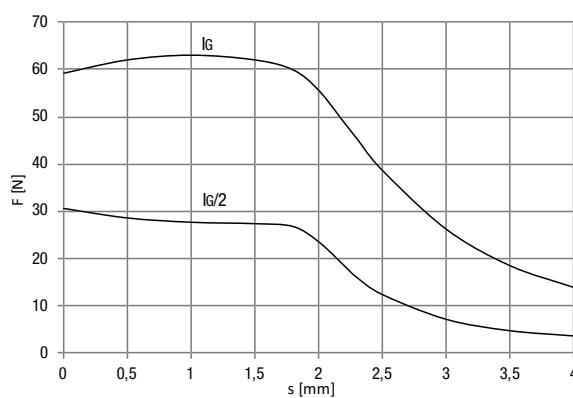
PDA 035x 0yy

↑ Oyy = Voltage
012 = 12 V, 024 = 24 V

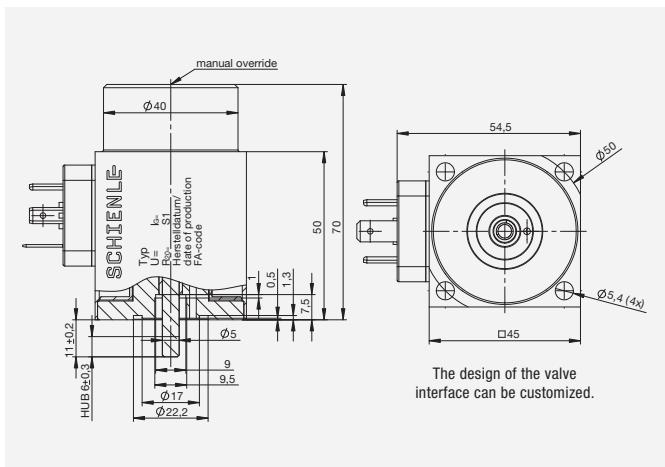
Force vs. current diagram



Force vs. stroke diagram



Proportional solenoid PDA 045x 0yy



Proportional solenoid for hydraulic valves – Size 45

Square electromagnet in proven sturdy, long-lasting design. Enclosed by solid square housing, which is affixed to the valve with four screws, this pressure-resistant armature tube withstands operating pressure of 320 bar.

The armature's bearings are of high quality with low friction, and in the event of a fault it can be operated via the integrated manual override.

- Electrical design: Construction type and inspection in accordance with VDE 0580
- Electrical connection: DIN EN 175301-803
- Protection class in accordance with DIN VDE 0470, EN 60529

Type code:

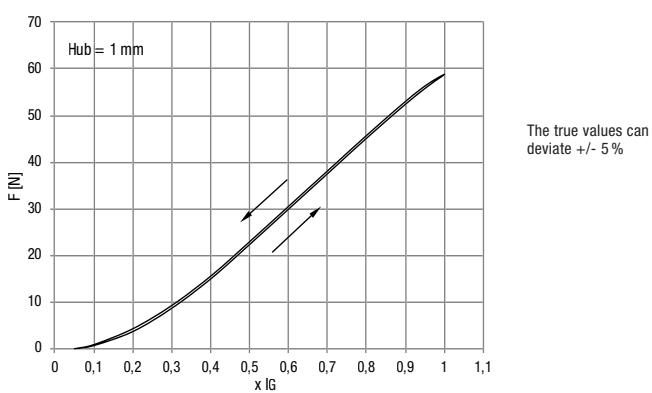
\downarrow x = Type of connector
 \downarrow A-DIN Connector, B-AMP Connector

PDA 045x 0yy

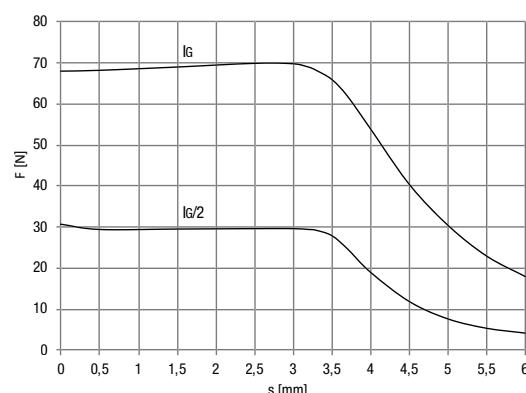
\uparrow 0yy = Voltage
 $012 = 12 \text{ V}, 024 = 24 \text{ V}$

Technical data	24 V	12 V
Duty cycle	S1 (100 %)	S1 (100 %)
Reference temperature	50 °C	50 °C
Pressure seal static	320 bar	320 bar
Total stroke	6 mm	6 mm
Working stroke	3 mm	3 mm
Rated magnetic force	68 N	68 N
Rated magnetic force hysteresis	~5,5 %	~5,5 %
Rated current hysteresis	~5 %	~5 %
Nominal resistance	21,7 Ω	4,6 Ω
Rated current	0,81 A	1,8 A
Rated current	0,81 A	1,8 A
Rated output	14,2 W	14,9 W
Limit rating	21,5 W	22,5 W
Anchor weight	0,064 kg	0,064 kg
Total weight	0,83 kg	0,83 kg
Protection class	IP65	IP65
Inductivity	87 mH	20 mH

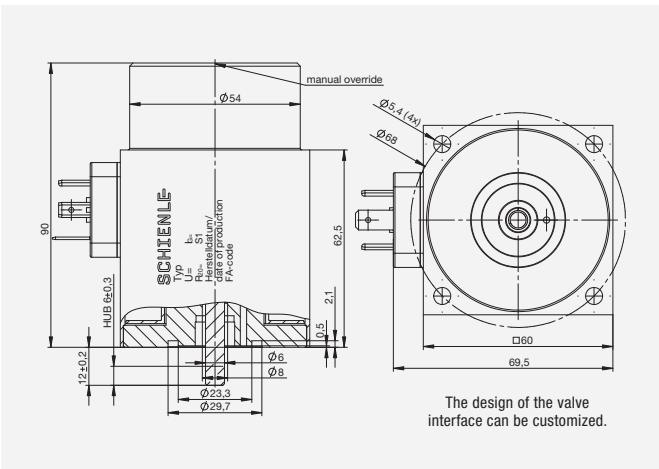
Force vs. current diagram



Force vs. stroke diagram

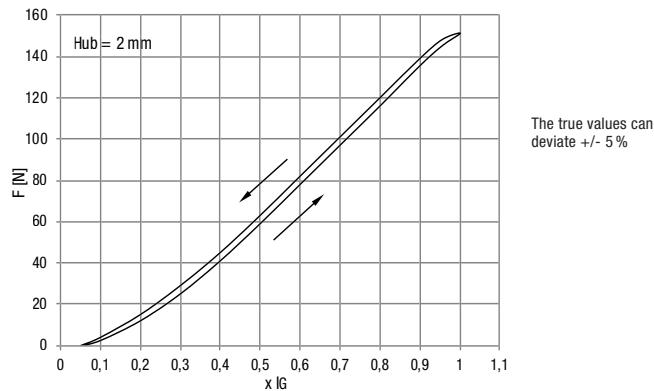


Proportional solenoid PDA 060x 0yy

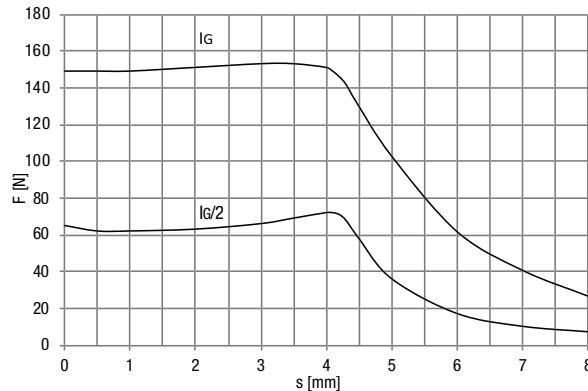


Technical data	24 V	12 V
Duty cycle	S1 (100 %)	S1 (100 %)
Reference temperature	50 °C	50 °C
Pressure seal static	320 bar	320 bar
Total stroke	8 mm	8 mm
Working stroke	4 mm	4 mm
Rated magnetic force	145 N	145 N
Rated magnetic force hysteresis	~6 %	~6 %
Rated current hysteresis	~5,5 %	~5,5 %
Nominal resistance	16,5 Ω	4,1 Ω
Rated current	1,15 A	2,3 A
Rated current	1,15 A	2,3 A
Rated output	22 W	22 W
Limit rating	28 W	28 W
Anchor weight	0,12 kg	0,12 kg
Total weight	1,75 kg	1,75 kg
Protection class	IP65	IP65
Inductivity	97 mH	24 mH

Force vs. current diagram



Force vs. stroke diagram



Proportional solenoid for hydraulic valves – Size 60

Square electromagnet in proven sturdy, long-lasting design. Enclosed by solid square housing, which is affixed to the valve with four screws, this pressure-resistant armature tube withstands operating pressure of 320 bar.

The armature's bearings are of high quality with low friction, and in the event of a fault it can be operated via the integrated manual override.

- Electrical design: Construction type and inspection in accordance with VDE 0580
- Electrical connection: DIN EN 175301-803
- Protection class in accordance with DIN VDE 0470, EN 60529

Type code:

PDA 060x 0yy
 x = Type of connector
 ↓ A-DIN Connector, B-AMP Connector

Oyy = Voltage
 012 = 12 V, 024 = 24 V

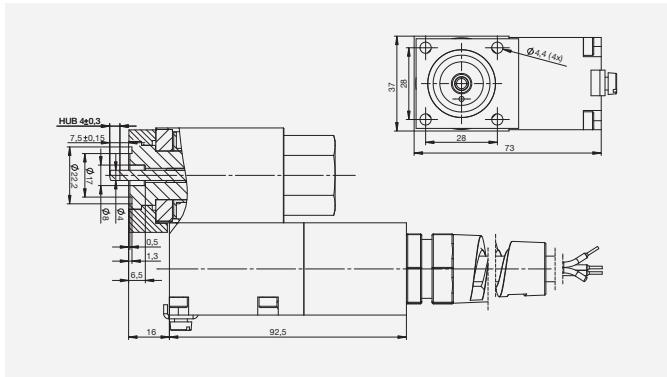
Proportional solenoid Ex 14



DESCRIPTION

EX

TECHNICAL DETAILS



Proportional solenoid for hydraulic valves – Size 37

- Square electromagnet in explosion-proof design.
- Thanks to the protection class-compliant flame proof "d" and "XP" enclosure, this product can be used worldwide – USA, RUS, IECEx, ATEX approval for Division 1 and Zone 1, 21 in gas and dust atmospheres.
- Ideal for NG4 and NG6 valves.
- The solenoid tube and valve interface can be customised to a large extent.

Type	Certification	Ambient temperature	Labeling
EX14	NEC 500 (USA)	-40 °C up to +55 °C	XP, Class I, Division 1, Group C, D, T4 DIP, Class II, Division 1, Group E, F, G T4 DIP, Class III, Division 1 & 2
	NEC 505 (USA) NEC 506 (USA)	-40 °C up to +55 °C	Class I, Zone 1, AEx d IIB, T4 Gb Zone 21, AEx tb IIIC T135 °C Db
	CEC Section 18 Annex J	-40 °C up to +55 °C	XP, Class I, Division 1, Group C, D, T4 DIP, Class II, Division 1, Group E, F, G T4 DIP, Class III, Division 1 & 2
	CEC Section 18	-40 °C up to +55 °C	Class I, Zone 1, AEx d IIB, T4 Gb
	ATEX	-40 °C up to +55 °C	II 2G Ex d IIB T4 Gb II 2D Ex tb IIIC T135 °C Db
	IECEx	-40 °C up to +55 °C	Ex d IIIB T4 Gb Ex tb IIIC T135 °C Db

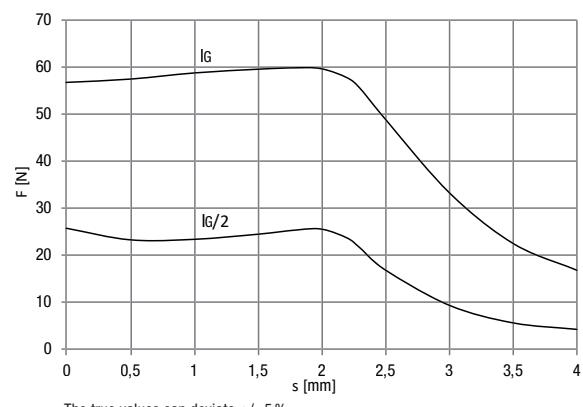
Electrical data

Nominal voltage [V]	12	24
Limiting current [A]	1.35	0,67
Power-on-time [%]	100	
Ambient temperature [°C]	-40 up to +55	
Max. medium temperature [°C]	+70 °C	
Protection class	according to DIN EN 60529 device and connection IP67 (mounted)	
Isolation class of coil	H	

Mechanical data

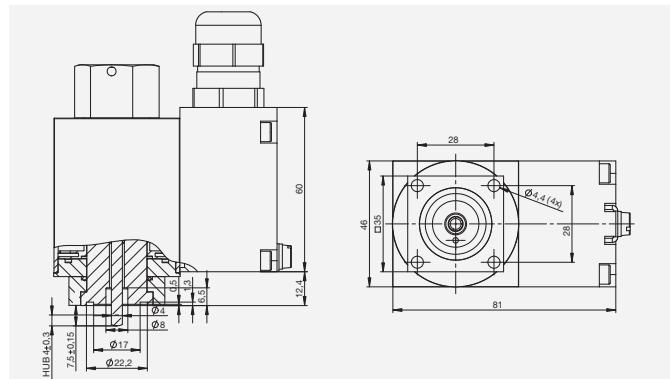
Tube diameter [mm]	19
Working pressure [bar]	up to 250
Adaptor flange	free
Manual override	yes
Surface protection	iron parts zinc-plated EN 12329-Fe/Zn8/C or DIN 50979 Fe//ZnNi4-8//Cn//TO RoHS-conformed

Force vs. stroke diagram





Proportional solenoid Ex 18



Proportional solenoid for hydraulic valves – Size 46

- Powerful square electromagnet in explosion-proof design – type of protection “m”. Approved for Zone 1, Zone 21 with gas and dust atmospheres as well as for the mining sector.
- Ideal for NG4 and NG6 valves.
- The solenoid tube and valve interface can be customised to a large extent. Available in various different voltages and output specifications.

Type	Certification	Ambient temperature	Labeling DC	AC
EX18	ATEX	-40 °C up to +70 °C for Tx = T4 or T135 °C and Pn = 10 W	I M2 Ex e mb I Mb II 2G Ex e mb IIB Tx Gb	I M2 Ex mb I Mb II 2G Ex mb IIB Tx °C Gb
		-40 °C up to +55 °C for Tx = T5 or T100 °C and Pn = 10 W	II 2D Ex tb IIIC Tx °C Db	II 2D Ex mb IIIC Tx °C Db
IECEx		-40 °C up to +45 °C for Tx = T6 or T85 °C and Pn = 10 W	Ex e mb I Mb Ex e mb IIB Tx Gb	Ex mb IIB Tx °C Gb
		-40 °C up to +60 °C for Tx = T4 or T135 °C and Pn = 18 W	Ex tb IIIC Tx °C Db	Ex mb IIIC Tx °C Db

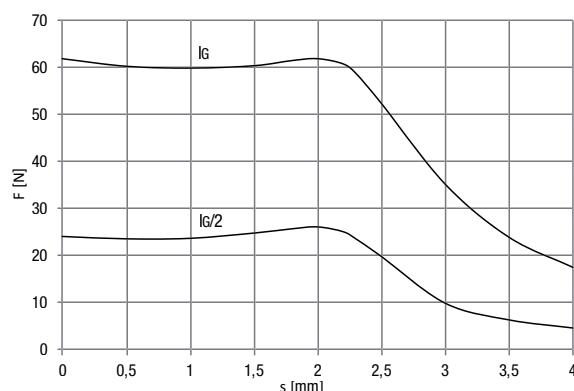
Electrical data

Nominal voltage [V]	12	24
Limiting current [A]	0.65	0.34
Power-on-time [%]	100	
Ambient temperature [°C]	-40 up to +45 / +55 / +70	
Max. medium temperature [°C]	+70 °C	
Protection class	according to DIN EN 60529 device and connection IP67 (mounted)	
Isolation class of coil	H	

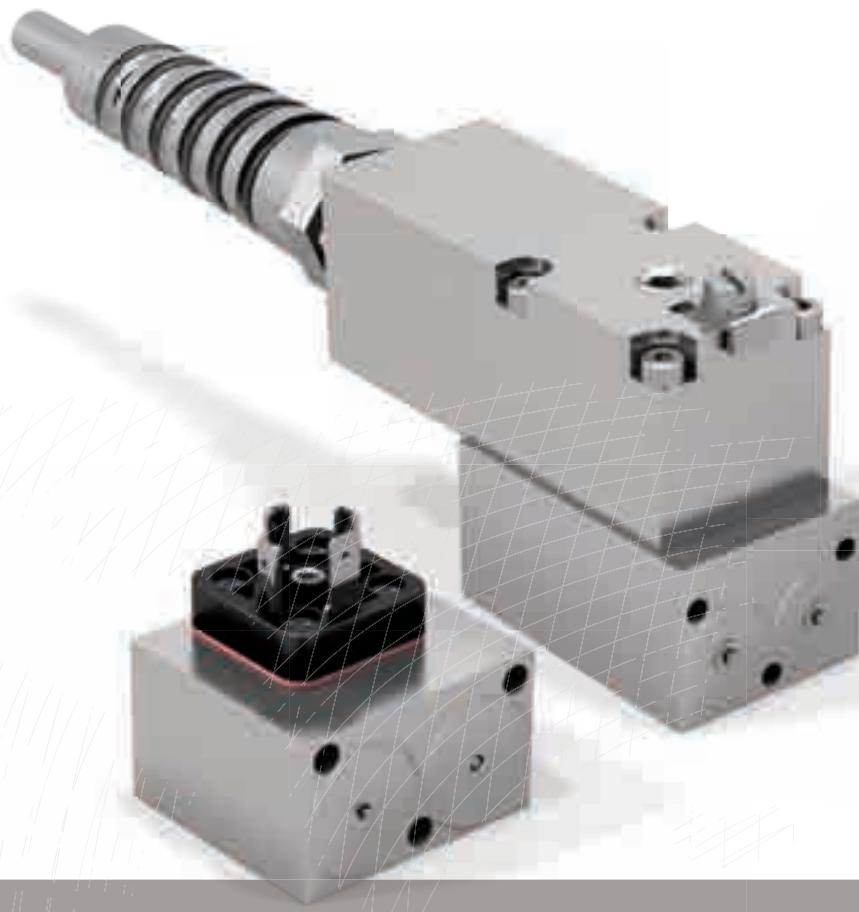
Mechanical data

Tube diameter [mm]	22
Surface protection	iron parts zinc-plated EN 12329-Fe/Zn12/C or DIN 50979 Fe//ZnNi12/Cn//T0 RoHS-conformed
Adaptor flange	free
Manual override	yes
Surface protection	iron parts zinc-plated EN 12329-Fe/Zn8/C or DIN 50979 Fe//ZnNi4-8//Cn//T0 RoHS-conformed

Force vs. stroke diagram

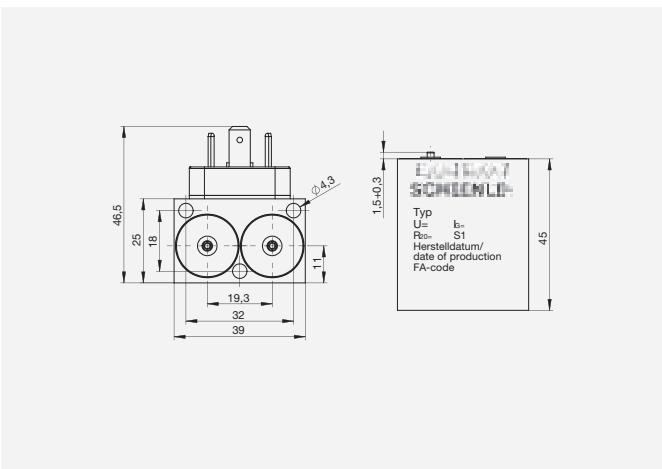


The true values can deviate +/- 5 %



Zwilling-Ventilsteuermagnete Twin solenoids

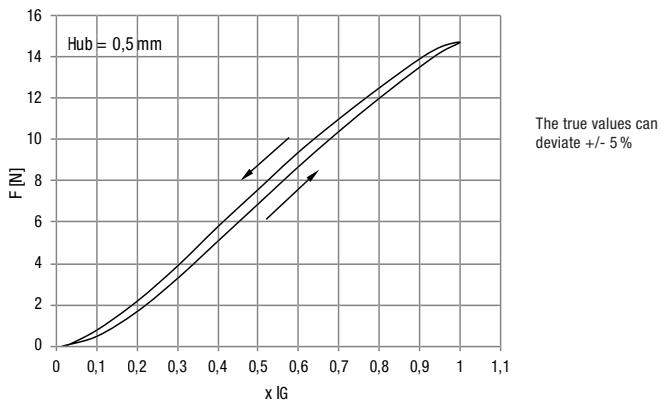
Twin solenoid Size 1



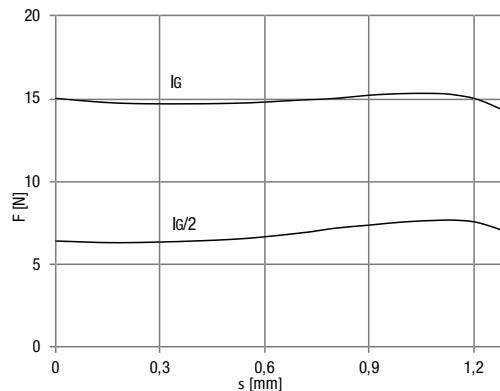
Technical data

Dimensions (W x H x D)	Size 1 39 x 45 x 25
Nominal voltage [V]	12 24
Limiting current [A]	1,2 0,6
Power-on-time [%]	100
Ambient temperature [°C]	50
Design characteristic curve	Proportional
Solenoid force, proportional [N]	15
Pressure, dynamic [bar]	50
Insulating material class [°C]	F / 155
Protection class	IP65
Connection	DIN A, B, C, Desina, Junior Timer AMP, Deutsch, ITT-Canon
Operation	S1 no parallel use of both coils

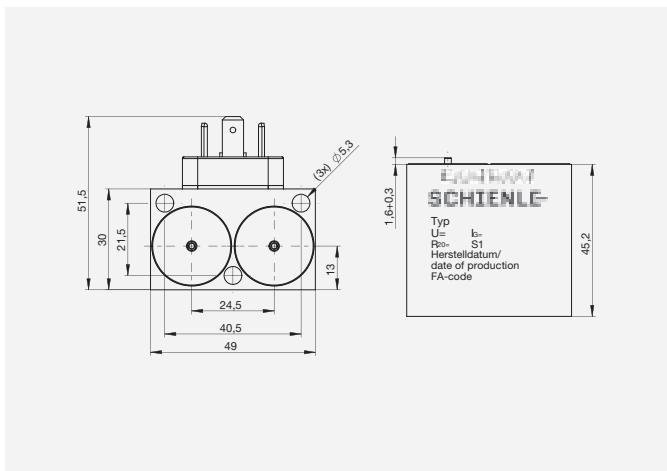
Force vs. current diagram



Force vs. stroke diagram



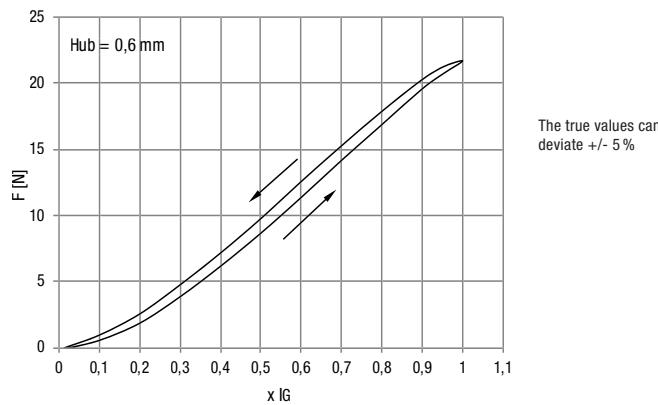
Twin solenoid Size 2



Technical data

Dimensions (W x H x D)	Size 2 49 x 45 x 30	
Nominal voltage [V]	12	24
Limiting current [A]	1.33	0.63
Power-on-time [%]	100	
Ambient temperature [°C]	50	
Design characteristic curve	Proportional	
Solenoid force, proportional [N]	22	
Pressure, dynamic [bar]	50	
Insulating material class [°C]	F / 155	
Protection class	IP65	
Connection	DIN A, B, C, Desina, Junior Timer AMP, Deutsch, ITT-Canon	
Operation	S1	

Force vs. current diagram



Twin valve control solenoid for hydraulic valves

Size 2

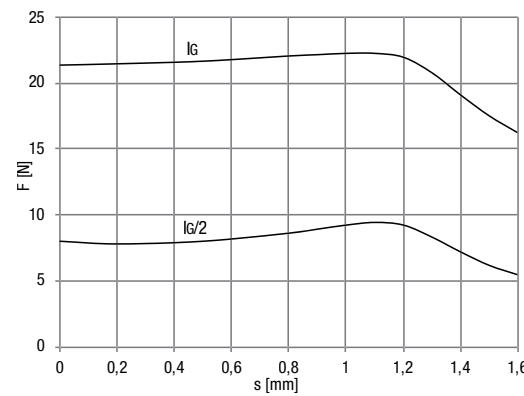
Twin valve control solenoids combine two separately controllable pressure-resistant single-stroke linear solenoids in a common enclosure. They are used for actuating valves (mostly pilot valves) and are characterised by their extremely compact construction.

The solid housing, which is affixed to the valve with three screws, holds the pressure-resistant armature tube and permits operating pressure of 50 bar.

Optionally available with manual emergency override and the widest variety of connector sockets (AMP, German, DIN, Schlemmer etc), it is one of the products we offer in the greatest number of variants.

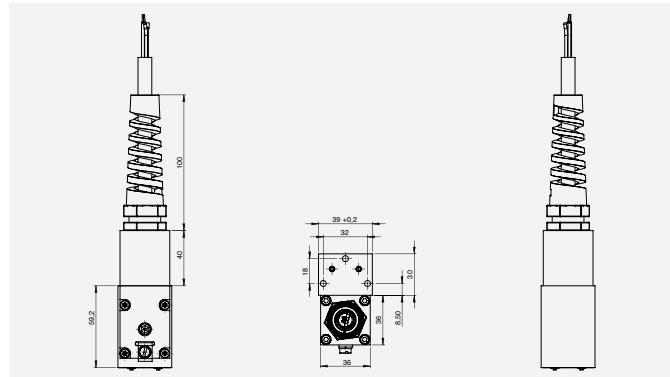
- Electrical design: Construction type and inspection in accordance with VDE 0580
- Electrical connection: DIN EN 175301-803 Form 'A'
- Protection class IP65 in accordance with DIN VDE 0470EN 60529 when used with an appliance socket that complies with DIN 43640

Force vs. stroke diagram





Twin solenoid Ex 04



Ex twin solenoid for hydraulic valves proportional – Size 1

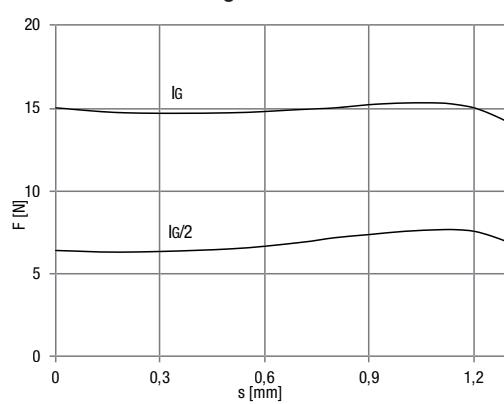
- Twin electromagnet in explosion-proof design.
- Thanks to the protection class-compliant pressure-resistant enclosure, this product can be used worldwide – USA, RUS, IECEX, ATEX
- Approved for Division 1 plus Zone 1, 21 with gas and dust atmospheres.
- With its 39 x 25 mm valve interface and two independent coils, this twin model is ideal for very compact valve concepts.

Type	Certification	Ambient temperature	Labeling
EX04	NEC 500 (USA)	-40 °C up to +55 °C	XP, Class I, Division 1, Group C, D, T4 DIP, Class II, Division 1, Group E, F, G T4 DIP, Class III, Division 1 & 2
	NEC 505 (USA) NEC 506 (USA)	-40 °C up to +55 °C	Class I, Zone 1, AEx d IIB, T4 Gb Zone 21, AEx tb IIIC T135 °C Db
	CEC Section 18 Annex J	-40 °C up to +55 °C	XP, Class I, Division 1, Group C, D, T4 DIP, Class II, Division 1, Group E, F, G T4 DIP, Class III, Division 1 & 2
	CEC Section 18	-40 °C up to +55 °C	Class I, Zone 1, AEx d IIB, T4 Gb
	ATEX	-40 °C up to +55 °C	II 2G Ex d IIB T4 Gb II 2D Ex tb IIIC T135 °C Db
	IECEEx	-40 °C up to +55 °C	Ex d IIB T4 Gb Ex tb IIIC T135 °C Db

Technical data		
Nominal voltage [V]	12	24
Limiting current [A]	1.2	0.6
Power-on-time [%]	100	
Ambient temperature [°C]	-40 °C up to +55 °C	
Max. medium temperature [°C]	+70 °C	
Protection class	according to DIN EN 60529 device and connection IP67 (mounted)	
Isolation class of coil	H	
Pressure, dynamic [bar]	50	

Mechanical data	
Working pressure [bar]	50
Stroke [mm]	1.2
Manual override	yes
Surface protection	iron parts zinc-plated EN 12329-Fe/Zn8/C or DIN 50979 Fe//ZnNi4-8//Cn/T0 RoHS-conformed

Force vs. stroke diagram



The true values can deviate +/- 5 %

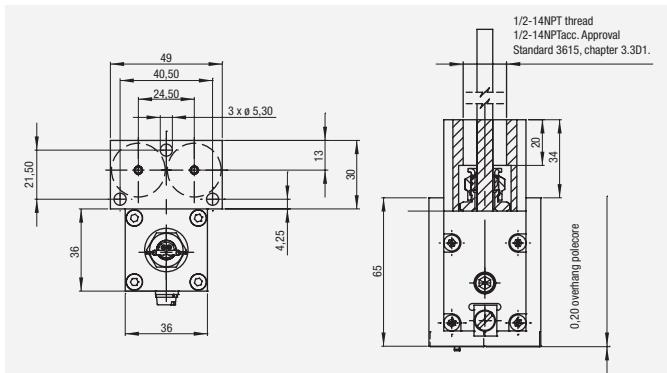
Twin solenoid Ex 11



DESCRIPTION

EX

TECHNICAL DETAILS

**Ex twin solenoid for hydraulic valves
proportional – Size 2**

- Twin electromagnet in explosion-proof design.
- Thanks to the protection class-compliant pressure-resistant enclosure, this product can be used worldwide – USA, RUS, IECEx, ATEX
- Approved for Division 1 plus Zone 1, 21 with gas and dust atmospheres.
- With its 49 x 30 mm valve interface and two independent coils, this twin model is ideal for very compact valve concepts.

Type	Certification	Ambient temperature	Labeling
EX11	NEC 500 (USA)	-40 °C up to +55 °C	Ex d IIC T4 Gb DIP, Class II, Division 1, Group E, F, G T4 DIP, Class III, Division 1 & 2
	NEC 505 (USA) NEC 506 (USA)	-40 °C up to +55 °C	Ex d IIC T4 Gb Zone 21, AEx tb IIIC T135 °C Db
	CEC Section 18 Annex J	-40 °C up to +55 °C	Ex d IIC T4 Gb DIP, Class II, Division 1, Group E, F, G T4 DIP, Class III, Division 1 & 2
	CEC Section 18	-40 °C up to +55 °C	Ex d IIC T4 Gb
	ATEX	-40 °C up to +55 °C	II 2G Ex d IIB T4 Gb II 2D Ex tb IIIC T135 °C Db
	IECEx	-40 °C up to +55 °C	Ex d IIB T4 Gb Ex tb IIIC T135 °C Db

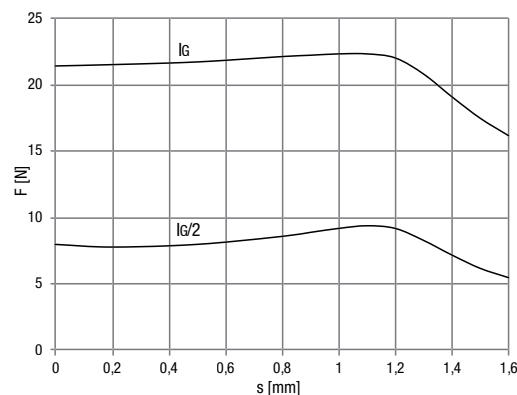
Technical data

Nominal voltage [V]	12	24
Limiting current [A]	1.33	0.63
Power-on-time [%]	100	
Ambient temperature [°C]	-40 °C up to +55°	
Max. medium temperature [°C]	+70 °C	
Protection class	according to DIN EN 60529 device and connection IP67 (mounted)	
Isolation class of coil	H	
Pressure, dynamic [bar]	50	

Mechanical data

Working pressure [bar]	50
Stroke [mm]	1
Manual override	yes
Surface protection	iron parts zinc-plated EN 12329-Fe/Zn8/C or DIN 50979 Fe//ZnNi4-8/Cn//TO RoHS-conformed

Force vs. stroke diagram



The true values can deviate +/- 5 %

SCHIENLE

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