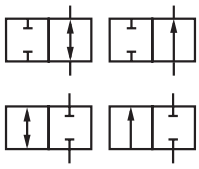
21000, 15200
2/2 way poppet valves
electromagnetic actuated, directly controlled
G 1/4 ... G 1/2

Working from 0 bar up

Suitable for vacuum range down to $1.33 \cdot 10^{-2}$ mbar·l/s

Valve seals in either direction

Protection class: IP65, Ex em, Ex d and applicable in Ex protection class ATEX see solenoid table





ATEX

Approval depending on solenoid system, see page 2!

Technical features

Medium:
For neutral gaseous and liquid fluids
Operation:
Direct solenoid actuated
Operating pressure:
0 ... 50 bar

Orifice:
8 and 12 mm
Port size:
G 1/4 ... G 1/2
Mounting position:
Optional, preferably vertival
Flow direction:
Optional

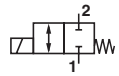
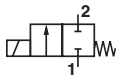
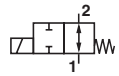
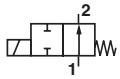
Fluid temperature:
-25 ... +80°C NBR
Ambient temperature:
-25 ... +60, +80°C
Depending on solenoid system
Air supply must be dry enough to avoid ice formation at temperatures below +2°C.

Materials:
Housing: brass
Seat seal: NBR
Inner part: brass, stainless steel 1.4104 (430 F)

Further versions
Seat seal FPM, PTFE
With manual override
Solenoid systems in protection class Ex d IIC T4/T6

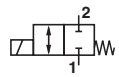
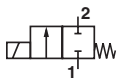
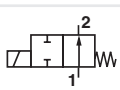
Technical data

Valves in protection class IP65 and Ex em

Symbol	Solenoids group	Port size	Orifice	Operating pressure (bar) min.	max,	kv-value (Cv (US) = kv x 1,2	Weight without solenoid (kg)	Dimensions No.	Model *1)
	30,5 A	G 1/4	8	0	15	0,87	2,1	1	1520450
	30,5 A	G 3/8	8	0	15	0,87	2,1	1	1520550
	30,5 A	G 1/2	8	0	15	0,87	2,1	1	1520650
	30,5 A	G 3/8	12	0	15	1,00	2,5	2	2102150
	30,5 A	G 1/2	12	0	15	1,00	2,5	2	2102250
	38,5 A	G 3/8	12	0	50	1,00	3,6	3	2101750
	38,5 A	G 1/2	12	0	50	1,00	3,6	3	2101850
	30,5 A	G 1/2	12	0	15	1,00	2,5	3	2112250
	30,5 A	G 1/2	12	0	15	1,00	6,5	3	2112259
	38,5 A	G1/2	12	0	50	1,00	3,6	3	2111850

*1) Please add solenoid, voltage and power supply data (frequency) when ordering

Valves in protection class Ex d

Symbol	Solenoids group	Port size	Nominal size	Operating pressure (bar) min.	max,	kv-value (Cv (US) = kv x 1,2	Weight without solenoid(kg)	Dimensions No.	Model *1)
	30,5 B	G 1/2	12	0	15	1,00	6,5	2	2102259
	38,5 B	G 1/2	12	0	50	1,00	7,8	3	2101859
	38,5 B	G 1/2	12	0	50	1,00	7,8	3	2111859

*1) Please add solenoid, voltage and power supply data (frequency) when ordering

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Solenoid operators
Solenoids group 30,5A

	Power consumption		Rated current		Ex-Protection	IP-Protection class (to EN 60529)	Temperature Ambient/Fluid	Electrical connection	Weight	Dimension	Circuit diagram	Model
	24 V d.c. (W)	230 V a.c. (VA)	24 V d.c. (m A)	230 V a.c. (m A)		Ex-Protection (ATEX-Category)	(°C)		(kg)	No.	No.	
	21,4	–	891	–	–	IP 65 (with cable gland)	-25...+60	M20x1,5	1,35	21	2	1300
	–	22,8	–	99	–	IP 65 (with cable gland)	-25...+60	M20x1,5	1,35	21	6	1301
	21,4	–	891	–	II2G II3D	Ex e mb IIC T4 Gb Ex tb IIIC T120°C Db IP 65 (with cable gland)	-20...+80 T4 -40...+60 T5	M20x1,5	2,0	22	4	1440
	–	22,8	–	99	II2G II3D	Ex e mb IIC T4 Gb Ex tb IIIC T120°C Db I IP 65 (with cable gland)	-20...+80 T4 -40...+60 T5	M20x1,5	2,0	22	7	1441

Standard voltages (±10%) 24 V d.c., 230 V a.c., other voltages on request.
Design according to VDE 0580, EN 50014/50028. 100% duty cycle.
IP 66 version on request

Solenoids group 38,5A

	Power consumption		Rated current		Ex-Protection	IP-Protection class (to EN 60529)	Temperature Ambient/Fluid	Electrical connection	Weight	Dimension	Circuit diagram	Model
	24 V d.c. (W)	230 V a.c. (VA)	24 V d.c. (m A)	230 V a.c. (m A)		Ex-Protection (ATEX-Category)	(°C)		(kg)	No.	No.	
	38,7	–	1614	–	–	IP 65 (with cable gland)	-25...+60 Fluid max. +80	M20x1,5	2,5	23	2	1500
	–	42,1	–	169	–	IP 65 (with cable gland)	-25...+60 Fluid max. +80	M20x1,5	2,5	23	6	1501
	38,7	–	1614	–	II2G	II2G Ex e mb IIC T4 Gb IP 65 (with cable gland)	-20...+40	M20x1,5 *6)	3,6	24	2	1570
	–	42,1	–	169	II2G	II2G Ex e mb IIC T4 Gb IP 65 (with cable gland)	-20...+40	M20x1,5 *6)	3,6	24	6	1571

Standard voltages (±10%) 24 V d.c., 230 V a.c., other voltages on request.
Design according to VDE 0580, EN 50014/50028. 100% duty cycle.
*6) Cable gland not supplied, see table »Accessories«
IP 66 version on request

Approvals

Model	Approvals ATEX	IECEx	FM	Datasheet
143x, 144x	KEMA 03 ATEX 1016 X	IECEx DEK 11.0066X	–	N/en 7.1.510
15xx, 157x	DEKRA BVS 08 ATEX E 117	–	–	N/en 7.1.520

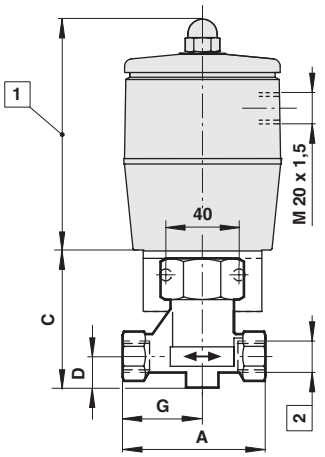
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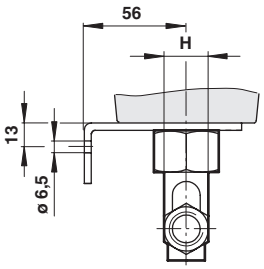
Accessories

Dimensions see Seite 5	Cable gland Protection class IP65 Ms nickel plated brass		Cable gland protection class (ATEX) Ms nickel plated brass		
					
	Cable-Ø	Model	Protection class	Cable-Ø	Model
M 20x1,5	6,5...9,5 mm	0589241	II2GD Ex e	5...8 mm	0588819
M 20x1,5	9,0...13 mm	0589242	II2GD Ex d	10...14 mm	0588851
1/2-14-NPT			II2GD Ex d	7,5...11,9 mm	0588925

Dimensions valves

1 ... 3





1 Solenoid dimensions see page 4

2 For port size, see general information

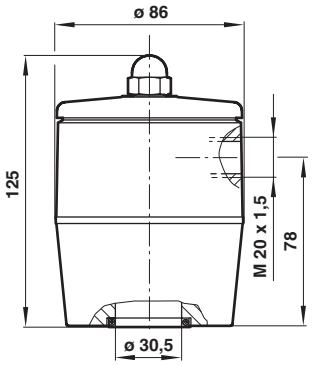
Dimensions No.	A	C	D	G	H
1	80	77	21	44	30
2	90	82	22	51	38
3	90	87	22	51	38

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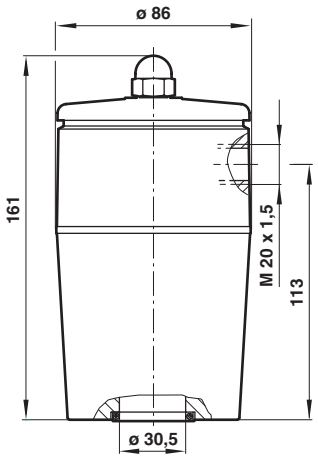
Dimensions

solenoid operators

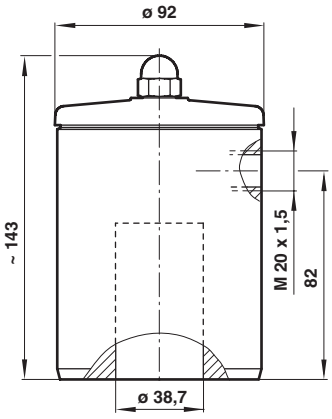
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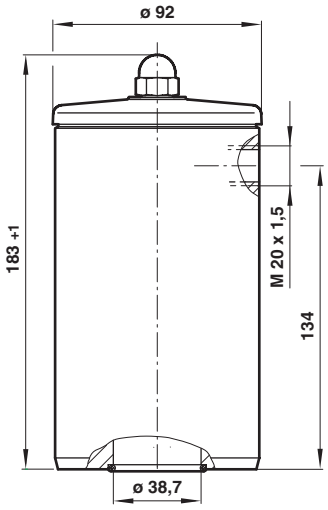
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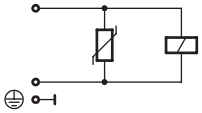


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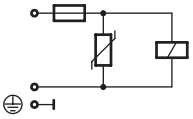


Circuit diagramm

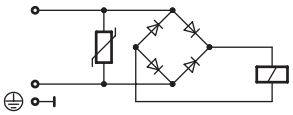
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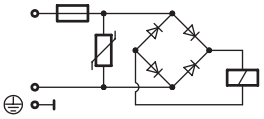
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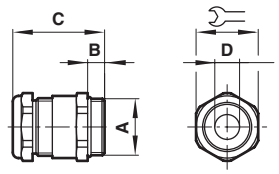


7



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Cable gland



A	B	C	ø D		Model
M20 x 1,5	9	36	5 ... 8	22	0588819
M20 x 1,5	14	39	10 ... 14	24	0588851
1/2-14 NPT	15	58	7,5 ... 11,9	24	0588925

Warning

These products are intended for use in industrial compressed air and fluid systems only. Do not use these products where pressures and temperatures can exceed those listed under **'Technical features'**.

Before using these products with fluids other than those specified, for non-industrial applications, life-support systems, or other applications not within published specifications, consult NORGREN.

Through misuse, age, or malfunction, components used in fluid power systems can fail in various modes.

The system designer is warned to consider the failure modes of all component parts used in fluid power systems and to provide adequate safeguards to prevent personal injury or damage to equipment in the event of such failure.
System designers must provide a warning to end users in the system instructional manual if protection against a failure mode cannot be adequately provided.
System designers and end users are cautioned to review specific warnings found in instruction sheets packed and shipped with these products.

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