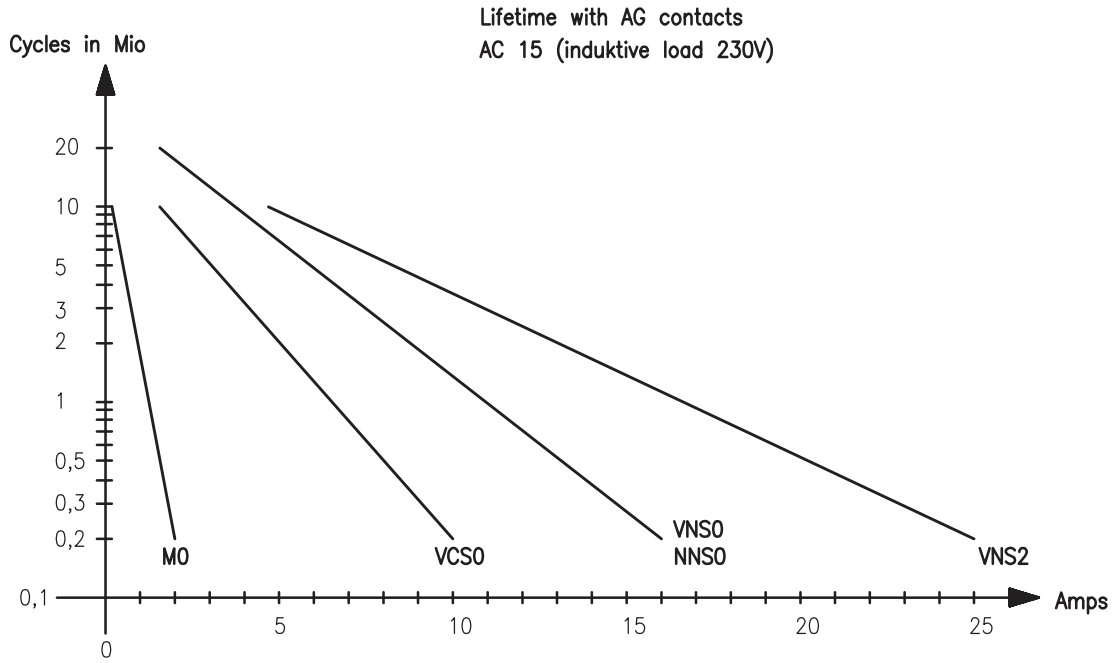
Controllers features

List 7 / 2004
1/1

Standards: IEC947 , EN60947 , VDE0660
Ambient temperature: −40°C to +60°C

Type of controller			MO	VCS0	VNS0 NNS0	VNS2	VNS2B	Dead man push button or turn switch in handle
Voltage (Ue) in V			250	250	400	600	600	250
Current (Ie) in A								
	AC12 (ohmic) 50−60Hz		2	10	16	25	−−	4
	AC15 (inductive) 50−60Hz		1	4	6	10	−−	3
	DC12 (ohmic)	12V	−−	4	8	14	25	2
		24 − 42V	−−	1,7	1,7	2,6	16	1,6
		115 − 230V	−−	0,3	0,3	0,45	8	0,3
	DC13 (inductive)	24 − 42V	−−	0,8	1,1	2	10	1,1
		115 − 230V	−−	0,2	0,2	0,28	2	0,2
	DC12 (ohmic) with gold contact 30V				4mA	4mA	−−	4mA
Short circuit	switch fuse		1	6	10	16	16	−−
	fuse		1	6	10	16	16	−−
Mech. life mill. cycles			10	10	20	10	10	−−
Connections:								
	Screw		−−	M3,5	M3,5	M5	M5	M3,5
	Wire profile		−−	1,5mm²	1,5mm²	6mm²	6mm²	−−
	With gold contacts	connection		−−	soldered			
		wire profile		−−	0,5mm²			



Spohn+Burkhardt GmbH & Co.
D-89143 Blaubeuren/Germany Mauergasse 5
local contact Fon:+86 21 50450977
Fax:+86 21 50458162
enquire@spobu.com.cn

The VNS0 and NNS0 Joystick controllers are characterized by their unmatched versatility and rugged construction.
Their applications include:
Cranes, Lifts, Hoists, Mobile Transporters, Mining Vehicles, Excavating and Logging Equipment.

Regulations: IEC 947, EN 60947, VDE 0660

Temp. range:	operation	– 40°C	up	to	+ 60°C
	storage	– 50°C	up	to	+ 80°C

Features: see page 1/1

Terminals: touchproof IEC 536

Life: 20 mio cycles

Controller **VNS0** (ø 8mm shaft) see page 9/2, 9/3, 9/4...

Controller **NNS0** (ø 12mm shaft) see page 9/2N, 9/3N, 9/4N

Contact elements and discs are separately exchangeable
Easy labeling under transparent
escutcheon plate possible

Spohn+Burkhardt GmbH & Co.
D-89143 Blaubeuren/Germany Mauergasse 5

local contact Fon:+86 21 50450977
Fax:+86 21 50458162
enquire@spobu.com.cn

Controllers VNS0–E und VNS0–V
base mounting or front mounting, IP00, dimensions see M 9/2

List 7 / 2004
9/2

With replaceable double contacts and cam discs.

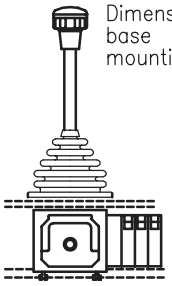
Rating see page 1/1

Max. 7–0–7 positions

Standard circuit see page S 40/1 or on request

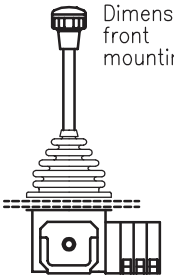
Note:

If the circuit is unsym. it is important to stipulate the arrangement required



Dimensions M 9/2B
base mounting

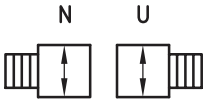
without spring return | with spring return



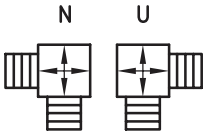
Dimensions M 9/2A
front mounting

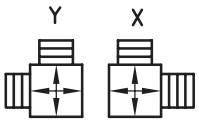
without spring return | with spring return

Drive arrangement E



Drive arrangement V





without spring return	with spring return	without spring return	with spring return	Basic price EUR	Additional per double contact EUR
VNS0–NE VNS0–UE					
	VNS0–NER VNS0–UER				
		VNS0–FNE VNS0–FUE			
			VNS0–FNER VNS0–FUER		
VNS0––NV VNS0––UV					
	VNS0––NVR VNS0––UVR				
		VNS0––FNV VNS0––FUV			
			VNS0––FNVR VNS0––FUVR		

Additionals:

Fitting in handle see page 2/1			Cross gate	EUR
Engraving	each word (max. 14 letters)	EUR	Special gate	EUR
	each symbol	EUR	Limiting gate	EUR
			Special limiting gate	EUR
Potentiometer attachment see page 14/1+2			Double contact	
Synchro transmitter DGO see page 13/1			with gold contact	EUR
Encoder see page 15/11...			Friction brake	EUR

Ordering example: VNS0 2 3 F N 11/14/18 SK/KK/AK V R H 20 . 40

Engraving type of potentiometer should be described.

- Type
- Double contact in view direction
- Double contact in cross direction
- Front mounting
- Arrangement
- Shaft 110 / 140 / 180
- SK special gate
- KK cross gate
- AK limiting gate
- Drive arrangement
- Spring return
- Fitting in handle
- Circuit in view direction
- Circuit in cross direction

Spohn+Burkhardt GmbH & Co.
D-89143 Blaubeuren/Germany Mauergasse 5

local contact Fon:+86 21 50450977
Fax:+86 21 50458162
enquire@spobu.com.cn

Controllers VNS0–G, VNS0–H, VNS0–M, base or front mounting, max. 7–0–7 steps, IP00, dimensions see M 9/3

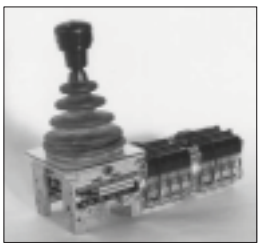
List 7 / 2004
9/3

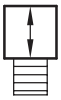
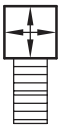
With replaceable double contacts and cam discs.

Rating see page 1/1

Standard circuit see page S 40/1 or request

With transparent escutcheon plate (without engraving), foil and rubber boot



	Base–mounting without spring return	Base–mounting with spring return	Front–mounting without spring return	Front–mounting with spring return	Basic price EUR	Additional per double contact EUR
Drive arrangement G 	VNS0–G		VNS0–FG			
		VNS0–GR		VNS0–FGR		
Drive arrangement H  Potentiometer attachment only for view direction	VNS0––H		VNS0––FH			
		VNS0––HR		VNS0––FHR		
Drive arrangement M 	VNS0––M		VNS0––FM			
		VNS0––MR		VNS0––FMR		

Additionals:

Fitting in handle see page 2/1			Cross gate	EUR
Engraving	each word (max. 14 letters)	EUR	Special gate	EUR
	each symbol	EUR	Limiting gate	EUR
Potentiometer attachment (Arrangement H only for view direction) see page 14/1+2			Special limiting gate	EUR
Synchro transmitter DGO see page 13/1			Double contacts in gold	EUR
Encoder see page 15/...			Friction brake	EUR

Ordering example: VNS0 2 3 F 11/14/18 SK/KK/AK H R H 20.40 — Engraving, type of potentiometer should be described.

- Type
- Double contact in view direction
- Double contact in cross direction
- Front mounting
- Shaft 110 / 140 / 180
- SK special gate / KK cross gate / AK limiting gate
- Drive arrangement
- Spring return
- Fitting in handle
- Circuit in view direction
- Circuit in cross direction

Spohn+Burkhardt GmbH & Co.
D-89143 Blaubeuren/Germany Mauergasse 5
local contact Fon:+86 21 50450977
Fax:+86 21 50458162
enquire@spobu.com.cn

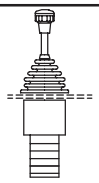
Joystick controllers VNS0–A, VNS0–AA, VNS0–EA, front mounting IP00, max. 7–0–7 steps, dimensions see M 9/4

List 7 / 2004
9/4

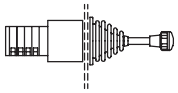
With replaceable double contacts and cam discs

Rating see page 1/1
Standard circuit see page S 40/1

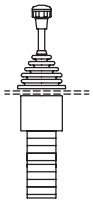
With transparent escutcheon plate (without engraving), and rubber boot		Basic price	Additional per double contact
without spring return	with spring return	EUR	EUR



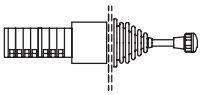
Drive arrangement A



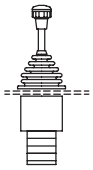
VNS0–A	**VNS0–AR**		
Potentiometer–attachment possible			



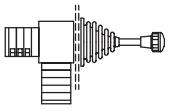
Drive arrangement AA



VNS0––AA	**VNS0––AAR**		
Potentiometer–attachment only for view direction			



Drive arrangement EA



VNS0––EA	**VNS0––EAR**		
Potentiometer–attachment for both directions possible			

Additionals:

Fitting in handle see page 2/1
Engraving each word (max. 14 letters) EUR
each symbol EUR

Potentiometer attachment see page 14/1+2
Synchro transmitter DGO see page 13/1
Encoder see page 15/11...

Cross gate	EUR
Special gate	EUR
Limiting gate	EUR
Special limiting gate	EUR
Double contacts in gold	EUR
Friction brake	EUR

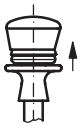
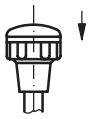
Ordering example: VNS0 3 4 . 11 14 18 SK KK AK AA R TU 40 . 50

Engraving, type of potentiometer should be described.

Type
Double contact in view direction
Double contact in cross direction
110
Shaft 140
180
SK special gate
KK cross gate
AK limiting gate
Dirve arrangement
Spring return
Fitting in handle
Circuit in view direction
Circuit in cross direction

Spohn+Burkhardt GmbH & Co.
D-89143 Blaubeuren/Germany Mauergasse 5
local contact Fon:+86 21 50450977
Fax:+86 21 50458162
enquire@spobu.com.cn

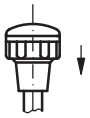
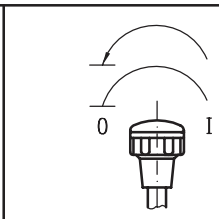
Price EUR

Type of controller		Mechanical unlock by lifting		with contact by push button			Mechanical unlock by pushing down grip, only possible in combination with slot or cross gate.	
		 without contact	with				 without contact	 with contact
M0		Z	HDZ					
VCS0		Z	ZS	HDSZ	HDVSZ	HDFSZ	IZ	IZS
			ZO	HDOZ	HDVOZ	HDFOZ		IZO
			ZU	HDUZ	HDVUZ	HDFUZ		IZU
			ZSS	HDSSZ	HDVSSZ	HDFSSZ		IZSS
			ZOO	HDOOZ	HDVOOZ	HDFOOZ		IZOO
VNS0– E V G H M		Z	ZS	HDSZ	HDVSZ	HDFSZ	IZ	IZS
			ZO	HDOZ	HDVOZ	HDFOZ		IZO
			ZU	HDUZ	HDVUZ	HDFUZ		IZU
			ZSS	HDSSZ	HDVSSZ	HDFSSZ		IZSS
			ZOO	HDOOZ	HDVOOZ	HDFOOZ		IZOO
VNS0– A EA		Z	ZU	HDUZ	HDVUZ	HDFUZ	IZ	IZU

Spohn+Burkhardt GmbH & Co.
D-89143 Blaubeuren/Germany Mauergasse 5

local contact Fon:+86 21 50450977
Fax:+86 21 50458162
enquire@spobu.com.cn

Price EUR

Type of controller		Deadman contact 	Push button (white) free IP32 	Push button (white) IP65 	Push button (white) flush mounting 	Contacts by lifting 	 Stay put 0 I	Spring return 0 I
M0				HD				
VCS0		T	H	HD	HDV	TYS	DS	DSR
		TO	HO	HDO	HDVO	TYO	DO	DOR
		TU	HU	HDU	HDVU	TYU	DSO	DSOR
		TSS	HSS	HDSS	HDVSS	TYSS		
		TOO	HOO	HDOO	HDVOO	TYOO		
VNS0– E V G H M		T	H	HD	HDV	TYS	DS	DSR
		TO	HO	HDO	HDVO	TYO	DO	DOR
		TU	HU	HDU	HDVU	TYU	DSO	DSOR
		TSS	HSS	HDSS	HDVSS	TYSS	DSS	DSSR
		TOO	HOO	HDOO	HDVOO	TYOO	DOO	DOOR
VNS0– A EA AA		TU	HU	HDU	HDVU	TYU	DSO	DSOR

Additional rotation, see grip G13 page 3/10.

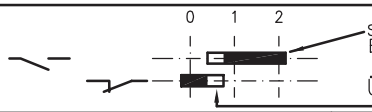
Spohn+Burkhardt GmbH & Co.
D-89143 Blaubeuren/Germany Mauergasse 5

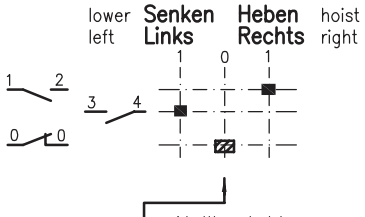
local contact Fon:+86 21 50450977
Fax:+86 21 50458162
enquire@spobu.com.cn

Meisterschalter – Fahrschaltung
Circuit diagram

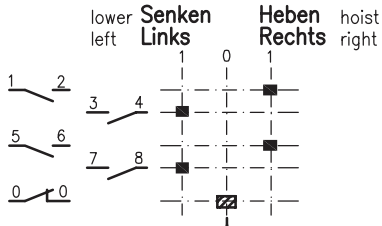
Liste 7 / 2004
S 40/1

Klammerbezeichnung bedeutet Abwicklung mit Nullkontakt
Specifications in brackets means with OFF–contact

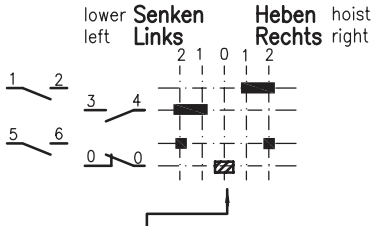




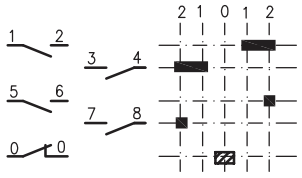
1 (10)



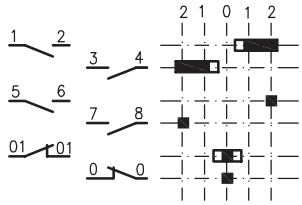
12 (120)



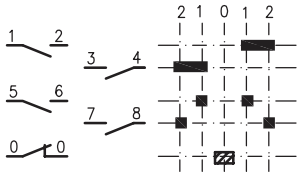
2 (20)



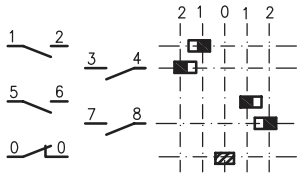
24 (240)



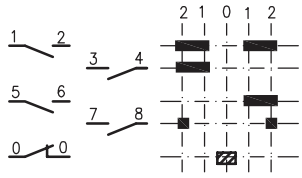
2400 A



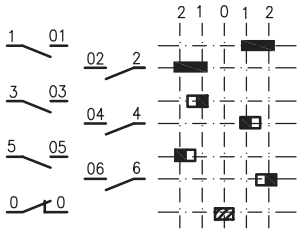
26 (260)



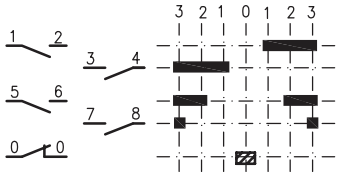
21 (210)
21 A (210 A) ohne Überlappung
Without overlapping



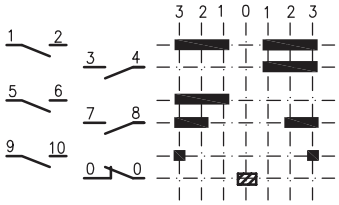
2D (2D0)



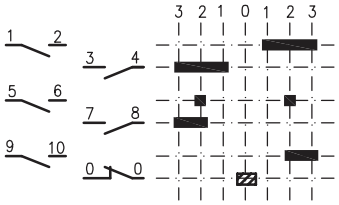
25 (250)



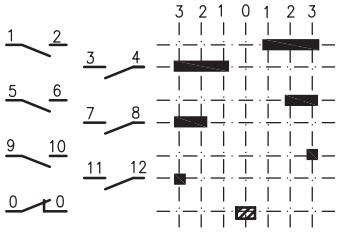
3 (30)



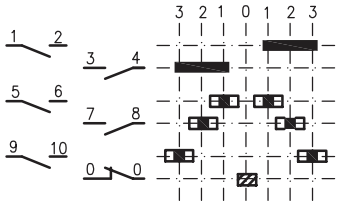
3D (3 D0)



3C (3 C0)



3B (3 B0)



31 (310)
33 (330) ohne Überlappung
Without overlapping

Spohn+Burkhardt GmbH & Co.
D-89143 Blaubeuren/Germany Mauergasse 5
local contact Fon:+86 21 50450977
Fax:+86 21 50458162
enquire@spobu.com.cn

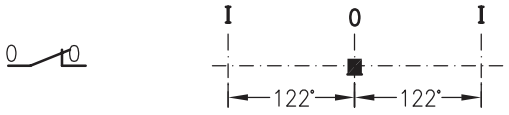
Normale Schaltungen für Meisterschalter VNS0 mit Potentiometer oder Encoder

Standard circuits for controller VNS0 with potentiometer or encoders

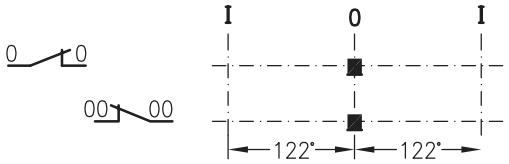
Liste 7 / 2004
S 40/5

Potentiometer Seite 14/1 + 14/2, Encoder 15/11 + 15/12 — Potentiometer see page 14/1 + 14/2, encoder 15/11 + 15/12

PN

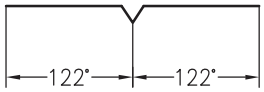


PNN



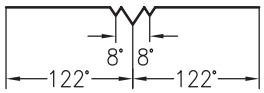
Normale Rastenscheibe
nur Nullraste, z.B. 9P1

Standard step cam
only OFF-step 9P1



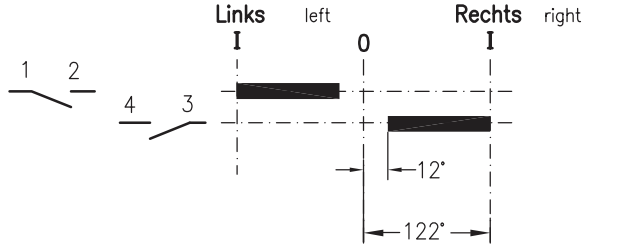
Spezial-Rastenscheibe
Null- und Anfangsrasten
Schaltungszusatz S, z.B. 9P1 S

Special step cam
OFF-and start-steps
additional "S" 9P1 S



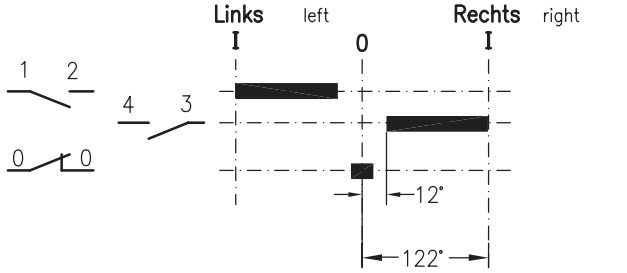
8 P1

Senken lower — Heben hoist
Vor forward — Zurück backward
Links left — Rechts right



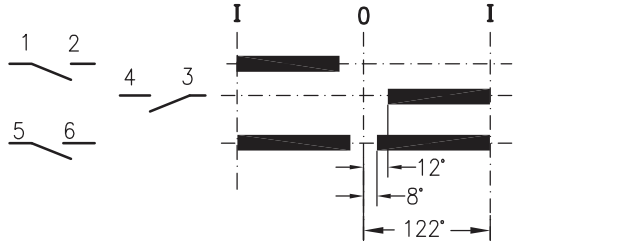
9 P1

Senken lower — Heben hoist
Vor forward — Zurück backward
Links left — Rechts right



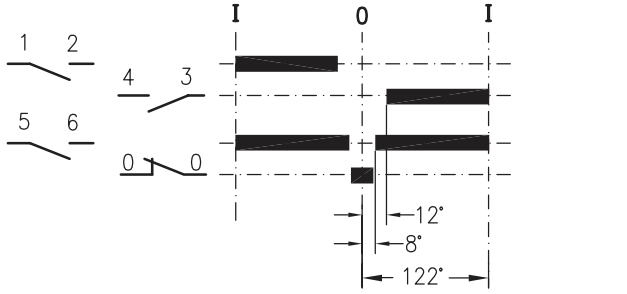
8 P1 A

Senken lower — Heben hoist
Vor forward — Zurück backward
Links left — Rechts right



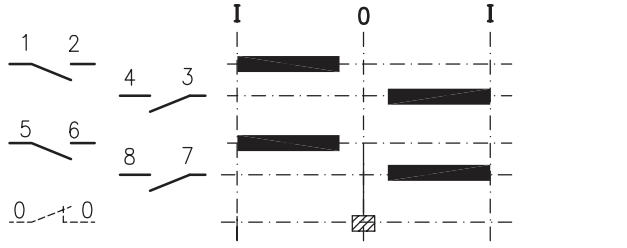
9 P1 A

Senken lower — Heben hoist
Vor forward — Zurück backward
Links left — Rechts right



8 P2

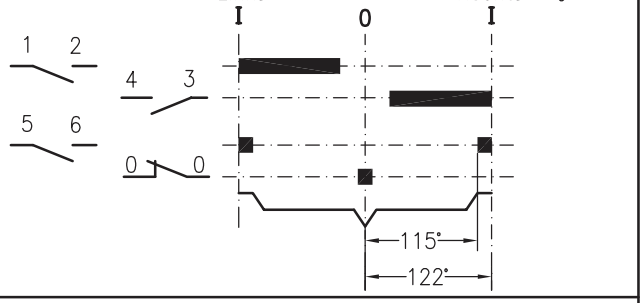
Senken lower — Heben hoist
Vor forward — Zurück backward
Links left — Rechts right



8 P 20 mit Nullkontakt 8 P 20 with OFF-contact

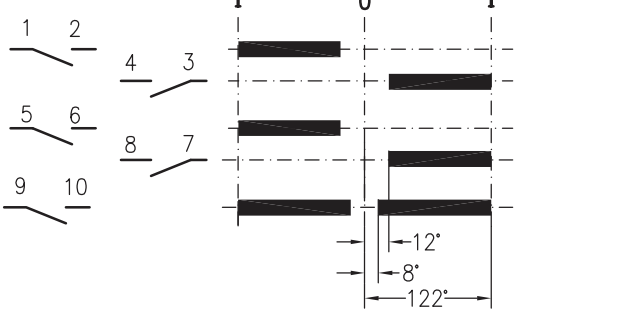
10 P

Senken lower — Heben hoist
Vor forward — Zurück backward
Links left — Rechts right



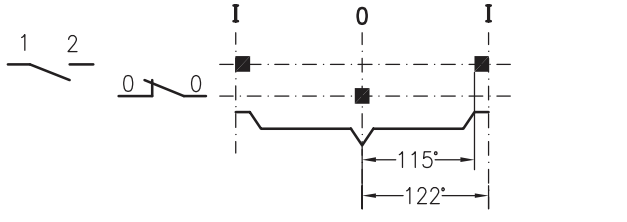
8 P2 A

Senken lower — Heben hoist
Vor forward — Zurück backward
Links left — Rechts right



POE

Senken lower — Heben hoist
Vor forward — Zurück backward
Links left — Rechts right



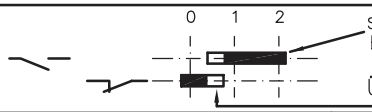
Spohn+Burkhardt GmbH & Co.
D-89143 Blaubeuren/Germany Mauergasse 5

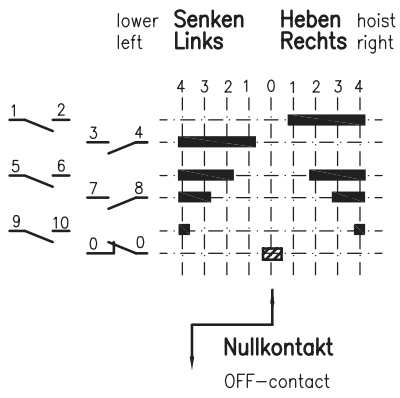
local contact Fon:+86 21 50450977
Fax:+86 21 50458162
enquire@spobu.com.cn

Meisterschalter – Fahrschaltung
Circuit diagram

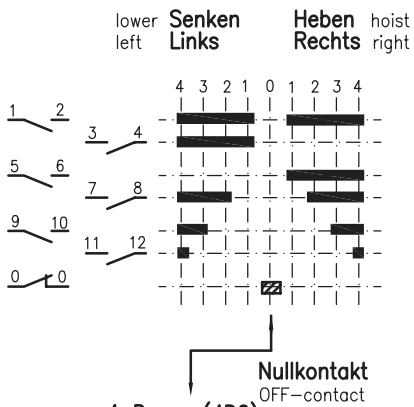
Liste 7 / 2004
S 40/2

Klammerbezeichnung bedeutet Abwicklung mit Nullkontakt
Specifications in brackets means with OFF-contact

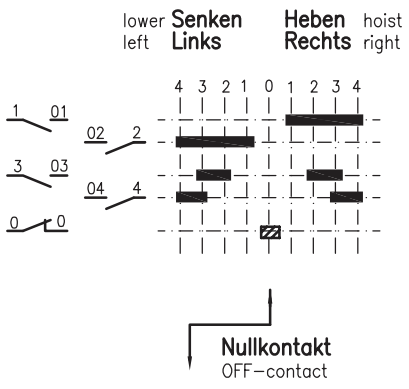




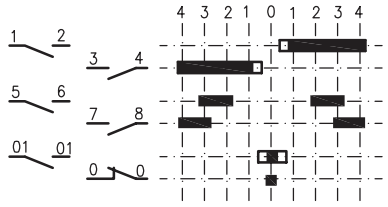
4 (40)



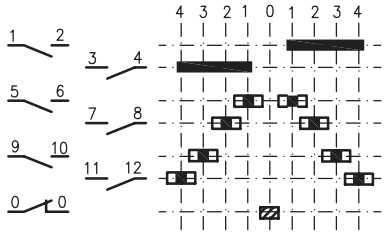
4 D (4D0)



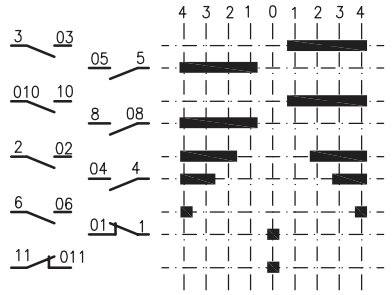
42 (420)



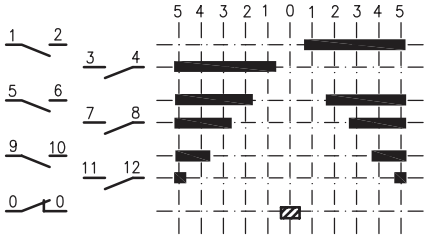
4200 A



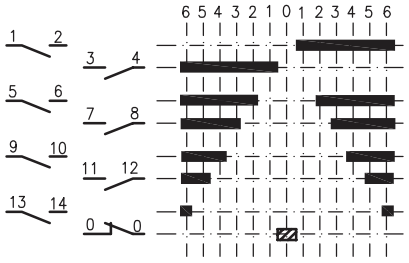
41 (410)



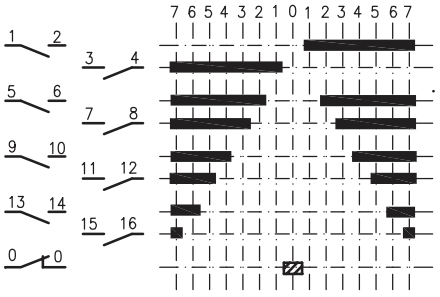
ak + aky
NESP 126 0106



5 (50)



6 (60)



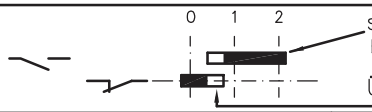
7 (70)

Spohn+Burkhardt GmbH & Co.
D-89143 Blaubeuren/Germany Mauergasse 5
local contact Fon:+86 21 50450977
Fax:+86 21 50458162
enquire@spobu.com.cn

Meisterschalter – Fahrschaltung
Circuit diagram

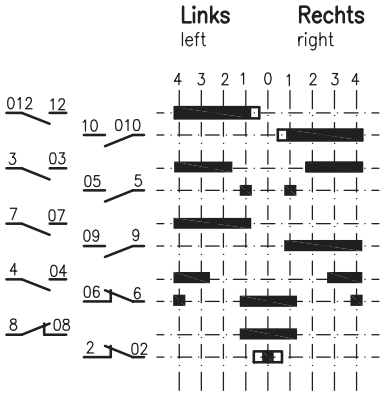
Liste 7 / 2004
S 40/3

Klammerbezeichnung bedeutet Abwicklung mit Nullkontakt
Specifications in brackets means with OFF–contact

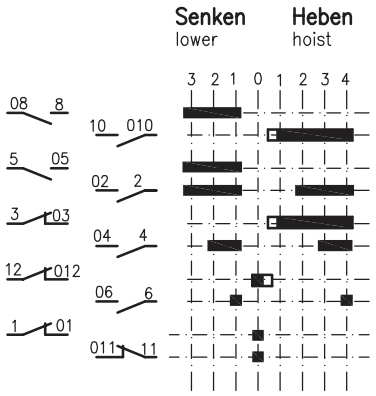


schwarzes Feld, Kontakt geschlossen
Black field, contact closed

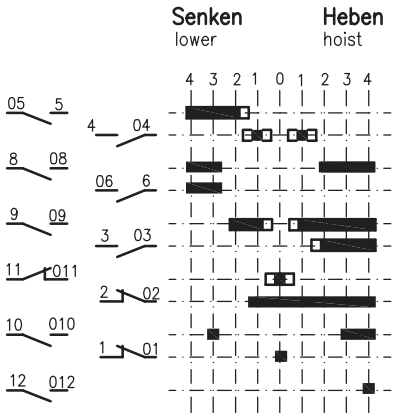
Überlappung overlapping



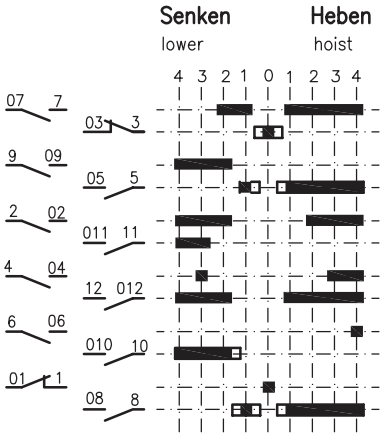
faky
NESP 126 0104



uky (0)
NESP 126 0108



ek (0)
eky (0)
NESP 126 1027



ehky (0)
NESP 126 0103

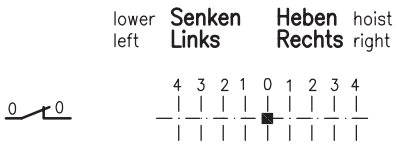
Spohn+Burkhardt GmbH & Co.
D-89143 Blaubeuren/Germany Mauergasse 5
local contact Fon:+86 21 50450977
Fax:+86 21 50458162
enquire@spobu.com.cn

Potentiometer– oder Encoderschaltungen mit Stellungsmarkierungen

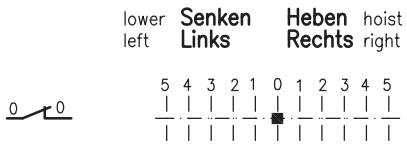
Circuits for potentiometer and encoders with notch feeling

Liste 7 / 2004
S 40/5A

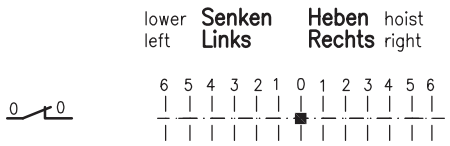
4PN



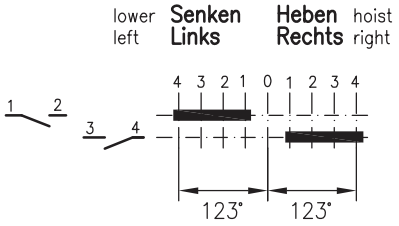
5PN



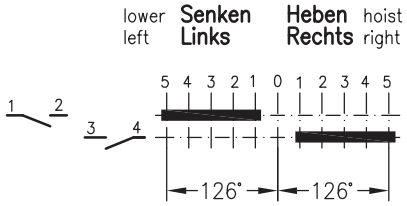
6PN



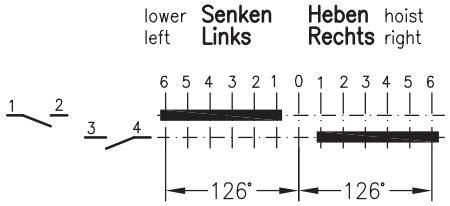
4P



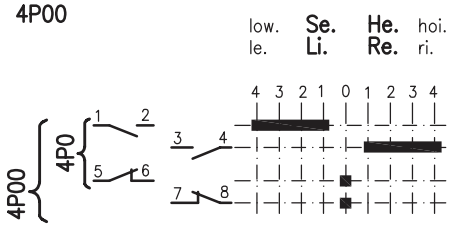
5P



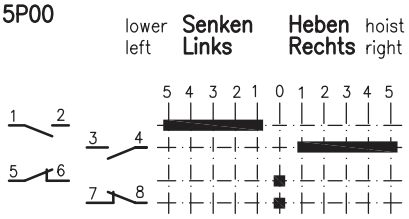
6P



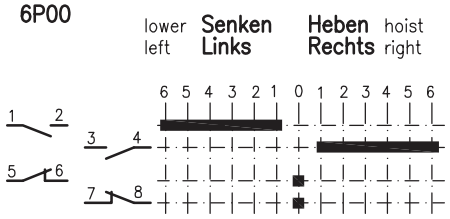
4P0
4P00



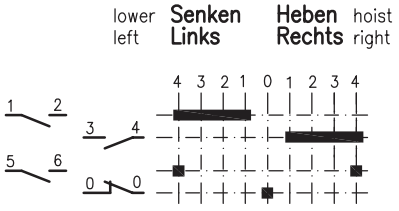
5P0
5P00



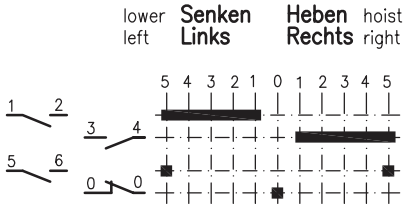
6P0
6P00



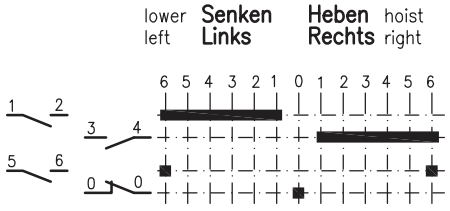
4P0E



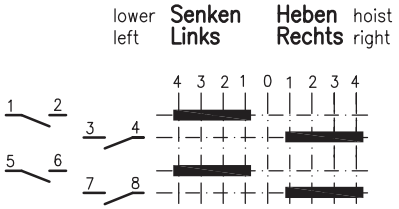
5P0E



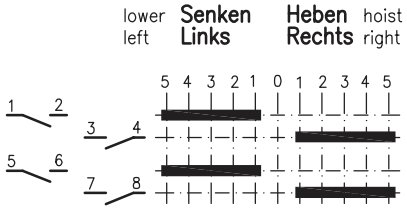
6P0E



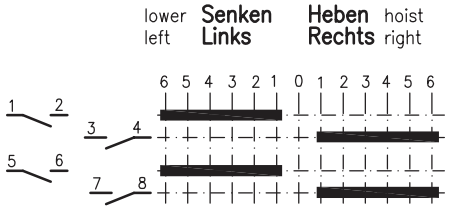
4P2



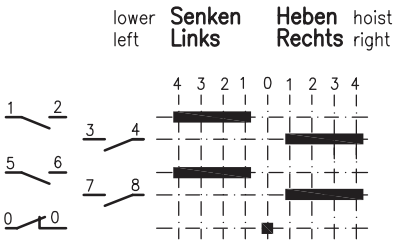
5P2



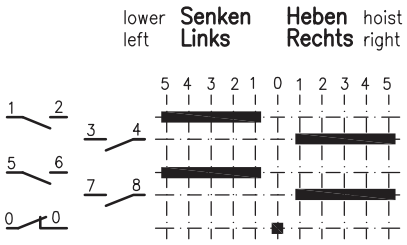
6P2



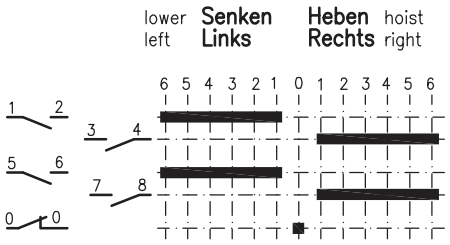
4P20



5P20



6P20



Spohn+Burkhardt GmbH & Co.
D-89143 Blaubeuren/Germany Mauergasse 5

local contact Fon:+86 21 50450977
Fax:+86 21 50458162
enquire@spobu.com.cn

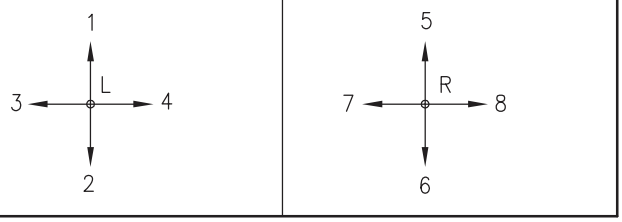
Meisterschalter VNS0, 16 Amp. für Bodenbefestigung
Controllers VNS0, 16 Amp. for base mounting

Liste 7 / 2004
M 9/2B

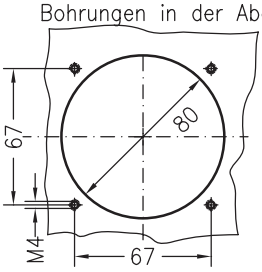
Anordnungsbezeichnung (Angabe bei Antrieb NS0–E, NS0–V u. NS0–VM erforderl.)

	VNS0–E		VNS0–V		VNS0–V		VNS0–VM	
	linke Hand	rechte Hand	linke Hand	rechte Hand	linke Hand	rechte Hand	linke Hand	rechte Hand
Blick-richtung	N	U	N	U	U	N	N	U
Quer	U	N	Y	X	X	Y	Y	X

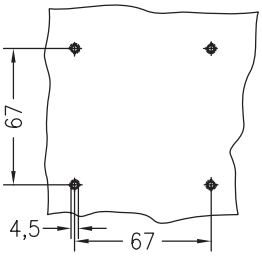
Schaltrichtungsbezeichnung

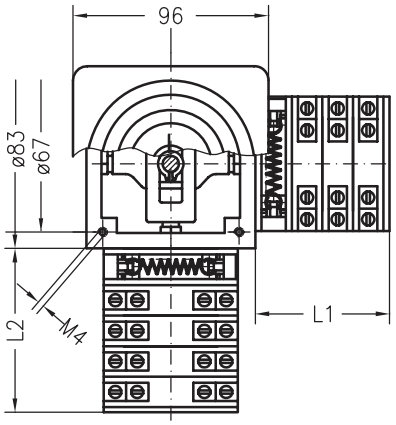


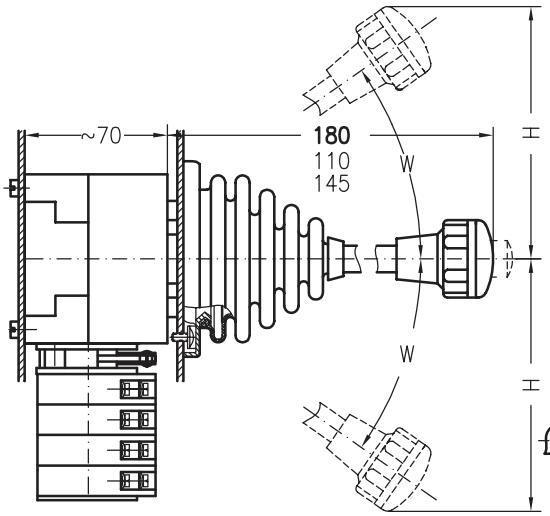
Bohrungen in der Abdeckung

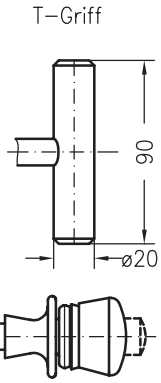


Bohrungen in der Rückwand







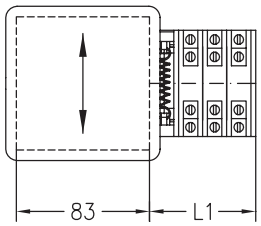


Anzahl Doppelkontaktelemente	1	2	3	4	5	6	7	8	9	10
	()ohne Rastung									
L1 L2 L3	35 (22)	50 (37)	65	80	95	110	125	140	155	170

Hebelausschlag (Hebel 180mm)								
Stellungen	H	w	Stellungen	H	w	Stellungen	H	w
1–0–1	70	17°	3–0–3	105	30°	5–0–5	115	35°
2–0–2	115	35°	4–0–4	125	38°	6–0–6	135	42°

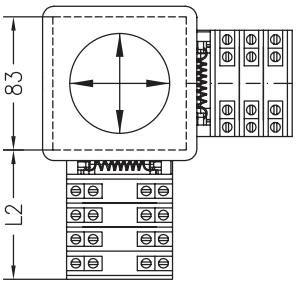
Antriebsart: **E**
Type VNS0 N S T E(R)
L1

Gew.: Antriebsblock: 900g
je Doppelkontaktelement: 80g



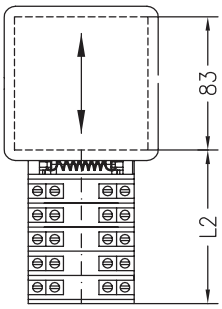
V
VNS0 T T N X C Y V(R)
L1 L2

1200g
80g



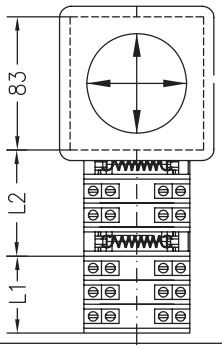
G
VNS0 T G(R)
L1

1200g
80g



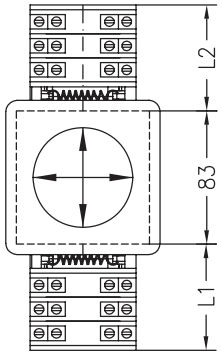
H
VNS0 T T H(R)
L1 L2

1450g
80g



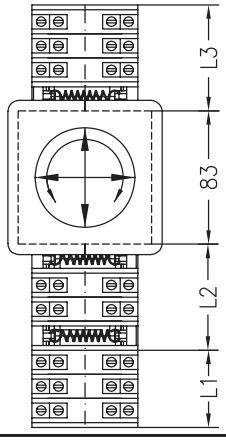
M
VNS0 T T M(R)
L1 L2

Gew.: Antriebsblock: 1400g
je Doppelkontaktelement: 80g



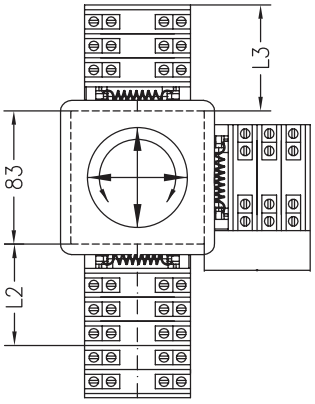
HM
NS0– T T T HM(R)
L1 L2 L3

1700g
80g

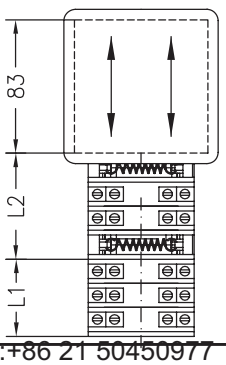


VM
NS0– T T T N X C Y VM(R)
L1 L2 L3

1600g
80g



GG
VNS0 T T GG(R)
L1 L2



Spohn+Burkhardt GmbH & Co.
D-89143 Blaubeuren/Germany Mauergasse 5
local contact Fon:+86 21 50450977
Fax:+86 21 50458162
enquire@spobu.com.cn

Meisterschalter VNS0–FG, VNS0–FH, VNS0–FM für Frontbefestigung

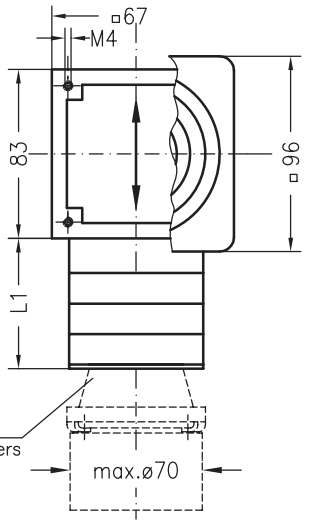
Controllers VNS0–FG, VNS0–FH, VNS0–FM for front mounted

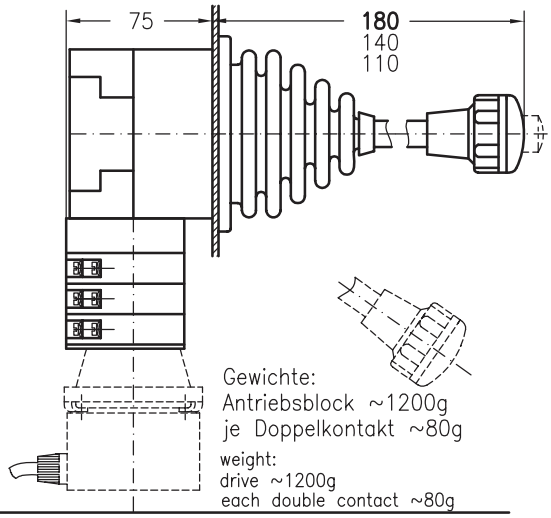
Liste 7 / 2004
M 9/3

Typ VNS0–FG

Antrieb G
siehe Seite 9/3

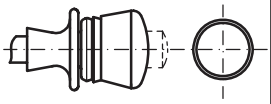
drive G
see page 9/3





Gewichte:
Antriebsblock ~1200g
je Doppelkontakt ~80g

weight:
drive ~1200g
each double contact ~80g



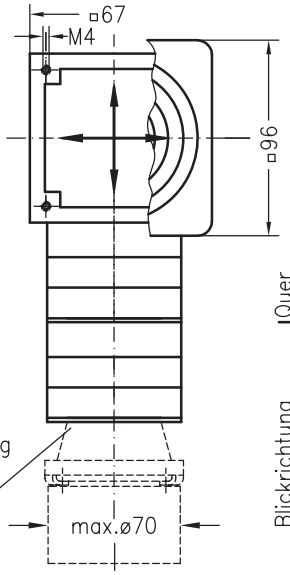
Einbauten im Hebel
siehe Seite 2/1...

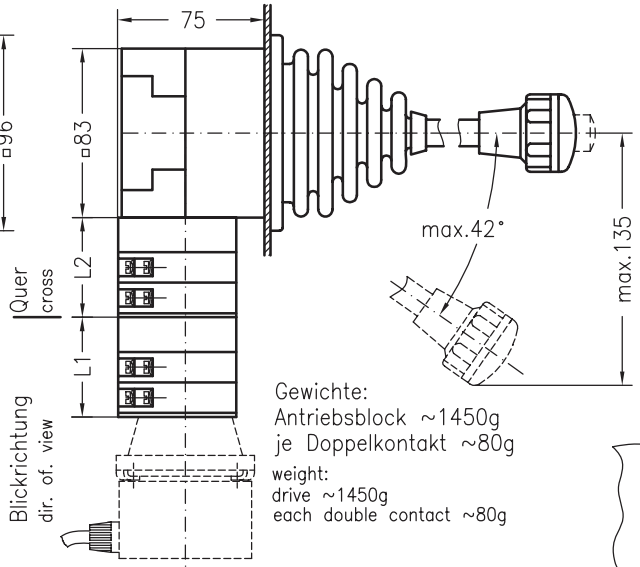
additionals
see page 2/1...

Typ VNS0––FH

Antrieb H
siehe Seite 9/3

drive H
see page 9/3



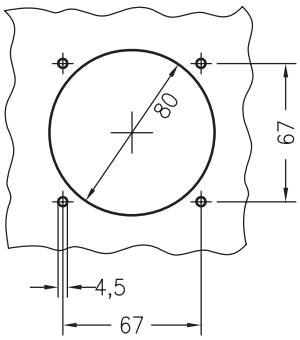


Gewichte:
Antriebsblock ~1450g
je Doppelkontakt ~80g

weight:
drive ~1450g
each double contact ~80g

Bohrungen in der
Befestigungswand

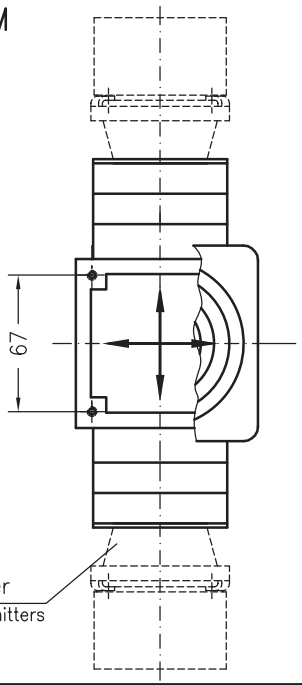
mounting dimensions

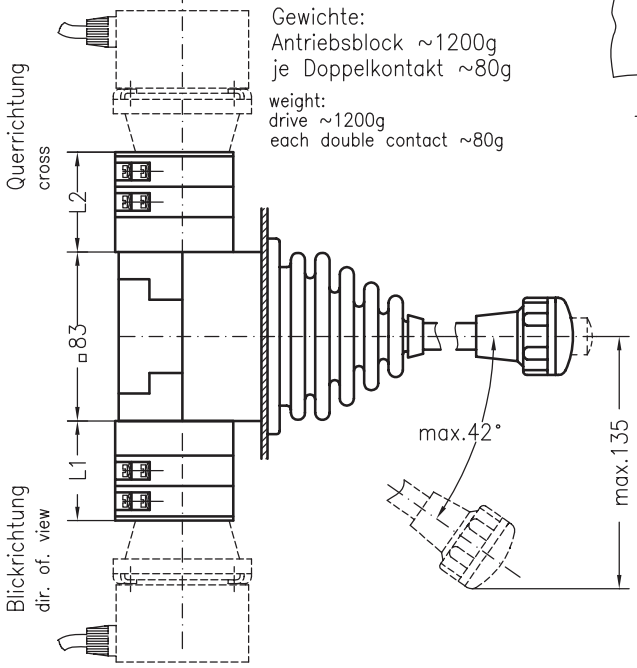


Typ VNS0––FM

Antrieb M
siehe Seite 9/3

drive H
see page 9/3





Gewichte:
Antriebsblock ~1200g
je Doppelkontakt ~80g

weight:
drive ~1200g
each double contact ~80g

Einbauten im Hebel
siehe Seite 2/1...

additionals
see page 2/1...

Maß L1 oder L2 Dimension L1 or L2	35	50	65	80	95	110	125	140	155	170
Anzahl Doppelkontakte number of double contacts	1	2	3	4	5	6	7	8	9	10

Spohn+Burkhardt GmbH & Co.
D-89143 Blaubeuren/Germany Mauergasse 5

local contact Fon:+86 21 50450977
Fax:+86 21 50458162
enquire@spobu.com.cn

Meisterschalter VNS0–A, VNS0–AA, VNS0–EA für Frontbefestigung

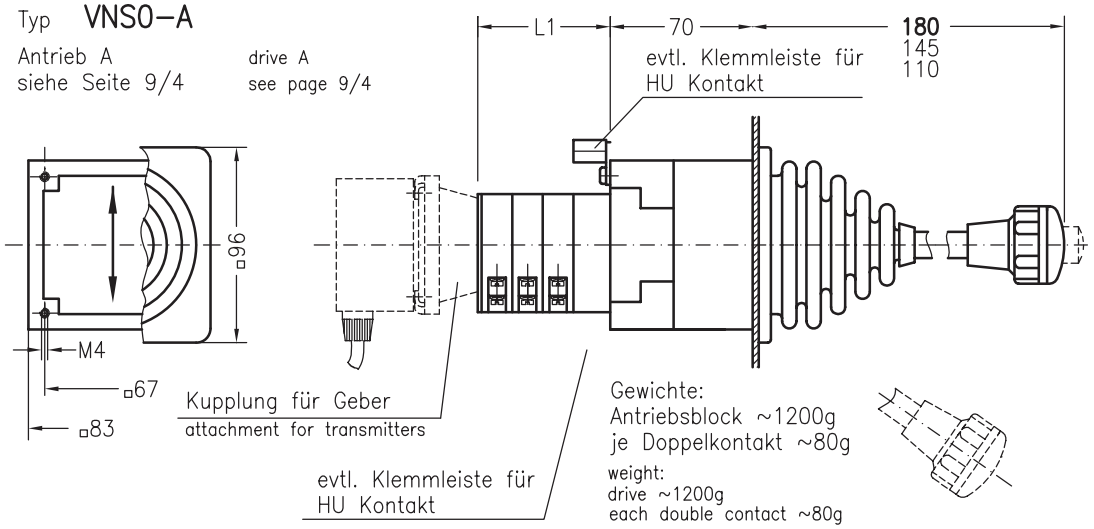
Controllers VNS0–A, VNS0–AA, VNS0–EA for front mounted

Liste 7 / 2004
M 9/4

Typ VNS0–A

Antrieb A
siehe Seite 9/4

drive A
see page 9/4

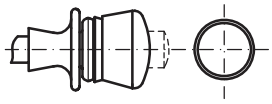


Gewichte:
Antriebsblock ~1200g
je Doppelkontakt ~80g

weight:
drive ~1200g
each double contact ~80g

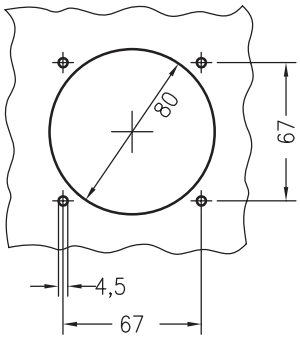
Einbauten im Hebel
siehe Seite 2/1...

additionals
see page 2/1...



Bohrungen in der
Befestigungswand

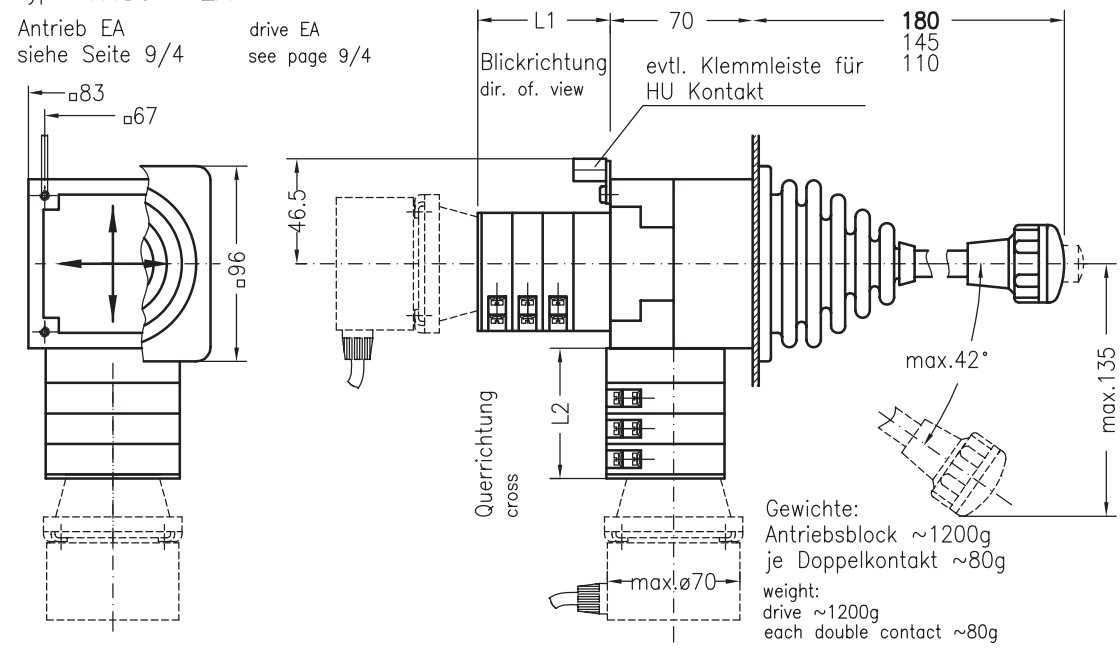
mounting dimensions



Typ VNS0––EA

Antrieb EA
siehe Seite 9/4

drive EA
see page 9/4



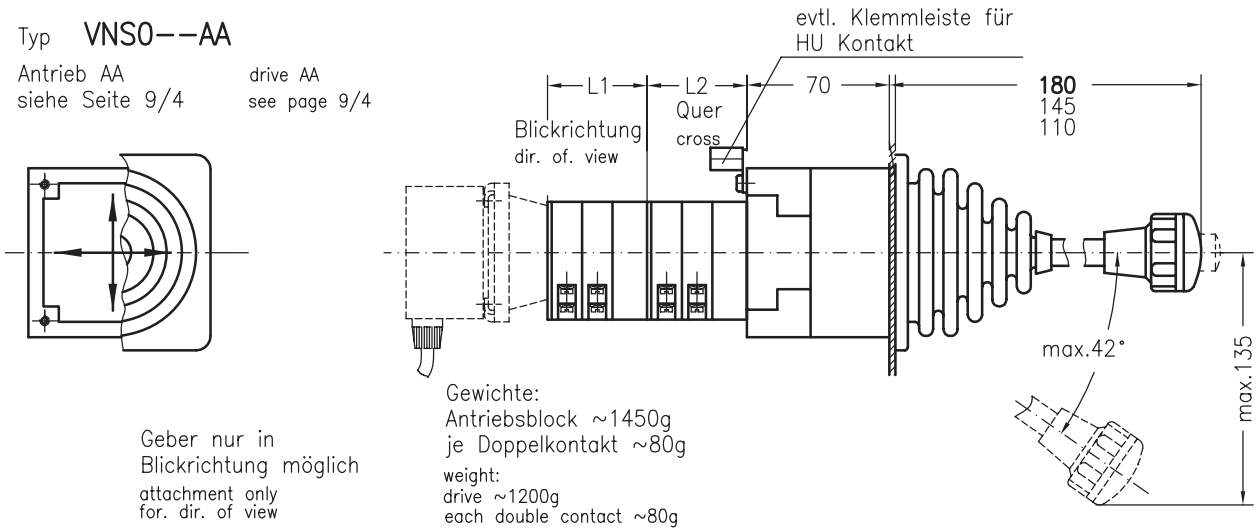
Gewichte:
Antriebsblock ~1200g
je Doppelkontakt ~80g

weight:
drive ~1200g
each double contact ~80g

Typ VNS0––AA

Antrieb AA
siehe Seite 9/4

drive AA
see page 9/4



Geber nur in
Blickrichtung möglich

attachment only
for. dir. of view

Gewichte:
Antriebsblock ~1450g
je Doppelkontakt ~80g

weight:
drive ~1200g
each double contact ~80g

Maß L1 oder L2 Dimension L1 or L2	35	50	65	80	95	110	125	140	155	170
Anzahl Doppelkontakte number of double contacts	1	2	3	4	5	6	7	8	9	10

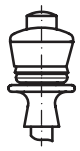
Spohn+Burkhardt GmbH & Co.
D-89143 Blaubeuren/Germany Mauergasse 5

local contact Fon:+86 21 50450977
Fax:+86 21 50458162
enquire@spobu.com.cn

Konsolen–Meisterschalter VNS0––K

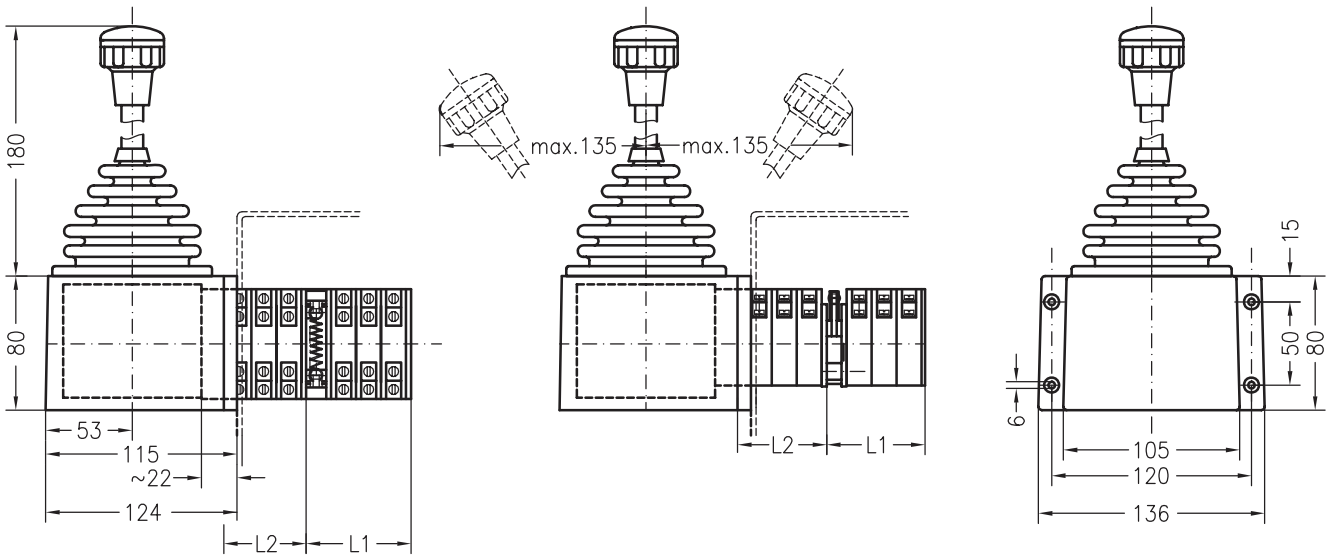
Bracket–controllers VNS0––K

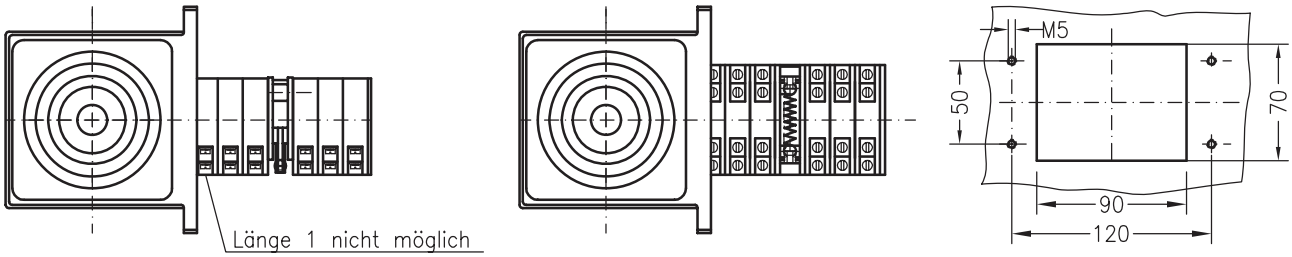
Liste 7 / 2004
M 9/7



Einbauten im Hebel
siehe Seite 2/1...

additionals
see page 2/1...





Schalterlänge bei Anzahl Doppelkontaktelemente																				
F. Norm	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
VNS0K$^{N}_{H}$E(R) VNS0–KE(R) VNS0K–H(R)	35	50	65	80	95	110	125	140	155	170	185	200	215	230	245	260	275	290	310	325
Gew. ~kg																				

Antriebsart
F. Norm

Kontaktanschlüsse seitlich

E	G	H
VNS0–NKE(R) VNS0–UKE(R)	VNS0–NKG(R) VNS0–UKG(R)	VNS0––NKH(R) VNS0––UKH(R)

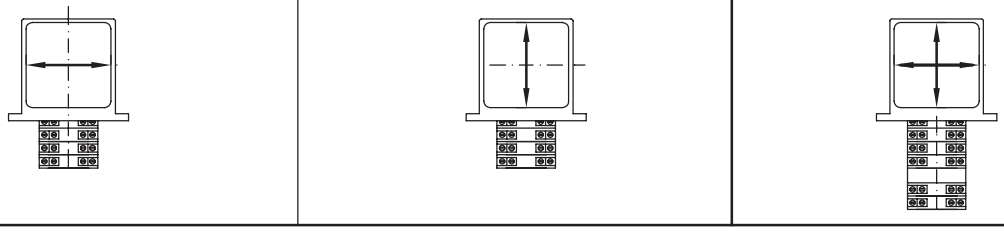
Anzahl Doppelkontaktelemente

Linker Block Rechter Block

Antriebsart
F. Norm

Kontaktanschlüsse oben

E	G	H
VNS0–KE(R)	VNS0–KG(R)	VNS0––KH(R)



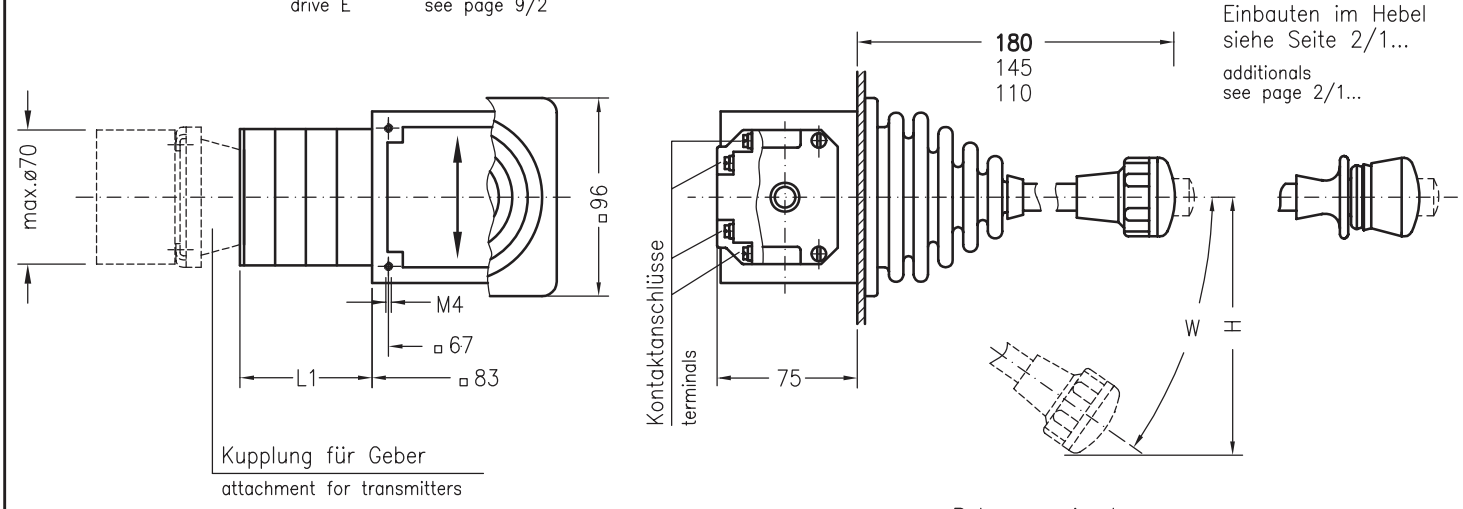
Spohn+Burkhardt GmbH & Co.
D-89143 Blaubeuren/Germany Mauergasse 5

local contact Fon:+86 21 50450977
Fax:+86 21 50458162
enquire@spobu.com.cn

Meisterschalter VNS0–FE, VNS0–FV für Frontbefestigung
Controllers VNS0–FE, VNS0–FV for front mounted

Liste 7 / 2004
M 9/2A

Typ **VNS0–F–E** Antrieb E siehe Seite 9/2
drive E see page 9/2

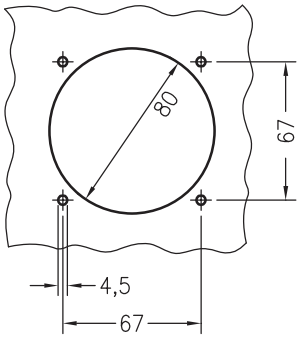


Anordnung
arrangement

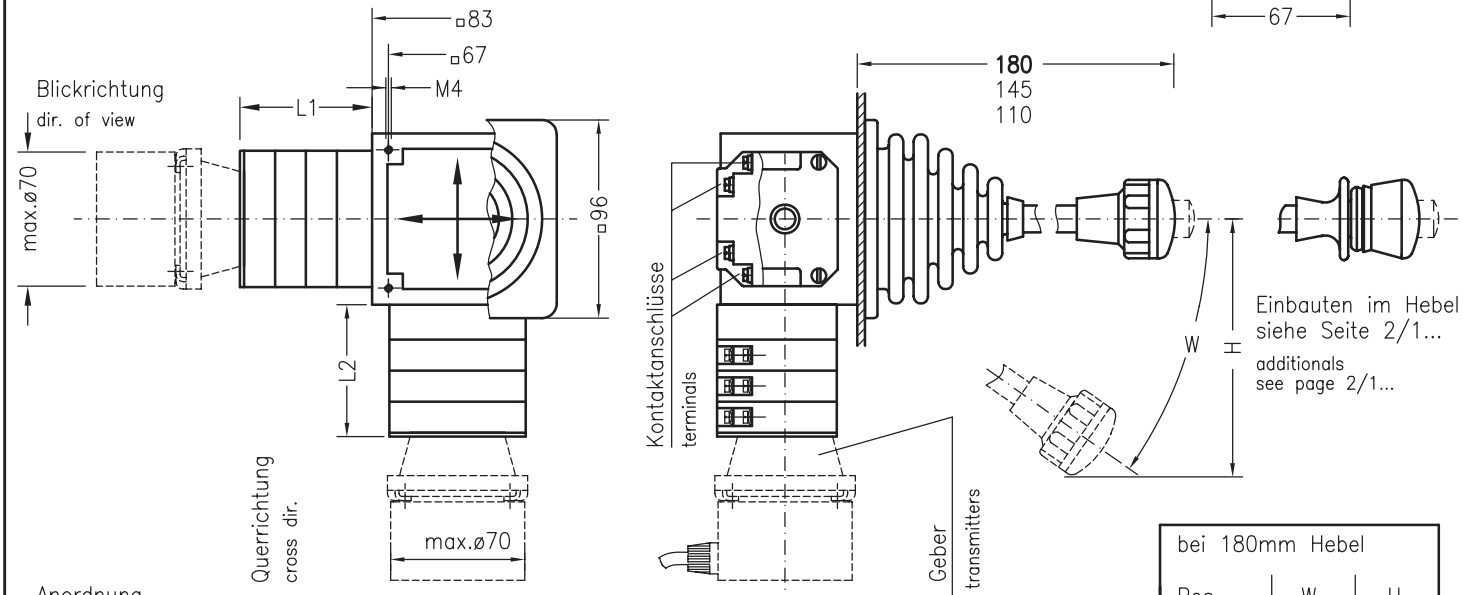
Gewichte:
Antriebsblock ~900g
je Doppelkontakt ~80g

weight:
drive ~900g
each double contact ~80g

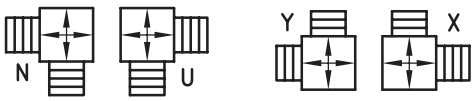
Bohrungen in der Befestigungswand
mounting dimensions



Typ **VNS0––F–V** Antrieb V siehe Seite 9/2
drive V see page 9/2



Anordnung
arrangement



Gewichte:
Antriebsblock ~900g
je Doppelkontakt ~80g

weight:
drive ~900g
each double contact ~80g

bei 180mm Hebel		
Pos.	W	H
1–0–1	17°	70
2–0–2	35°	115
3–0–3	30°	105
4–0–4	38°	125
5–0–5	35°	115
6–0–6	42°	135
7–0–7	42°	135

Maß L1 oder L2 dimension L1 or L2	35	50	65	80	95	110	125	140	155	170
Anzahl Doppelkontakte number of double contacts	1	2	3	4	5	6	7	8	9	10

Spohn+Burkhardt GmbH & Co.
D-89143 Blaubeuren/Germany Mauergasse 5
local contact Fon:+86 21 50450977
Fax:+86 21 50458162
enquire@spobu.com.cn

Programmable optoelectronical absolute encoder for master controller type VNS0 and NNS0

List 7 / 2004
15/12

Connection diagram:

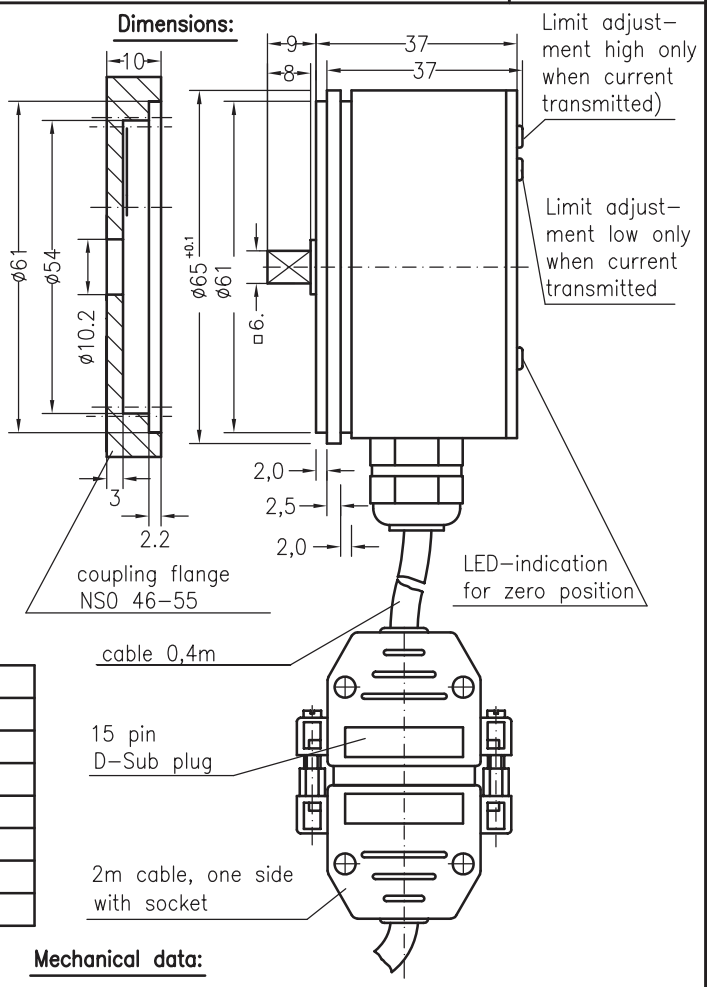
8 bit gray or binary output:

signals	15 pin D–Sub–plug	cable
	(pin number)	code DIN 47100
D0	7	green
D1	6	yellow
D2	5	grey
D3	4	pink
D4	3	blue
D5	2	red
D6	15	red/blue
D7	14	grey/pink
right	13	black
left	12	violet
supply voltage U+	9	white
GND 0V	8	brown
shielding	housing	shielding

0–20mA / 4–20mA output:

signals	15 pin D–Sub–plug	cable
	(pin–number)	code DIN 47100
output signal	1	green
right	13	yellow
left	12	grey
supply voltage U+	9	white
GND 0V	8	brown
shielding	housing	shielding

Dimensions:



Electrical data:

Supply voltage	9...36 Vdc(Uv)
Supply current	Typ (max) 45 (70) mA at 24 Vdc
Temperature	±0,5% at 20mA (±100µA)
Output signals	2 direction signals + current output or 8–bit–code
Angle	±123° max. mechanical measuring

Outputs:

Parallel– and direction outputs	$U_{High} \geq Uv–3,0$ V, $U_{Low} \leq 0,5$V (at 20mA) short circuit protected
Data code	gray / binary
Direction signals	signal R=1:a (0:a), L=0:a (1:a) CW (CCW) from 0–position
Current outputs	0...20 / 4...20mA
Max. load	(+Uv–2) / 20mA=R max.
Min. load	50 (150) 300Ω – 9...24 (24...30) 30...36 Vdc
Adjustment range current output	
4mA	3,7...4,3mA
20mA	17...22mA
Precision	±1/2 LSB
Cable	0,4m shielded (16x0,14mm²)

Addition (extra price)

Program set for encoder:

* program–disc
* program–cable
* discription

1 piece EUR

Mechanical data:

Inertia factor	1,7 x 10^{-6} kgm²
Journal load	radial 20N, axial 10N
Shaft	6mm, quadratic
Code disc	unbreakable acryl–glass
Housing	Aluminium
Weight	350g
Protection	IP 65
Temperature	–20°C...+60°C
Storage temperature	–25°C...+70°C
Vibration	100m/s² (50...2000Hz)
Shock	100m/s² (11ms)

Features:

LED for zero–position
Trimming potentiometer for current outputs
Programmable with PC–program:
RS–232–communication PC encoder (COM1 or COM2) (Txd pin10 / Rxd pin11)
Programmable functions: curve characteristic, angle, dead time, gray–, binary–code

EMV:

EN 50081–1
pr EN 50082–2
1 piece EUR

Additional prices:

1 piece Coupling NS046–55 for VNS0 controller. EUR

Spohn+Burkhardt GmbH & Co.
D-89143 Blaubeuren/Germany Mauergasse 5
local contact Fon:+86 21 50450977
Fax:+86 21 50458162
enquire@spobu.com.cn

Programmable optoelectronical absolute encoder for master controller type VNS0 and NNS0

List 7 / 2004
15/11

This encoder uses a contactless optoelectronic system to identify each position. In addition to the binary and gray-code output the encoder has got 2 direction signals and an LED to indicate zero position. The encoder mounts with coupling to the VNS0 and NNS0 master controller.

Application:

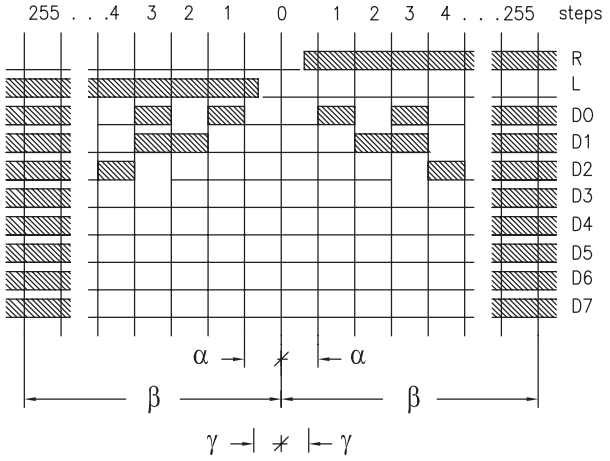
* Digital reference for PLC's
* Analoge output for PLC's

Designation key:

OGR8B – □ □	8 bit binary code	□ = curve characteristic
OGR8G – □ □	8 bit gray code	1 = linear
OGR420 – □ □	current output 4–20mA	2 = progressiv 1
OGR020 – □ □	current output 0–20mA	3 = progressiv 2
		4 = progressiv 3
	for NNS0-controller add : N	S0 = special application

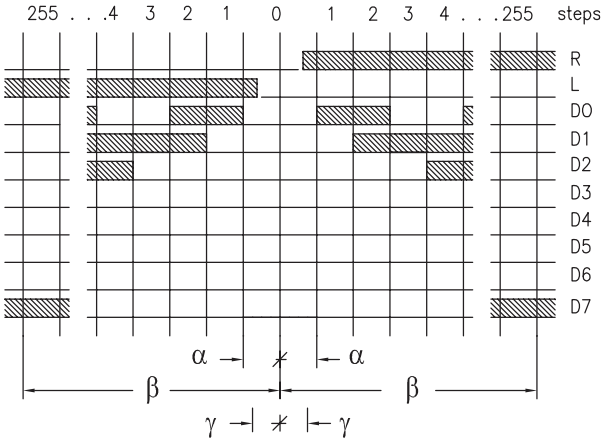
Output signals:

8-bit-binary code + 2 direction signals (OGR8B-□)

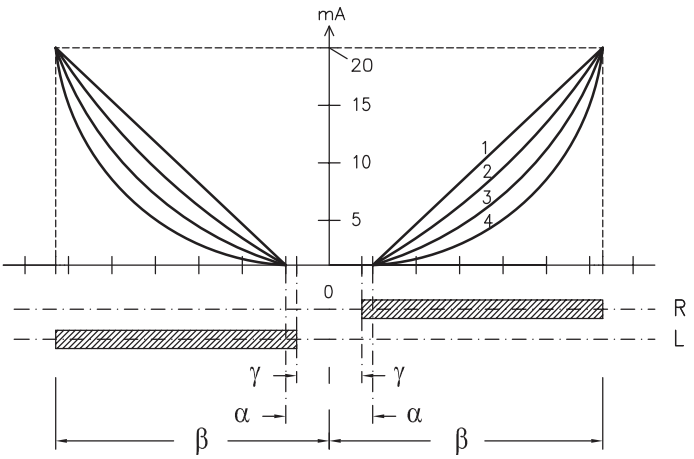


R, L... direction signals
D0-D7... 8 data signals

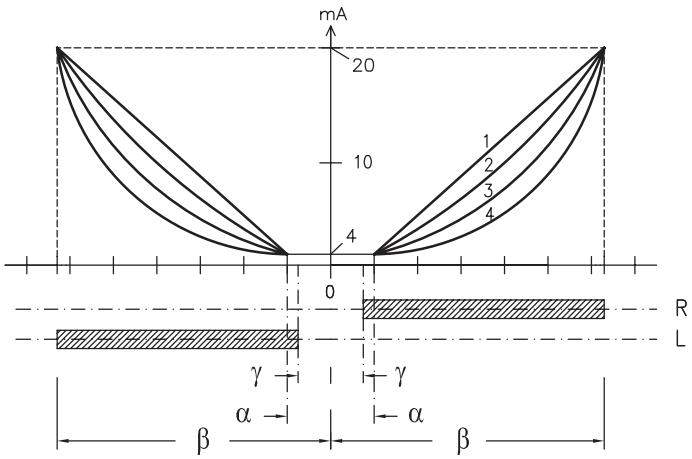
8-bit-gray code + 2 direction signals (OGR8G-□)



Current output 0-20mA + 2 direction signals (OGR020-□)



Current output 4-20mA + 2 direction signals (OGR420-□)



Basic adjustments (OGR...- 1): α = +/- 20° α = +/- 20°
β = +/- 123° β = +/- 123° / by NNS0 +/- 100°
γ = +/- 15° γ = +/- 15°
charakteristic: linear (1)

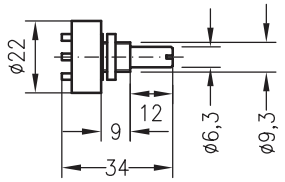
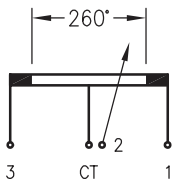
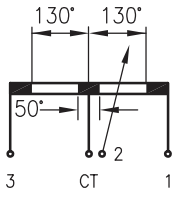
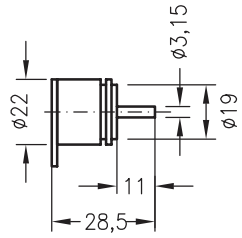
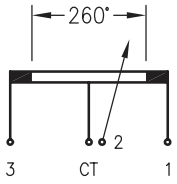
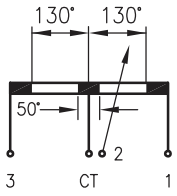
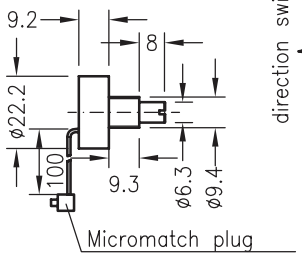
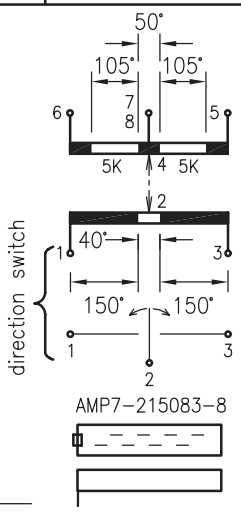
These adjustments can be changed with software.

Spohn+Burkhardt GmbH & Co.
D-89143 Blaubeuren/Germany Mauergasse 5

local contact Fon:+86 21 50450977
Fax:+86 21 50458162
enquire@spobu.com.cn

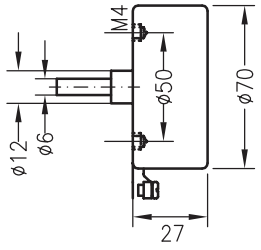
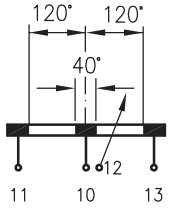
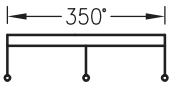
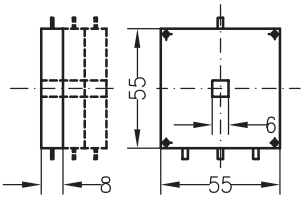
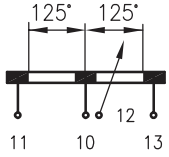
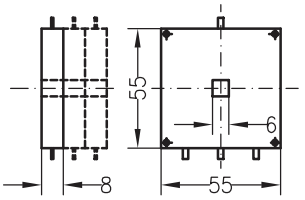
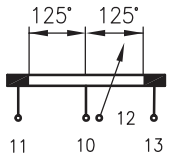
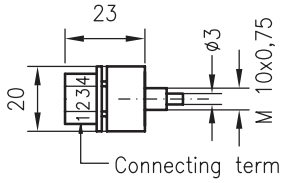
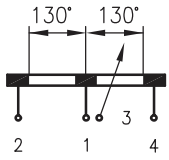
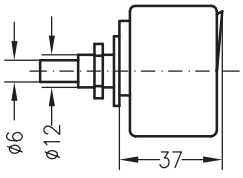
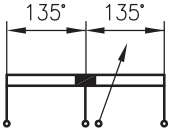
Conductive plastic potentiometer connecting instructions:

* we recommand to use an opamp as a buffer in the wiper circuitry to limit the current under 0,1 µA
* make sure, that the wiper current cannot exceed the maximal limit of 1mA (especially in case of malfunction)
* power rating 0,5 W/40°C
* maximal supply voltage Umax(V) = $\sqrt{P(W) \times R(\Omega)}$

Model		Ohmic value	Type	EUR	+ additional price for coupling EUR						
					M0	VCS0	CS1	VNS0	NNS0	VNS2	NS3
PL300 10 mio. cycles conductiv plastic bushing mount with centre tap resistance– tolerance ±20 % 	**S406** 	5 K	G5		—	—		—	—	—	—
	S256 	5–0–5 K	G55		—	—		—	—	—	—
PL310 10 mio. cycles conductiv plastic servo mount with centre tap resistance– tolerance ±20 % 	**S406** 	1 K 5 K 10 K	B1 B5 B10				—				
	S256 	1–0–1 K 5–0–5 K 10–0–10 K	B11 B55 B1010				—				
PL320 10 mio. cycles conductiv plastic bushing mount with direction switch with ribboncable and plug resistancetolerance ±20 % 		5–0–5 K	GLR55								—

Spohn+Burkhardt GmbH & Co.
D-89143 Blaubeuren/Germany Mauergasse 5

local contact Fon:+86 21 50450977
Fax:+86 21 50458162
enquire@spobu.com.cn

Model		Ohmic value	Type	EUR	+ additional price for coupling EUR				
					M0	VCS0	VNS0	NNS0	VNS2
PW70 10 mio. cycles 6 Watt wire wound with centre mounting wiper current max. 120 mA resistance– tolerance ±1 % 	**PW70–SM 7206–L**  with stoppers	540–0–540 1030–0–1030 5–0–5 K 10–0–10 K			—				
		5–0–5 K oil filled			—				
	PW70d  without stoppers	0–1 K 0–5 K			—				
PD550–S233 10 mio. cycles 3 Watt 	wire wound with squared hole wiper current max. 100 mA resistancetolerance ±5 % 	1–0–1 K 1,5–0–1,5 K 2–0–2 K 3–0–3 K 5–0–5 K 10–0–10 K	PQ11 PQ22 PQ33 PQ55 PQ1010		—			—	
PD550–S286 10 mio. cycles 3 Watt 	wire wound with squared hole wiper current max. 100 mA resistancetolerance ±5 % 	1–1 K 2,5–2,5 K 5–5 K			—			—	
PD 200–S237 2 mio. cycles 2 Watt 	wire wound with centre mounting wiper current max. 100 mA resistancetolerance ±5 % 	1–0–1 K 2–0–2 K 5–0–5 K 10–0–10 K	PZ11 PZ22 PZ55 PZ1010						
DP60 1 mio. cycles 50 Watt 	wire wound with centre mounting max. wiper current see ohmic values resistancetolerance ±5 % 	50–0–50 (0,77 Amp) 80–0–80 (0,6 Amp) 120–0–120 (0,5 Amp)			—				

Spohn+Burkhardt GmbH & Co.
D-89143 Blaubeuren/Germany Mauergasse 5

local contact Fon:+86 21 50450977
Fax:+86 21 50458162
enquire@spobu.com.cn