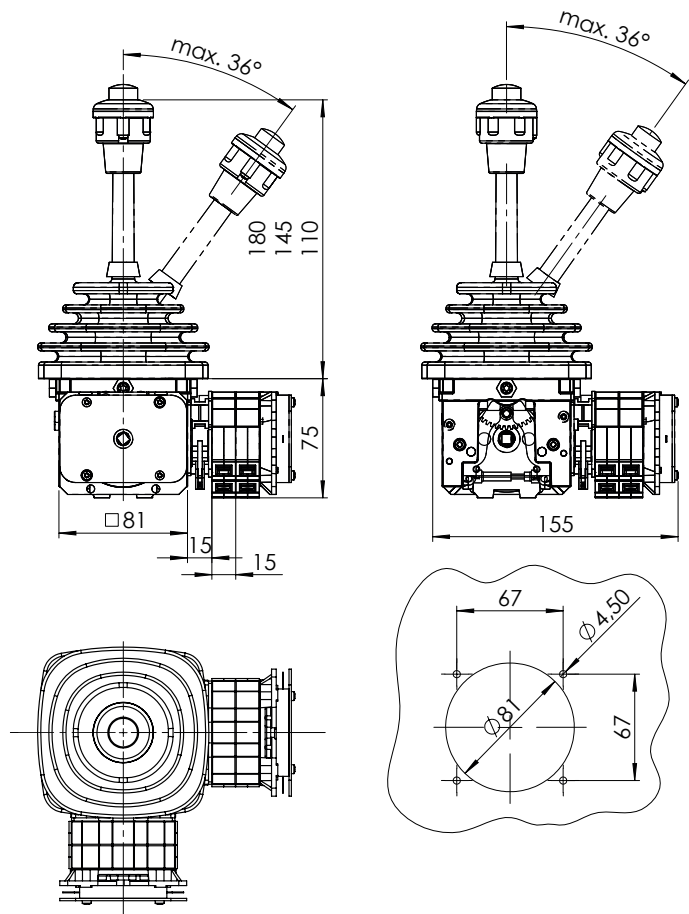
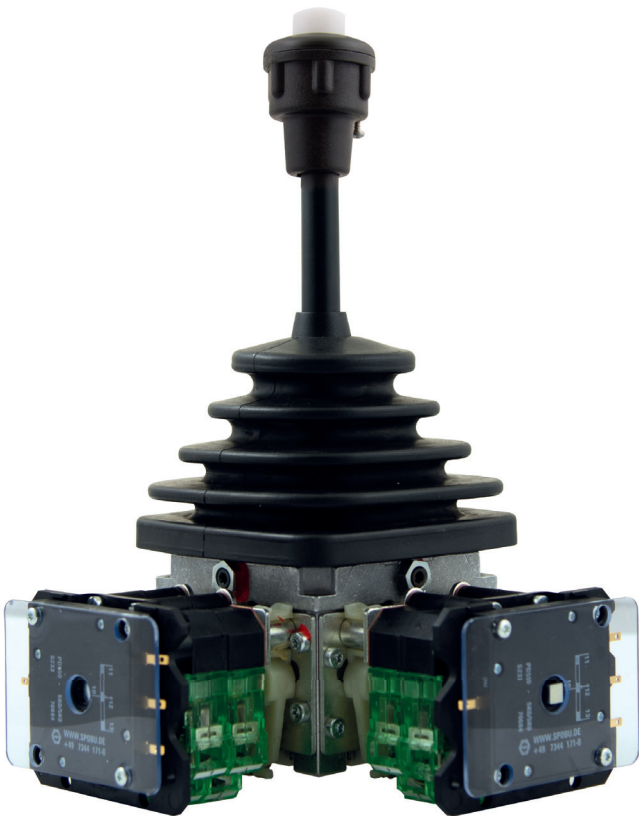
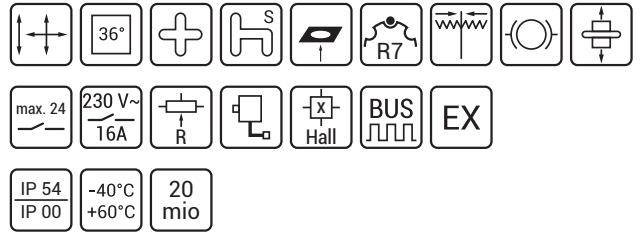


VNS0

The Allrounder.



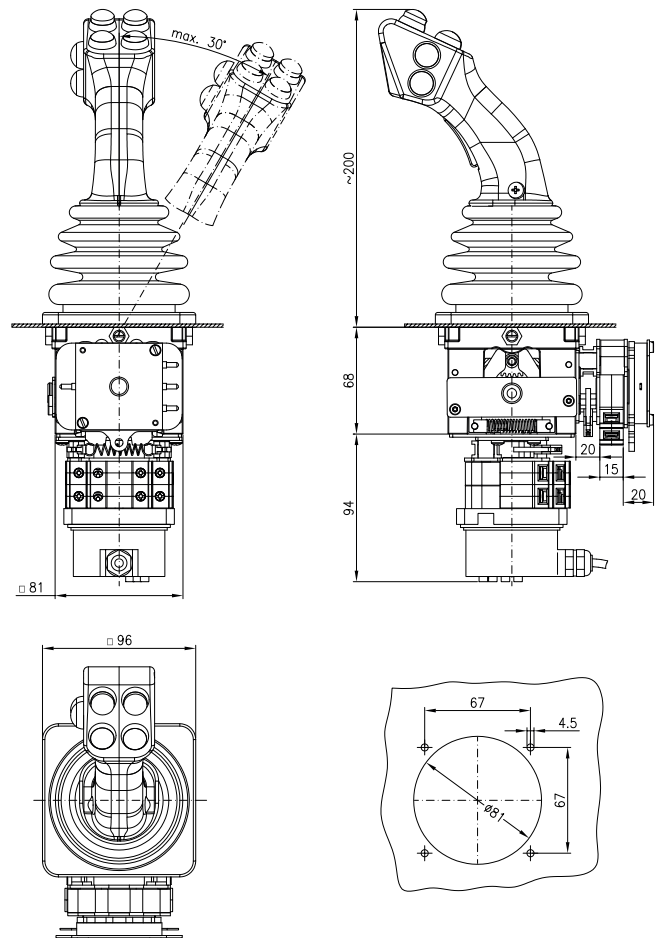
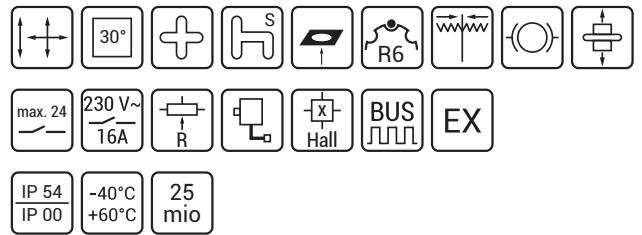
Both the VNS0 and the NNS0 are very robust joysticks with aluminium diecast consoles and metal gears. Their resistance against ozone, UV radiation, oil and maritime climate makes them especially suitable for heavy-duty applications and also in potentially explosive areas. They are available both as single and dual axis drives. The intelligent modular design allows customized solutions for contact elements for up to twelve units, each of them with two switching contacts. Those

may be flanged in the x-, y- and z-axis as well as in series. A maximum of nine double contact elements, silver or gold plated, is possible with spring return and notches.

A large standard portfolio allows to choose the notching discs as well as the cams. They are also programmable according to client's request.

NNSO

Our special type.



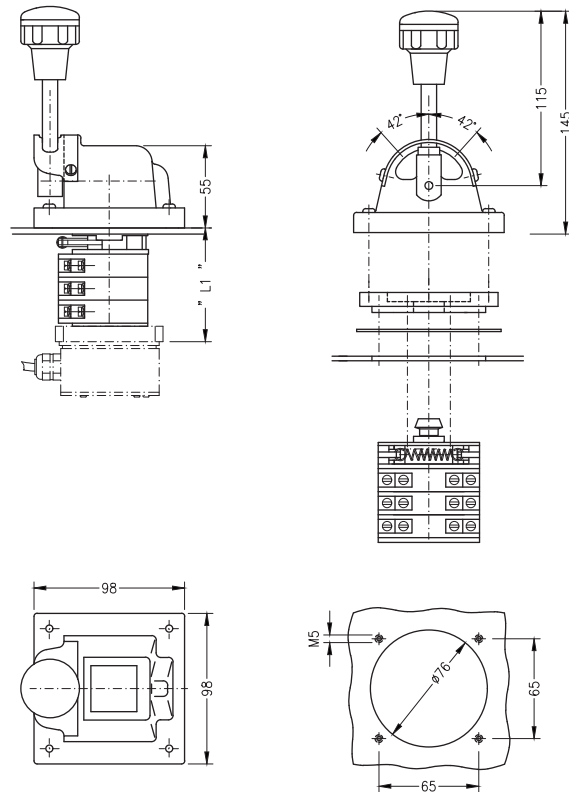
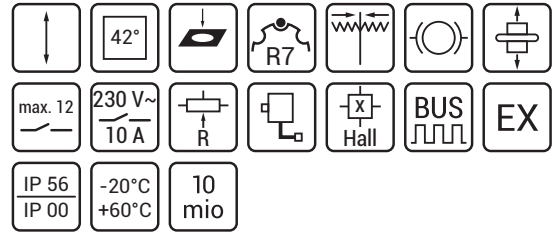
The hollow special-alloy lever (VNSO 8 mm, NNSO 12 mm diameter) allows to mount a variety of handles and the wires can be routed through the shaft of the joystick. Optionally, a rotary module mounted between the joystick and the handle extends the joystick by an additional axis. Due to the special coupling design it is easy to flange potentiometers as well as optoelectronic encoders. Moreover, various bus interfaces are

available in customized system sizes.

As an optical finish, you will get as standard a rubber boot with matching invisible holder or a rubber boot with escutcheon plate of your choice either in transparent plastic with specified engraving or as an engraved aluminium version.

NS0-SFA

For extreme environmental requirements.



The NS0-SFA with a chromated aluminum upper part, lever and drive shaft made of high-quality stainless steel as well as a shaft seal was developed with the demand of permanently ensuring a high front IP protection class.

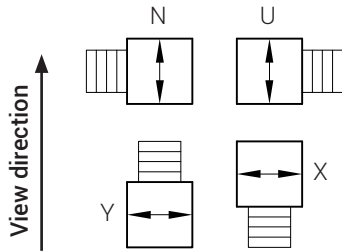
The modular contact block is equipped with exchangeable double contact elements and allows switching with a maximum of 7-0-7 posi-

tions and the attachment of potentiometers and absolute encoders.

A Gravoply plate that can be engraved can optionally be inserted on the top of the control switch to show the switching function.

These control switches have been showing their reliability and durability under extreme operating conditions on ships, drilling rigs and steel works for years.

Drive E
Arrangement N, U, Y, X

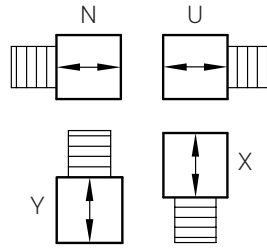


VNS0-F E-

N
U
Y
X

--AK

Drive G
Arrangement N, U, Y, X

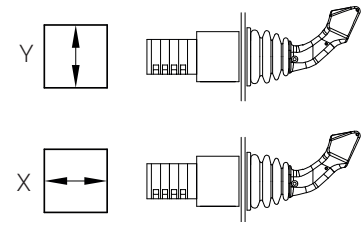


VNS0-F G-

N
U
Y
X

--AK

Drive A
Arrangement Y, X

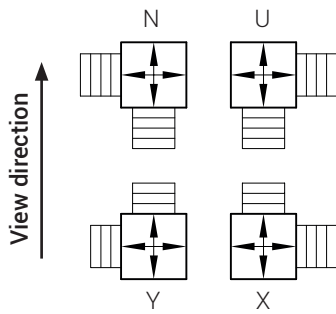


VNS0-F A-

Y
X

--AK

Drive V
Arrangement N, U, Y, X

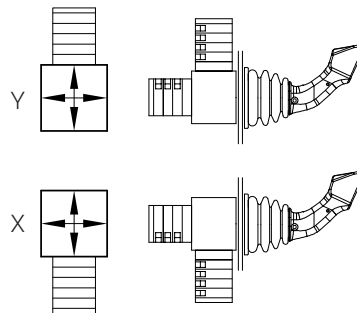


VNS0--F V-

N
U
Y
X

--AK

Drive EA
Arrangement Y, X

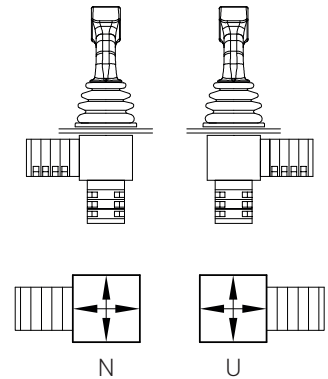


VNS0--F EA-

Y
X

--AK

Drive EA
Arrangement N, U

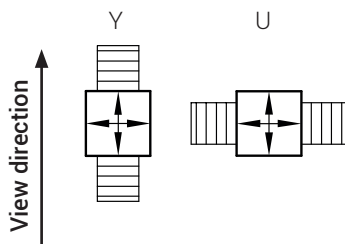


VNS0--F EA-

N
U

--AK

Drive M
Arrangement Y, U

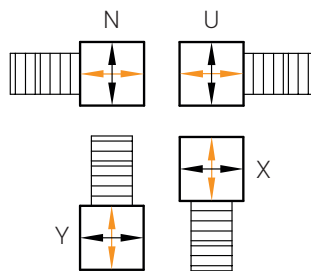


VNS0--F M-

U
Y

--AK

Drive H
Arrangement N, U, Y, X



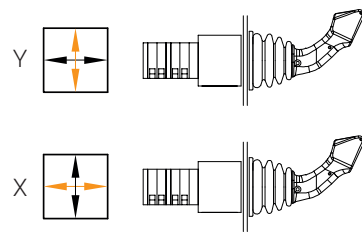
Potentiometer and encoder coupling only for colour-coded axis

VNS0--F H-

N
U
Y
X

--AK

Drive AA
Arrangement Y, X



Potentiometer and encoder coupling only for colour-coded axis

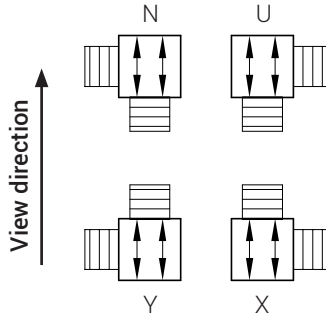
VNS0-F AA-

Y
X

--AK

Drive GGV

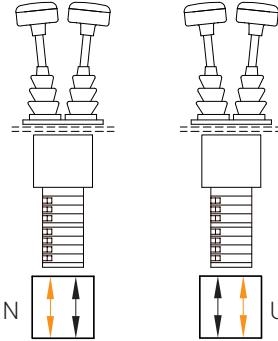
Arrangement N, U, Y, X



VNS0--F GGV-
N
U
Y
X

Drive GGAA

Arrangement N, U

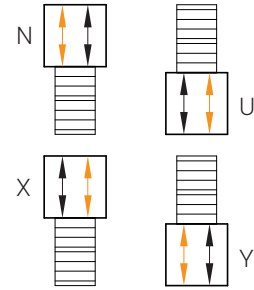


Potentiometer and encoder coupling
 only for colourcoded axis

VNS0--F GGAA-
N
U

Drive GGH

Arrangement N, U, Y, X

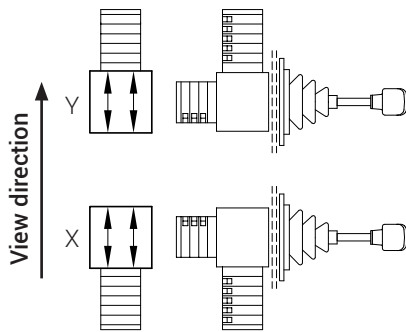


Potentiometer and encoder coupling
 only for colourcoded axis

VNS0--F GGH-
N
U
Y
X

Drive GGEA

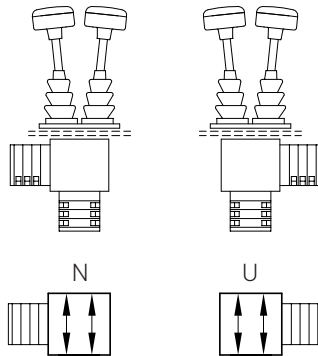
Arrangement Y, X



VNS0--F GGEA-
Y
X

Drive GGEA

Arrangement N, U



VNS0--F GGEA-
N
U

Project planning information:

Handles in combination with GG-drives:

G13-handle: only in combination with lever length 140 mm

UGA-handle without handrest: only in combination with lever length 110 mm

UGALR-handle without handrest: only in combination with lever length 140 mm

G56, G58: not possible in combination with GG-drives

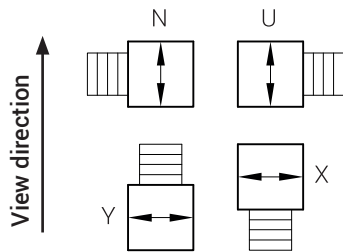
VNS0-GG-Joysticks with black aluminium escutcheon plate.

The orientation of the handles is always in the view direction.

The view direction is defined by the drive and the arrangement.

Drive EPI

Arrangement N, U, Y, X



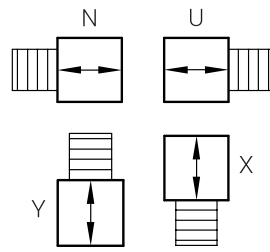
NNS0--F EPI-

N
U
Y
X

 --AK

Drive GPI

Arrangement N, U, Y, X



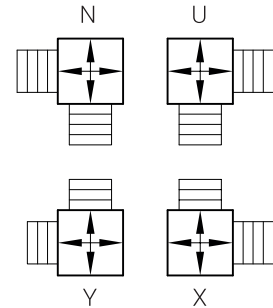
NNS0--F GPI-

N
U
Y
X

 --AK

Drive VPI

Arrangement N, U, Y, X



NNS0--F VPI-

N
U
Y
X

 --AK

NNS0-PI: Specification for Bxx-potentiometer mounted inside of the drive block.

Standard scope of supply for NNS0-EPI, -GPI, -VPI:

- Deflection max. 30° (depending on contact circuit)
- With zero notching
- Limiting gate
- Lever with 12 mm diameter
- Rubber boot with invisible holder (S3 combination)
- Handle G48

Additional charge for drive arrangement EPI, GPI, VPI:

- Spring return per axis R
- Model without zero notching per axis (only in combination with spring return possible)
- Housing for bus interfaces
- Limiting gate 18° (depending on contact circuit)
- More additional see page J-NS0-S, J-NS0-8/11, E-Electronic-1, -2, -3

Project planning information:

Type code see page J-NS0-8/11

The orientation of the handles is always in the view direction.
 The view direction is defined by the drive and the arrangement.

Scope of supply, additional charge, type code

Scope of supply for VNS0, NNS0:

- Standard handle G41 for VNS0, G48 for NNS0
- Rubber boot with invisible holder (S3 combination)
- Limiting gate (36° for VNS0, 26° for NNS0)

Suitable handles	see sheet G-Ü
Absolute encoder, potentiometer	see sheet E-Electronic-1/2
Contact circuits	see TI-S-...
Further technical information	see TI-VNS0-...

Additional charge:

- Version NNS0 for E-, A-, G-drive arrangement (see sheet J-NS0-4/11)
- Version NNS0 for V-, EA-, AA-, M-drive arrangement (see sheet J-NS0-4/11)
- Bracket version of E-, G-, H-, or GGH-drive arrangement (dimensions see TI-VNS0-5/10) (Included 1x spacer element for mechanical length adaptation)
- Contact circuits
- Spring return per axis R
- Friction brake per axis B
- Base mounting (not possible for A, AA, EA, EPI, GPI, VPI)
- Special limiting gate SAK
- Cross gate KK
- Special gate SK
- Slot gate SZK
- Special notching disc
- Aluminium escutcheon plate, black, 96x96 mm
- Plastic escutcheon plate, clear with foil, foil freely inscribable
- Rubber boot holder V048-100-A1
- Rubber boot holder V048-100-A1 with escutcheon plate V048-100-A2
- Labelling per switch direction with max. 14 letters at plastic escutcheon plate, aluminium escutcheon plate black
- Labelling foil for plastic escutcheon plate with symbols see sheet 2/3, each pair

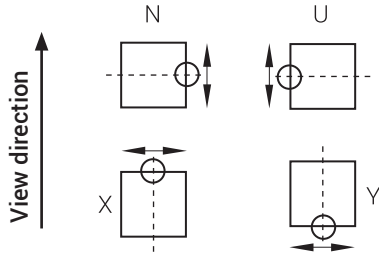
Type code:	VNS0	NNS0	1	2	UK	V-N	18	SZK	B	H	8P1	9P1	PQ55	B55
Gold plated contacts														
Type														
Double contact in view direction *)														
Double contact in cross direction *)														
Front mounting, base mounting, bracket version														
Drive-arrangement														
Lever length 70 110 140 180 mm **)														
Limiting- special- cross- special limiting- Slot gate														
Spring return friction brake														
Fitting in handle														
Contact circuit in view direction														
Contact circuit in cross direction														
Potentiometer in view direction														
Potentiometer in cross direction														

*) model with friction brake add 1

**) Lever length 70 only for NNS0 joysticks with G25, G9 handle. G25, G9 handle only in combination with lever length 70. For the total height above the front panel, see technical data sheets or on request.

Drive SFA

Arrangement N, U, X, Y



N
U
X
Y

NS0- - SFA

Scope of supply NS0-SFA:

- Standard handle G41
- Chromated housing top
- Lever 8 mm made of stainless steel
- Guide plate for lever
- Lever deflection max. 42° (depending on contact circuit)

Options:

- Handles see G-Ü
- Absolute encoder, Potentiometer see E-Electronic-1,-2

Note:

- Technical information see TI-NS0-1/1

Additional charge:

- Contact circuits
- Spring return R
- Friction brake B
- Special lever deflection
- Special notching disc
- Housing for electronics
- Labeling for one switching direction with max. 14 characters on Gravoply insert plate
- Mechanical locking Z with G41-Z

Type code:

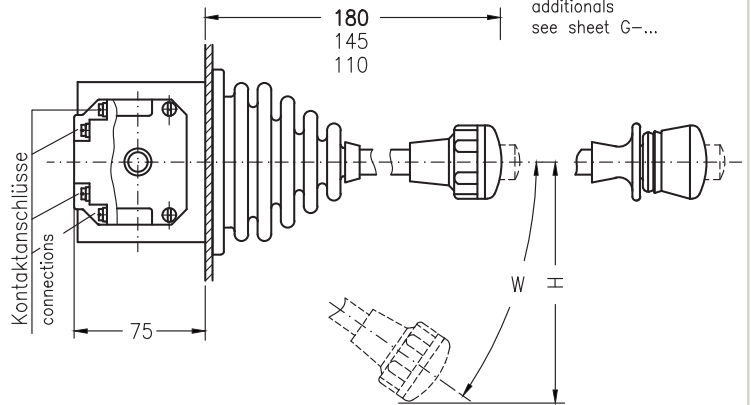
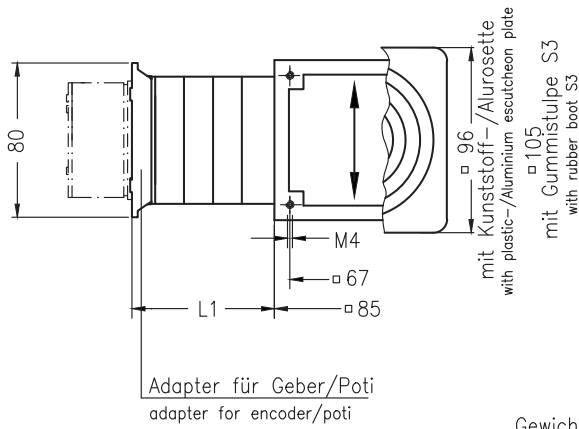
	K	NS0	2	N	11	SFA	R	G21
Gold plated contacts	_____	_____	_____	_____	_____	_____	_____	_____
Type	_____	_____	_____	_____	_____	_____	_____	G22
Number of double contacts	_____	_____	_____	_____	_____	_____	_____	G41-Z
Arrangement	_____	_____	_____	_____	_____	_____	_____	G41-IZ
Lever length 110 mm	_____	_____	_____	_____	_____	_____	_____	20
Drive	_____	_____	_____	_____	_____	_____	_____	
Spring return (R)/Friction brake (B)	_____	_____	_____	_____	_____	_____	_____	
Handle	_____	_____	_____	_____	_____	_____	_____	
Contact circuit	_____	_____	_____	_____	_____	_____	_____	

Project planning information:

- Maximum 8 single wires through handle shaft possible.
- The orientation of the handles is always in the view direction.
- The view direction is defined by the drive and the arrangement.

Typ **VNS0-F-E** Antrieb E siehe Kapitel J-NS0
 type drive E see chapter J-NS0

Einbauen im Hebel
 siehe Seite G-...
 additional
 see sheet G-...

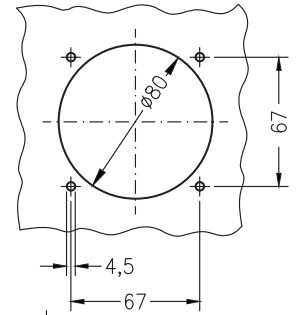


Anordnung
 arrangement



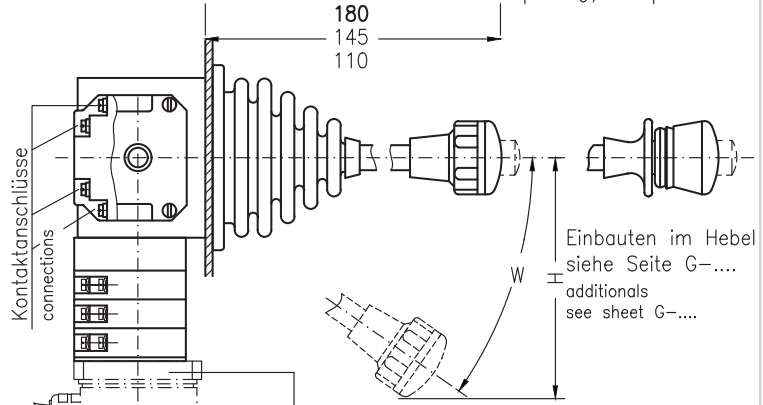
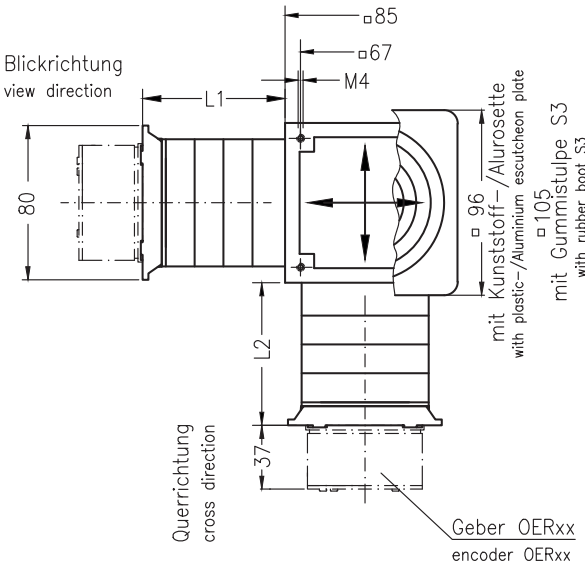
Gewicht:
 Antriebsblock ~0,9 kg
 je Doppelkontakt ~0,08 kg
 weight:
 drive ~0,9 kg
 each double contact ~0,08 kg

Bohrungen in der
 Befestigungswand
 mounting pattern



Typ **VNS0-F-V** Antrieb V siehe Kapitel J-NS0
 type drive V see chapter J-NS0

Blickrichtung
 view direction



Einbauen im Hebel
 siehe Seite G-....
 additional
 see sheet G-....

Anordnung
 arrangement



Gewicht:
 Antriebsblock ~1,2 kg
 je Doppelkontakt ~0,08 kg
 weight:
 drive ~1,2 kg
 each double contact ~0,08 kg

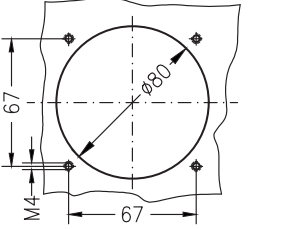
bei 180 mm Hebel by lever 180 mm		
Position	W	H ~ mm
1-0-1	14°	70
2-0-2	20°	100
3-0-3	30°	135
4-0-4	30°	135
5-0-5	36°	155
6-0-6	36°	155
7-0-7	30°	135
Poti/ Encoder	36°	155

Maß L1 oder L2 (mm) dimension L1 or L2 (mm)	40	55	70	85	100	115	130	145	160	175
Anzahl Doppelkontaktelemente number of double contact elements	1	2	3	4	5	6	7	8	9	10

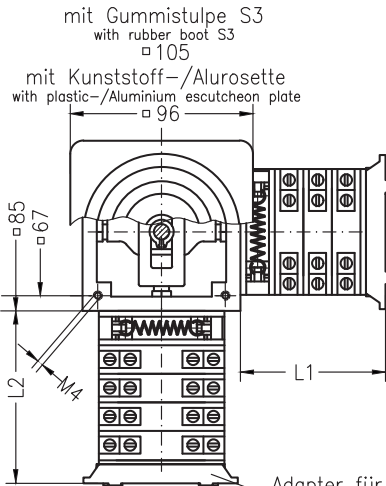
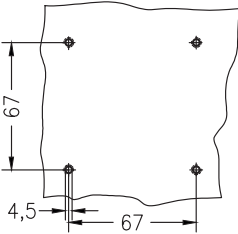
Anordnungsbezeichnung: arrangement description:						Schaltrichtungsbezeichnung		switch direction arrangement	
VNS0-E		VNS0-V		VNS0-V		linke Hand left hand		rechte Hand right hand	
linke Hand left hand	rechte Hand right hand	linke Hand left hand	rechte Hand right hand	linke Hand left hand	rechte Hand right hand	1	2	3	4
						↑	↓	←	→
								←	→
Blick- richtung view direction									
Quer- cross direction									

Bohrungen in der Abdeckung

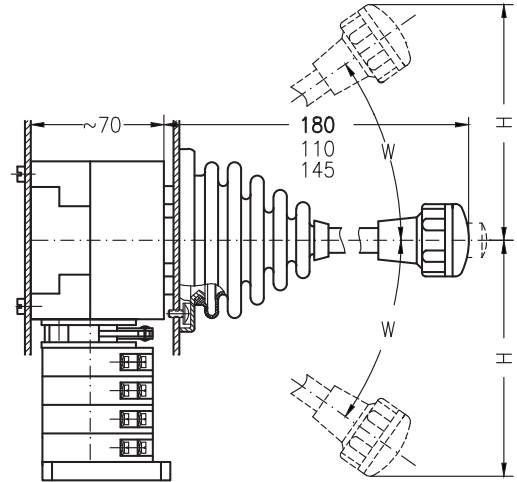
mounting pattern



Bohrungen in der Rückwand



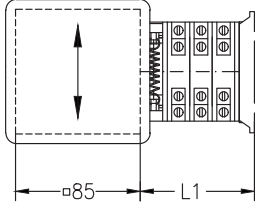
Adapter für Geber/Poti
adapter for encoder/poti



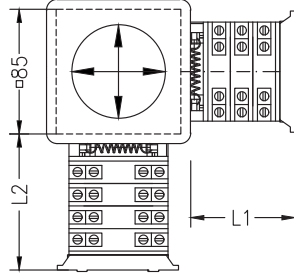
Anzahl Doppelkontaktelemente number of double contact elements	1 ohne Rastung (without notches)		3	4	5	6	7	8	9	10	Hebelausschlag (Hebel 180 mm) lever deflection (lever 180 mm)										
	L1	L2									Stellungen steps	H	W	Stellungen steps	H	W	Stellungen steps	H	W		
	40	(22)	55	(37)	70	85	100	115	130	145	160	175	1-0-1	70	14'	3-0-3	135	30'	5-0-5	155	35'
													2-0-2	100	20'	4-0-4	135	30'	6-0-6	155	36'

Antriebsart:
drive arrangement:
Typ VNS0 E(R)

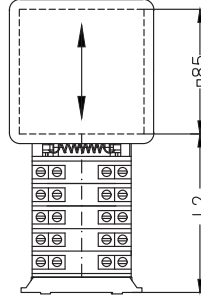
Gew.: Antriebsblock: weight: drive block 0,9 kg
je Doppelkontakt-
element: each double contact element 0,08 kg



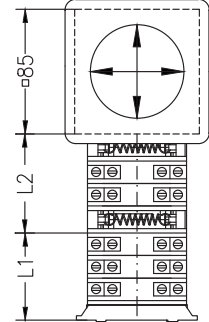
VNS0 V(R)



VNS0 G(R)

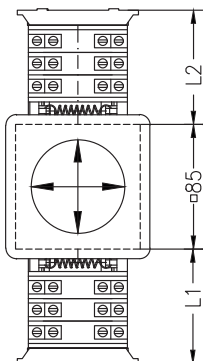


VNS0 H(R)

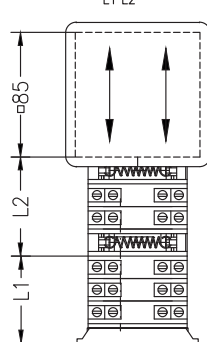


VNS0 M(R)

Gew.: Antriebsblock: weight: drive block 1,4 kg
je Doppelkontakt-
element: each double contact element 0,08 kg



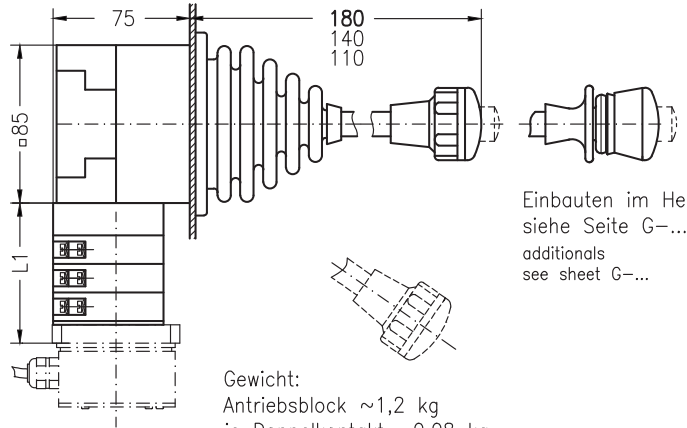
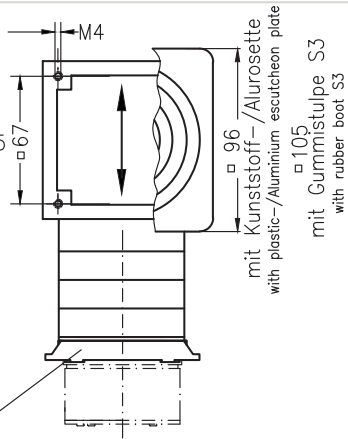
NS0 GG(R)



Typ VNS0-FG
type

Antrieb G
siehe Seite J-NS0-4/5
drive G
see sheet J-NS0-4/5

Adapter für Geber/Poti
adapter for encoder/poti



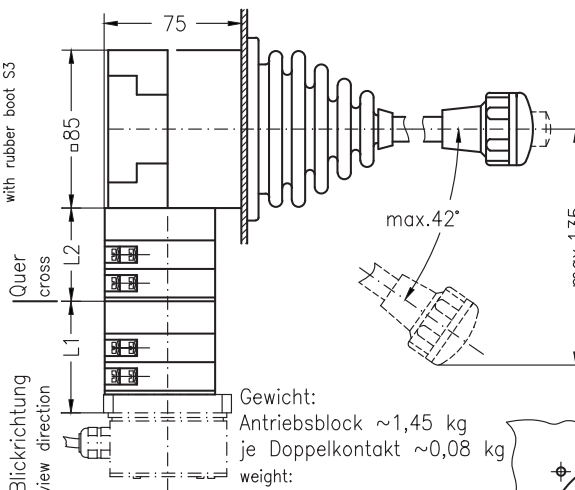
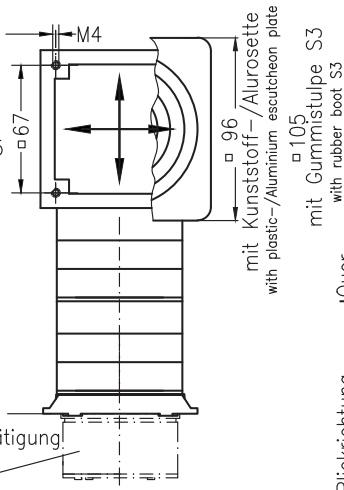
Einbauen im Hebel
siehe Seite G-...
additional
see sheet G-...

Gewicht:
Antriebsblock ~1,2 kg
je Doppelkontakt ~0,08 kg
weight:
drive ~1,2 kg
each double contact ~0,08 kg

Typ VNS0--FH
type

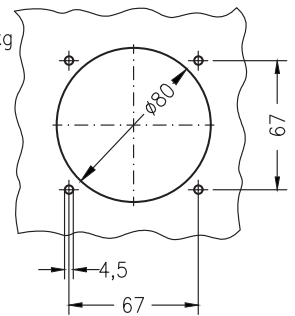
Antrieb H
siehe Seite J-NS0-4/5
drive H
see sheet J-NS0-4/5

Geber/Poti nur für Betätigung
in Blickrichtung möglich
encoder/poti
only in view direction



Bohrungen in der
Befestigungswand
mounting pattern

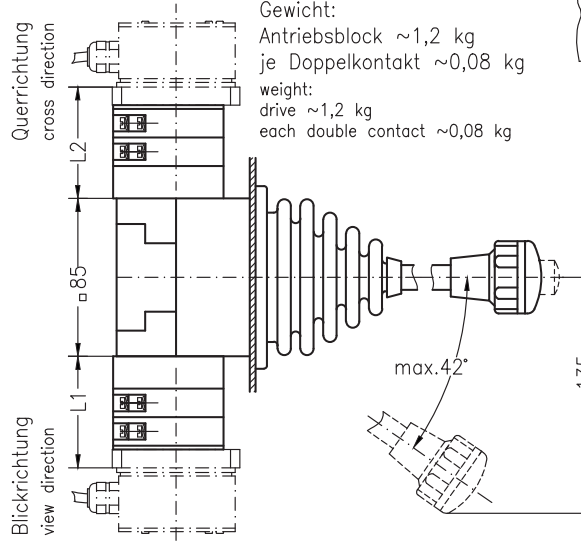
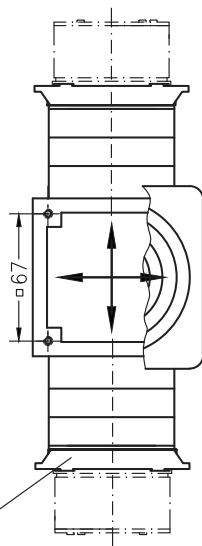
Gewicht:
Antriebsblock ~1,45 kg
je Doppelkontakt ~0,08 kg
weight:
drive ~1,45 kg
each double contact ~0,08 kg



Typ VNS0--FM
type

Antrieb M
siehe Seite J-NS0-3/5
drive H
see sheet J-NS0-3/5

Adapter für Geber/Poti
adapter for encoder/poti



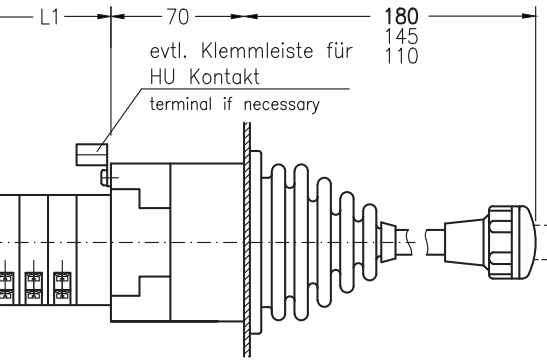
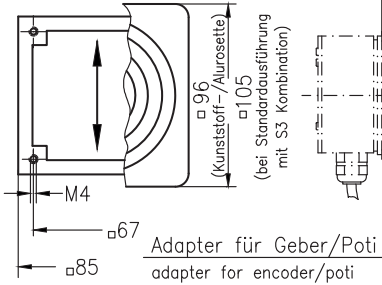
Einbauen im Hebel
siehe Seite G...
additional
see sheet G...

Gewicht:
Antriebsblock ~1,2 kg
je Doppelkontakt ~0,08 kg
weight:
drive ~1,2 kg
each double contact ~0,08 kg

Maß L1 oder L2 (mm) dimension L1 or L2 (mm)	40	55	70	85	100	115	130	145	160	175
Anzahl Doppelkontaktelemente number of double contact elements	1	2	3	4	5	6	7	8	9	10

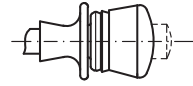
Typ VNS0-A

type Antrieb A siehe Seite J-NS0-3/5
drive A see sheet J-NS0-3/5



Gewicht:
Antriebsblock ~1,2 kg
je Doppelkontakt ~0,08 kg
weight:
drive ~1,2 kg
each double contact ~0,08 kg

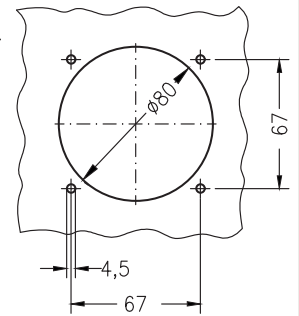
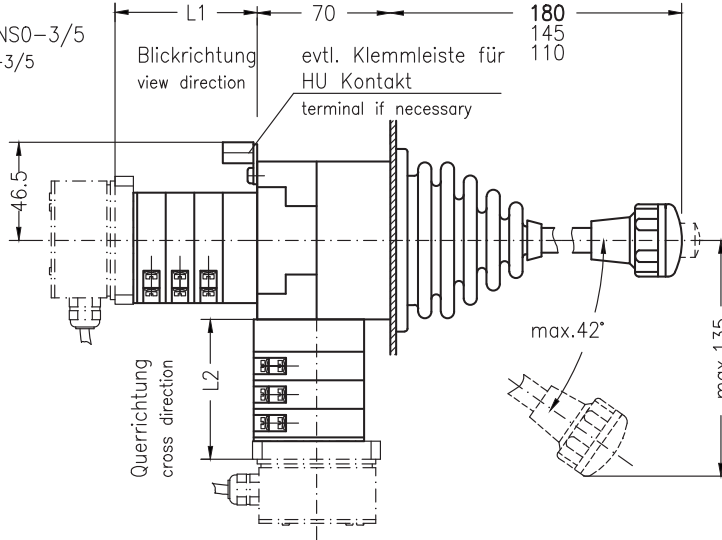
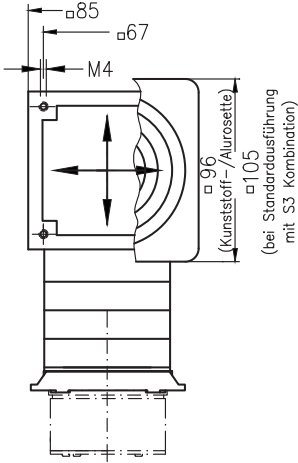
Einbauen im Hebel
siehe Seite G-4/4
additional
see sheet G-4/4



Bohrungen in der Befestigungswand
mounting pattern

Typ VNS0--EA

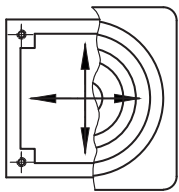
type Antrieb EA siehe Seite J-NS0-3/5
drive EA see sheet J-NS0-3/5



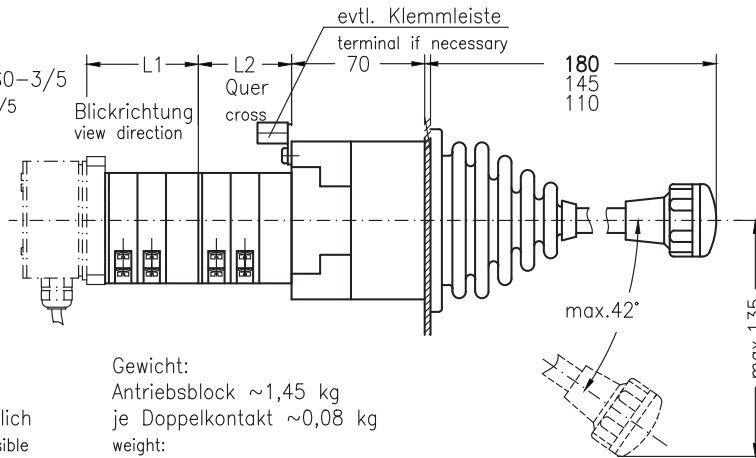
Gewicht:
Antriebsblock ~1,2 kg
je Doppelkontakt ~0,08 kg
weight:
drive ~1,2 kg
each double contact ~0,08 kg

Typ VNS0--AA

type Antrieb AA siehe Seite J-NS0-3/5
drive AA see sheet J-NS0-3/5

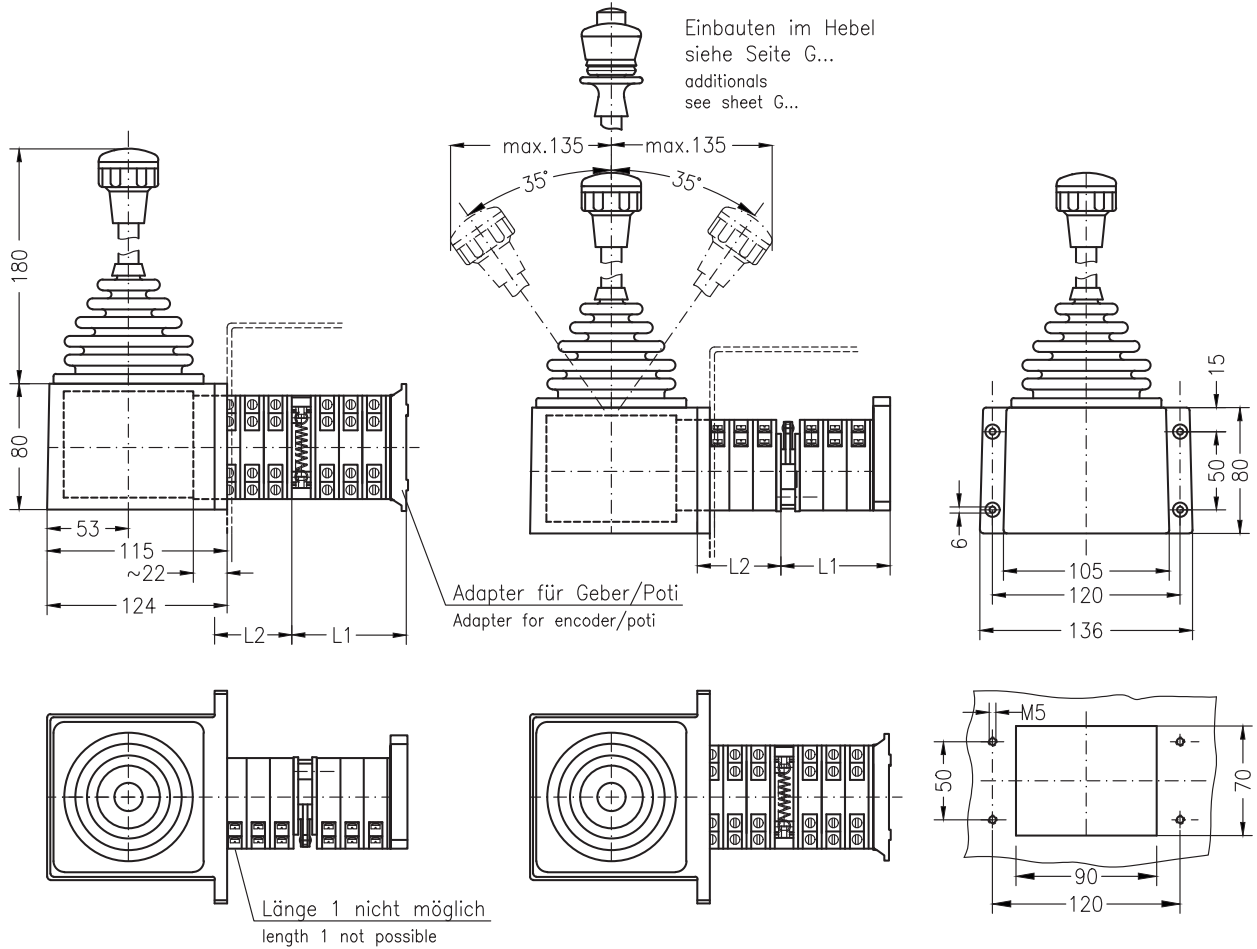


Geber nur in Blickrichtung möglich
attachment only possible for view direction



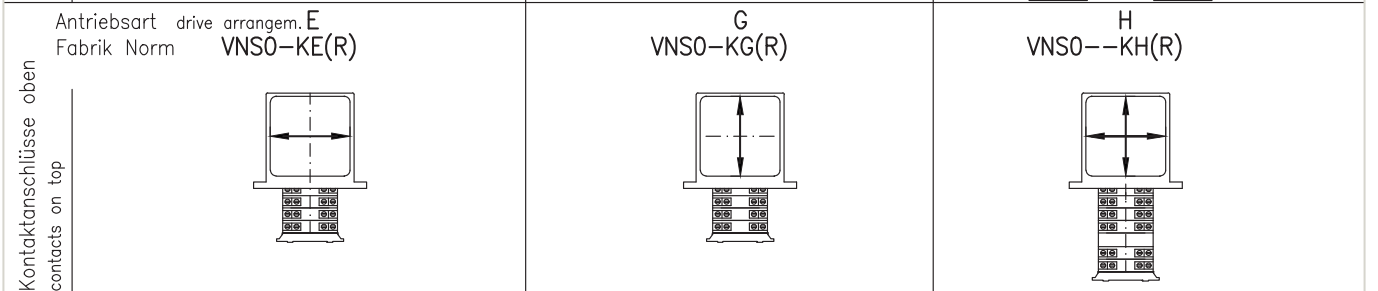
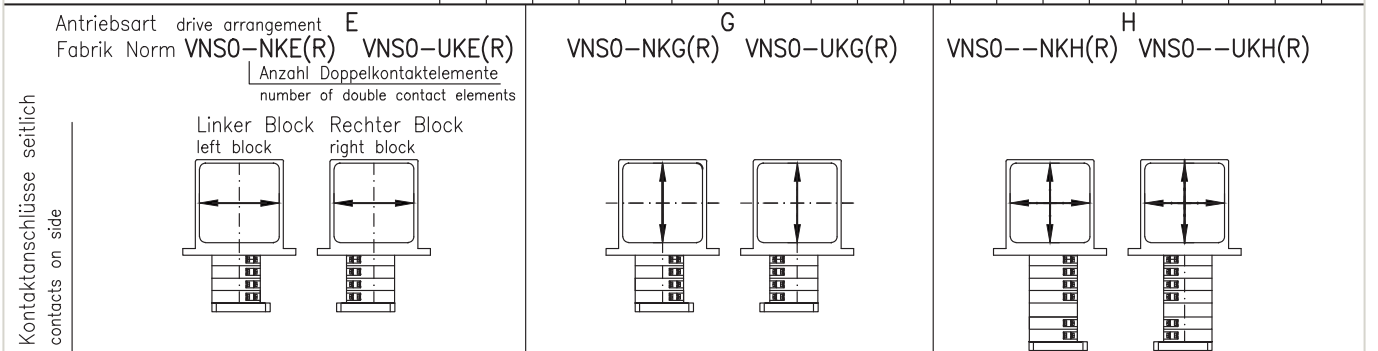
Gewicht:
Antriebsblock ~1,45 kg
je Doppelkontakt ~0,08 kg
weight:
drive ~1,45 kg
each double contact ~ 0,08 kg

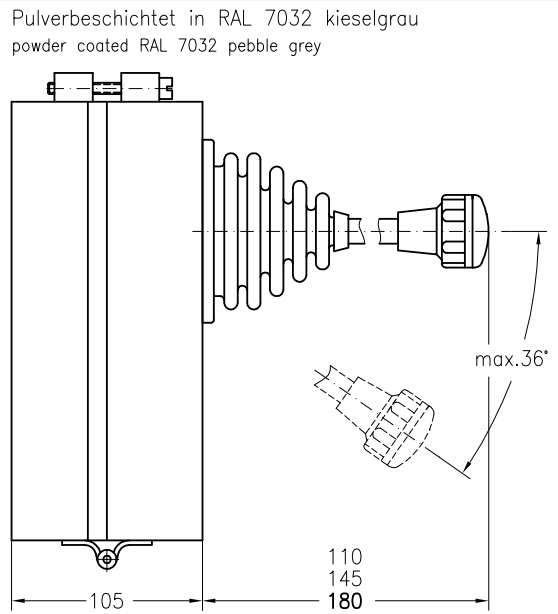
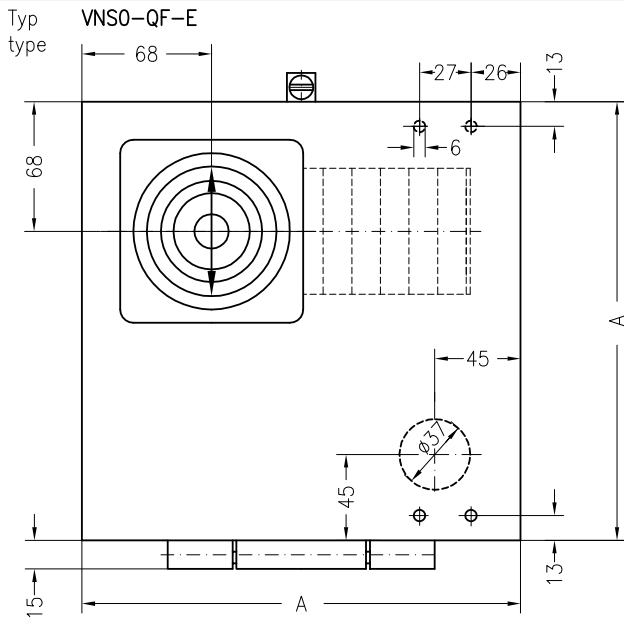
Maß L1 oder L2 (mm) dimension L1 or L2 (mm)	40	55	70	85	100	115	130	145	160	175
Anzahl Doppelkontaktelemente number of double contact elements	1	2	3	4	5	6	7	8	9	10



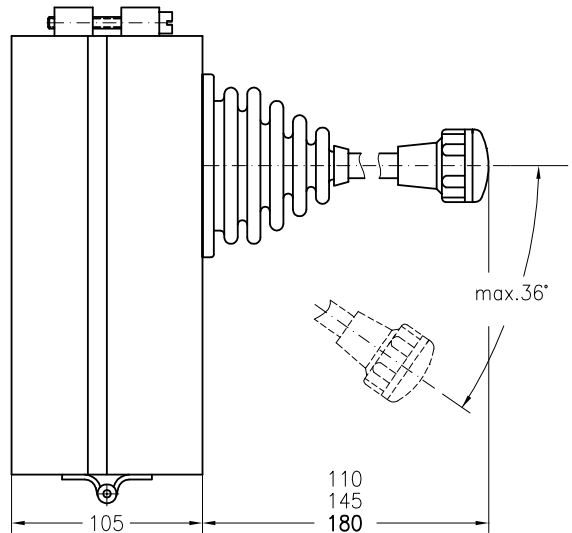
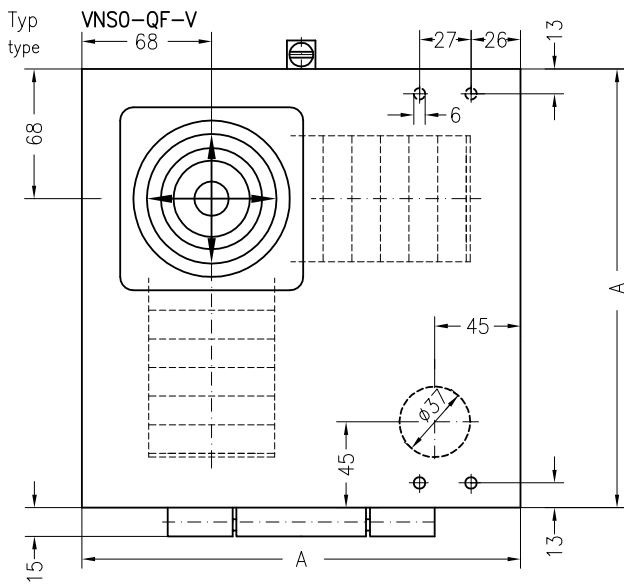
Schalterlänge bei Anzahl Doppelkontaktelemente number of double contact elements

Fabrik Norm	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
VNSOK $\frac{E}{H}$ (R) VNS0-KE(R)																				
VNSOK-H(R)	40	55	70	85	100	115	130	145	160	175	190	205	220	235	250	265	280	295	315	330
Gewicht weight ~kg																				



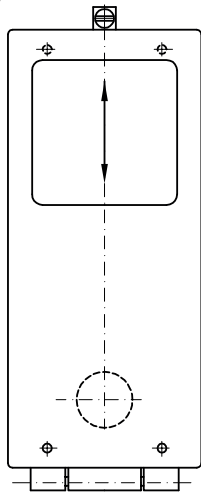


Typ type	Maß A dimension A	Gewicht weight	Anordnung arrangement		Schaltrichtung switching direction	
			linke Hand left hand	rechte Hand right hand	linke Hand left hand	rechte Hand right hand
VNS03QF-E	180	3-6 kg			1	5
VNS06QF-E	230				L	R
VNS09QF-E	280				2	6

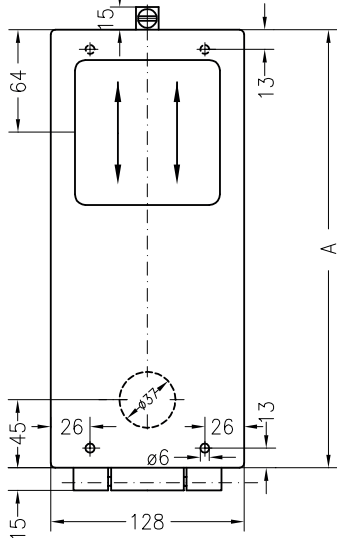


Typ type	Maß A dimension A	Gewicht weight	Anordnung arrangement				Schaltrichtung switching direction	
			linke Hand left hand	rechte Hand right hand	linke Hand left hand	rechte Hand right hand	linke Hand left hand	rechte Hand right hand
VNS03QF-V	180	4-8 kg					1	5
VNS06QF-V	230						L	R
VNS09QF-V	280						3	8

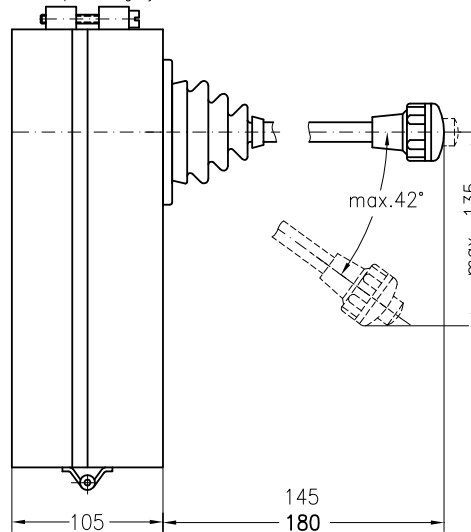
Typ VNS0-LF-G
type



VNS0-LF--GG

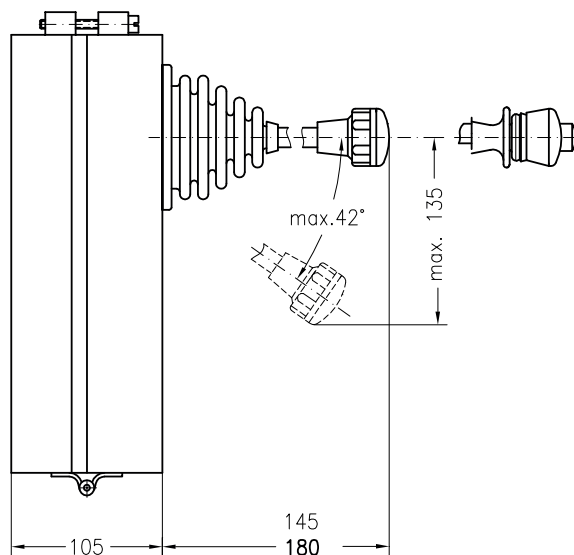
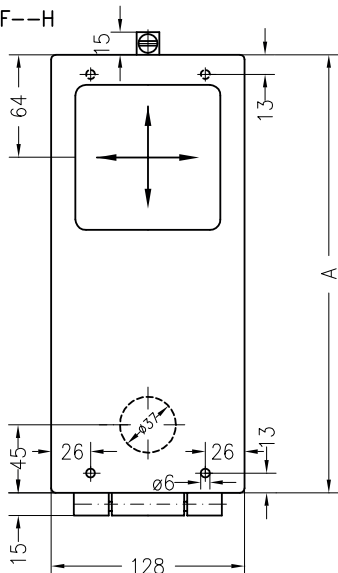


Lackierung RAL 7032 kieselgrau
color RAL 7032 pebble grey



Typ type	MAß A dimension A	Gewicht weight	Schaltrichtungsbezeichnung			
			linke Hand left	rechte Hand right	linke Hand left	rechte Hand right
VNS04 LF-G	195	3-6 kg	1 ↓ L 2	5 ↓ R 6	1 3 ↓ ↓ 2 4	5 7 ↓ ↓ 6 8
VNS06 LF-G	290		circuit direction and engraving code			
VNS09 LF-G	350					

Typ VNS0-LF--H
type

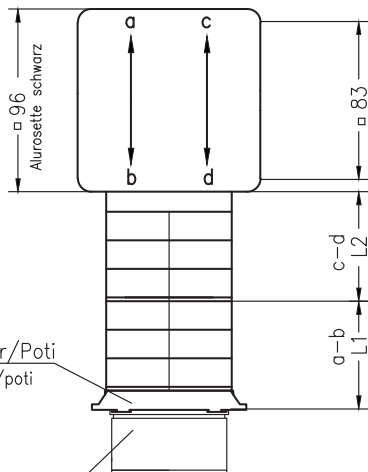
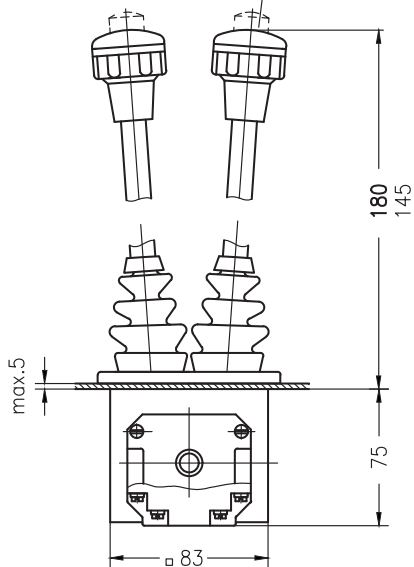


Typ type	MAß A dimension A	Gewicht weight	Schaltrichtungsbezeichnung	
			linke Hand left	rechte Hand right
VNS04 LF--H	195	3-6 kg	1 ↓ L 2	5 ↓ R 6
VNS06 LF--H	290		circuit direction and engraving code	
VNS09 LF--H	350			

Typ NS0--FGGH
type

Antrieb GGH
siehe Seite 9/5
drive GGH
see sheet 9/5

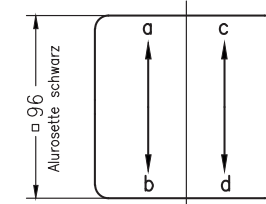
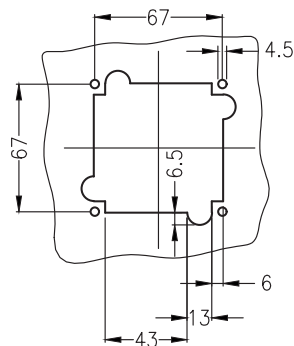
Einbauen im Hebel
siehe Seite 2/1...
additional
see sheet 2/1...



Adapter für Geber/Poti
adapter for encoder/poti

Geber nur für
einen Hebel möglich
attachment for encoder
only for one handle

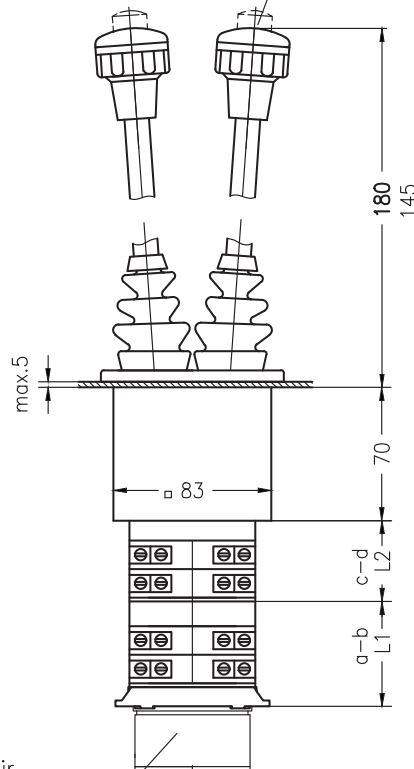
Gewicht:
Antriebsblock ~1,6 kg
je Doppelkontakt ~0,08 kg
weight:
drive ~1,6 kg
each double contact ~0,08 kg



Typ NS0--FGGAA
type

Antrieb GGAA
siehe Seite 9/5
drive GGAA
see sheet 9/5

Einbauen im Hebel
siehe Seite 2/1...
additional
see sheet 2/1...



Geber nur für
einen Hebel möglich
attachment for encoder
only for one handle

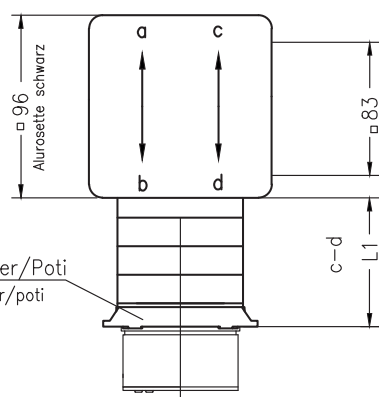
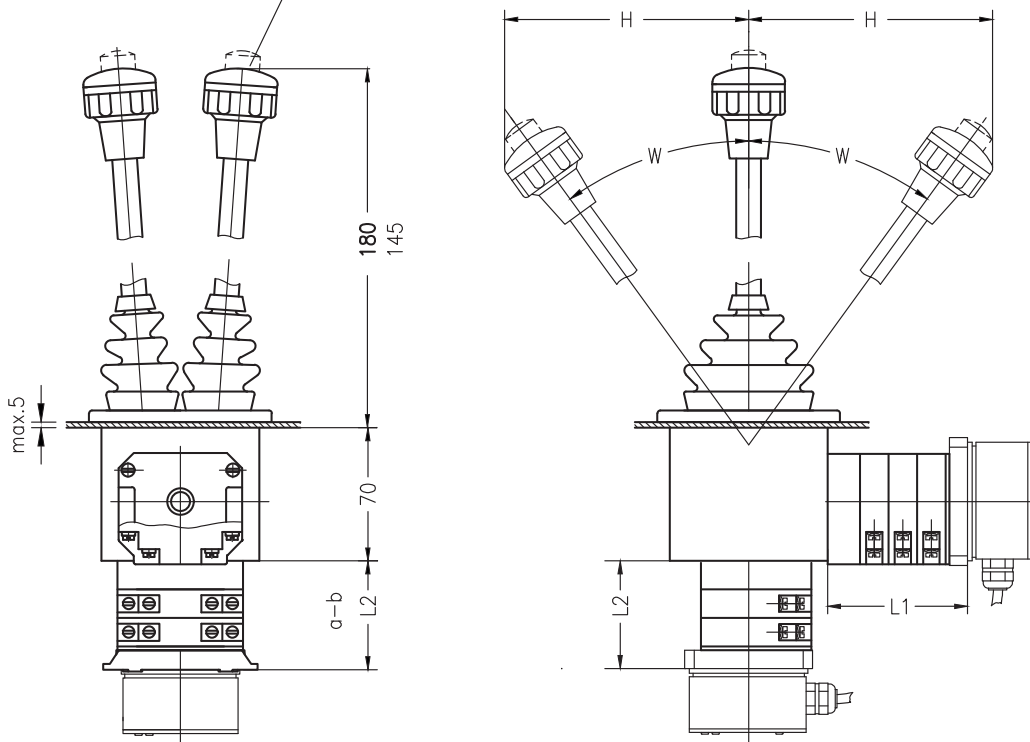
Bohrungen in der
Befestigungswand
mounting pattern

Maß L1 oder L2 (mm) dimension L1 or L2 (mm)	40	55	70	85	100	115	130	145	160	175
Anzahl Doppelkontaktelemente number of double contact elements	1	2	3	4	5	6	7	8	9	10

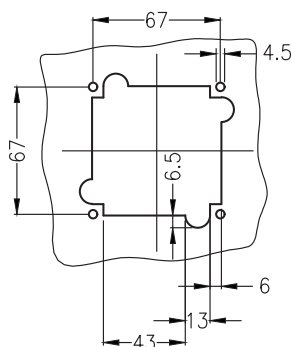
Typ NS0--FGGEA
type

Antrieb GGEA
siehe Seite 9/5
drive GGEA
see sheet 9/5

Einbauen im Hebel
siehe Seite 2/1...
additional
see sheet 2/1...



Adapter für Geber/Poti
adapter for encoder/poti



Bohrungen in der Befestigungswand
mounting pattern

Gewicht:
Antriebsblock ~1,6 kg
je Doppelkontakt ~0,08 kg
weight:
drive ~1,6 kg
each double contact ~0,08 kg

bei 180 mm Hebel by lever 180 mm		
Position	W	~ H mm
1-0-1	14°	70
2-0-2	20°	100
3-0-3	30°	135
4-0-4	30°	135
5-0-5	36°	155
6-0-6	36°	155
7-0-7	30°	135
Poti/ Encoder	36°	155

Maß L1 oder L2 (mm) dimension L1 or L2 (mm)	40	55	70	85	100	115	130	145	160	175
Anzahl Doppelkontaktelemente number of double contact elements	1	2	3	4	5	6	7	8	9	10