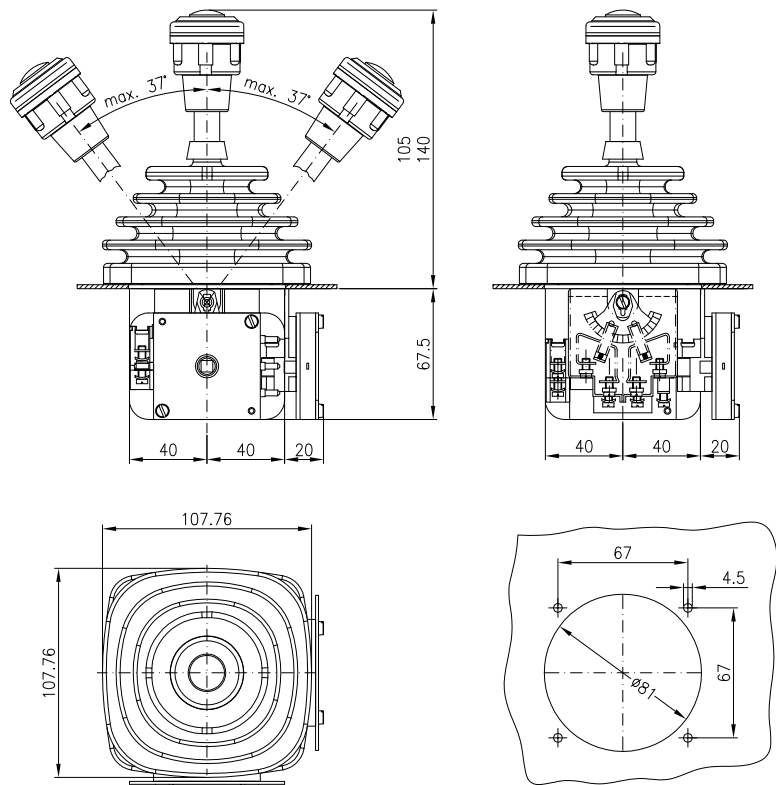
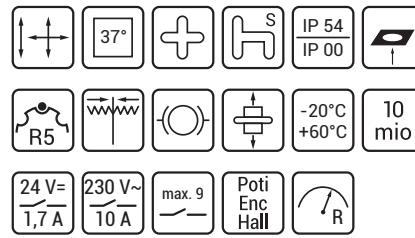


VCS0

Our classic.



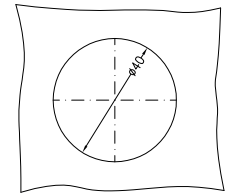
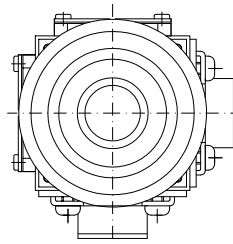
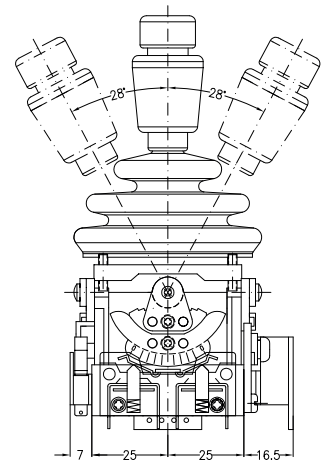
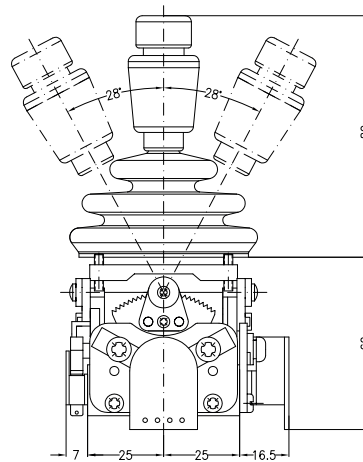
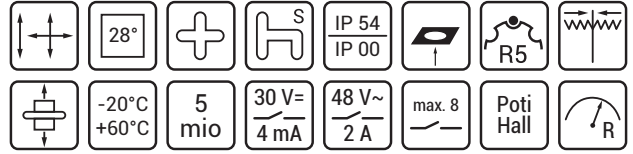
Picture:
Rubber boot with invisible holder (S3 combination)

For medium-duty applications, we recommend this joystick which has been field-proven in use for decades. The drive block with special leak-current-proof, heat-resistant and cold-resistant insulation supports all mechanical components and serves as contact protection for the electrically conductive parts. An optional zero position, horn, or deadman contact (operator presence) can be integrated in the drive block for space-saving and protected installation. Insulated double contact elements for up to 250 V and 10 A are intelligently positive locking and additionally flanged securely on the drive block. Various

gates are available for mechanical limiting or guidance of the direction of movement. Standard and special circuits can also be provided with the use of up to four double contact elements per axis. Suitable potentiometers and encoders can be docked with the use of a simple sliding coupling or directly instead of a double contact element. In addition to numerous special equipment applications, this joystick is supplied as standard equipment for cranes, control stations, and in portable control consoles – thanks to its low weight.

MON

Small, durable and reliable.



The M0 joystick is designed for digital applications with up to 5-0-5 step output and / or analogue applications with stepless output potentiometers. Micro-switches or analogue sensors are installed with modular double contacts on the drive block made of durable PA6 GF30 plastic. Of course, resistance to ozone, UV radiation, oil, and maritime climate is mandatory. Despite a very low installation depth, both a single drive and dual drive with spring-return can be provided. With installation of micro-switches, the joystick developed for low voltages

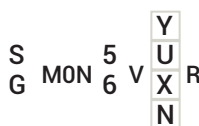
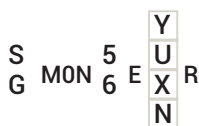
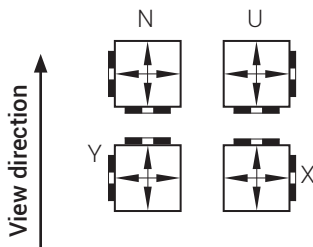
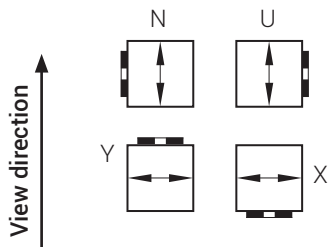
can also be used for operating voltages of up to 230 VAC. For added stability, the high handle shaft was produced from metal and thus installation of a pushbutton in the handle is also enabled. With a potentiometer mounted, the lever deflection is 28°. The installation of a cross gate or special gates allows special switching functions. With its low weight and small dimensions, the joystick is intended for installation in portable panels and as a control switch for auxiliary functions.

Drive E


Arrangement N, U, Y, X

Drive V

Arrangement N, U, Y, X



Note: In case of missing declaration of arrangement, version U will be produced.

Legend:  Mounting direction Potentiometer

Scope of supply, type code

Scope of supply M0N:

- Standard handle G49 (without installations)
- Rubber boot 50 mm or 60 mm
- Spring return

Handles, attachments:

Fitting in handle	see sheet G-M054
Potentiometer, Hall	see sheet E-Electronic-...
Contact circuits	see sheet TI-S-6

- Contact circuits
- Cross gate KK
- Special gate SK
- Mechanical interlock Z
- Wiring to connection cable or plug

Type code:

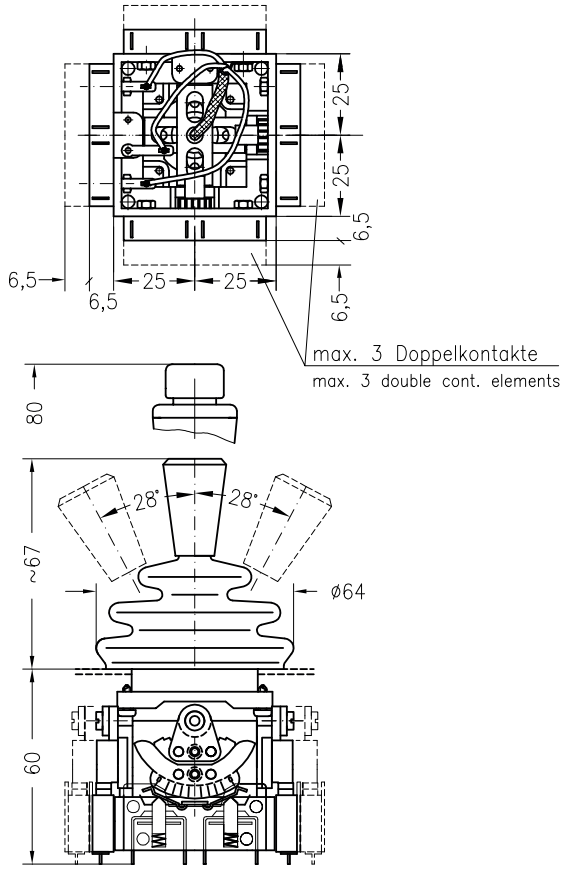
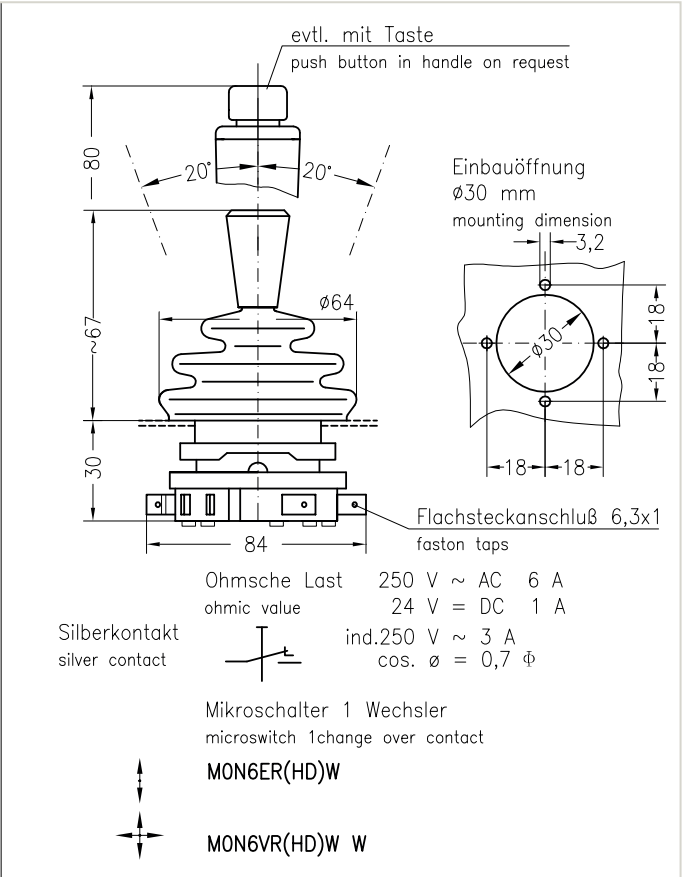
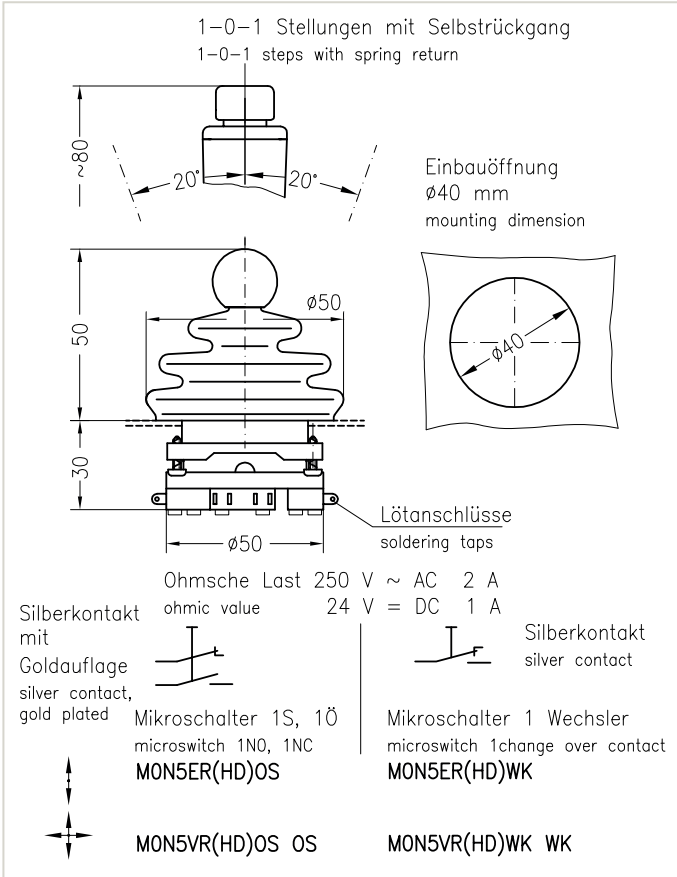
U
N G49
X HDS
R HDU Z 9P1.8P1 + B55.B1010

S 5 E V U
G M0N 6 KK V V R HDU Z 9P1.8P1 + B55.B1010

Silver (S)/gold contact (G)	_____
Type	_____
Rubber boot 50, 60 mm	_____
Cross gate	_____
Drive	_____
Arrangement	_____
Spring return	_____
Handle (without or with installations)	_____
Mechanical interlock	_____
Contact circuit in view direction	_____
Contact circuit in cross direction	_____
Potentiometer in view direction	_____
Potentiometer in cross direction	_____

Note:

- Rubber boot \emptyset 50 mm only until max. 2-0-2 switching positions possible
- Contact load with gold contacts: max. 30 VDC 4mA
- Contact load with silver contacts: max. 48 VAC 2A
- Version for 230 VAC on request



max. 5-0-5 Stellungen
mit oder ohne Selbstrückgang
5-0-5 steps

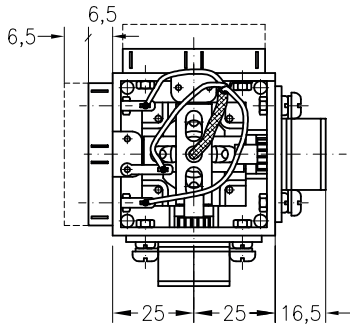
zwangsbetätigte Tastkontakte mit
Goldauflage oder Silberauflage
force actuated goldcontacts or
silvercontacts

Typ
GMON6E...
SMON6E...

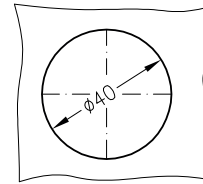
GMON6V...
SMON6V...

Gewicht ~ 0,1 kg
weight ~ 0,1 kg



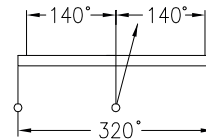


Einbauöffnung
 ø40 mm
 mounting dimension



evtl. mit Impedanzwandler 4–20 mA
 potentiometer – conductiv plastic

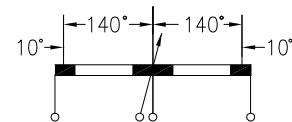
Potentiometer ohne Mittelanzapfung
 potentiometer without centre tap



Leitplastik
 conductivplastic
 1 kOhm Typ : B1
 5 kOhm : B5
 10 kOhm : B10

Achtung Schleiferbelastung max. 1 mA
 warning: wiper current max. 1 mA

Potentiometer mit Mittelanzapfung und Kurzschlußstrecken
 potentiometer with centre tap and short circuit path

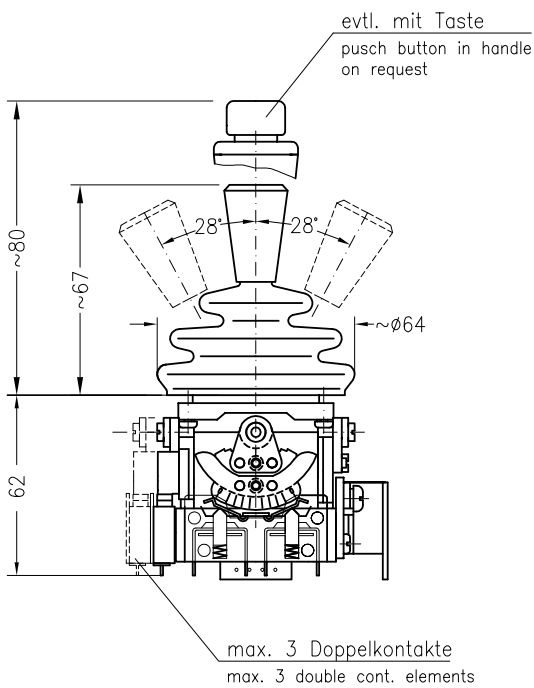


Leitplastik
 conductiv plastic
 5–0–5 kOhm Typ: B55
 10–0–10 kOhm Typ: B1010

Achtung: Schleiferbelastung max. 1 mA
 warning: wiper current max. 1 mA

Drahtgewickelte Potentiometer – 2 Watt
 potentiometer wire wound – 2 Watt
 PD 200 1–0–1 kOhm
 5–0–5 kOhm
 10–0–10 kOhm

Andere Potentiometer und Ohmwerte,
 bzw. Spannungs- oder Stromausgang
 auf Anfrage
 other potentiometer or ohmic value
 on request



Typ: SMON6ER--B
 GMON6ER--B

Gewicht: 0,16 kg
 weight: 0,16 kg

Schaltung
 circuit

Potentiometertyp
 potentiometertype

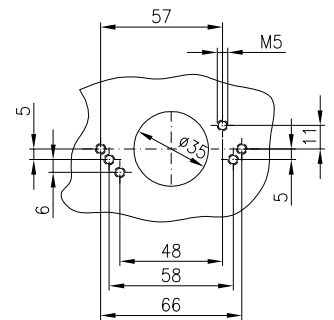
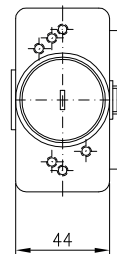
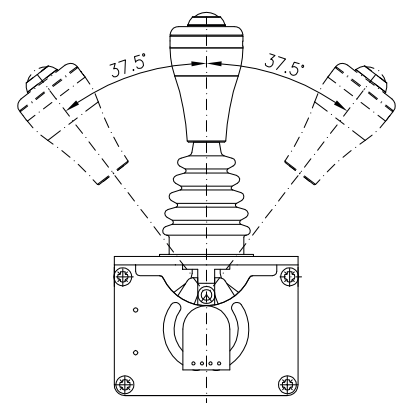
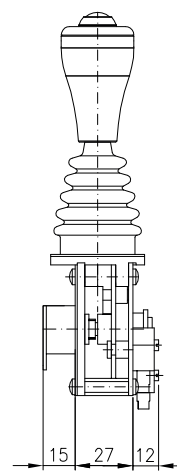
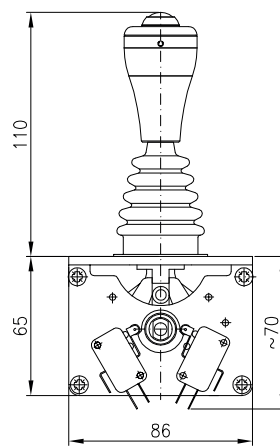
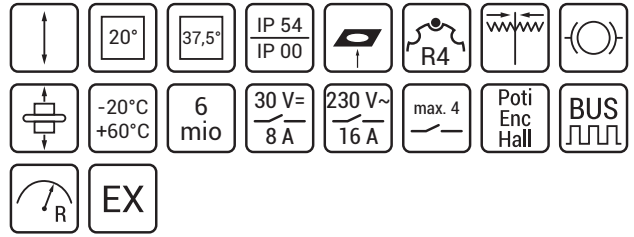


SMON6VR--B--B--
 GMON6VR--B--B--

Gewicht: 0,2 kg
 weight: 0,2 kg

STO

The solid one.

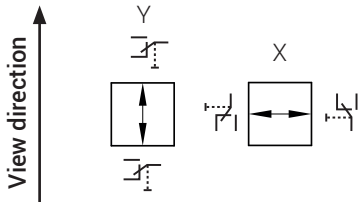


Both standard and custom solutions can be produced based on our modular principle. The sturdy metal cast drive block used as standard by Spohn + Burkhardt assures a long service life and high number of switching cycles. Including spring-return to center, friction brake and mechanical interlock, the modular concept enables a wide range of options and variations. We provide this joystick in versions either for 5-0-5 steps latching or with spring-return. A combined version with detent contact positions and momentary contact positions is also

possible. Equipped with micro-switches, double contact elements, potentiometers or absolute encoders, it can be used for a wide range of demanding control tasks. With an integrated bus interface, it works just as reliably as a bus node as with a valve amplifier for activation of solenoid valves. Various handles complete this joystick with optical and tactile features.

This joystick is frequently used in control consoles, construction machinery, municipal vehicles and in work platforms.

Drive arrangement for 1-0-1 position
Dimension sheet TI-ST0



ST0 - W

ST0 - R W

Scope of delivery/ design:

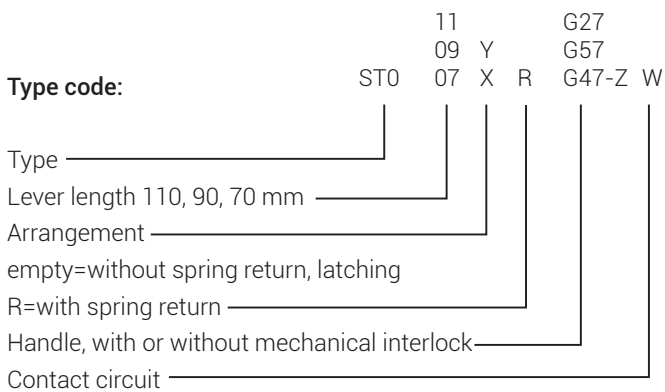
- Handle G27 for lever length 90 or 110 mm, without Z
- Handle G57 for lever length 70 mm
- Lever deflection $\pm 20^\circ$
- ST0 without spring return
- ST0-R with spring return
- Lever length 110 mm, on demand 90 or 70 mm, please note restrictions.
- Contact circuit W, see TI-S-8

Additional technical information:

- Electrical TI-ST0
- Mechanical TI-ST0
- Contact circuit TI-S-8

Options:

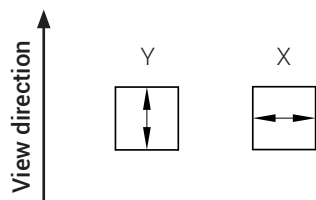
- Mechanical interlock Z with handle G47-Z (only for lever length 90 or 110 mm possible)
- Hose strap for rubber boot
- Handles according to combination table
Additional prices on the corresponding handle sheets
- Wiring to connection cable or plug



Note:
Joystick ST0 with G40 or G4T handle only in combination with lever length 09.

Drive arrangement stepless with microswitch and potentiometer

Dimension sheet TI-ST0



ST0 -

Y
X

 E

Scope of delivery/ design:

- Additional price for spring return, friction brake see options, one option must be selected
- Handle G27 for lever length 90 or 110 mm, without Z
- Handle G57 for lever length 70 mm
- Lever deflection ca. $\pm 37,5^\circ$
- Lever length 110 mm; on demand 90 or 70 mm, please note restrictions

Additional technical information:

- Electrical TI-ST0
- Mechanical TI-ST0
- Contact circuits see TI-S-8

Options:

- Spring return R
 - Friction brake B
 - Mechanical interlock Z with handle G47-Z (only for lever length 90 or 110 mm possible)
 - Hose strap for rubber boot
 - Special notching disc
 - Contact circuit: P0
 - P, 8P1
 - 9P1
 - Potentiometer, amplifiers
 - Handle according to combination table
- Additional prices on the corresponding handle sheets
- Wiring to connection cable or plug

Type code:

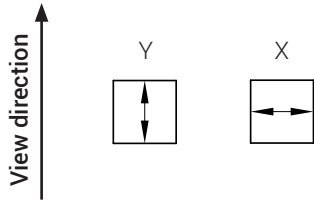
	11		G27	P	
	09	Y	R	G57	8P1
	07	X	B	G47-Z	9P1
					G5
					G55

Type	_____
Lever length 110, 90, 70 mm	_____
Arrangement	_____
Spring return (R), friction brake (B)	_____
Handle, with or without mechanical interlock	_____
Contact circuit	_____
Potentiometer	_____

Note:

Joystick ST0 with G40 or G4T handle only in combination with lever length 09.

Drive arrangement with contact block NS00
Dimension sheet TI-ST0



ST0N -

Y
X

Scope of delivery/ design:

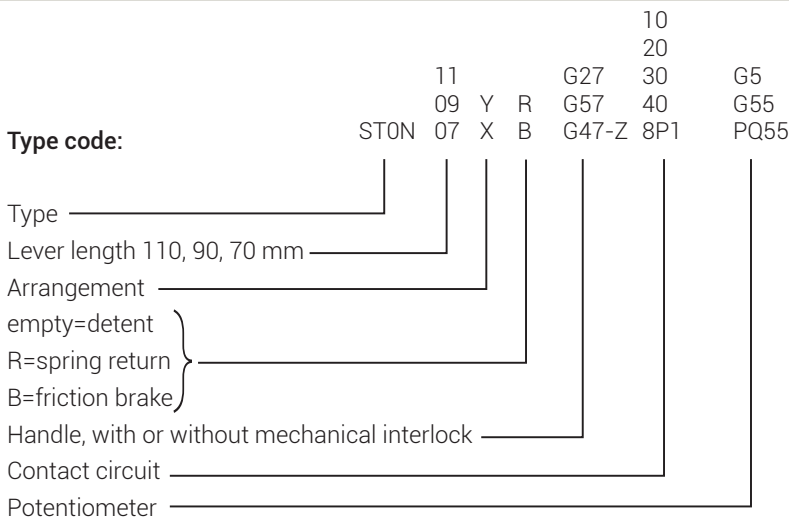
- Basic version with detents for max. 5-0-5 positions
- Additional price for spring return, friction brake see options
- Handle G27 for lever length 90 or 110 mm, without Z
- Handle G57 for lever length 70 mm
- Lever deflection, depending on contact circuit maximum $\pm 37,5^\circ$
- Lever length 110 mm; on demand 90 or 70 mm, please note restrictions
- Bus interface and Ex version on request

Additional technical information:

- Electrical TI-ST0
- Mechanical TI-ST0
- Contact circuits see TI-S-1, ...-2, ...-3, ...-4

Options:

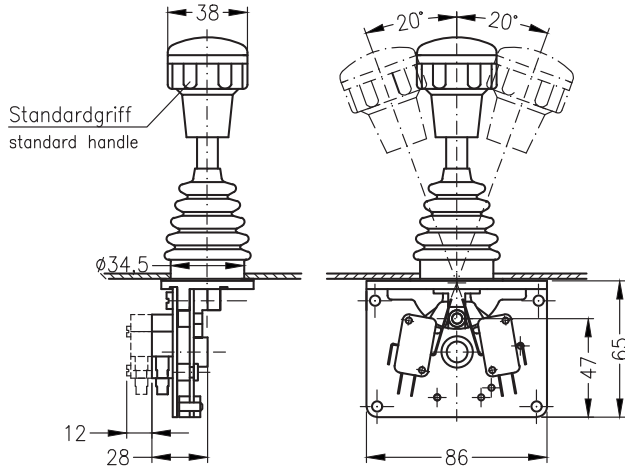
- Spring return R
- Friction brake B
- Mechanical interlock Z with handle G47-Z (only for lever length 90 or 110 mm possible)
- Hose strap for rubber boot
- Special notching disc
- Contact circuit
- Potentiometer, amplifier, encoder
- Handle according to combination table
Additional prices on the corresponding handle sheets
- Wiring to connection cable or plug



Note:
Joystick ST0 with G40 or G4T handle only in combination with lever length 09.

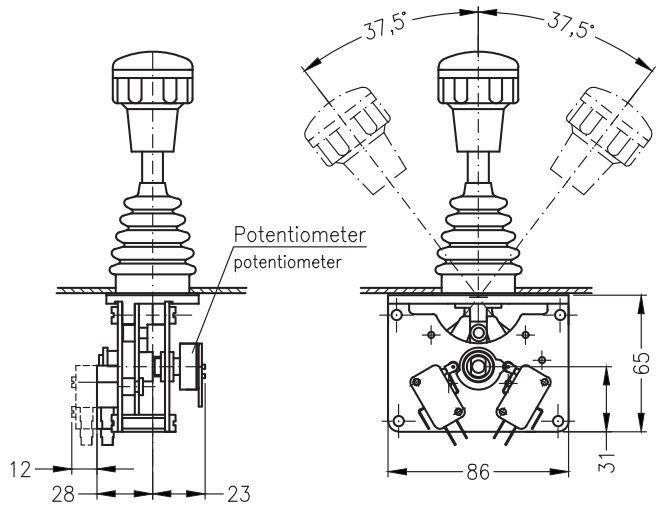
1-0-1 Stellungen mit Mikroschaltern

1-0-1 steps with micro switches



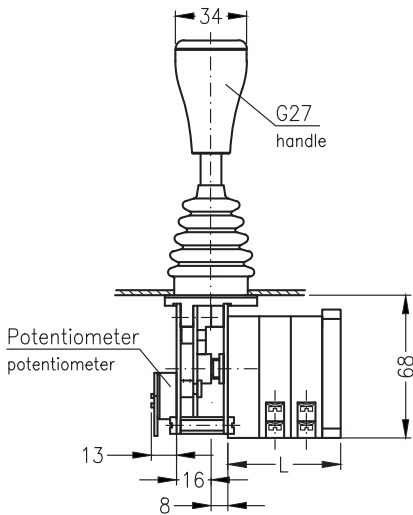
stufenlos mit Mikroschalter und Potentiometer

with micro switch and potentiometer



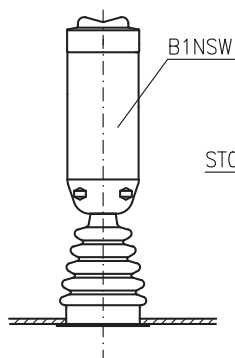
mit Kontaktblock NS0 für max. 4-0-4 Stellungen

Potentiometeranbau möglich
with NS0 double contactblock max. 4-0-4 step, potentiometer possible

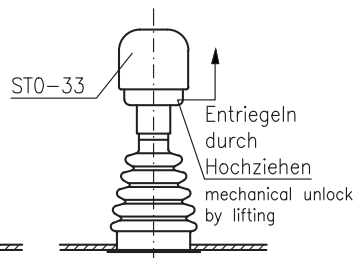


Anzahl Doppelkontaktelemente number of double contact elements	1	2	3
L	40	55	70

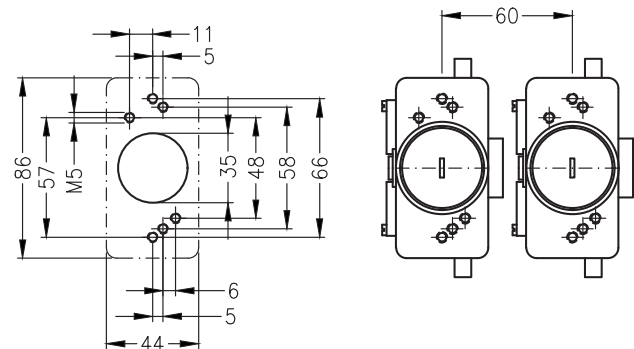
mit Ballgriff
with palm handle



mit mechanischer Nullstellungsverriegelung
with mechanical interlock

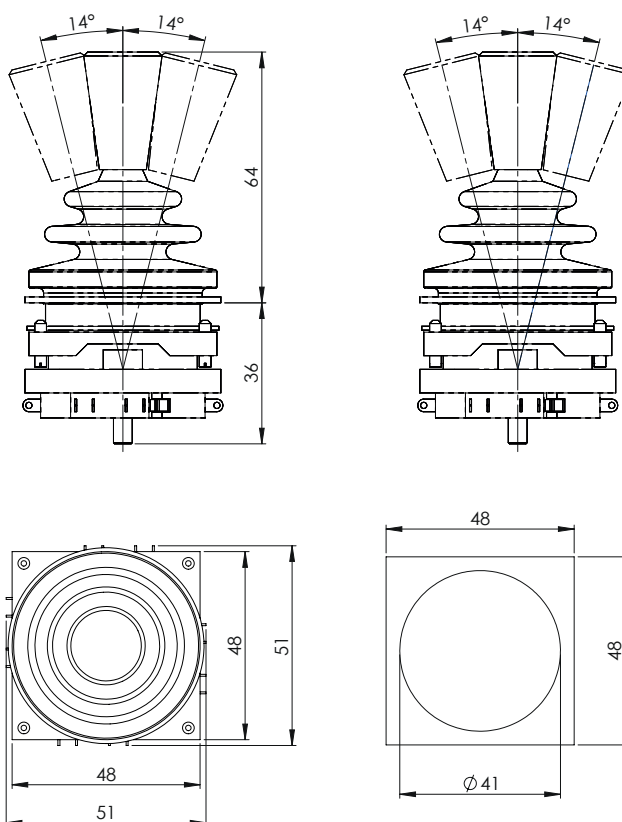
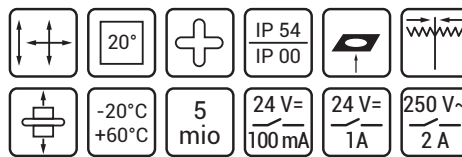


Befestigungsmaße
mounting dimensions



M0N-OS

Small installation depth.

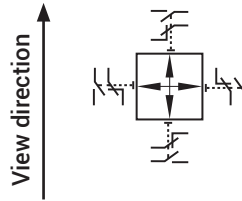
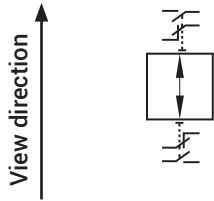


The joystick M0N-OS is due to its small installation depth ideal for installation in casings with low height. Despite its compact design it comes with a 1- or 2-axis version with spring return. Its body, made of durable plastic, serves as a carrier for the microswitches. For each switching direction a microswitch with one NO and one NC contact is available. Its contacts switch small DC voltages / DC currents just

as reliably as AC voltages. The hollow lever, made of metal for reasons of stability, allows the construction of a handle with pushbutton. For applications with specific switching functions the joystick can be equipped with a cross or special gate. As a control switch for auxiliary functions it is, due to its low weight, ideally suited for installation in portable consoles as well as in fixed operating stations.

Drive E

Drive V



M0N 5 ER OS

Basic price
152,00 €

M0N 5 VR OS.OS

Basic price
182,00 €

Scope of supply, type code

Scope of supply M0N-WK:

- Handle G49 (without installation)
- Rubber boot 50 mm
- Spring return
- Microswitch with gold plated silver contacts¹⁾ and soldered connection

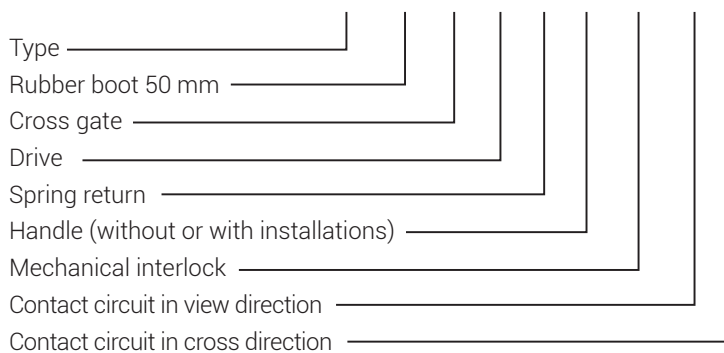
Handles:

Fitting in handle

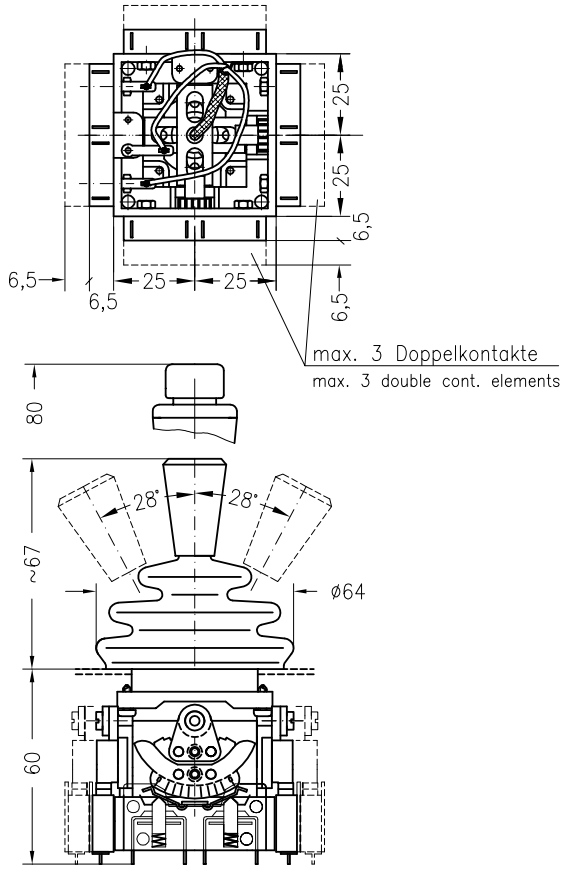
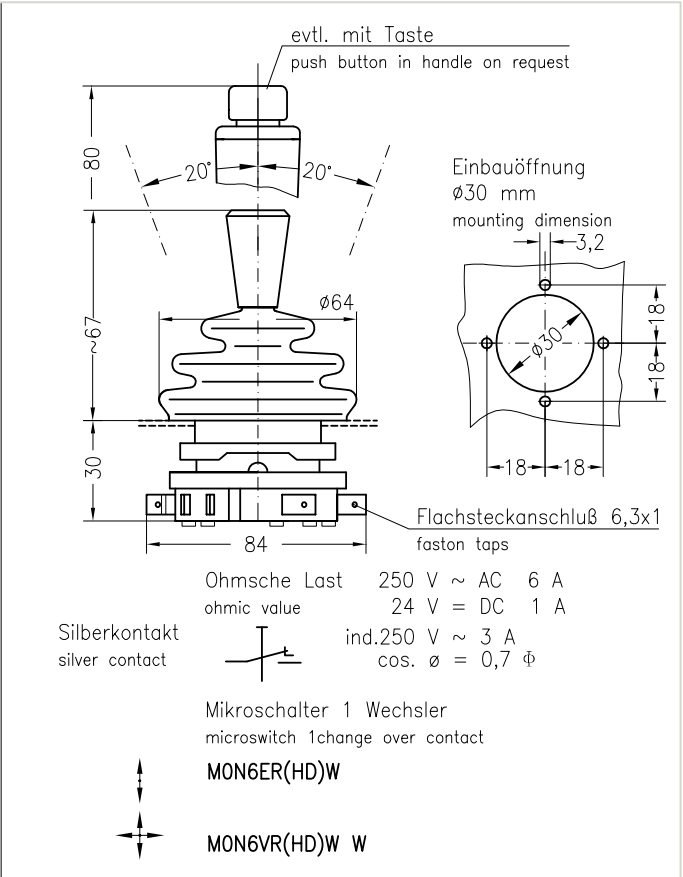
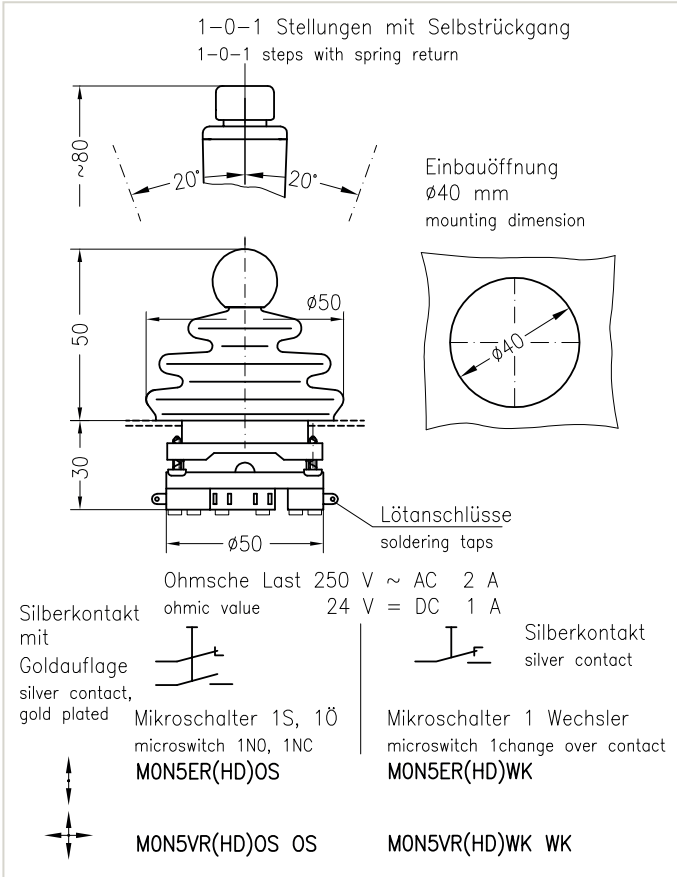
see sheet G-M054

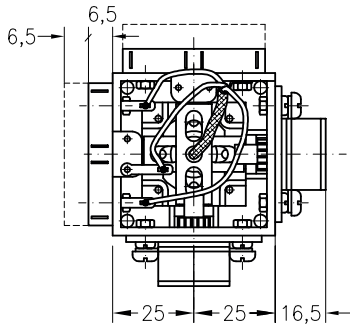
- Cross gate KK
- Mechanical interlock Z
- Ball handle KG
- Wiring to connection cable or plug

Type code: M0N 5 KK V R HDU Z OS. OS

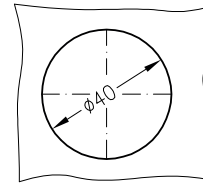


1) If the switch capacity is too high the thin gold coat will be damaged.



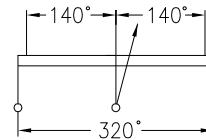


Einbauöffnung
 ø40 mm
 mounting dimension



evtl. mit Impedanzwandler 4–20 mA
 potentiometer – conductiv plastic

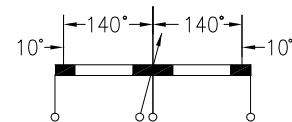
Potentiometer ohne Mittelanzapfung
 potentiometer without centre tap



Leitplastik
 conductivplastic
 1 kOhm Typ : B1
 5 kOhm : B5
 10 kOhm : B10

Achtung Schleiferbelastung max. 1 mA
 warning: wiper current max. 1 mA

Potentiometer mit Mittelanzapfung und Kurzschlußstrecken
 potentiometer with centre tap and short circuit path

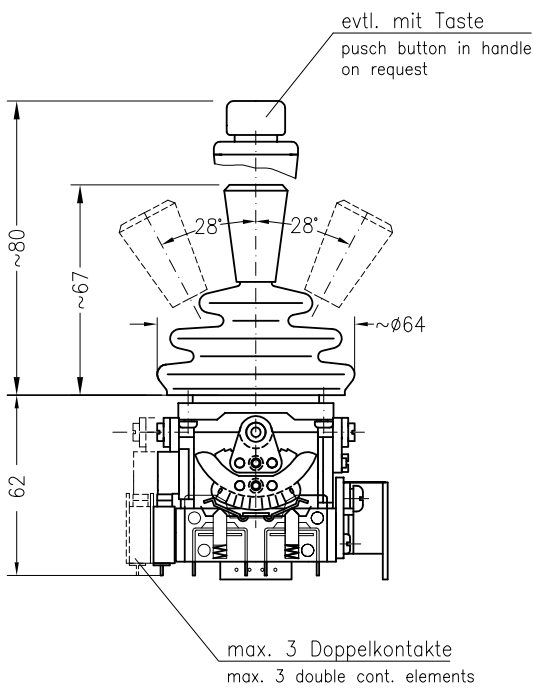


Leitplastik
 conductiv plastic
 5–0–5 kOhm Typ: B55
 10–0–10 kOhm Typ: B1010

Achtung: Schleiferbelastung max. 1 mA
 warning: wiper current max. 1 mA

Drahtgewickelte Potentiometer – 2 Watt
 potentiometer wire wound – 2 Watt
 PD 200 1–0–1 kOhm
 5–0–5 kOhm
 10–0–10 kOhm

Andere Potentiometer und Ohmwerte,
 bzw. Spannungs- oder Stromausgang
 auf Anfrage
 other potentiometer or ohmic value
 on request



Typ: SMON6ER--B
 GMON6ER--B

Gewicht: 0,16 kg
 weight: 0,16 kg

Schaltung
 circuit

Potentiometertyp
 potentiometertype

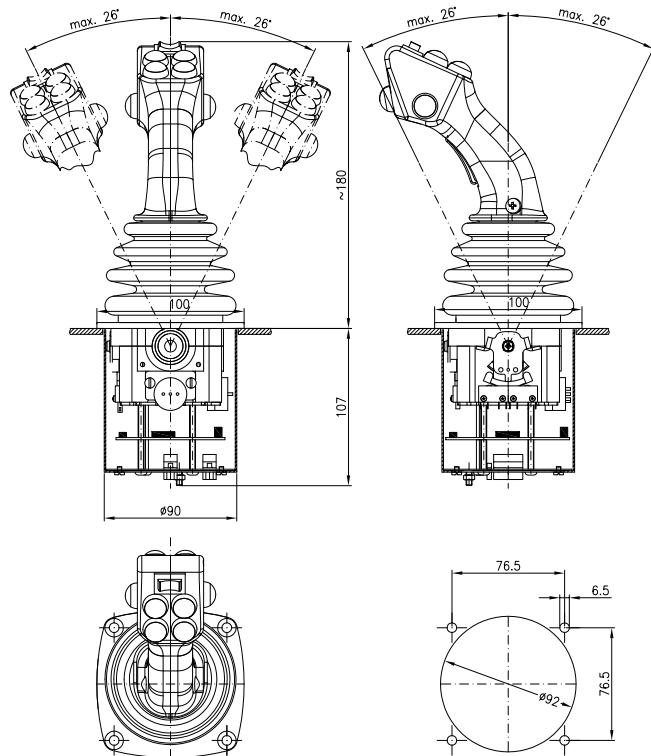
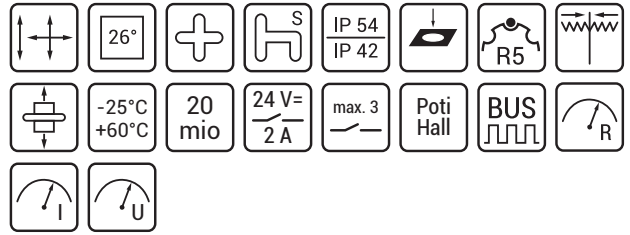


SMON6VR--B--B--
 GMON6VR--B--B--

Gewicht: 0,2 kg
 weight: 0,2 kg

NS3

Our bus professional.



Metal gears and aluminum pressure casting elements are the highest Spohn + Burkhardt quality features for this compact precision joystick. The bearing is provided in a special pairing of bronze and plastic and enables very precise and sensitive work. The special console design enables activation of electronic elements such as Hall sensors and potentiometers and the use of up to three switch contacts. Several bus and amplifier printed circuit boards are available as units that can be integrated on the underside with special encapsulation for EMC purposes. Pulse-width-modulated power distribution for activation

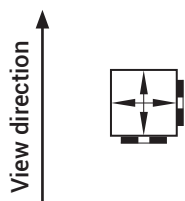
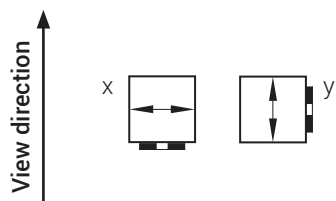
of solenoid valves is also available. Of course, we also offer special gates for the guidance of the sturdy 12 mm handle shaft in addition to the standard gates. In combination with bus systems, the NS3 is suitable for tough conditions in construction, agricultural, and forestry applications, as well as for special machinery applications. There is also a wide range of handle options available from our modular system, or we can work with you to develop a custom version specifically for your requirements.

Drives 1- and 2-axis

Drive E

Arrangement Y, X

Drive V

NS3--AK E $\begin{matrix} X \\ Y \end{matrix}$ R

NS3--AK V R

NS3G--AK E $\begin{matrix} X \\ Y \end{matrix}$ R

NS3G--AK V R

Project planning note:

Legend:



The handles are always aligned in the direction of view.
The direction of view is determined by drive and arrangement.

Scope of supply, additional charge, type code

Scope of supply NS3

- Handle G22 without fitting
- Rubber boot
- Spring return
- Zero notch
- Symmetrical limiting gate 26°
- On the connection side IP00

Scope of supply NS3G

- Handle G22 without fitting
- Rubber boot
- Spring return
- Zero notch
- Symmetrical limiting gate 26°
- Protective housing for drive/electronic

Handle/attachments

Fitting in handle	see sheet G-1/...
Potentiometer	see sheet E-Electronic-1
Contact circuits	see sheet TI-S-7
Electronic	see sheet E-Electronic-1

Technical information see
TI-NS3

- Contact circuits
- With spring return without zero notch RL
- Cross gate KK
- Special limiting gate SAK
- Special gate SK
- Slot gate SZK
- Mechanical interlock, only with cross- or slot gate Z
- Special notching disc SRS
- Lever length 70 mm (only in combination with G9, G25 handle)
- Wiring to connection cable or plug

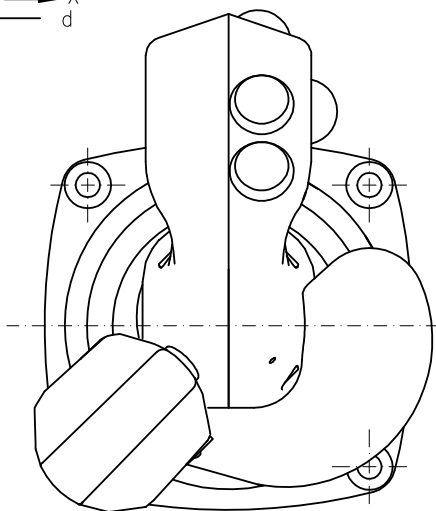
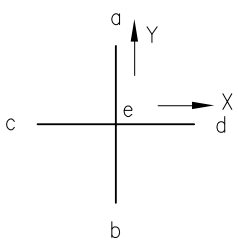
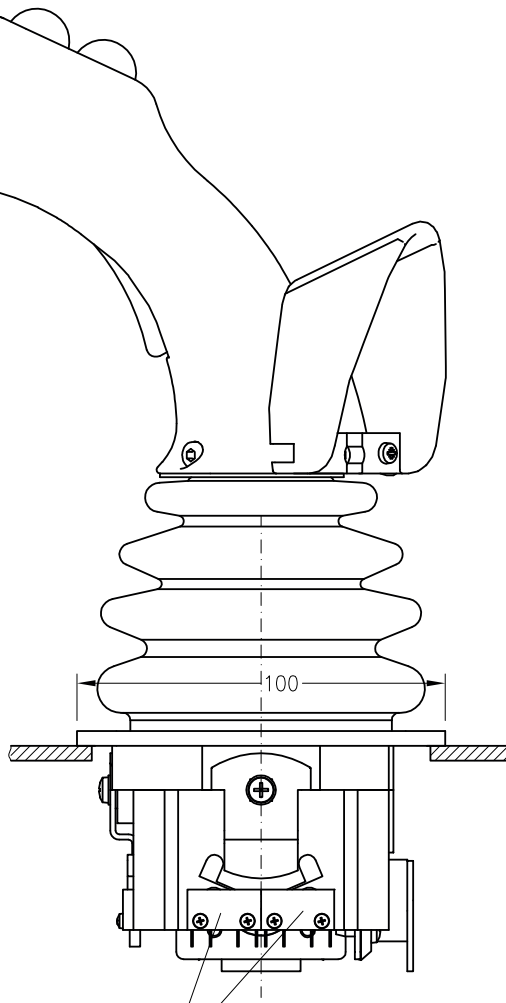
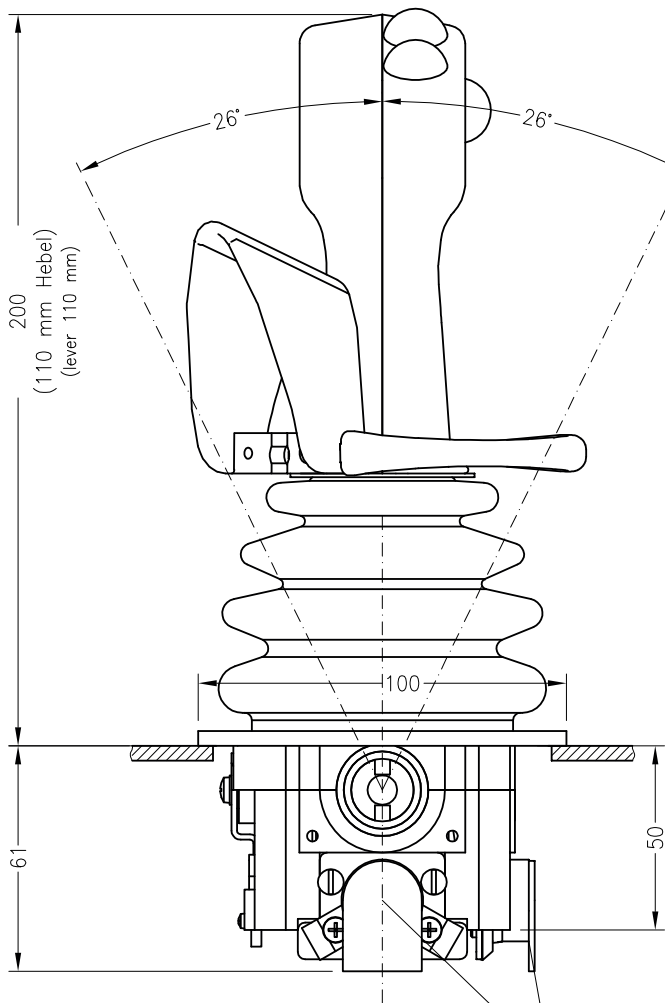
Type code:

AK²⁾
KK
18 SAK EX
NS3 14 SK EY R Z MP1.MP1. + BLR10B. BLR10B. + ESS094A
NS3G 11 SZK V RL

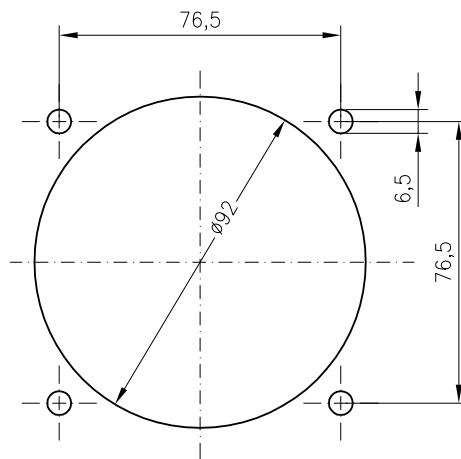
Type	_____
Lever length 180 140 110 mm	_____
Limiting cross special gate	_____
Single two axis	_____
Spring return (R) spring return without zero notching (RL)	_____
Mechanical interlock ¹⁾	_____
Contact circuit in view direction	_____
Contact circuit in cross direction	_____
Potentiometer in view direction	_____
Potentiometer in cross direction	_____
Electronic	_____

1) only with cross or slot gate available

2) AK standard

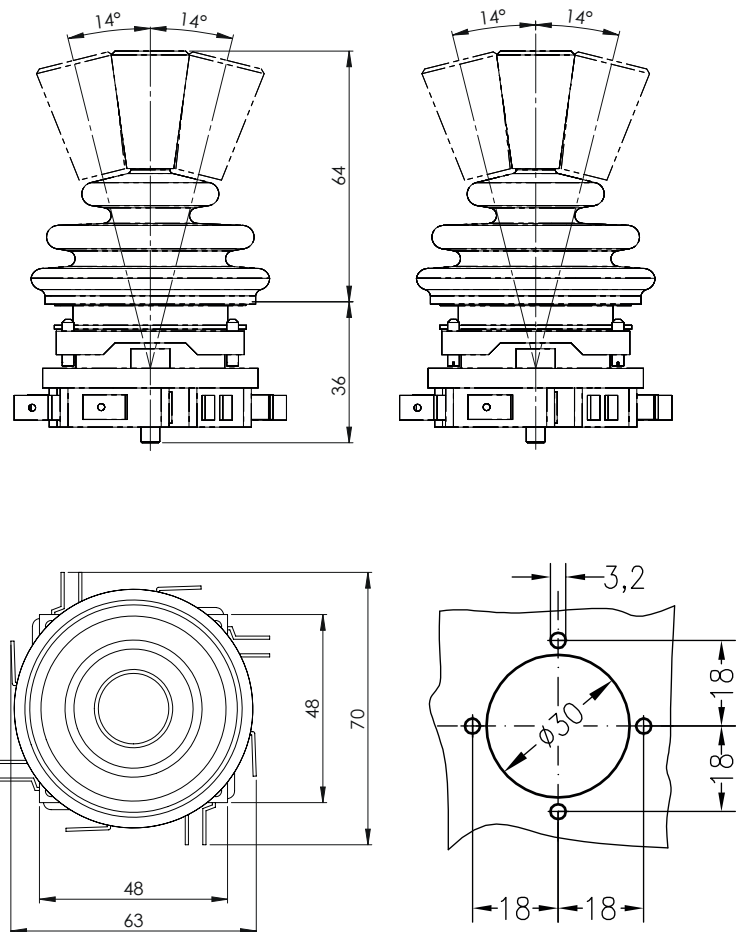
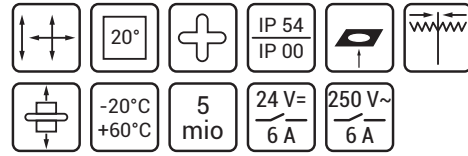


Einbauöffnung
mounting dimensions



M0N-W

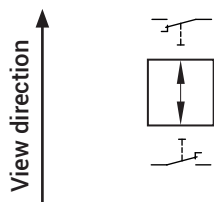
Small installation depth.



The joystick M0N-W is due to its small installation depth ideal for installation in casings with low height. Despite its compact design it comes with a 1- or 2-axis version with spring return. Its body, made of durable plastic, serves as a carrier for the microswitches with flat plug connectors. For each switching direction, one or two microswitches are fitted with one change-over contact each. Thus, both single-pole (W) as well as two-pole switching functions (2W) can be realized.

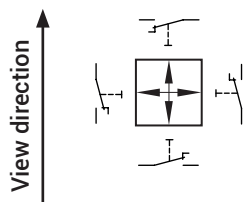
The version 2SW offers sequentially switching contacts in single pole version. The hollow lever, made of metal for reasons of stability, allows the construction of a handle with pushbutton. For applications with specific switching functions the joystick can be equipped with a cross or special gate. As a control switch for auxiliary functions it is, due to its low weight, ideally suited for installation in portable consoles as well as in fixed operating stations.

Drive E, 1 step
per axis 1 changer



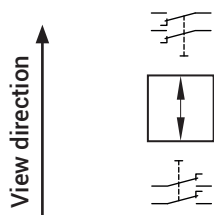
MON 6 ER W

Drive V, 1 step
per axis 1 changer



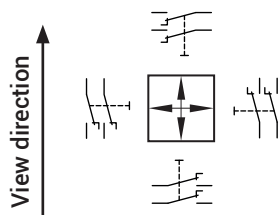
MON 6 VR W.W

Drive E, 1 step
per axis 2 changer



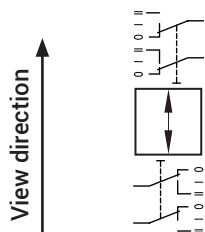
MON 6 ER 2W

Drive V, 1 step
per axis 2 changer



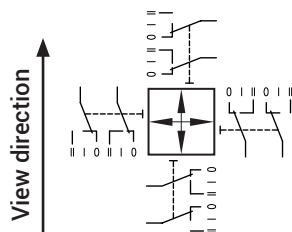
MON 6 VR 2W.2W

Drive E, 2 step



MON 6 ER 2SW

Drive V, 2 step



MON 6 VR 2SW.2SW

Scope of supply, type code

Scope of supply M0N-W, -2W, -2SW:

- Handle G49 (without inserts)
- Rubber boot 60 mm
- Spring return
- Microswitch with flat plug connection

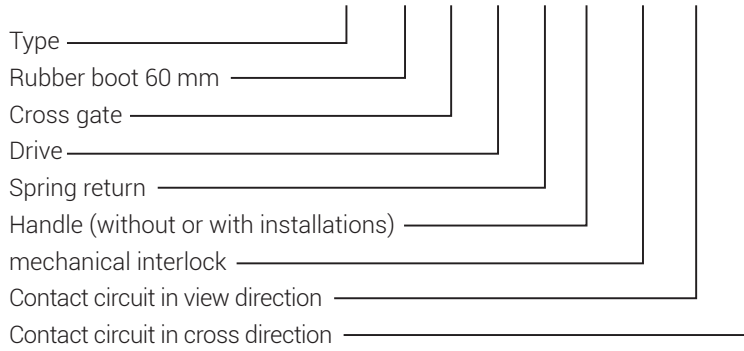
Handles:

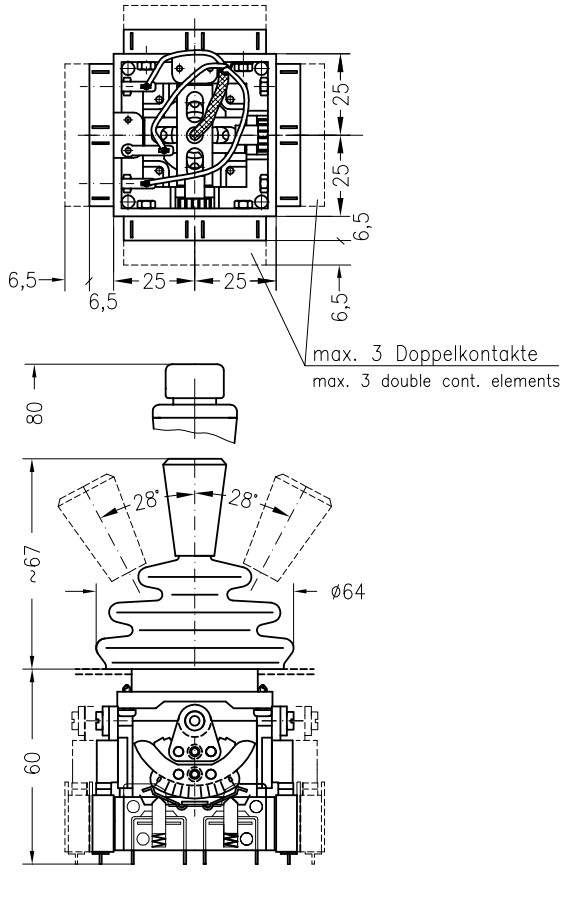
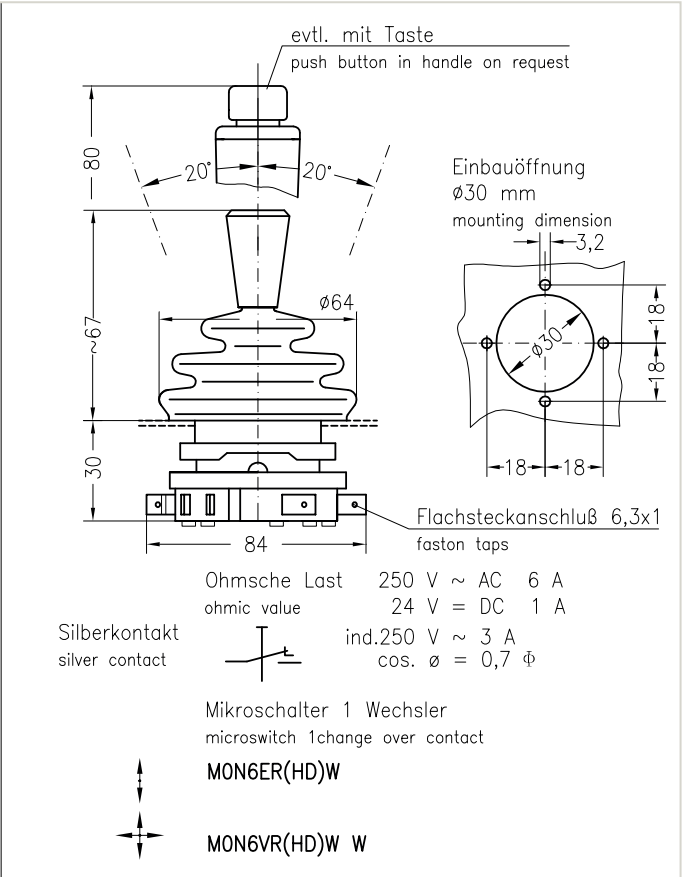
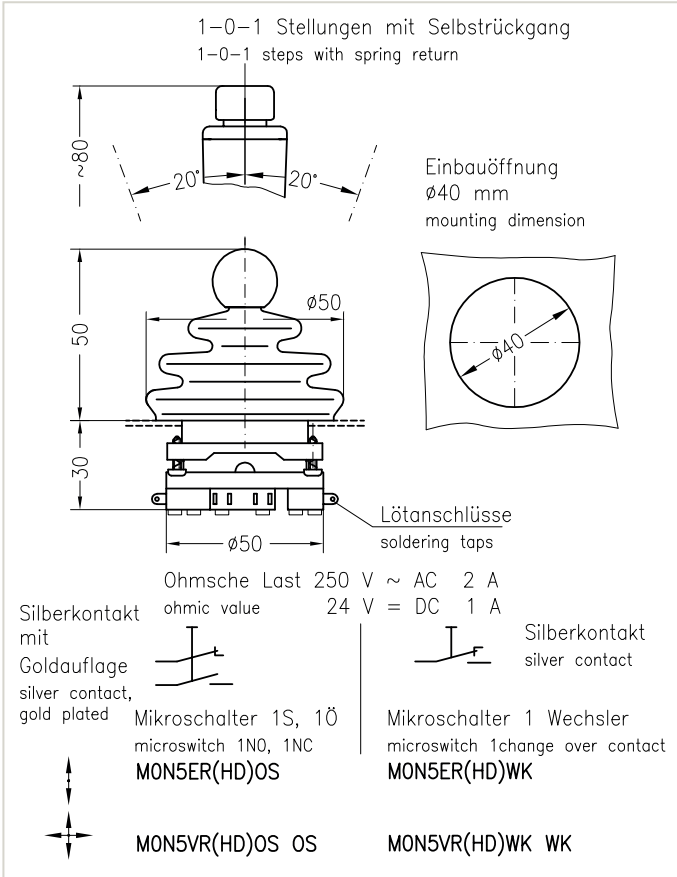
Fitting in handle see sheet G-M054

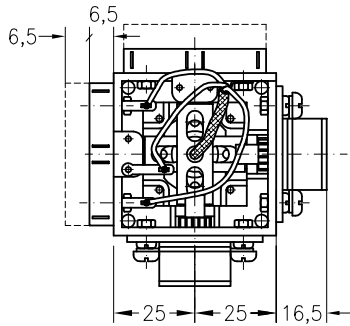
- Cross gate KK
- Mechanical interlock Z
- Ball handle KG
- Wiring to connection cable or plug

Type code:

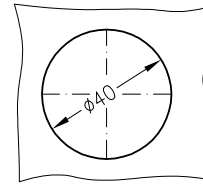
M0N 6 KK V R HDU Z W. W.
 E HDS G49 2W 2W
 2SW. 2SW





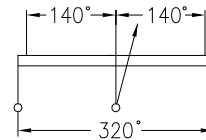


Einbauöffnung
 ø40 mm
 mounting dimension



evtl. mit Impedanzwandler 4–20 mA
 potentiometer – conductiv plastic

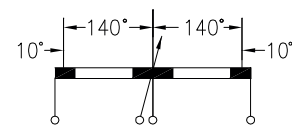
Potentiometer ohne Mittelanzapfung
 potentiometer without centre tap



Leitplastik
 conductivplastic
 1 kOhm Typ : B1
 5 kOhm : B5
 10 kOhm : B10

Achtung Schleiferbelastung max. 1 mA
 warning: wiper current max. 1 mA

Potentiometer mit Mittelanzapfung und Kurzschlußstrecken
 potentiometer with centre tap and short circuit path

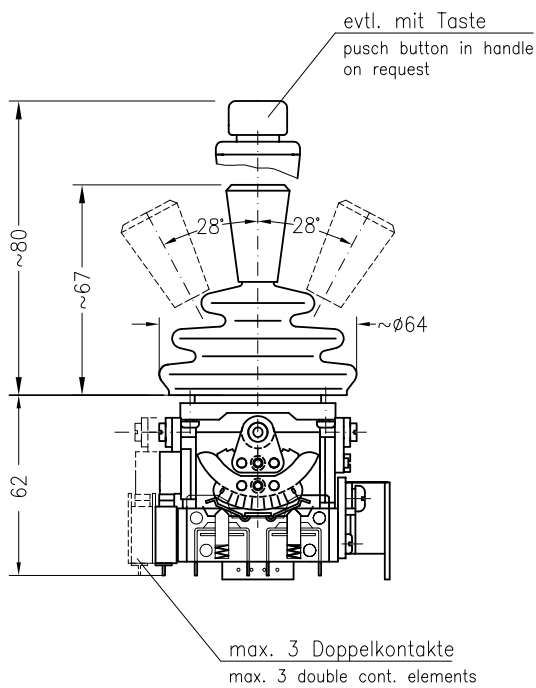


Leitplastik
 conductiv plastic
 5–0–5 kOhm Typ: B55
 10–0–10 kOhm Typ: B1010

Achtung: Schleiferbelastung max. 1 mA
 warning: wiper current max. 1 mA

Drahtgewickelte Potentiometer – 2 Watt
 potentiometer wire wound – 2 Watt
 PD 200 1–0–1 kOhm
 5–0–5 kOhm
 10–0–10 kOhm

Andere Potentiometer und Ohmwerte,
 bzw. Spannungs- oder Stromausgang
 auf Anfrage
 other potentiometer or ohmic value
 on request



Typ: SMON6ER--B
 GMON6ER--B

Gewicht: 0,16 kg
 weight: 0,16 kg

Schaltung
 circuit

Potentiometertyp
 potentiometertype

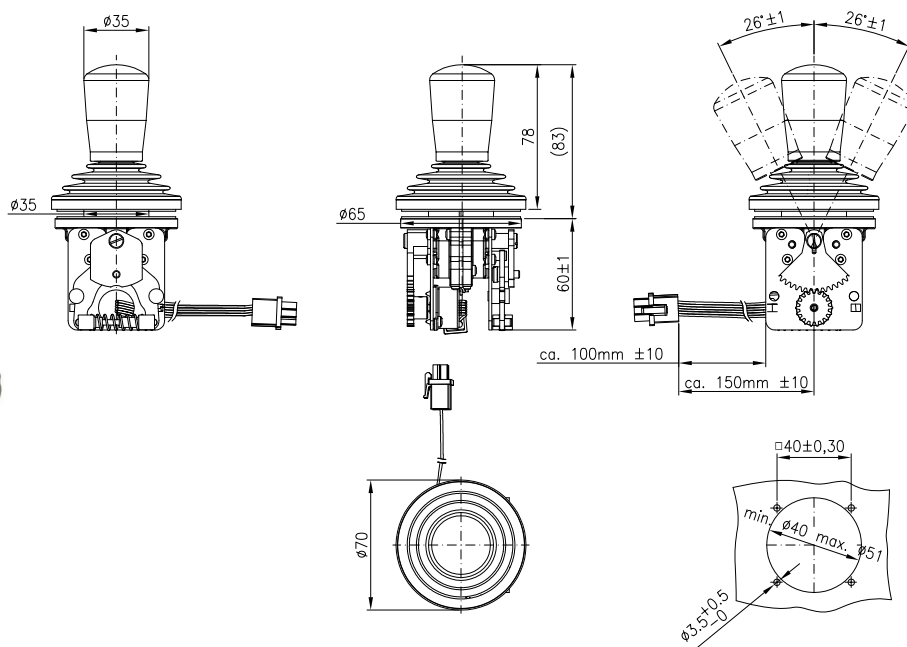
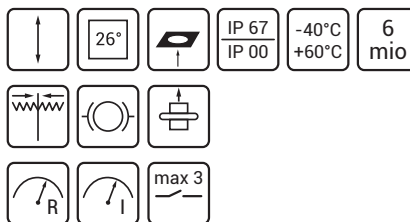


SMON6VR--B--B--
 GMON6VR--B--B--

Gewicht: 0,2 kg
 weight: 0,2 kg

ST4

The weather-proof 1-axis joystick.



A specially-designed joystick for wind and rain, snow and ice. The innovative drive block, made of special plastic, guarantees even with defective rubber boot tightness and functionality when water enters.

Specially designed for construction and agricultural machinery without cabin, this version ensures maximum performance. For any application that is exposed to wind, weather and sunlight.

Installation dimensions

Diameter with boot	ø 70 mm
Panel cut-out	ø 40 mm to 51 mm
Mounting depth	60 mm from mounting plate (Version with potentiometer without microswitches)

Mechanical characteristics

Lever deflection	± 26°
Impact force	max. 400 N at 90 mm distance from pivot point
Impact force in Z-direction	± 400 N (compressive and tensile loading)
Life cycle	> 6 million operating cycles under the influence of climate (-40°C bis +85°C)
Brake power	8N ± 1
Retraction force	4N ± 1

Potentiometer

Project planning notes:

Please note infos on sheet TI-Poti-6 (technical information)

Potentiometer BD1010:

conductive plastic, redundant, without centre taps
resistance: per lane 10 KOhm
connection: cable approx. 100 mm long with 6-pin Mat N Lok

Assignment deflection joystick - connection potentiometer / extension cable

backwards left	forward right	Pin Mat N Lok	Color extension cable
1	3	1	red
	2	2	yellow
4	6	3	blue
	5	4	white
		5	violett
		6	grey

Potentiometer BLR55:


conductive plastic, 5K-0-5K, with direction signals

Potentiometer B55:

conductive plastic, 5K-0-5K

Reedcontact

on mechanical interlock

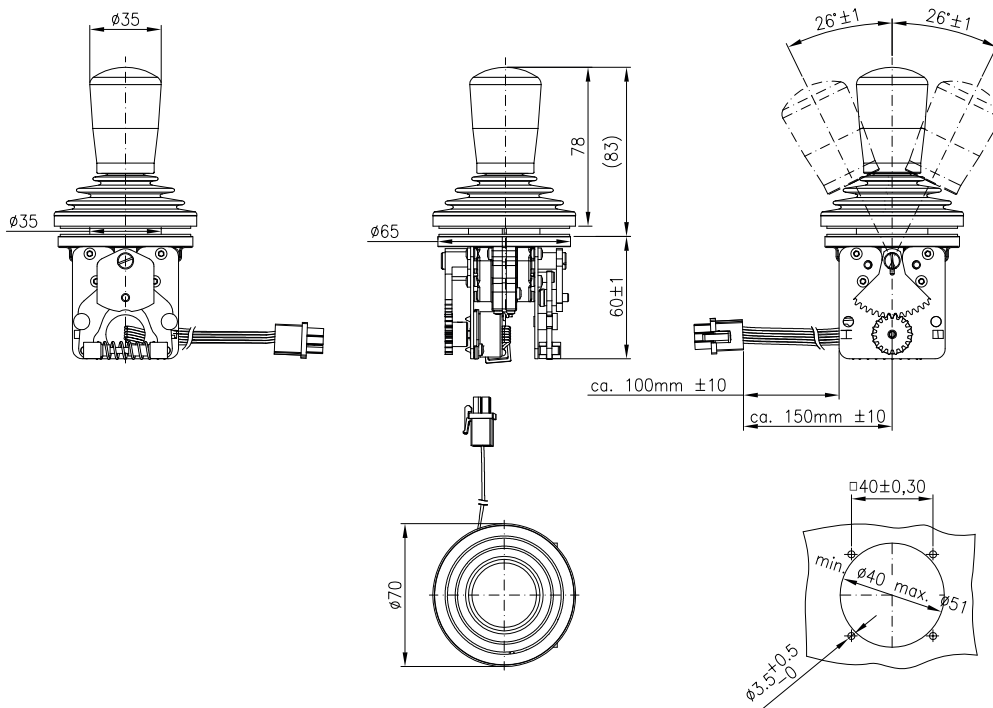
ZO  1 NC

Connection: cable approx. 100 mm long with 2-pole Mat N Lok

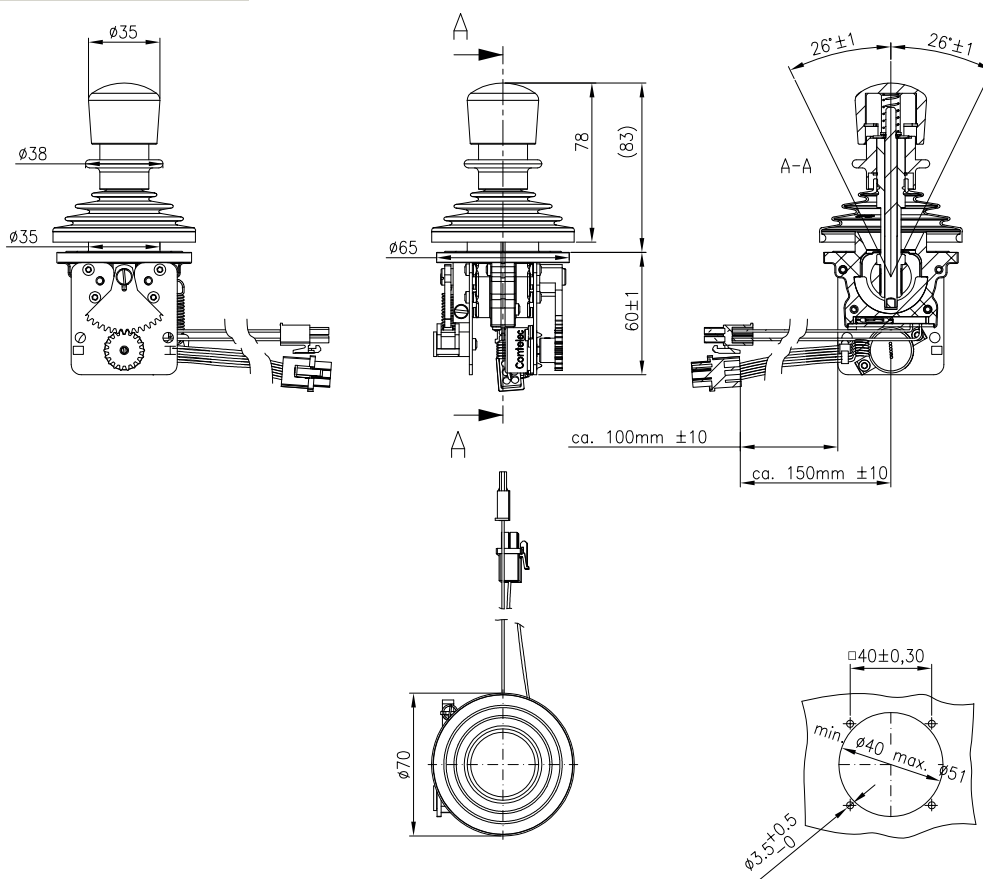
General characteristics

Working temperature	-40°C to +85°C
Storage temperature	-50°C to +90°C
Degree of protection from outside (with standard handle and boot)	IP67

Version: Handle G45,
spring return

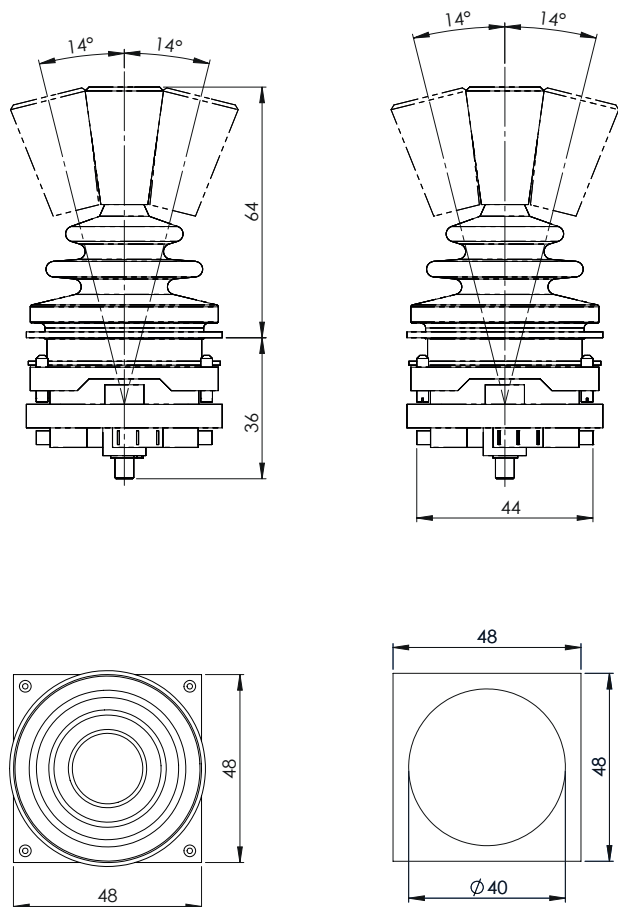
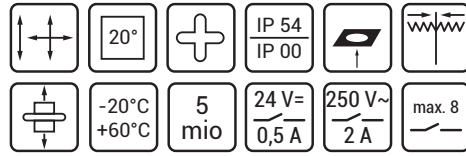


Version: with mechanical in-
terlock, handle G45-Z, friction
brake, reed contact



MON-WK

Small installation depth.

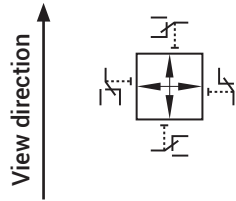
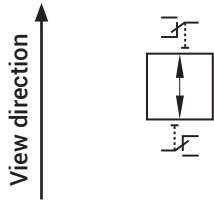


Due to its small size the joystick MON-WK is ideal for installation in casings with limited mounting depth. Despite its compact design it comes with a 1- or 2-axis version with spring return. Its body, made of durable plastic, serves as a carrier for the microswitches with snap characteristic and two way contact. For each switching direction a microswitch with changeover contact is available. The contact system switches DC voltages / DC currents just as reliably as AC voltages.

The hollow lever, made of metal for reasons of stability, allows the construction of a handle with pushbutton. For applications with specific switching functions the joystick can be equipped with a cross or special gate. As a control switch for auxiliary functions it is, due to its low weight, ideally suited for installation in portable consoles as well as in fixed stations.

Drive E

Drive V



MON 5 ER WK

Basic price
130,00 €

MON 5 VR WK.WK

Basic price
142,00 €

Scope of supply, type code

Scope of supply MON-WK:

- Handle G49 (without inserts)
- Rubber boot 50 mm
- Spring return
- Microswitch with soldered connection

Handles:

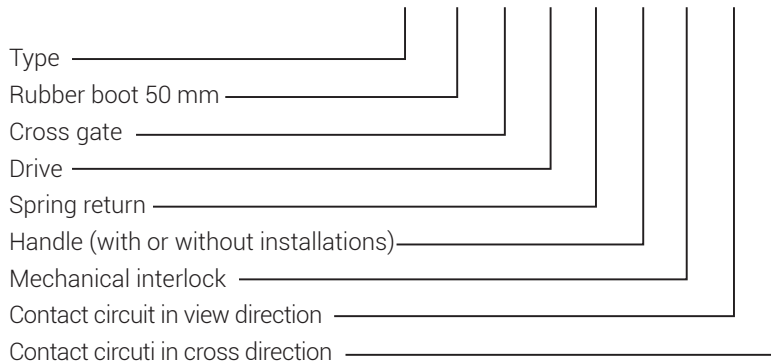
Fitting in handle

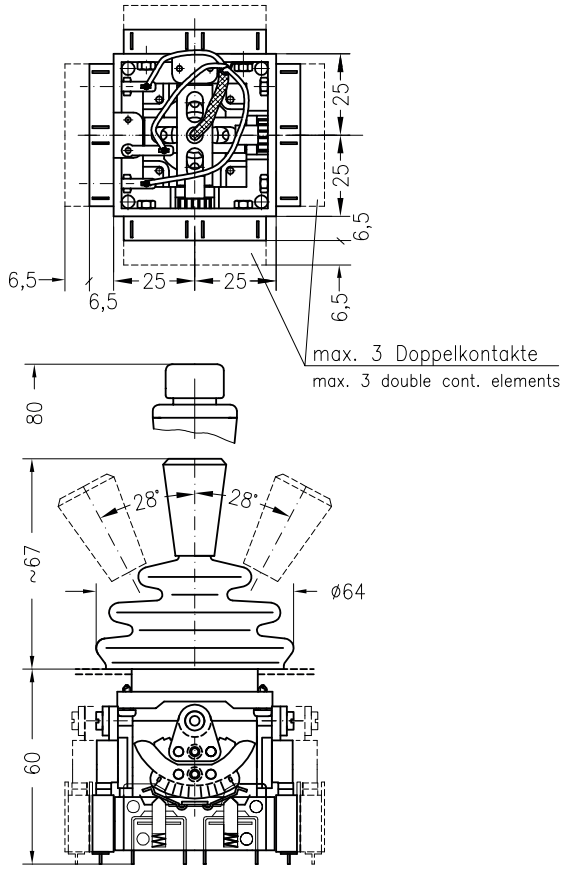
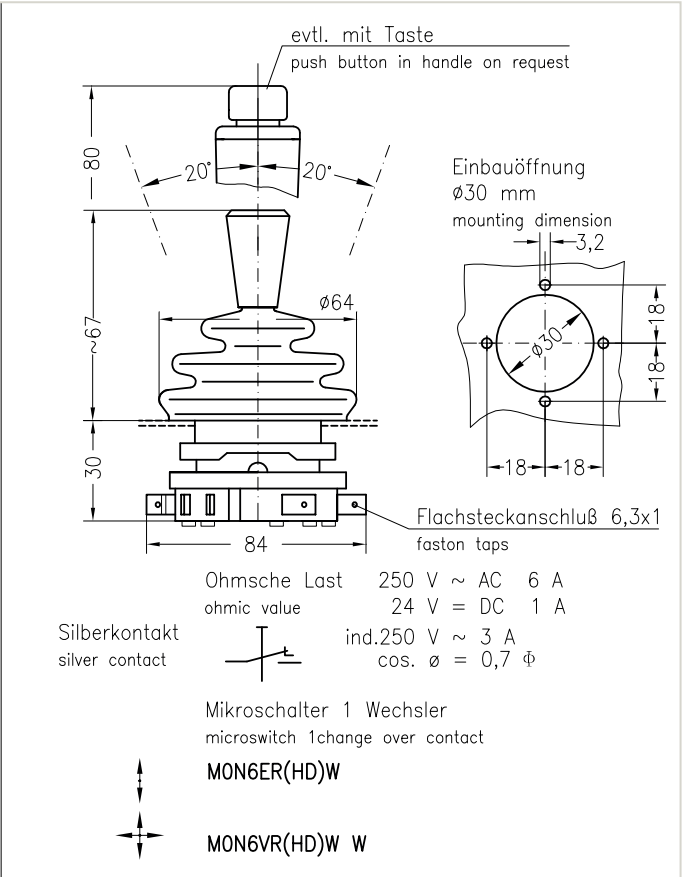
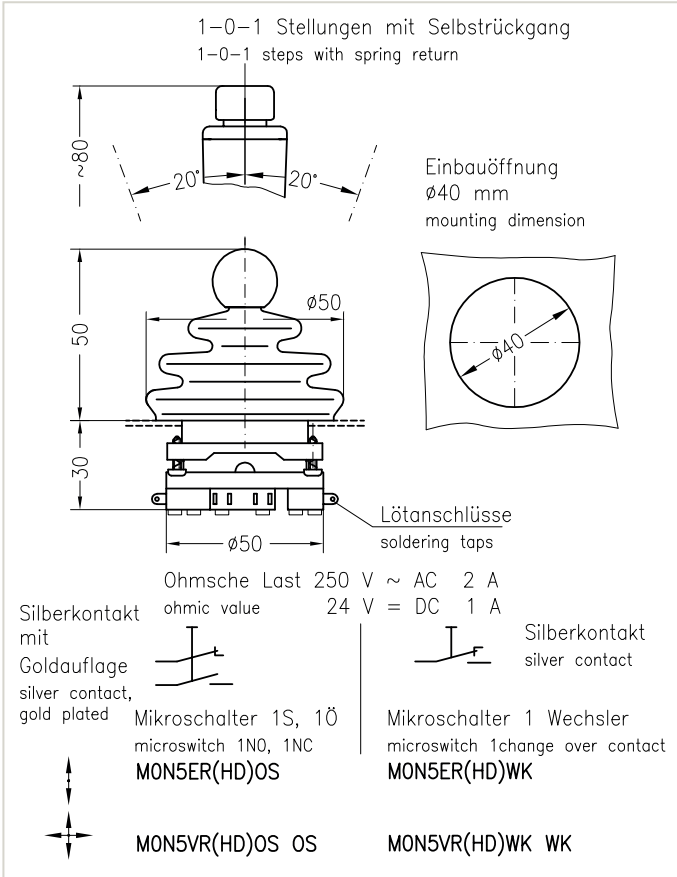
see sheet G-M054

- Cross gate KK
- Mechanical interlock Z
- Ball handle KG
- Wiring to connection cable or plug

Type code:

MON 5 KK V R HDU Z WK.WK
E HDS G49





max. 5-0-5 Stellungen
mit oder ohne Selbstrückgang
5-0-5 steps

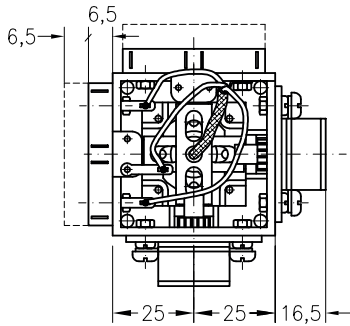
zwangsbetätigte Tastkontakte mit
Goldauflage oder Silberauflage
force actuated goldcontacts or
silvercontacts

Typ
GMON6E...
SMON6E...

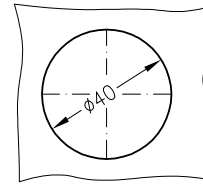
GMON6V...
SMON6V...

Gewicht ~ 0,1 kg
weight ~ 0,1 kg



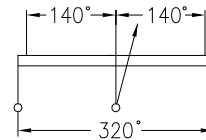


Einbauöffnung
 ø40 mm
 mounting dimension



evtl. mit Impedanzwandler 4-20 mA
 potentiometer - conductiv plastic

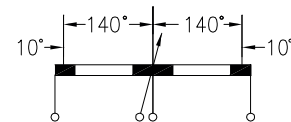
Potentiometer ohne Mittelanzapfung
 potentiometer without centre tap



Leitplastik
 conductivplastic
 1 kOhm Typ : B1
 5 kOhm : B5
 10 kOhm : B10

Achtung Schleiferbelastung max. 1 mA
 warning: wiper current max. 1 mA

Potentiometer mit Mittelanzapfung und Kurzschlußstrecken
 potentiometer with centre tap and short circuit path

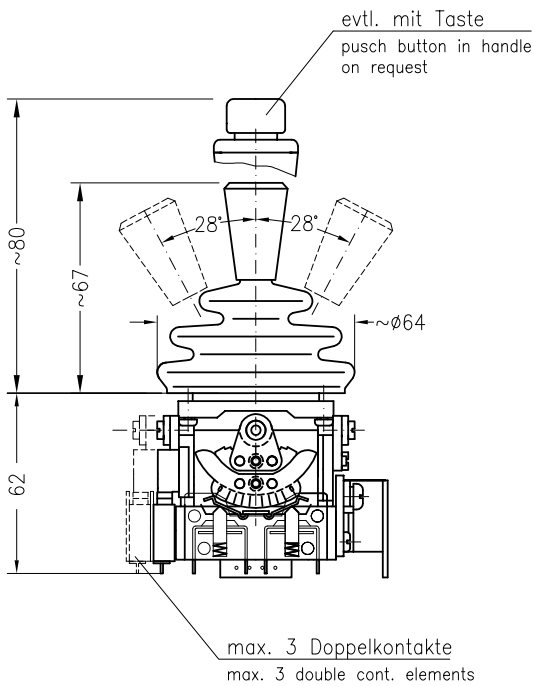


Leitplastik
 conductiv plastic
 5-0-5 kOhm Typ: B55
 10-0-10 kOhm Typ: B1010

Achtung: Schleiferbelastung max. 1 mA
 warning: wiper current max. 1 mA

Drahtgewickelte Potentiometer - 2 Watt
 potentiometer wire wound - 2 Watt
 PD 200 1-0-1 kOhm
 5-0-5 kOhm
 10-0-10 kOhm

Andere Potentiometer und Ohmwerte,
 bzw. Spannungs- oder Stromausgang
 auf Anfrage
 other potentiometer or ohmic value
 on request



Typ: SMON6ER--B
 GMON6ER--B

Gewicht: 0,16 kg
 weight: 0,16 kg

Schaltung
 circuit

Potentiometertyp
 potentiometertype

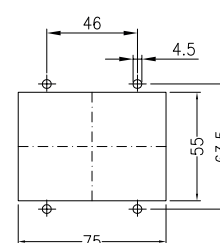
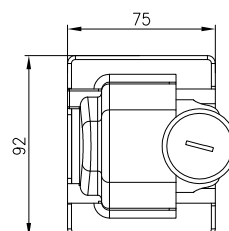
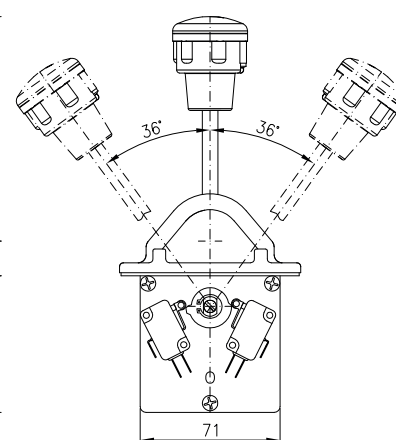
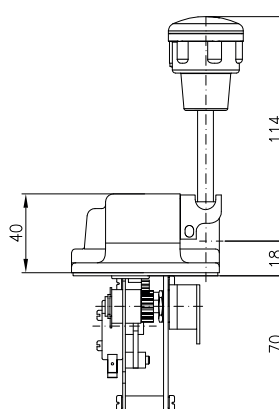
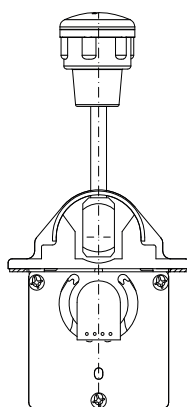
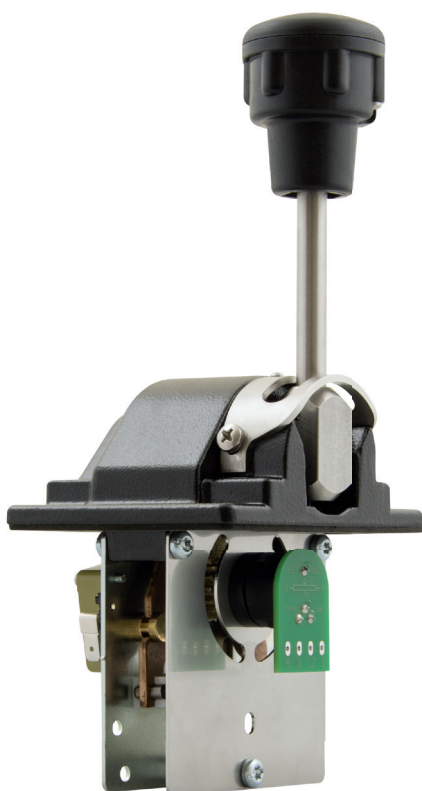
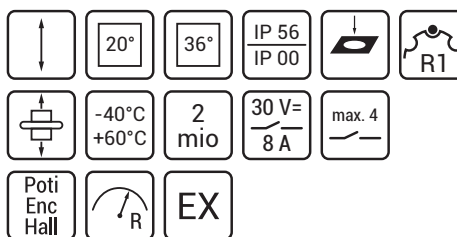


SMON6VR--B--B--
 GMON6VR--B--B--

Gewicht: 0,2 kg
 weight: 0,2 kg

ST1

For extreme environmental requirements.



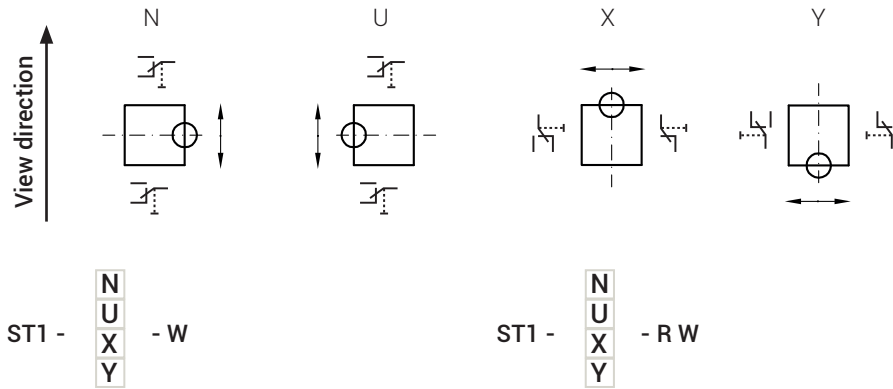
The requirement of assuring a high permanent IP protection rating on the panel top side led to the development of the ST1 joystick with chromated cast console.

The lever, made of stainless steel precisely controls contacts, potentiometers or encoders.

The version with 1-0-1 positions is available as a stayput version or with spring return into middle position. The stepless drive with potentiometer is available with spring return system or with friction brake.

This joystick demonstrates its durability and reliability on ships, yachts, oil rigs, or steel mills.

Drive for 1-0-1 position
Arrangement N, U, X, Y



Scope of delivery/ features:

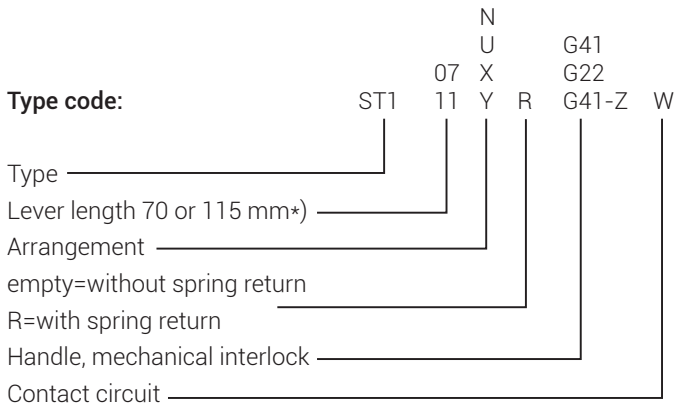
- Handle G41
- Lever deflection $\pm 20^\circ$
- ST1 without spring return
- ST1-R with spring return
- Lever length 115 mm
- Contact circuit W
- Chromated housing
- Limiting plate made of stainless steel

Additional technical information:

- Mechanical TI-ST1
- Contact circuits see TI-S-8

Options:

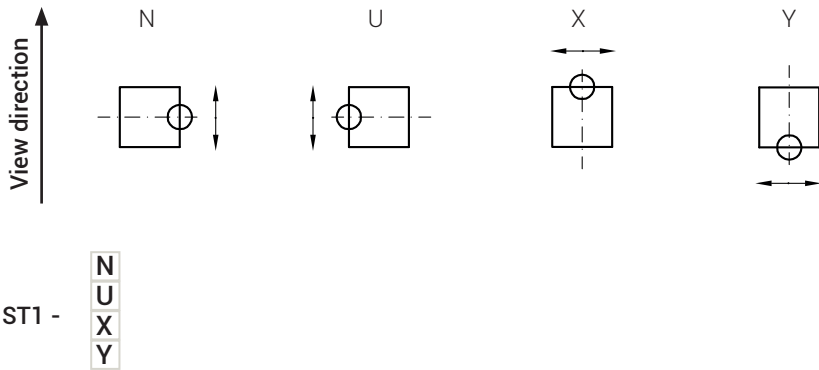
- Mechanical interlock Z with handle G41-Z
- Handles according to combination table G-Ü
- Lever length 70 mm *)
- Low temperature version down to -40°C
- Wiring to connection cable or plug



Note:

*) Joystick with G40 handle only in combination with lever length 07.

Drive stepless with microswitches and potentiometer
Arrangement N, U, X, Y



Scope of delivery/ features:

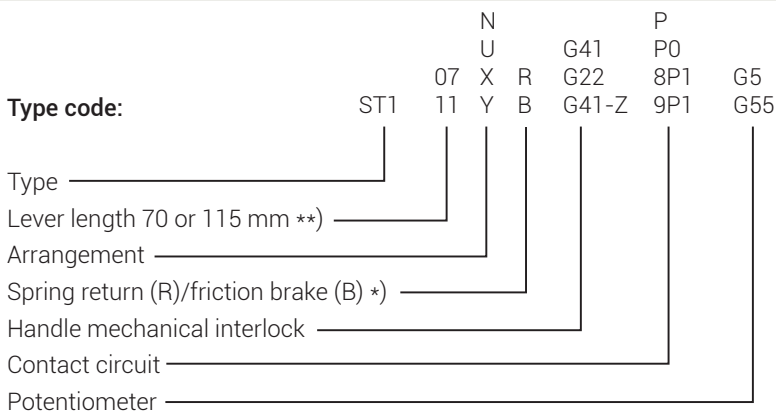
- Handle G41
- Lever deflection ca. $\pm 36^\circ$
- Lever length 115 mm
- Without spring return, friction brake *)
- Chromated housing
- Limiting plate made of stainless steel

Additional technical information:

- Mechanical TI-ST1
- Switching see TI-S-8

Options:

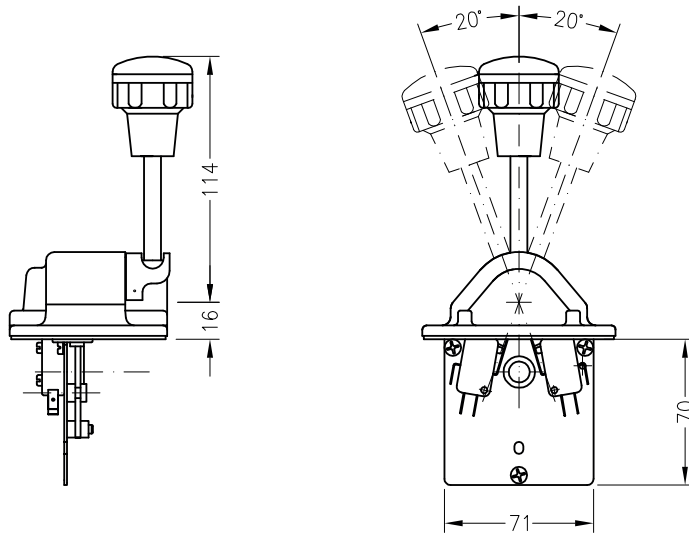
- Spring return R
- Friction brake B
- Mechanical interlock Z with handle G41-Z
- Special notching disc
- Contact circuit: P0
 - P, 8P1
 - 9P1
- Potentiometer
- Handles according to combination table G-Ü
- Version for potentially explosive area
- Lever length 70 mm **)
- Wiring to connection cable or plug



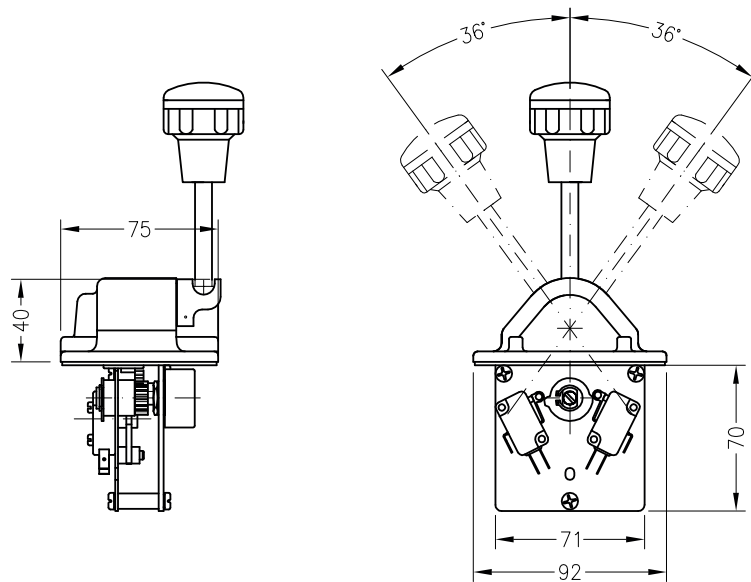
Note:

- *) One option must be selected.
- **) Joystick with G40 handle only in combination with lever length 07.

1-0-1 Stellungen
 ohne Potentiometer
 siehe Seite J-ST1-2/2
 1-0-1 step
 without potentiometer
 see sheet J-ST1-2/2

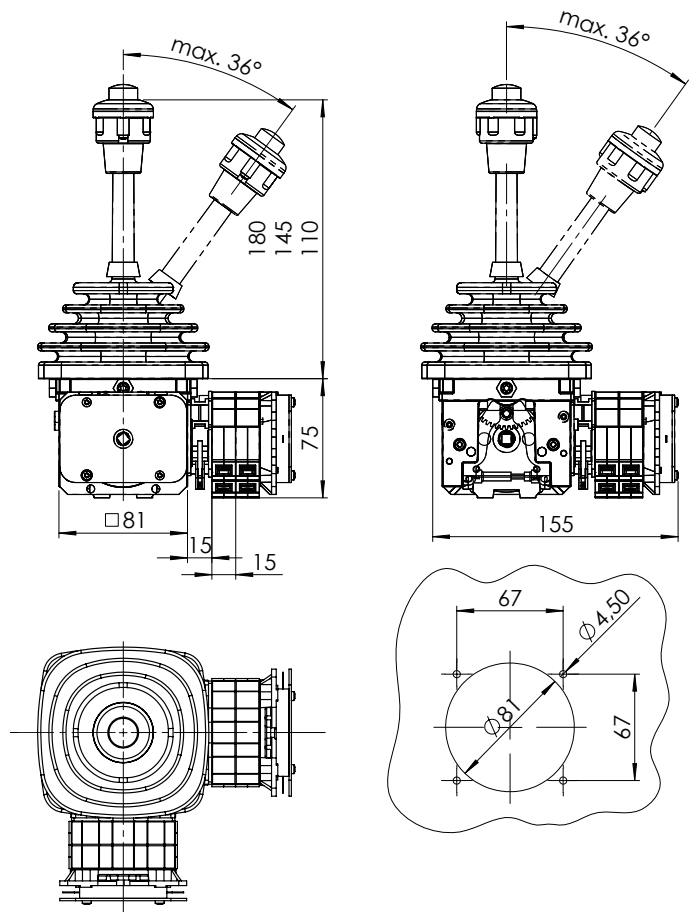
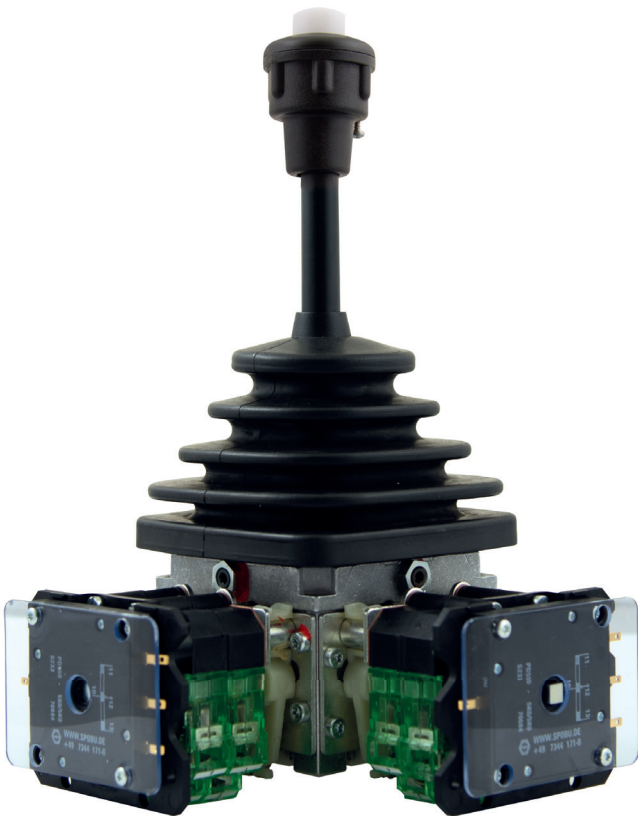
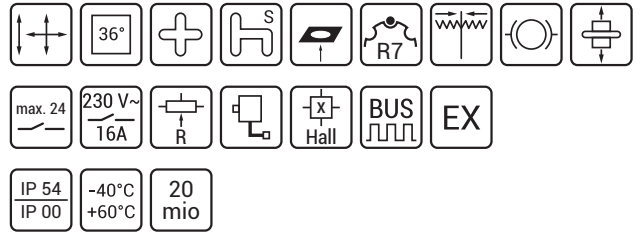


mit Potentiometer
 siehe Seite J-ST1-2/2
 with potentiometer
 see sheet J-ST1-2/2



VNS0

The Allrounder.



Both the VNS0 and the NNS0 are very robust joysticks with aluminium diecast consoles and metal gears.

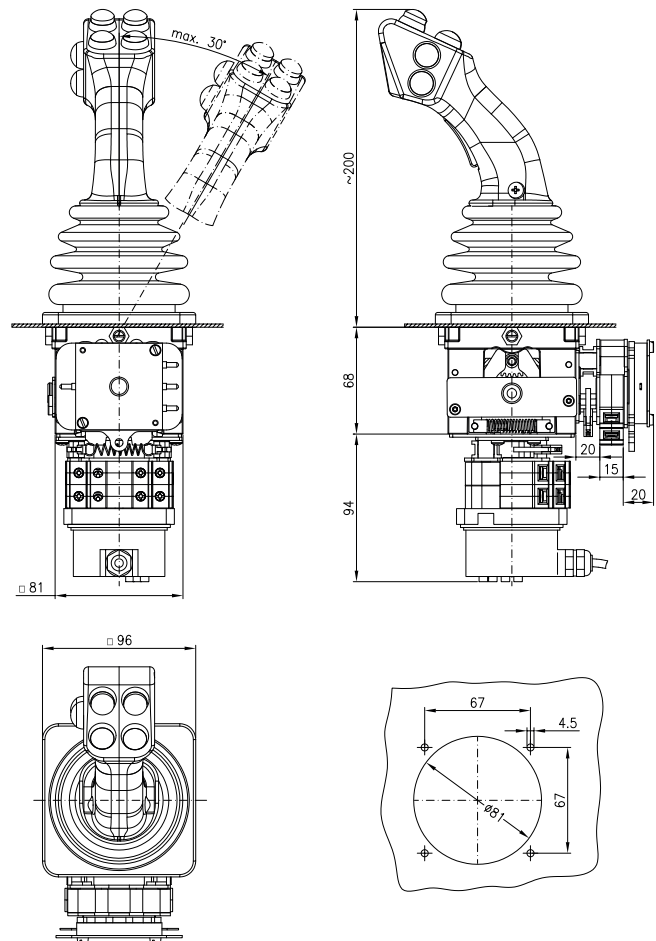
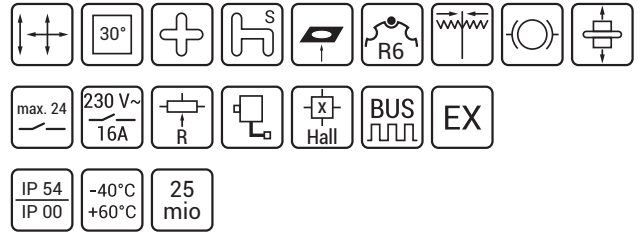
Their resistance against ozone, UV radiation, oil and maritime climate makes them especially suitable for heavy-duty applications and also in potentially explosive areas. They are available both as single and dual axis drives. The intelligent modular design allows customized solutions for contact elements 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.



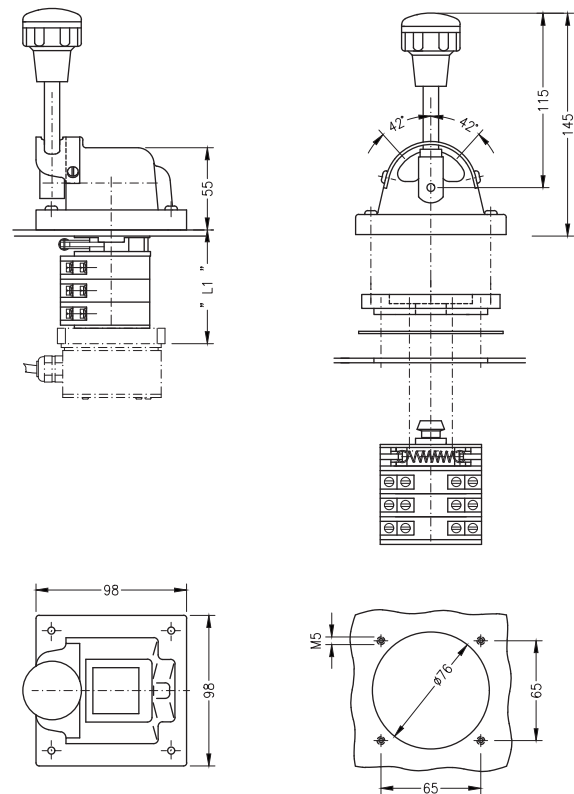
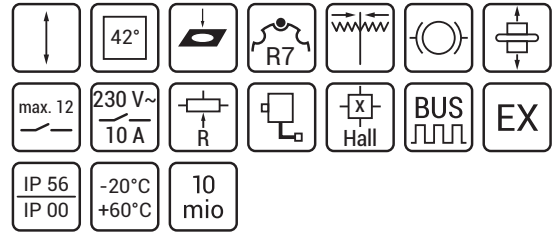
The hollow special-alloy lever (VNSO 8 mm, NNSO 12 mm diameter) allows to mount a variety of handles and the wires can be routed through the shaft of the joystick. Optionally, a rotary module mounted between the joystick and the handle extends the joystick by an additional axis. Due to the special coupling 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.

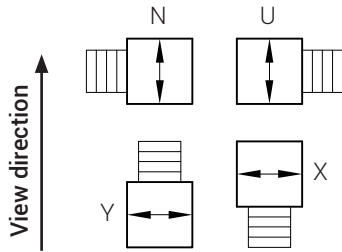
The modular contact block is equipped with exchangeable double contact elements and allows switching with a maximum of 7-0-7 posi-

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

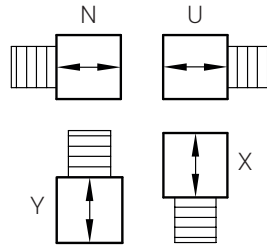


VNS0-F E-

N
U
Y
X

--AK

Drive G
Arrangement N, U, Y, X

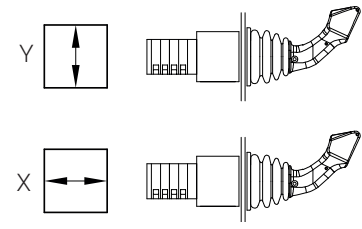


VNS0-F G-

N
U
Y
X

--AK

Drive A
Arrangement Y, X

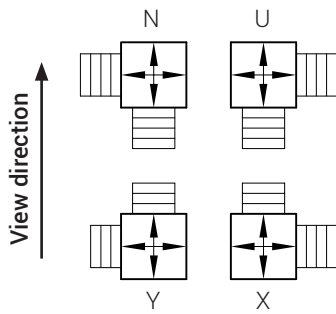


VNS0-F A-

Y
X

--AK

Drive V
Arrangement N, U, Y, X

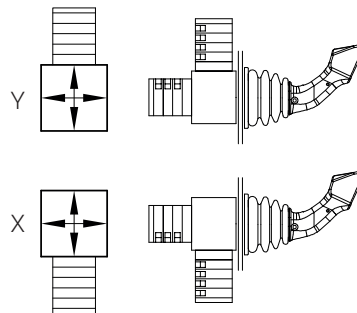


VNS0--F V-

N
U
Y
X

--AK

Drive EA
Arrangement Y, X

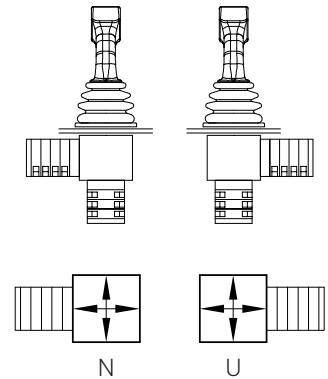


VNS0--F EA-

Y
X

--AK

Drive EA
Arrangement N, U

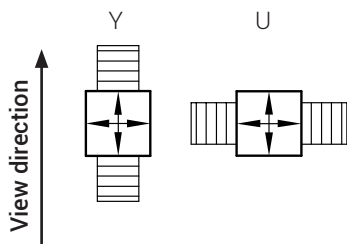


VNS0--F EA-

N
U

--AK

Drive M
Arrangement Y, U

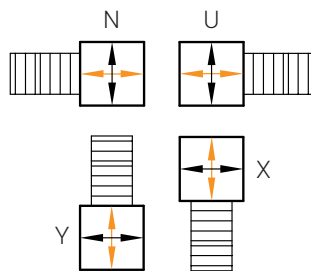


VNS0--F M-

U
Y

--AK

Drive H
Arrangement N, U, Y, X



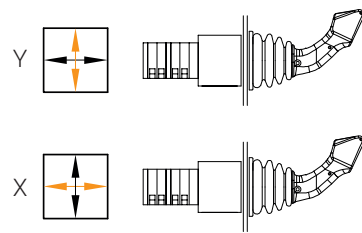
Potentiometer and encoder coupling only for colour-coded axis

VNS0--F H-

N
U
Y
X

--AK

Drive AA
Arrangement Y, X



Potentiometer and encoder coupling only for colour-coded axis

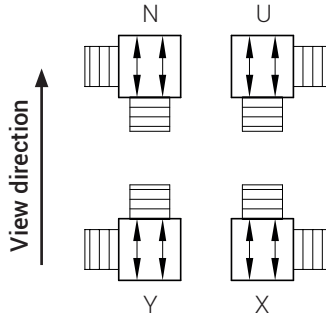
VNS0-F AA-

Y
X

--AK

Drive GGV

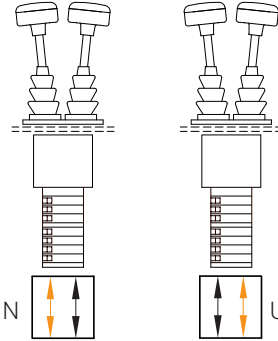
Arrangement N, U, Y, X



VNS0--F GGV-
N
U
Y
X

Drive GGAA

Arrangement N, U

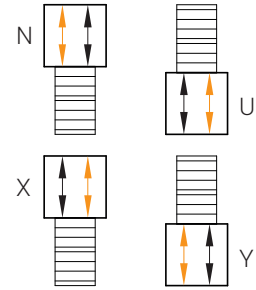


Potentiometer and encoder coupling
only for colourcoded axis

VNS0--F GGAA-
N
U

Drive GGH

Arrangement N, U, Y, X

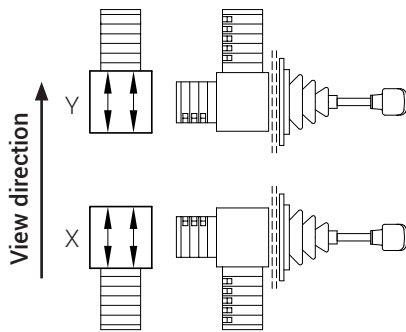


Potentiometer and encoder coupling
only for colourcoded axis

VNS0--F GGH-
N
U
Y
X

Drive GGEA

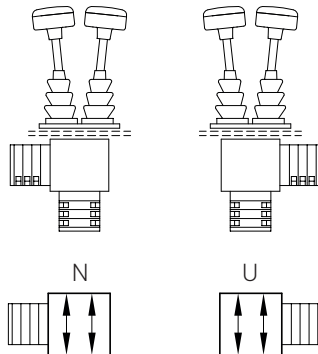
Arrangement Y, X



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

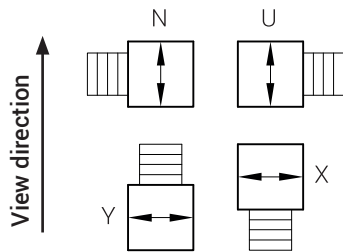
VNS0-GG-Joysticks with black aluminium escutcheon plate.

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



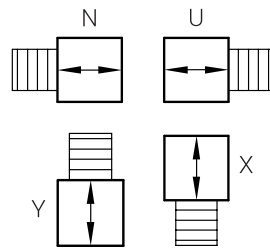
NNS0--F EPI-

N
U
Y
X

 --AK

Drive GPI

Arrangement N, U, Y, X



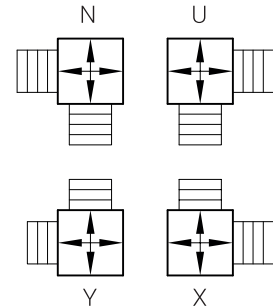
NNS0--F GPI-

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

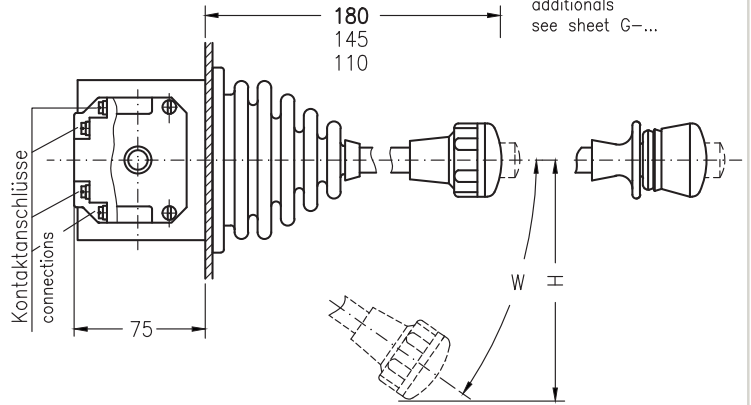
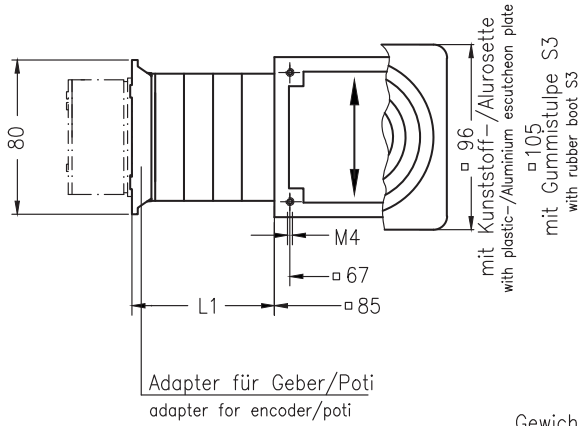
Type code:	VNS0	NNS0	1	2	UK	V-N	18	SZK	B	H	8P1	9P1	PQ55	B55
Gold plated contacts														
Type														
Double contact in view direction *)														
Double contact in cross direction *)														
Front mounting, base mounting, bracket version														
Drive-arrangement														
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.

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-...

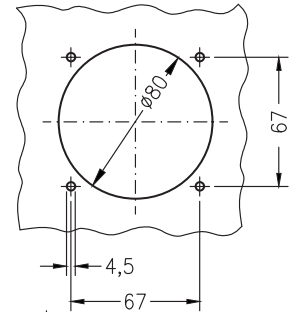


Anordnung
 arrangement



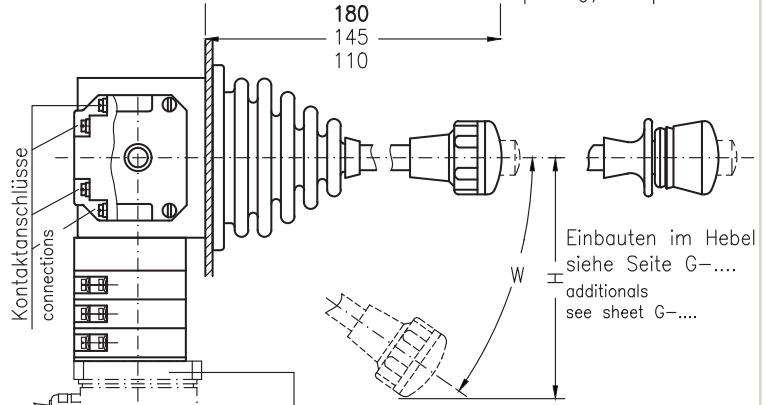
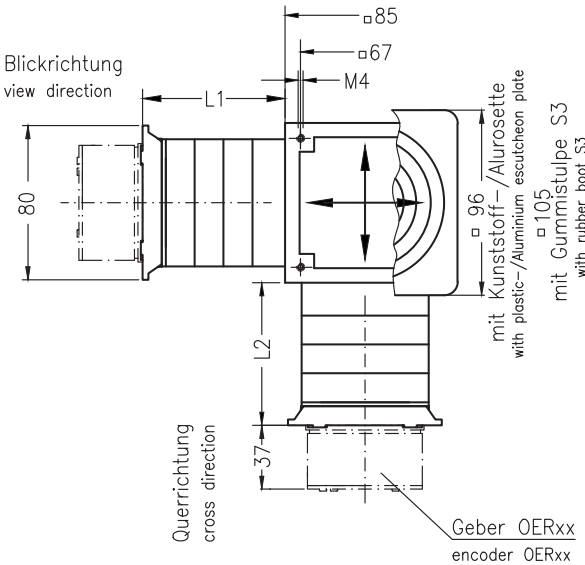
Gewicht:
 Antriebsblock ~0,9 kg
 je Doppelkontakt ~0,08 kg
 weight:
 drive ~0,9 kg
 each double contact ~0,08 kg

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-....

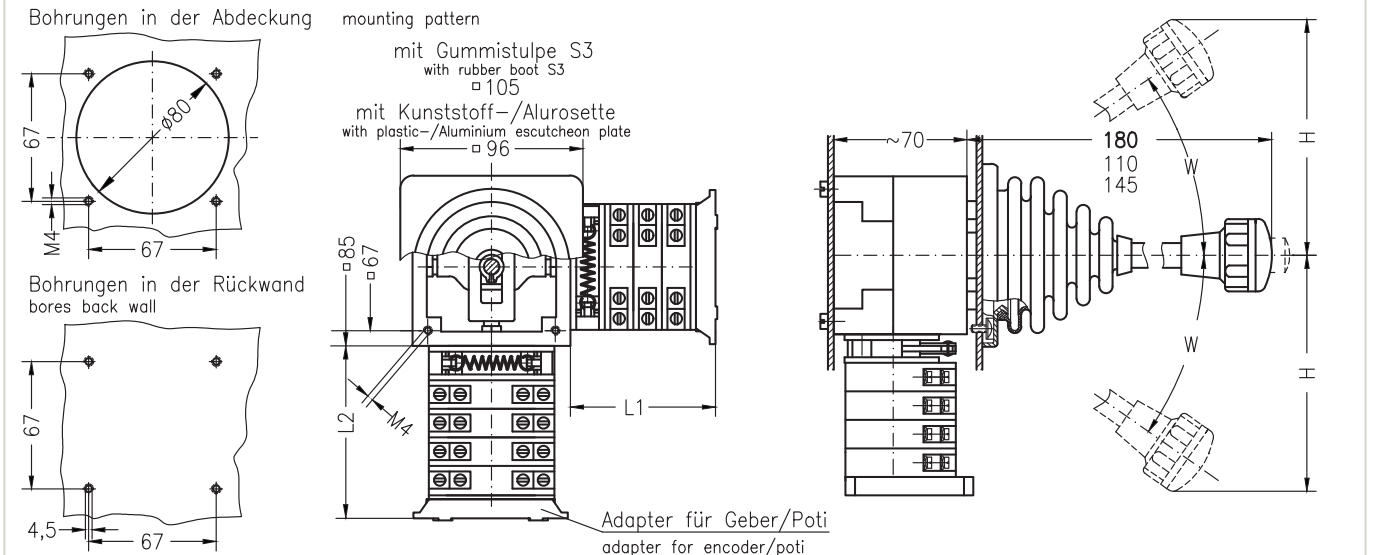
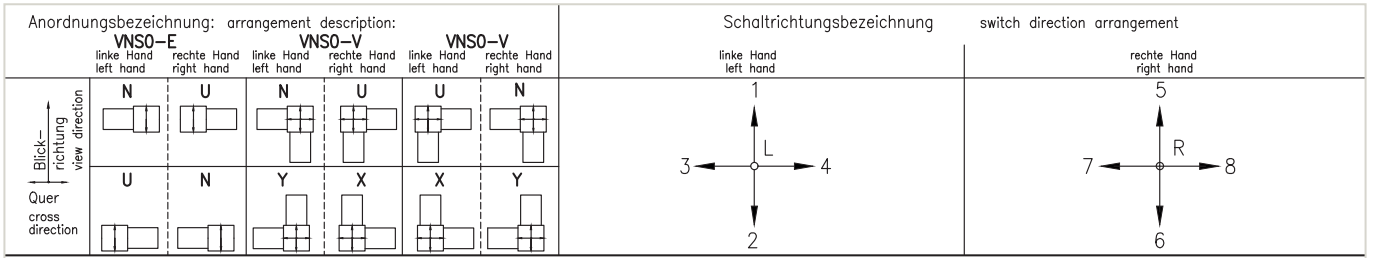
Anordnung
 arrangement



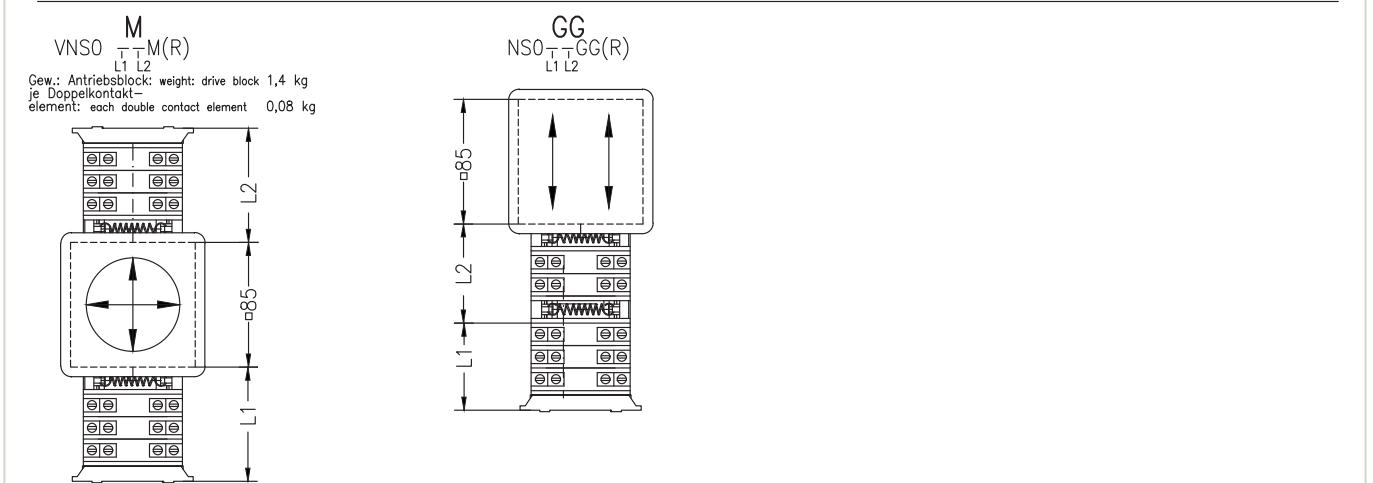
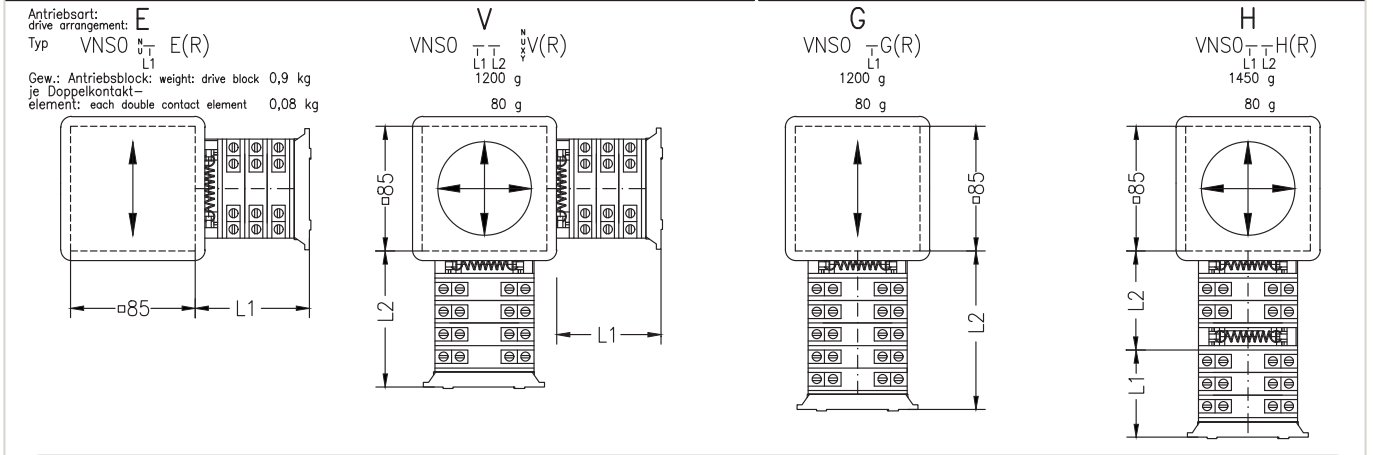
Gewicht:
 Antriebsblock ~1,2 kg
 je Doppelkontakt ~0,08 kg
 weight:
 drive ~1,2 kg
 each double contact ~0,08 kg

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



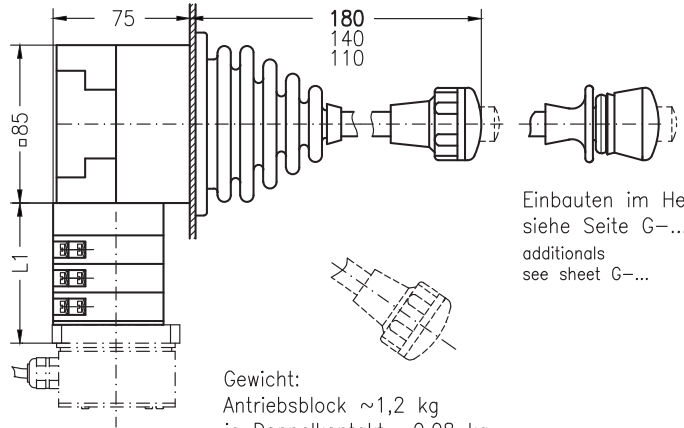
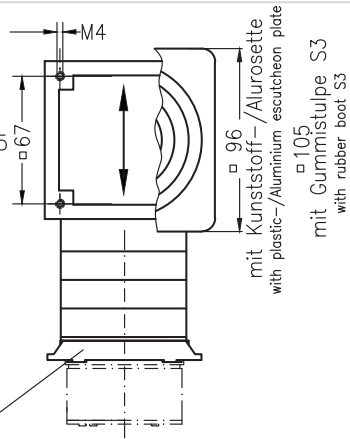
Anzahl Doppelkontaktelemente number of double contact elements	1 ohne Rastung (without notches)		3	4	5	6	7	8	9	10	Hebelausschlag (Hebel 180 mm) lever deflection (lever 180 mm)										
	L1	L2									Stellungen steps	H	W	Stellungen steps	H	W	Stellungen steps	H	W		
	40	(22)	55	(37)	70	85	100	115	130	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'



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



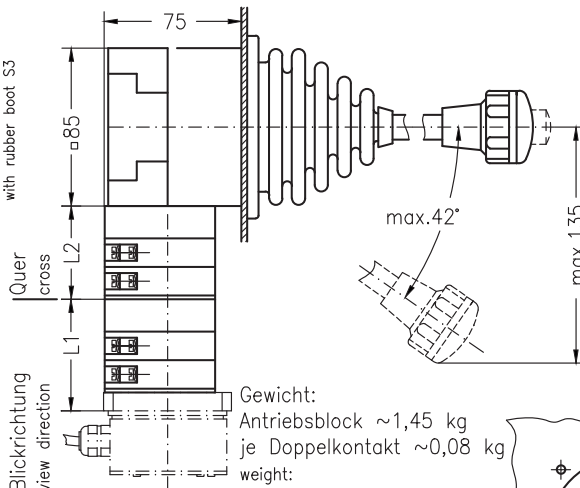
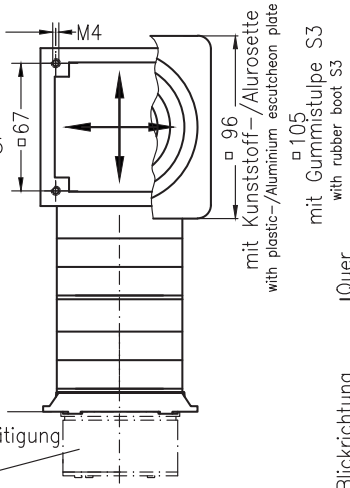
Einbauen im Hebel
siehe Seite G-...
additional
see sheet G-...

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

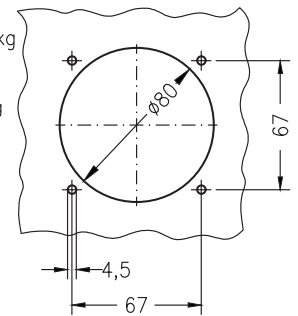
Antrieb H
siehe Seite J-NS0-4/5
drive H
see sheet J-NS0-4/5

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



Bohrungen in der
Befestigungswand
mounting pattern

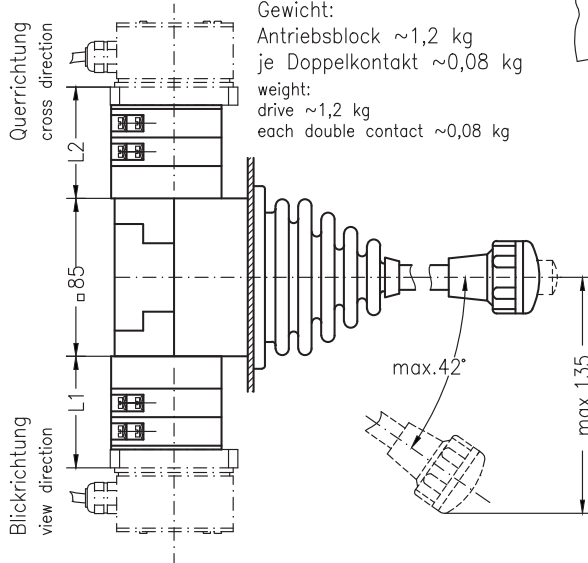
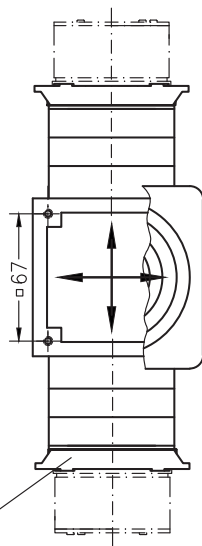
Gewicht:
Antriebsblock ~1,45 kg
je Doppelkontakt ~0,08 kg
weight:
drive ~1,45 kg
each double contact ~0,08 kg



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



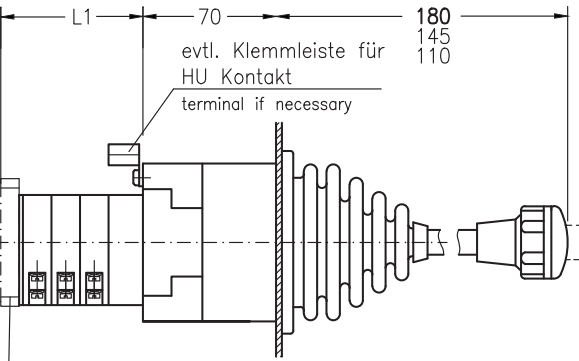
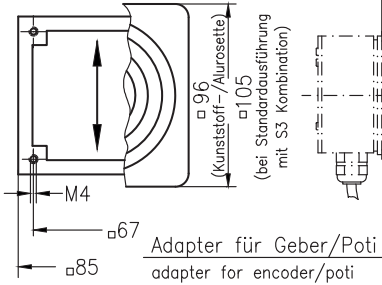
Einbauen im Hebel
siehe Seite G...
additional
see sheet G...

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

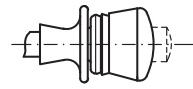
Typ VNS0-A

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

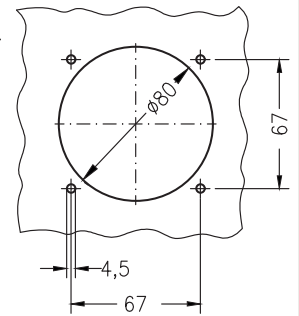
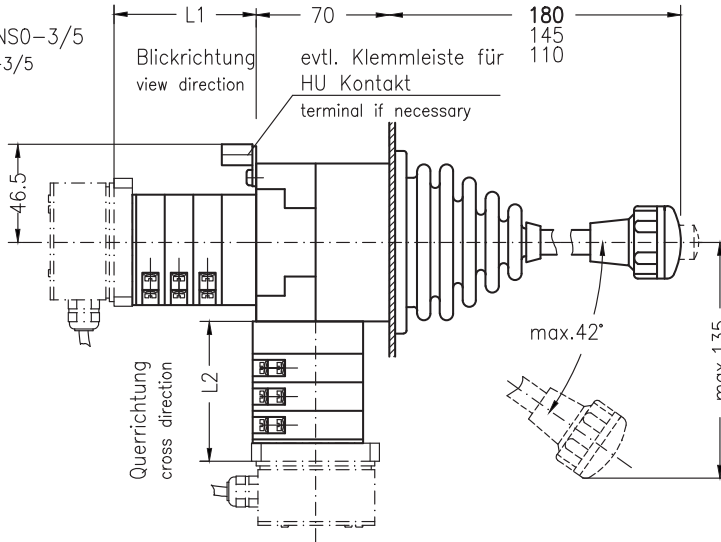
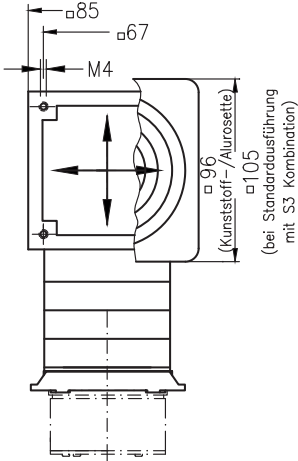
Einbauen im Hebel
siehe Seite G-4/4
additional
see sheet G-4/4



Bohrungen in der
Befestigungswand
mounting pattern

Typ VNS0--EA

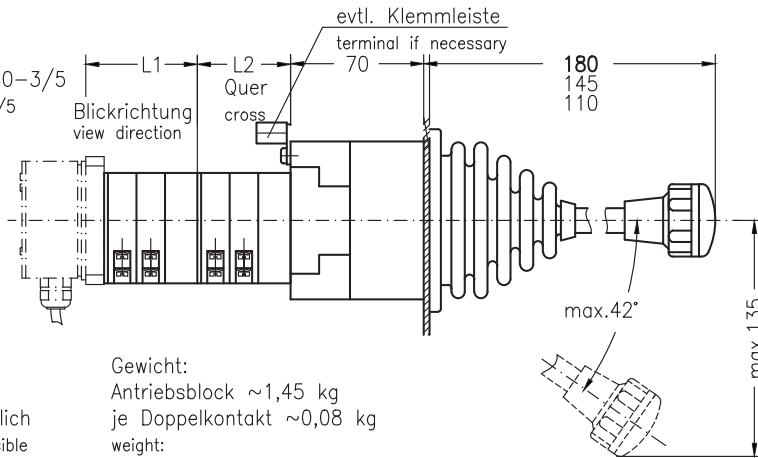
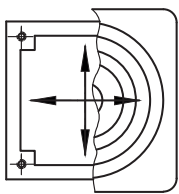
type Antrieb EA siehe Seite J-NS0-3/5
drive EA see sheet J-NS0-3/5



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

Typ VNS0--AA

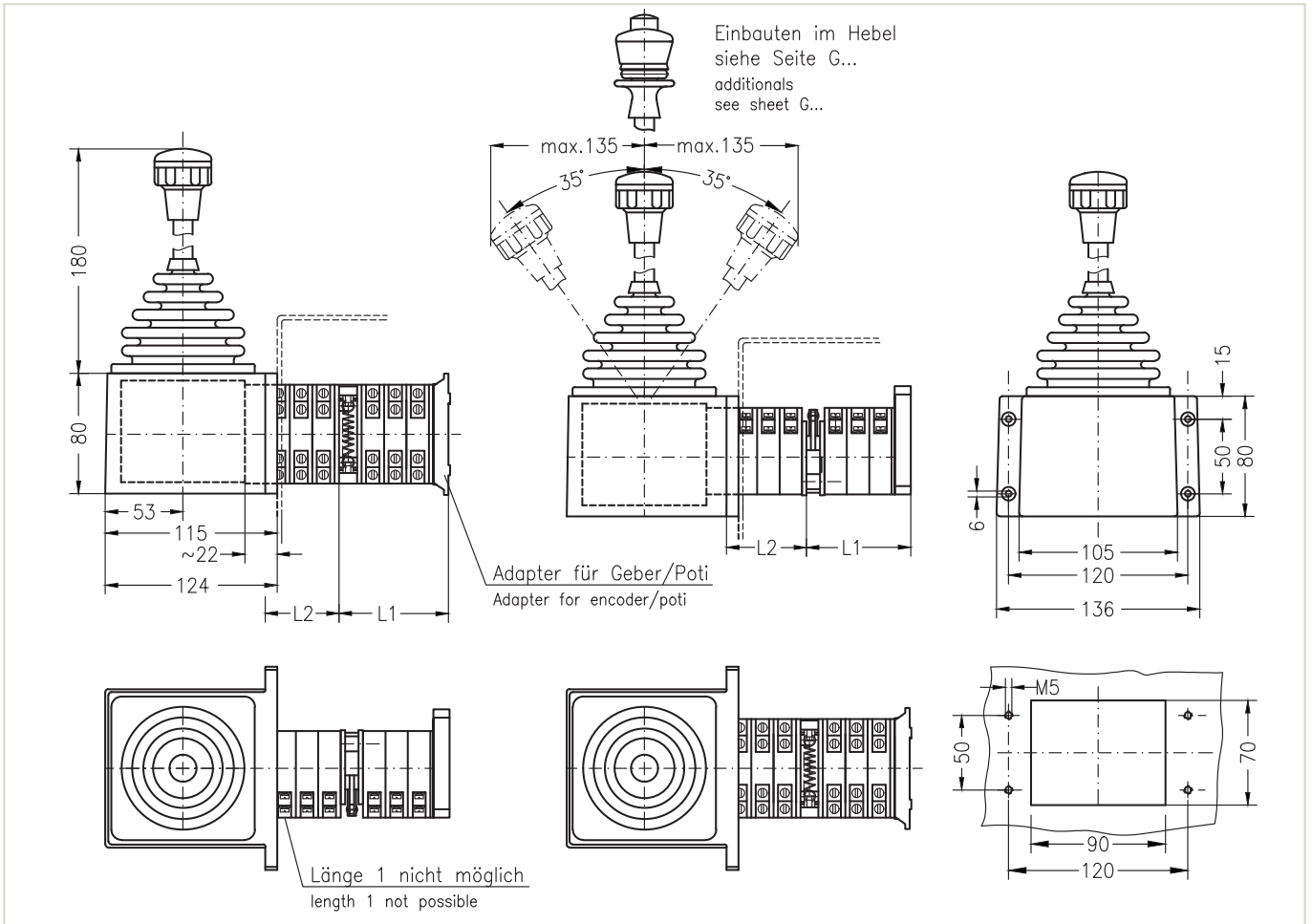
type Antrieb AA siehe Seite J-NS0-3/5
drive AA see sheet J-NS0-3/5



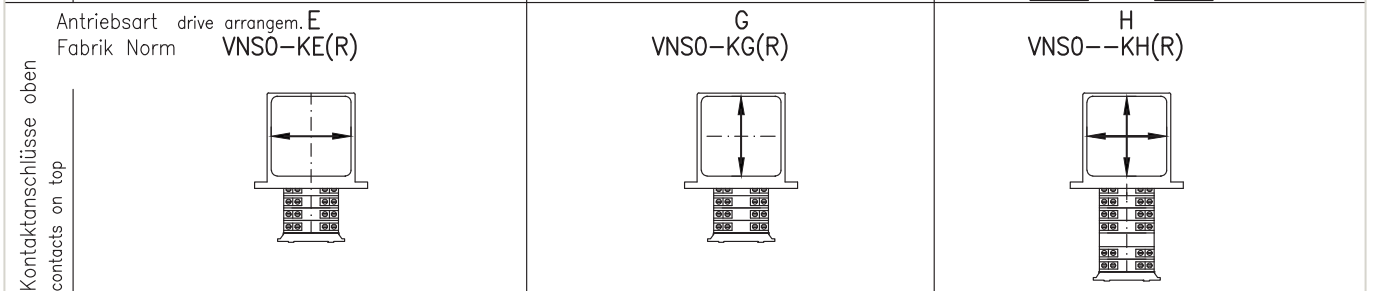
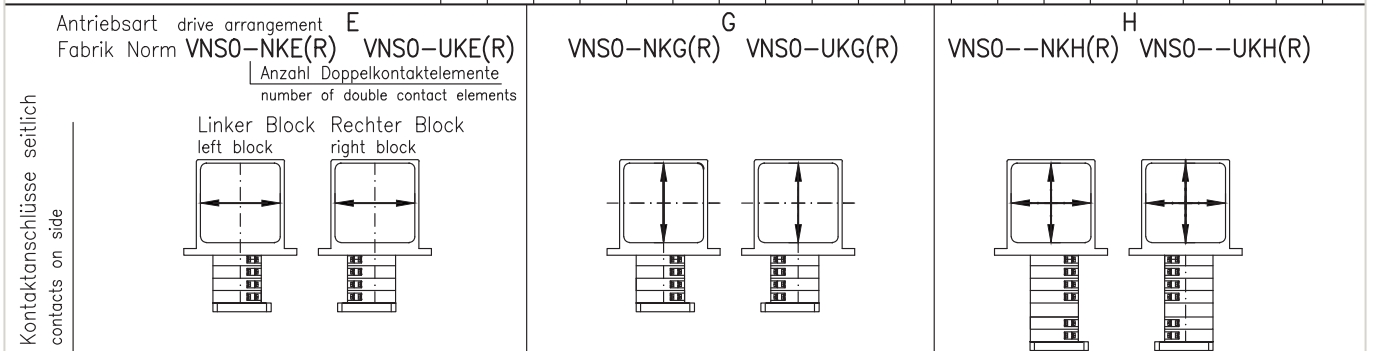
Geber nur in
Blickrichtung möglich
attachment only possible
for view direction

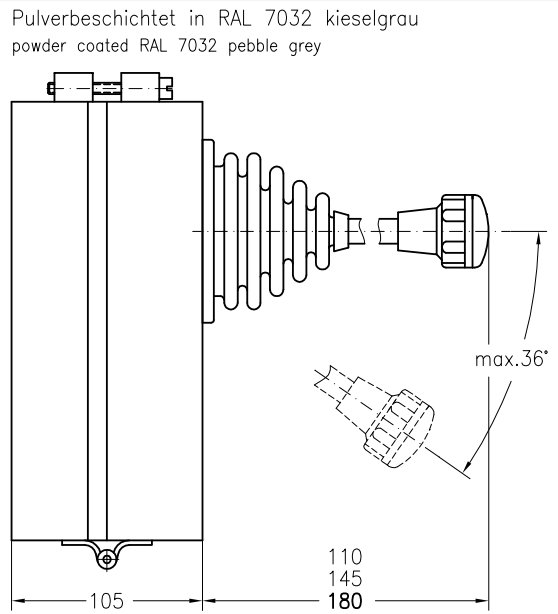
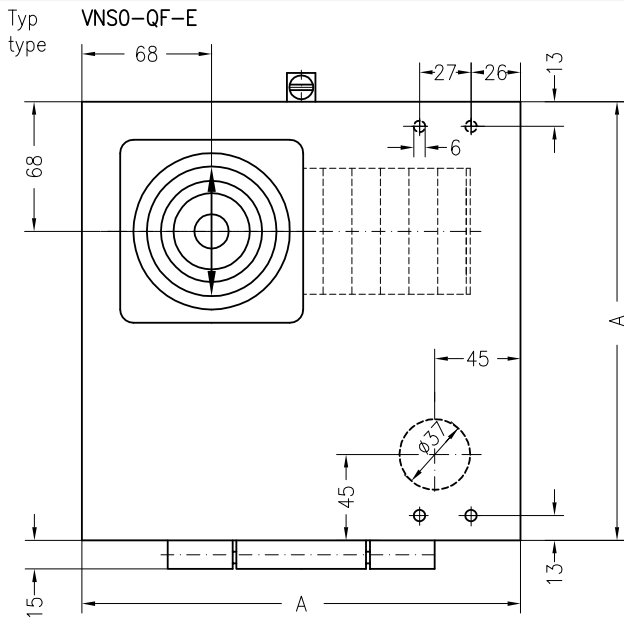
Gewicht:
Antriebsblock ~1,45 kg
je Doppelkontakt ~0,08 kg
weight:
drive ~1,45 kg
each double contact ~ 0,08 kg

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

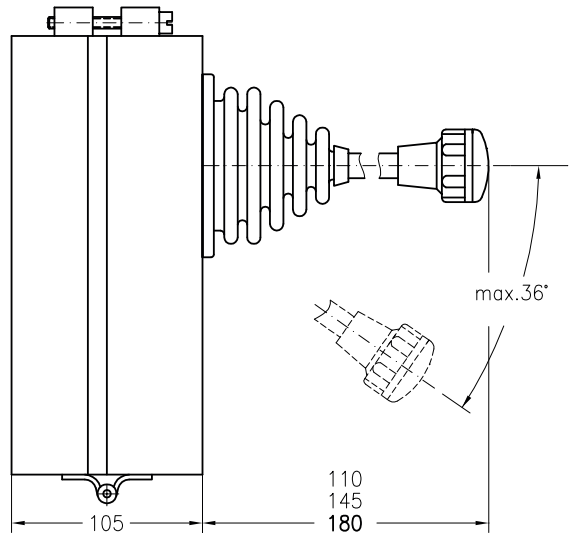
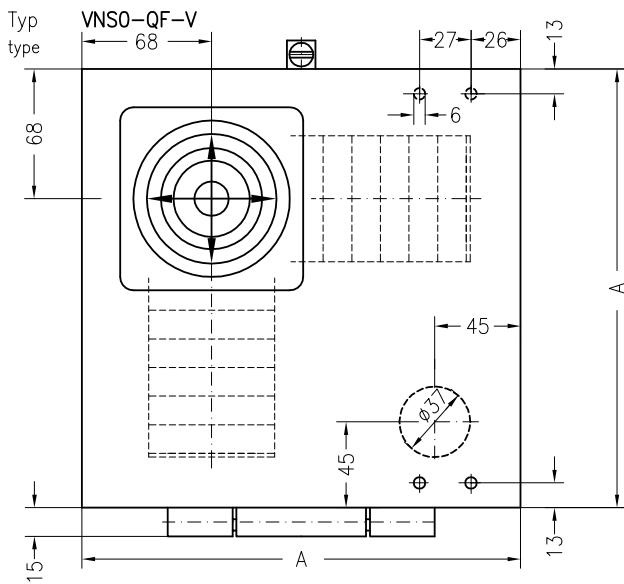


	Schalterlänge bei Anzahl Doppelkontaktelemente											number of double contact elements								
Fabrik Norm	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
VNS0K-E(R) VNS0-KE(R)																				
VNS0K-H(R)	40	55	70	85	100	115	130	145	160	175	190	205	220	235	250	265	280	295	315	330
Gewicht weight ~kg																				



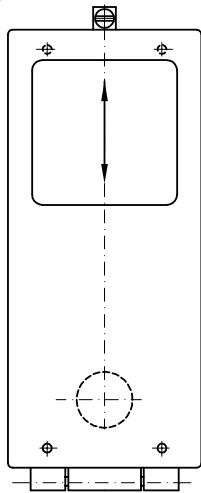


Typ type	Maß A dimension A	Gewicht weight	Anordnung arrangement		Schaltrichtung switching direction	
			linke Hand left hand	rechte Hand right hand	linke Hand left hand	rechte Hand right hand
VNS03QF-E	180	3-6 kg			1	5
VNS06QF-E	230				L	R
VNS09QF-E	280				2	6

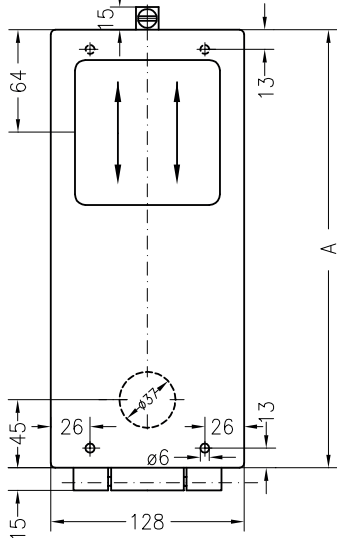


Typ type	Maß A dimension A	Gewicht weight	Anordnung arrangement				Schaltrichtung switching direction	
			linke Hand left hand	rechte Hand right hand	linke Hand left hand	rechte Hand right hand	linke Hand left hand	rechte Hand right hand
VNS03QF-V	180	4-8 kg					1	5
VNS06QF-V	230						3	7
VNS09QF-V	280						2	6

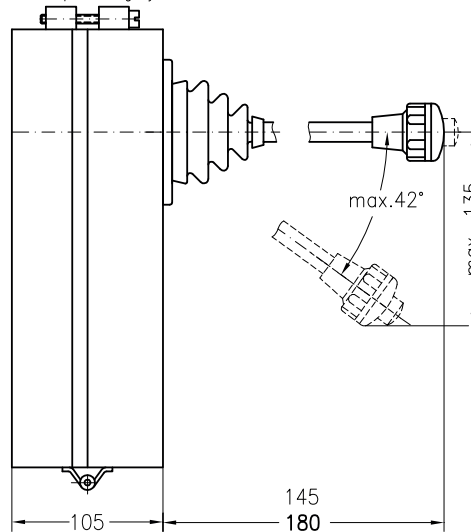
Typ VNS0-LF-G
type



VNS0-LF--GG

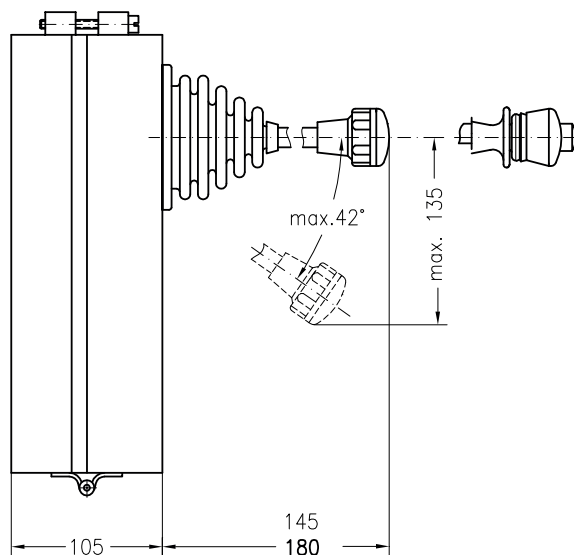
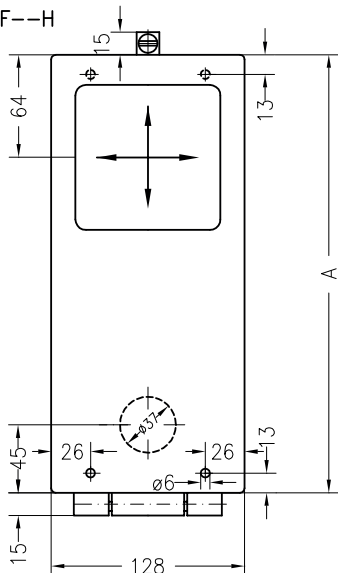


Lackierung RAL 7032 kieselgrau
color RAL 7032 pebble grey



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

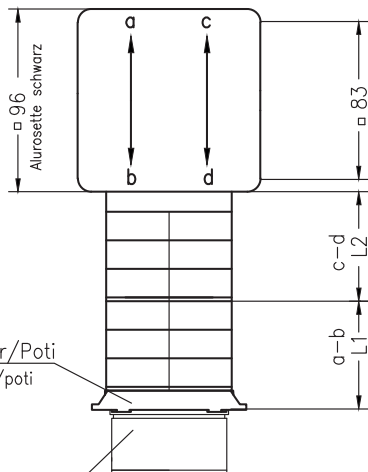
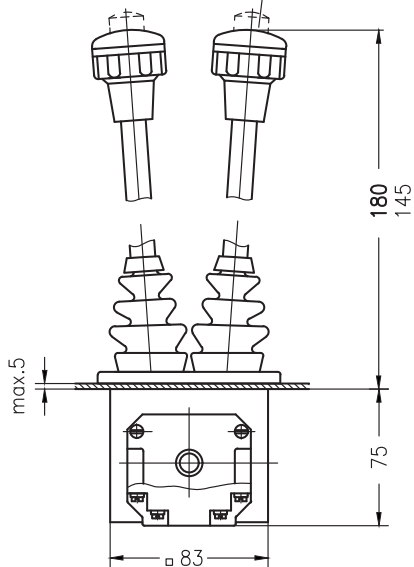


Typ type	MAß A dimension A	Gewicht weight	Schaltrichtungsbezeichnung	
			linke Hand left	rechte Hand right
VNS04 LF--H	195	3-6 kg	1 ↓ L 2	5 ↓ R 6
VNS06 LF--H	290		circuit direction and engraving code	
VNS09 LF--H	350			

Typ NS0--FGGH
type

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

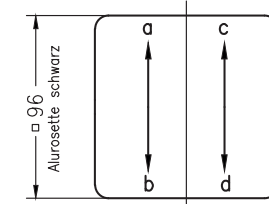
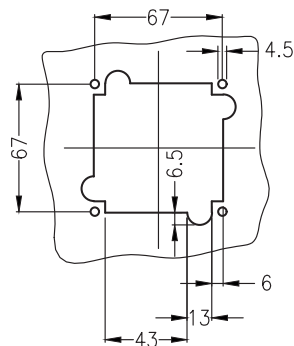
Einbauen im Hebel
siehe Seite 2/1...
additional
see sheet 2/1...



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

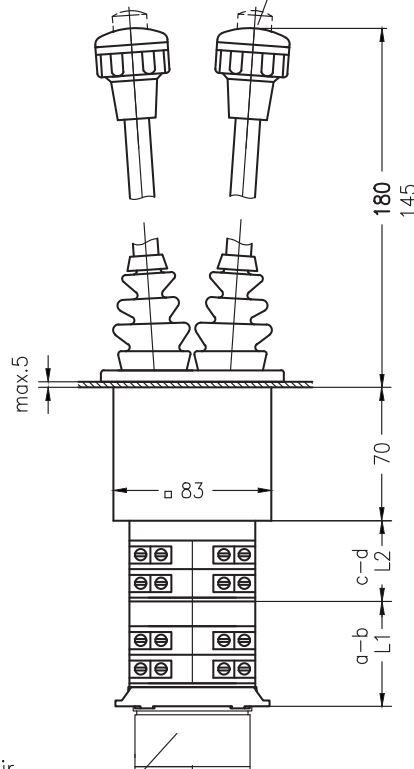


Bohrungen in der
Befestigungswand
mounting pattern

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...



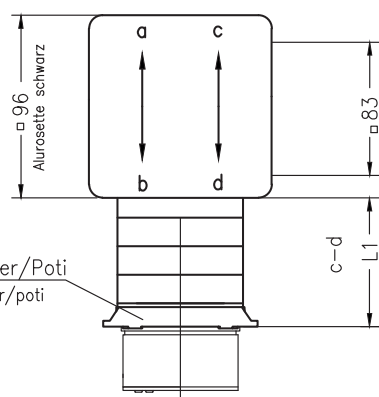
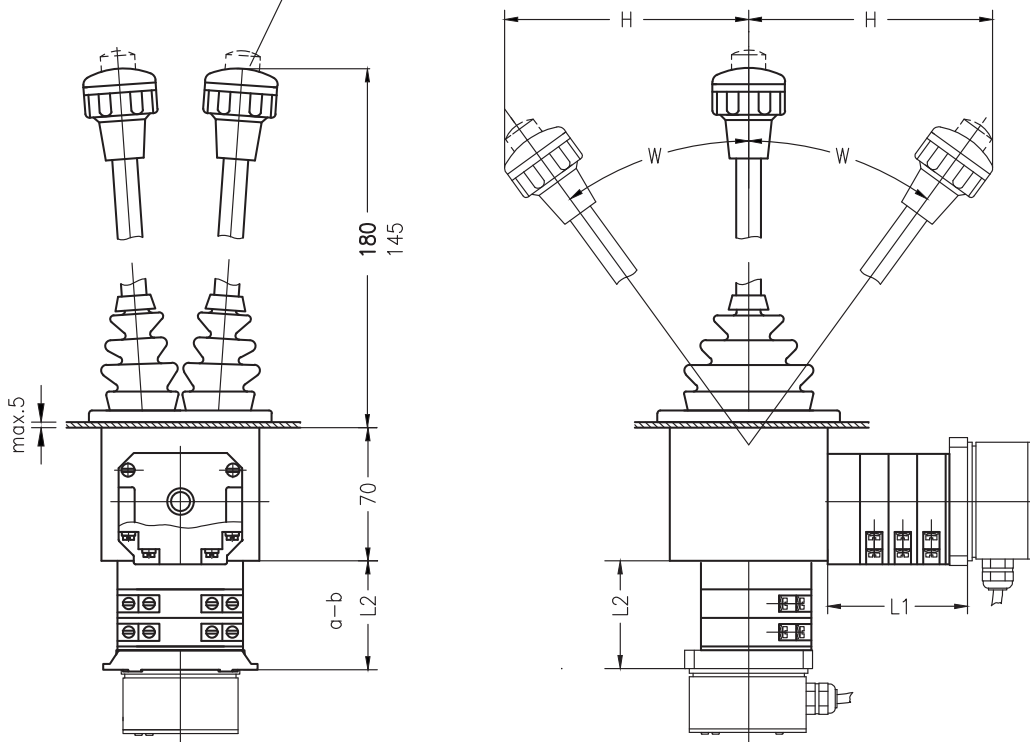
Geber nur für
einen Hebel möglich
attachment for encoder
only for one handle

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

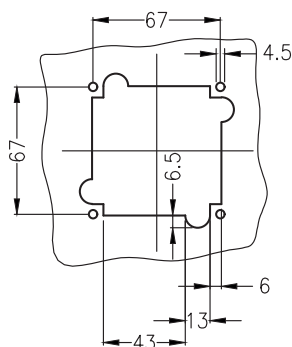
Typ NS0--FGGEA
type

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

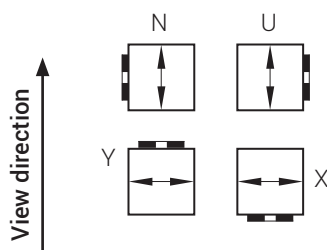
Gewicht:
Antriebsblock ~1,6 kg
je Doppelkontakt ~0,08 kg
weight:
drive ~1,6 kg
each double contact ~0,08 kg

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

Drive E

Arrangement U, N, X, Y

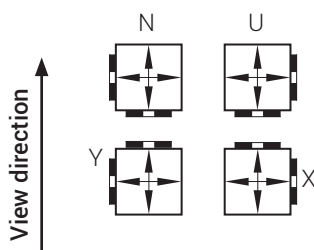


VCS0 S3 - - AK E

U
N
X
Y

Drive V

Arrangement U, N, X, Y



VCS0 S3 - - AK V

U
N
X
Y

Project planning information:

In case of missing declaration of arrangement, version U will be produced.

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

Legend:



— Mounting direction potentiometer/encoder

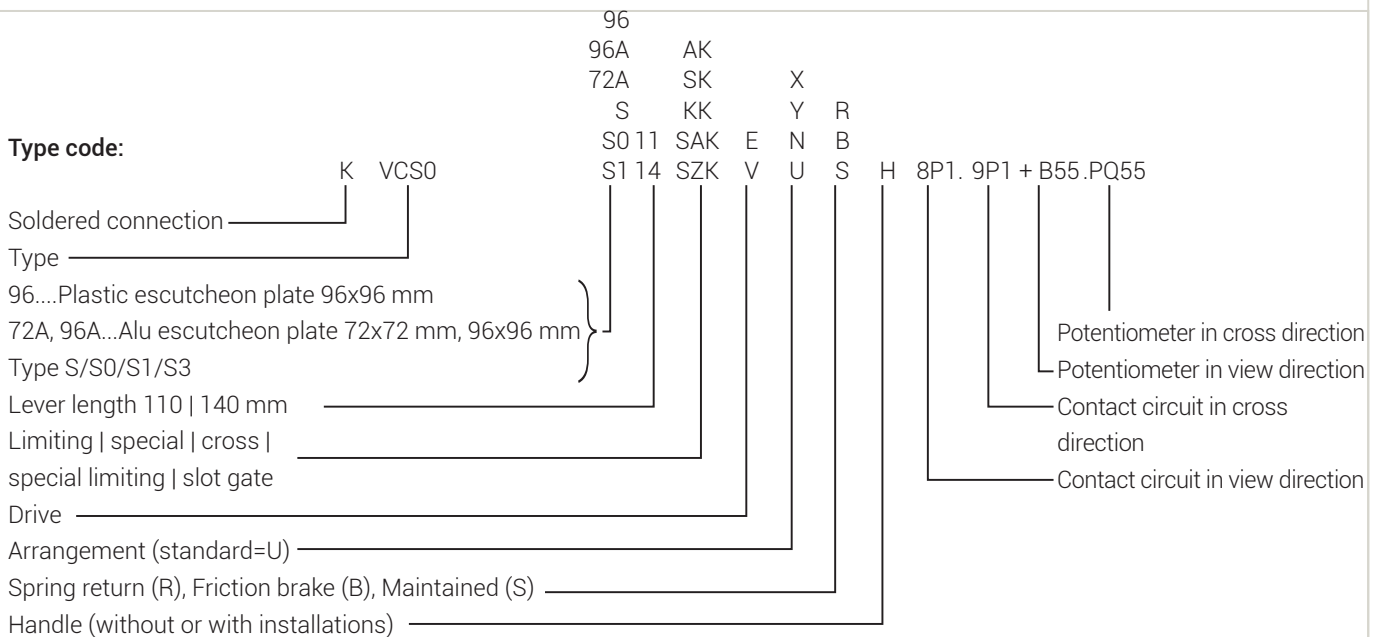
Scope of supply, type code

Scope of supply VCS0

- Standard handle G41 (without installation)
- Rubber boot (Type S3)*
- Limiting gate 36°-0-36°

Handles	see sheet G-Ü
Absolute encoder, potentiometer	see sheet E-Electronic-1
Circuits	see sheet TI-S-5

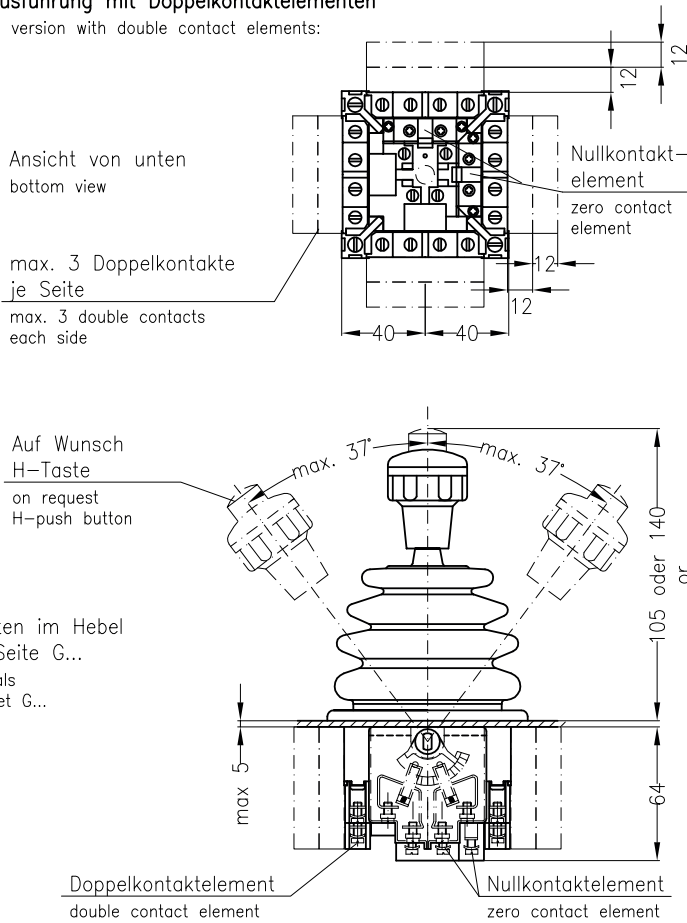
- Circuits
- Spring return per axis R
- Friction brake per axis B
- Special limiting gate SAK
- Cross gate KK
- Special gate SK
- Slot gate SZK
- Special notching segment
- Engraving per line (max. 14 letters, inscription in plain text)
- Aluminium-escutcheon plate black 72x72 or 96x96 (escutcheon plate 72x72 mm not labeled)
- Plastic escutcheon plate 96x96, clear with foil, foil freely inscribable
- Version with plastic escutcheon plate and 2 sealings acc. to V04828-2
- Escutcheon plate S1 (V048-100-A1, necessary in combination with UGN-handle)
- Escutcheon plate S, S0
- Mechanical interlock
- Wiring to connection cable or plug



* Please consider the dimensions on page J-VCS0-1/2.

Grundausführung mit Doppelkontaktelementen

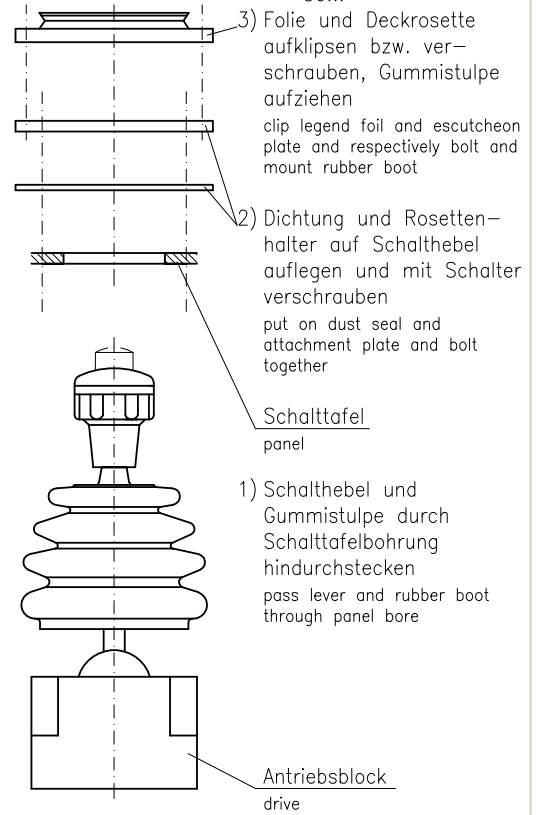
standard version with double contact elements:



Montageanleitung Ausführung 96...

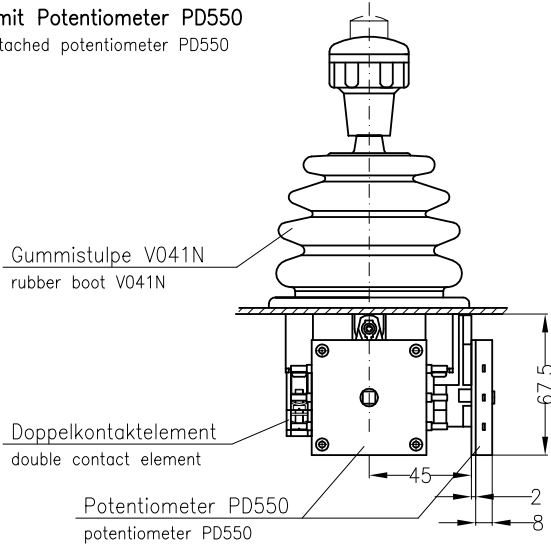
assembly instructions: version

- 96...
- 72...
- S...
- S0...



Ausführung mit Potentiometer PD550

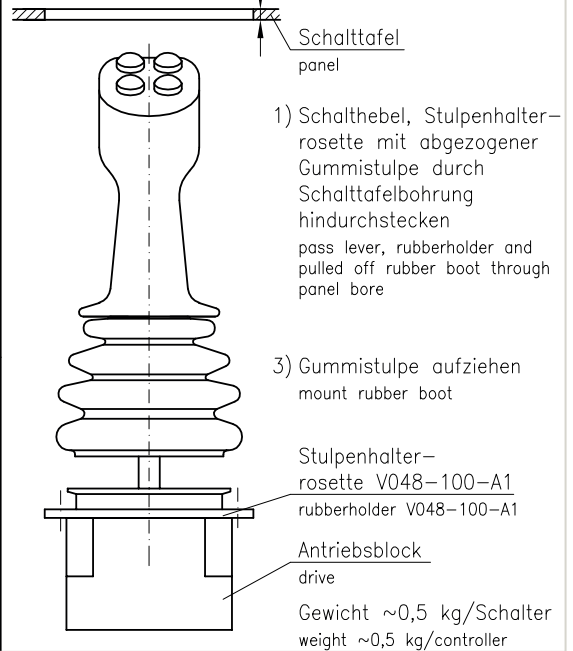
version with attached potentiometer PD550



Montageanleitung Ausführung S1...

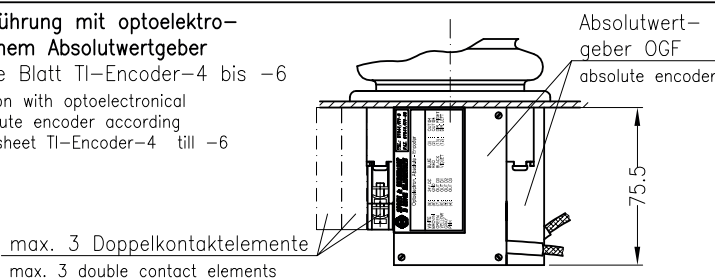
assembly instructions: version

- 2) Rosette auf Schalttafel auflegen und mit Schalter verschrauben
put on escutcheon plate on panel and bolt together with controller



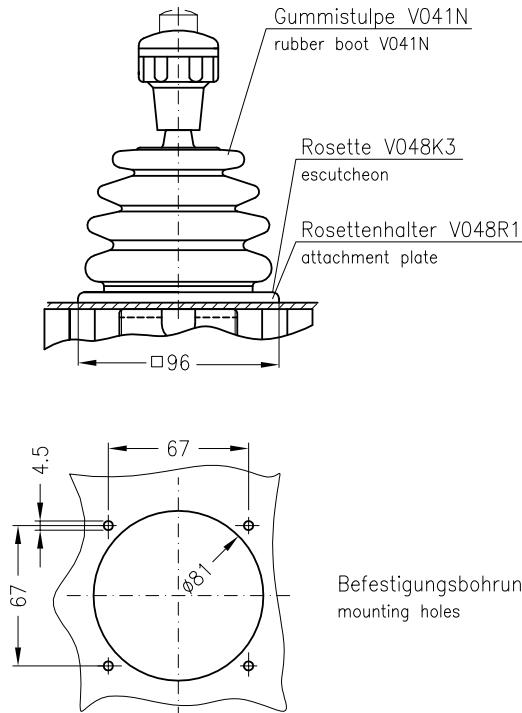
Ausführung mit optoelektronischem Absolutwertgeber

siehe Blatt TI-Encoder-4 bis -6
version with optoelectrical absolute encoder according see sheet TI-Encoder-4 till -6



Ausführung VCS0 96...

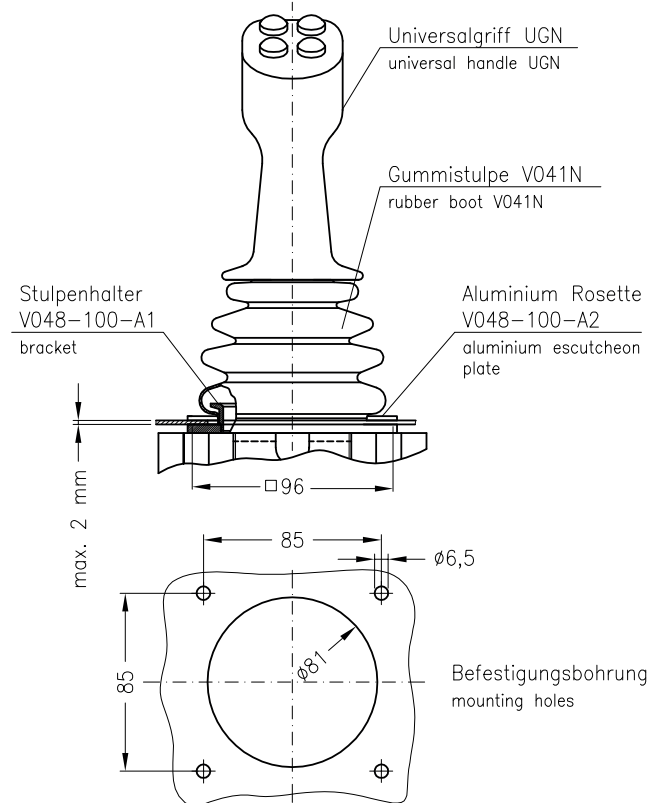
mit transparenter Kunststoff-Rosette 96x96 und Beschriftungsfolie
with transparent escutcheon plate 96x96 and inscription foil

**Hinweis:**

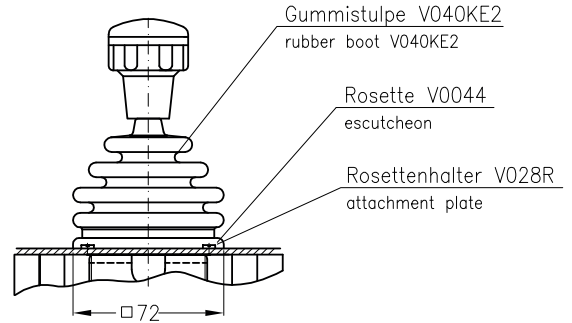
Auf Wunsch mit geschraubter schwarzer Aluminiumrosette 96x96
On request with screwed black aluminium escutcheon plate 96x96

Ausführung VCS0 S1...

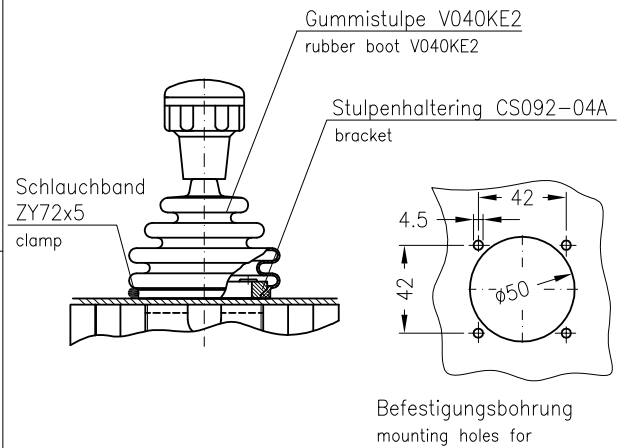
mit Stulpenhalterrosette S1
with bracket for rubber boot + escutcheon plate

**Ausführung VCS0 72...**

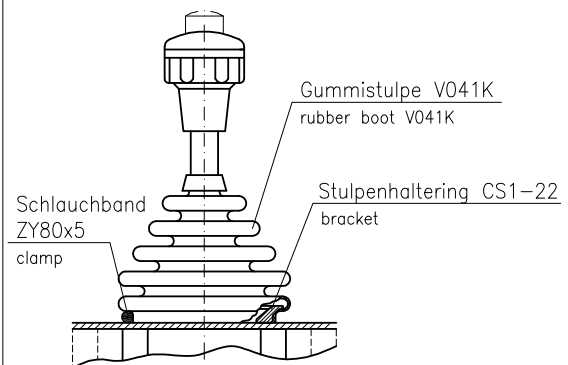
mit Aluminium Rosette schwarz 72x72, nicht beschriftbar
with aluminium escutcheon plate black 72x72, not inscribable

**Ausführung VCS0 S0...**

mit Stulpenhalterung S0
with bracket for rubber boot

**Ausführung VCS0 S...**

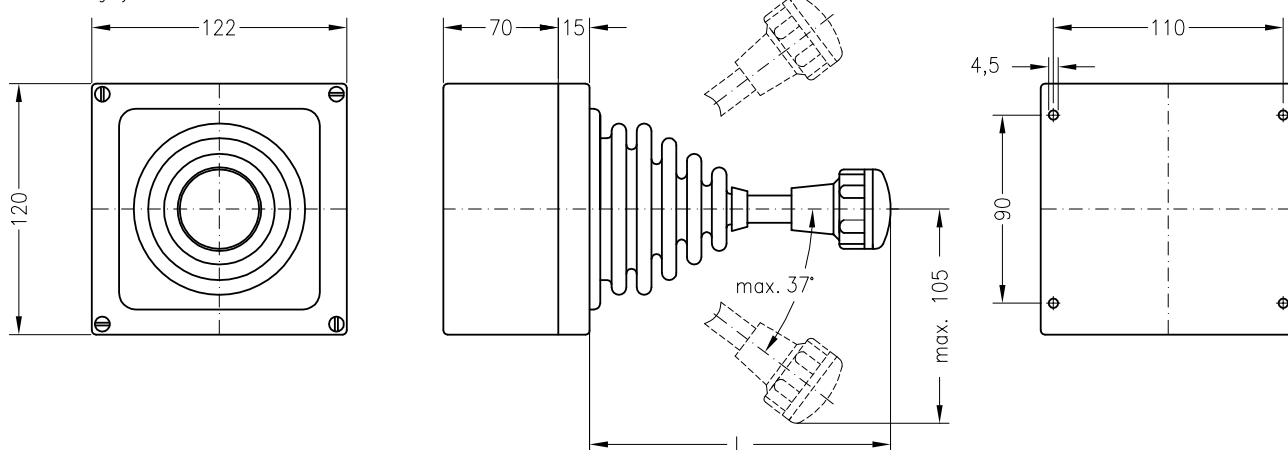
mit Stulpenhalterung S
with bracket for rubber boot



Gewicht ~0,5kg/Schalter
weight ~0,5kg/controller

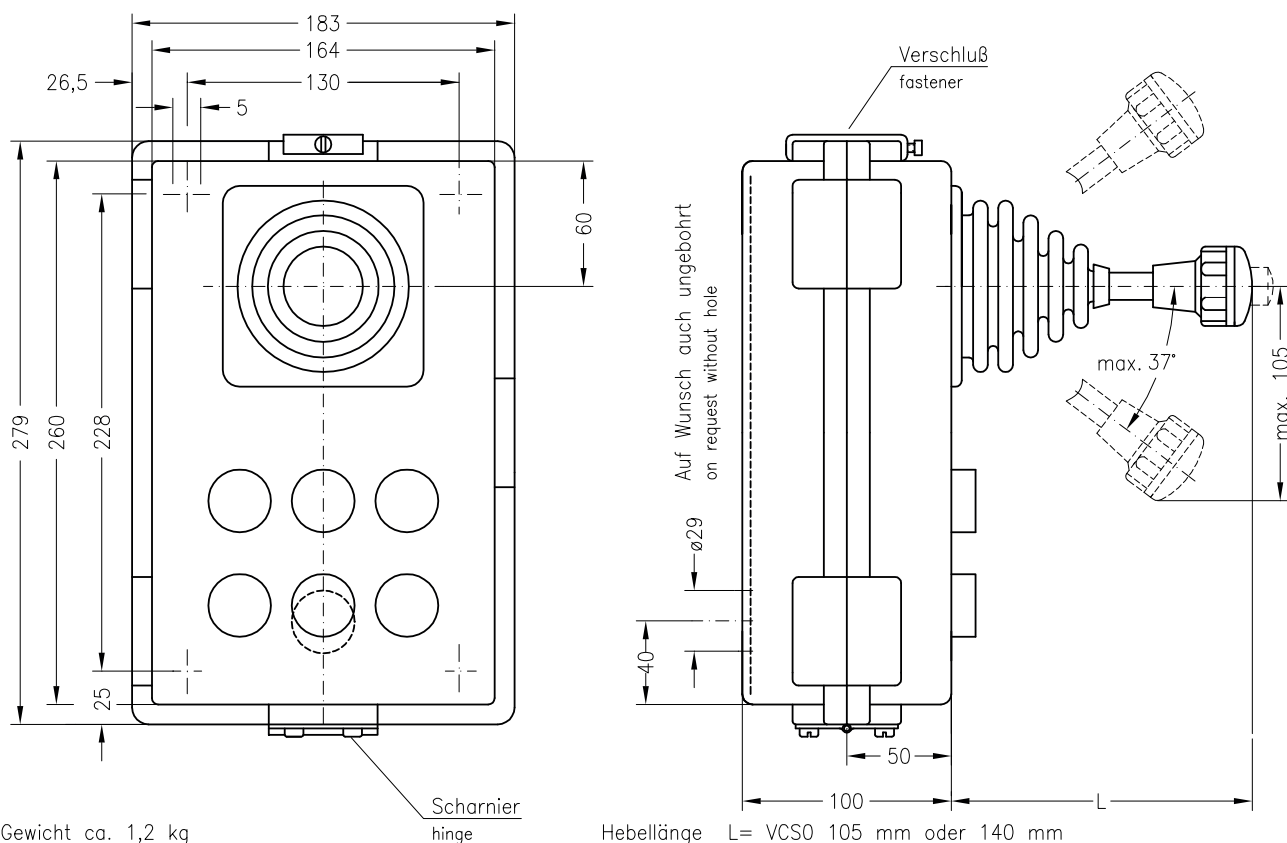
Typ CS0-M1

M0- M1

Material: PC grau
material: PC greyGewicht ca. 0,8 kg
weight app. 0.8 kgHebellänge L= VCS0 105 mm oder 140 mm
shaft length M0 67 mm bzw. 80 mm mit HD

Typ CS0-M3

M0- M3

Material: PA 6 gelb
material: PA 6 yellowGewicht ca. 1,2 kg
weight app. 1.2 kgHebellänge L= VCS0 105 mm oder 140 mm
shaft length M0 67 mm bzw. 80 mm mit HD