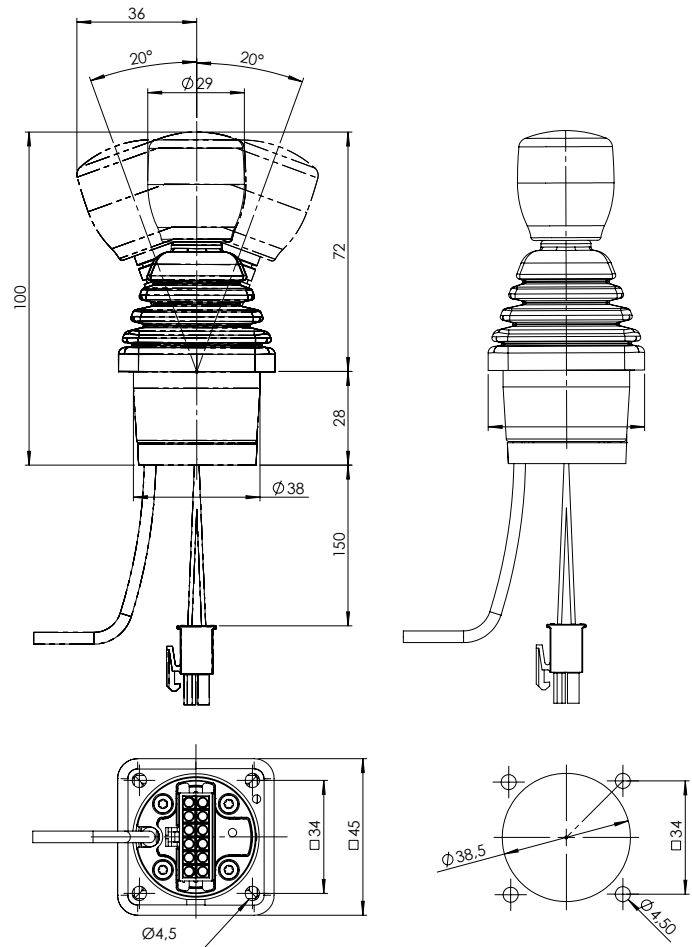
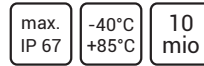
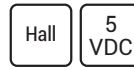


HS0

Our small Joystick with 3D HALL technology.



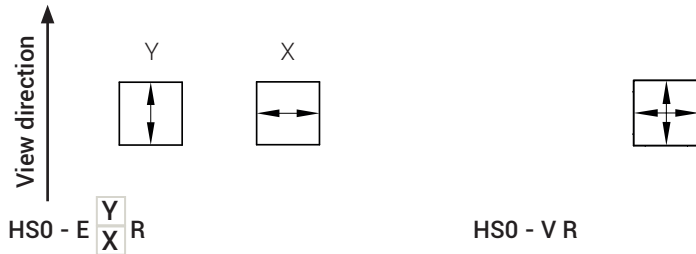
The contactless, wear-free 3D Hall sensor system of this compact joystick in combination with the stable mechanism results in a control system with a very high number of switching cycles. In addition to a Spobu-typical stable ferromagnetic metal base, the low height and the 12 mm handle are the characteristics of this new joystick. The extremely compact design allows use in even the smallest enclosures and consoles,

so that previously not possible console designs can be realized. Various gates and a variety of handle shapes complete the range of application. The joystick is used in particular in agriculture, construction machinery and radio remote controls. It can be easily intergrated into complex control panels and systems.

Drive E

Arrangement Y, X

Drive V

**Scope of supply HS0 basic version:**

- 3D-Hall-sensor system, redundant
- Analogue output signals A1
- Connection side: IP00, connection: cable 0,5 m
- Lever deflection $\pm 20^\circ$
- Limiting gate AK (square)
- With preferred guidance
- Spring return in middle position
- Handle G57-12, boot
- Installation from above

Electrical, mechanical characteristics:

- see TI-HS0-1/3,-2/3

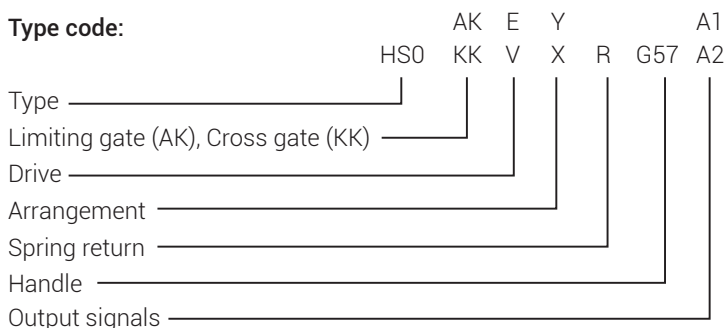
Dimensions

- see TI-HS0-1/3,-3/3

Options:

Handles	see sheet G-Ü
Functional safety/ PId-ability	on demand

- Cross gate KK (only in combination with V-drive)
- Analogue output signals A2
- Wiring to connection cable or plug

Type code:**Combinable handles:**

- Standard handle without inserts
 - Handles with inserts
 - Handle
- G57
G20, G21, G22,
G9, G25, G51,
G40, G4T
G50

Installation dimensions

Mounting	from top
Mounting opening	ø 38,5 mm diameter, additionally 4 mounting holes 4,5 mm
Flange dimension	45 x 45 mm
Installation depth, version: A1, A2	drive block 26 mm + cable exit at the bottom (space requirements for cable)

Mechanical data

Drive block material	Metal
Lever deflection angle	20°
Repeat accuracy center position	± 1°
Mechanical lifetime	> 5 mio cycles
Operating force (lever 60 mm)	Spring 1: 2,4...4,2 N (handle small) Spring 2: 8,4...14,7 N
Temperature range	-40°C ... +85°C
Protection degree with standard handle (above frontplate)	IP67

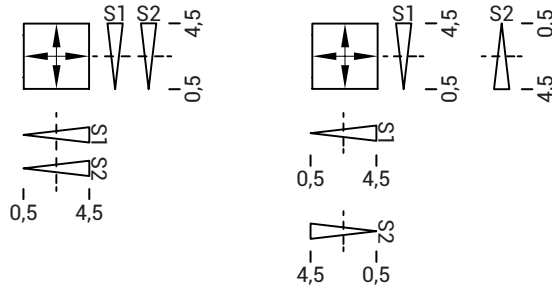
Electrical data

Sensor

Sensor type	full redundant contactless dual-die 3D-HALL
Resolution	8-Bit (@ 20° deflection angle)
Linearity	max. +- 3% rel. linearity
EMV immunity	DIN EN 61000-6-2:03.2006
EMV emission	DIN EN 61000-6-3:09.2011

Voltage output signal

Supply voltage U_B	<u>A1</u>	<u>A2</u>
Current consumption	5 VDC \pm 0,5	5 VDC \pm 0,5
Load resistor	< 35 mA	< 35 mA
Output signal	> 10 k Ω	> 10 k Ω
	0,5 ... 4,5 VDC \pm 0,15	0,5 ... 4,5 VDC \pm 0,15
	ratiometric, redundant, in line signals	ratiometric, redundant, contrary signals



Center signal	2,5 VDC \pm 0,15	2,5 VDC \pm 0,15
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Pin assignment (lead wire 150 mm with connector 12 pol. AMP Mate-N-Lock 770581-1 at the end):

Description	Pin	colour lead wire
Supply voltage 1	1	red
GND 1	2	brown
Signal S1, x-axis	3	blue
Signal S1, y-axis	7	violet
Supply voltage 2	5	orange
GND 2	6	black
Signal S2, x-axis	4	green
Signal S2, y-axis	8	yellow

Dimensions with standard
handle G57-12

