

Construction machinery





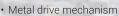




Joysticks/Mini steering wheel

STO ST1 ST4 CS1





- Maximum 5-0-5 stages
- Long mechanical service life of up to 6 million switching cycles
- Long-lasting lightweight plastic potentiometer or non-contact Hall sensors
- Friction brake or spring-return
- Optional mechanical neutral position lock



- Metal drive mechanism
- Chrome-plated cast aluminum housing with high front-side IP protection rating for extreme environmental requirements
- Long-lasting lightweight plastic potentiometer or non-contact Hall sensors
- Friction brake or spring-return
- Optional mechanical neutral position lock



- Metal drive mechanism
- Sealed high-quality plastic housing prevents entry of water from above, even if the rubber sheath is damaged
- High mechanical service life of up to 6 million switching cycles
- Long-lasting lightweight plastic potentiometer or non-contact Hall sensors
- Friction brake or spring-return
- Optional mechanical neutral position lock with Reed contact

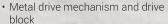


- Metal drive mechanism, drive block made of high-quality plastic
- Long mechanical service life of up to 10 million switching cycles
- Non-contact HALL sensors or
- lightweight plastic potentiometers
- Microswitches for hardware wiring
 Optionally integrated interfaces for CANopen, SAEJ1939, Profibus
- Combinable with several SPOBU handles



NS3 HS0 HS2 ML





- Long mechanical service life of up to 20 million switching cycles
- Non-contact HALL sensors and/or lightweight plastic potentiometers
- Microswitches for hardware wiring
- Optionally integrated interfaces for CANopen, CANopenSafety, Profibus, ProfiNet, ProfiNet with ProfiSafe protocol
- Combinable with several SPOBU handles



- Metal drive and housing
- Long mechanical service life of up to 10 million switching cycles
- Non-contact 3D Hall sensors
- Low installation depth
- · Redundant analogue exit
- Optional external interfaces for CANopen, SAEJ1939, Profibus, ProfiNet
- Combinable with several SPOBU handles



- Metal drive and housing
- Long mechanical service life of up to 10 million switching cycles
- Non-contact 3D Hall sensors
- · Redundant analogue exit
- Optional integrated interfaces for CANopen, SAEJ1939, Profibus, ProfiNet
- Combinable with several SPOBU handles



- Extremely sensitive, zero-play metal mechanics
- Optionally with oil damping for smooth and precise control
- Long mechanical service life
- Sensors with HALL sensors or lightweight plastic potentiometers
- Combinable with various electronic interfaces

Handles

Standard handles



- · Standard handle for M0 joysticks
- Optional pushbutton
- Version M054-Z for mechanically locking joystick





- Standard handle for joystick HS0
- · Compact design
- · Ideal for installation in remote controls

G22



- Plastic handle Ø 40 mm
- · A maximum of 1 pushbutton can be integrated
- Recessed or protruding pushbutton installation
- · Version G22Z for mechanically locking joystick
- · Combinable with several SPOBU joysticks
- G27



- Plastic handle Ø 27 mm
- · A maximum of 1 pushbutton can be integrated
- Recessed or protruding pushbutton installation
- Combinable with joystick ST0

G21



- Plastic handle Ø 45 mm
- · A maximum of 2 pushbuttons can be integrated
- Recessed or protruding pushbutton installation
- Version G21Z for mechanically locking joystick
- · Combinable with several SPOBU joysticks

Palm handles

G40



- · Ball handle with several installation options
- Push buttons on the side and/or on top
- · Alternatively with toggle switch on top
- · Optionally with hand rest
- · Combinable with several SPOBU joysticks



- · Compact ball handle with/without pushbuttons
- · Optionally with capacitive hand recognition sensor
- · Operable with 2 fingers or whole hand
- · Combinable with several SPOBU joysticks





- · Forward-tilting ball handle
- Lever switch on front
- · Optionally with toggle switch, pushbutton or rotary potentiometer on top
- · Combinable with several SPOBU joysticks





- · Compact plastic handle
- · Operable with 2 fingers or whole hand
- Up to 6 pushbuttons can be integrated · Combinable with several SPOBU joysticks

G51



- · Compact plastic handle
- · Up to 6 pushbuttons can be integrated
- · Combinable with several SPOBU joysticks





Ball handles

KG40/50

- · Solid ball handle
- · Versions with 40 and 50 mm diameter
- · Combinable with several SPOBU joysticks

KG56-IKKZ



- Ball handle for mechanical locking for VNS0, NNS0, VNS2 joysticks
- · in combination with slot or cross gates
- · Optionally with contact

T-handles

G1



- T-handle with/without pushbuttons
- Optional mechanical pivoting for individual adjustment
- Version G1Z for mechanically locking joysticks
- Optionally with dead man's function by pressing down
- Optionally integrated capacitive hand recognition
- · Combinable with several SPOBU joysticks



- T-handle with/without pushbutton
- Stationary or rotating with a maximum of 2-0-2
- Version G13Z for mechanically locking joystick
- · Optionally with capacitive hand recognition sensor
- · Combinable with several SPOBU joysticks

Rotary handles

G50



- · Handle with integrated rotating function
- · Sensors with lightweight plastic potentiometers with direction recognition
- · Combinable with several SPOBU joysticks

Universal handles

G56





- · Ergonomically shaped for left or right hand
- Integrated hand rest for work without fatigue
- Modular design with standard or custom equipment of insert panels
- Optionally integrated capacitive hand recognition sensor
- Optionally rotating
- · Combinable with several SPOBU joysticks

G58





- · Compact, symmetrical, can be used for left or right hand
- Ergonomically shaped for work without fatigue
- Modular design with standard or custom insert panels
- · Catch on the rear
- Optionally integrated capacitive hand recognition sensor
- · Combinable with several SPOBU joysticks

UGA





- Can be used for left or right hand
- Modular design with optional combination of wide and narrow handle halves
- High variability with installation of command devices on top, front or side
- · Lever switch on the rear
- · Optionally with hand rest, can also be updated
- Optionally rotating
- Optionally integrated capacitive hand recognition sensor
- Combinable with several SPOBU joysticks

UGN





- Compact handle can be used for left or right hand
- Ergonomically shaped for work without fatigue
- High variability with installation of command devices on top, front or side
- Integrated surrounding hand rest
- · Optionally integrated capacitive hand recognition sensor
- · Combinable with several SPOBU joysticks



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