



## Compact joystick J2

**With up to 3 push button switches, bottom mounted.**

Compact joystick J2 is used effectively in tractors for front loader control or in industrial trucks for controlling the forks. Up to three push button switches integrated in the handle enable the operation of additional functions.

### Technical specifications

- Space-saving design
- High reliability and long service life thanks to contactless Hall-effect and reed technology
- Analogue output signal (current/voltage, also redundant) or switching output possible
- CAN-bus connection (CANopen / SAE J1939) available
- IP67 protection class of electronics, ideal for harsh environmental conditions
- Deflection  $\pm 20^\circ$
- Available with various actuation types such as no detent / detent or centre position interlock

### Technical drawing

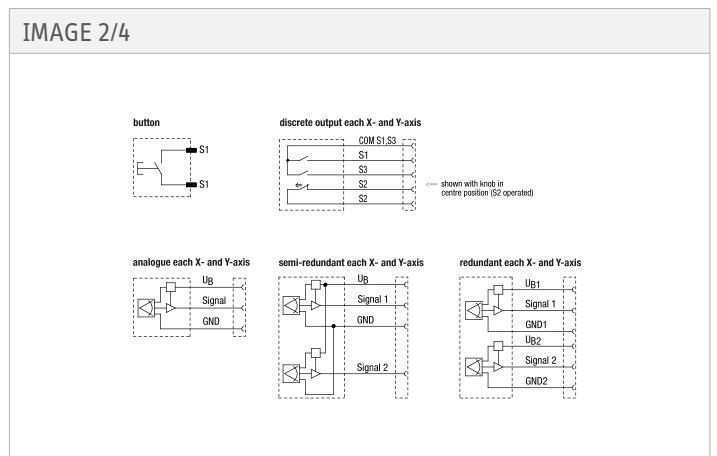
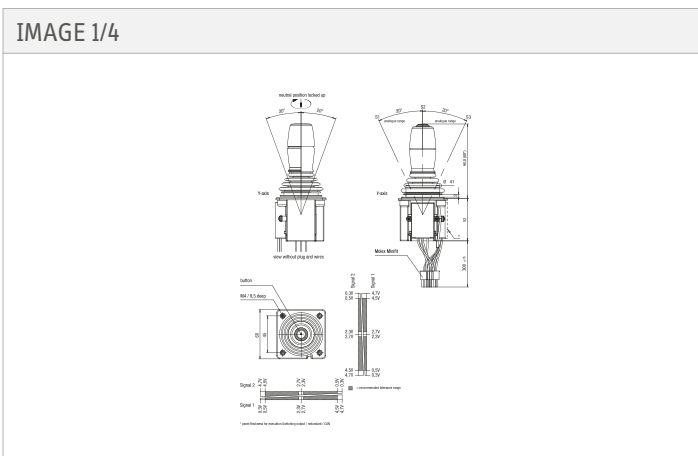


IMAGE 3/4: EINBAUÖFFNUNG FÜR STANDARDGRIFF

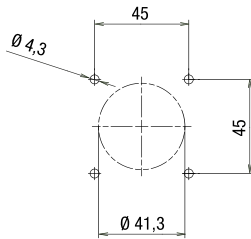
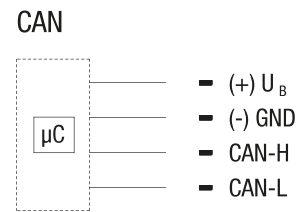


IMAGE 4/4



## Electrical data

Attribute	J2A1...	J2A6...	J2A7...	J2CJ	J2C0...	J2D8...
Max. switching voltage			-			48 V DC
Max. switching current			-			0.3 A
Max. switching power			-			10 W
Max. switching power			-			10 VA
Contact form			-			NO
Polarity reversal protection			yes			-
Output signal min.	-	0.5 V DC			-	
Output signal max.	-	4.5 V DC			-	
Output signal min.	4 mA			-		
Output signal max.	20 mA			-		
Output signal		analogue			-	
Output signal - centre position/zero position	-	2.5 V DC			-	
Output signal - centre position/zero position	12 mA			-		
EMC immunity (Norm)		DIN EN 13309, DIN EN ISO 14982, ISO 13766, DIN EN 12895				-
EMC emission (Norm)		DIN EN 13309, DIN EN ISO 14982, ISO 13766, DIN EN 12895				-
Operating voltage min.	10 V DC	4.5 V DC	10 V DC		9 V DC	-
Operating voltage max.	30 V DC	5.5 V DC	30 V DC		36 V DC	-
Current consumption	bei 12 V max. 18 mA	max. 15 mA	bei 12 V max 15 mA		< 120 mA	-
Load resistance min.	-	20000 Ohm			-	
Load resistance at 10V max.	250 Ohm				-	
Load resistance al 30V max.	1250 Ohm				-	
Short-circuit resistance to GND	no	yes	no		yes	no
Short-circuit resistance to supply	no	yes	no		yes	no
Technology		Hall				Reed

## Electrical data

Attribute	J2A1...	J2A6...	J2A7...	J2CJ	J2C0...	J2D8...
Protocol		-		J1939	CANopen	-
Node ID / Source Address		-		0x70	0x11	-
Transmitting cycle		-		100 ms		-
Baud rate		-		250 kBit/s		-
Bus terminating resistor		-		no		-

## Mechanical data

Attribute	J2A1...	J2A6...	J2A7...	J2CJ	J2C0...	J2D8...
Max. lever load with specified lever length	250 N bei 70 mm N					
Deflection	± 20 °					
Actuation type	multi axis					
Service life, mechanical (Cycles)	1000000					

## Material information

Attribute	J2A1...	J2A6...	J2A7...	J2CJ	J2C0...	J2D8...
Housing material	PBT					
Shaft material	1.4305					
Gaiter material	NBR 438.40					

## Environmental conditions

Attribute	J2A1...	J2A6...	J2A7...	J2CJ	J2C0...	J2D8...
Protection class, electronic	IP67 DIN EN 60529					
Operating temperature min.	-25 °C					
Max. operating temperature	85 °C					
Min. storage temperature	-40 °C					
Max. storage temperature	85 °C					

## Installation

Attribute	J2A1...	J2A6...	J2A7...	J2CJ	J2C0...	J2D8...
Installation	from below					
Mounting type	screwed from above					

## Connection

Attribute	J2A1...	J2A6...	J2A7...	J2CJ	J2C0...	J2D8...
Connector type	Mini-Fit Jr.					
Cable length	0.3 m					