



Assembly and Installation Instructions Robust Joystick J7 CAN (GB)

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1 Introduction

The is an ergonomic joystick for parallel installation in very confined spaces.

The following criteria characterise the :

- Designed with protection class IP65 for adverse environmental conditions.
- For forces of up to 1000 N along the x and y axes.
- Space-saving design for ergonomic arrangement in armrests.
- High level of reliability thanks to shielded, non-contact hall-effect technology.
- Version with friction brake, overpressure points and jog mode for the implementation of various functions.
- Capability to design hydraulic-free cabins.
- No maintenance required.



The CAN specification is carried out via the online configurator at http://www.elobau.com/elobau_konfiguratoren/J7

Imprint

This document contains important information for correct assembly and commissioning of the product described. Observance of the information and instructions described in the document helps to prevent hazards, repair costs and downtimes and to prolong the service life of the product.

- For safe working and trouble-free operation with the , read through this document before assembly and electrical connection to the vehicle.
- Observe the safety instructions and warnings in this document.

This document is supplied to the customer as standard as support documentation.

The technical information and data described in this document are valid as at . Our products are constantly being developed further. The manufacturer reserves the right to make modifications and improvements to the product.

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2 Safety

2.1 Use as Intended

The is exclusively designed for installation in:

- Construction machinery
- Agricultural and forestry machines
- Earth-moving machinery

2.2 Improper Use

The is exclusively designed for the area of application described under Intended Use.

Use in any area of application other than that described under Intended Use is only permitted by special approval of the manufacturer. Failure to observe this renders the manufacturer approval null and void.

2.3 Modifications

Modifications to the are not permitted and render all liability or warranty on the part of the manufacturer null and void!

2.4 Safety Instructions



Before assembly and commissioning, the assembly and commissioning instructions, the CAN protocol and the data sheet provided on delivery of the must be read and understood and must be observed.

Damage to the or to the vehicle may result if not observed.

2.5 Personnel Qualification

The may only be assembled by qualified or instructed personnel.

Electrical connection of the may only be carried out by a qualified electrician.

3 Delivery and Packaging

The is delivered as standard in packaging units (PU).

1 PU = 17 pieces

Package size [L x W x H]: 395 mm x 290 mm x 295 mm

One assembly and installation instruction manual is supplied per packaging unit.

Depending on the quantity ordered, 4 packaging units are packed in one box.

Box size [L x W x H]: 1200 mm x 800 mm x 600 mm



Each joystick is to be visually inspected for damage.

Only undamaged joysticks may be used in the vehicle.

4 Assembly

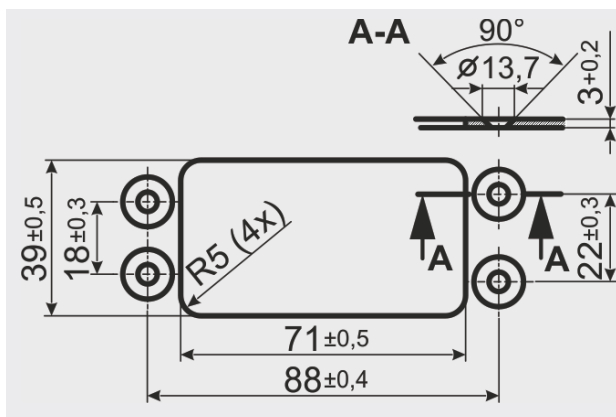


Several joysticks can be positioned next to each other, for example to enable dual lever operation for simultaneous control of various functions of vehicles.



Damaged joysticks must not be installed.

4.1 Assembly Preparation on the Vehicle

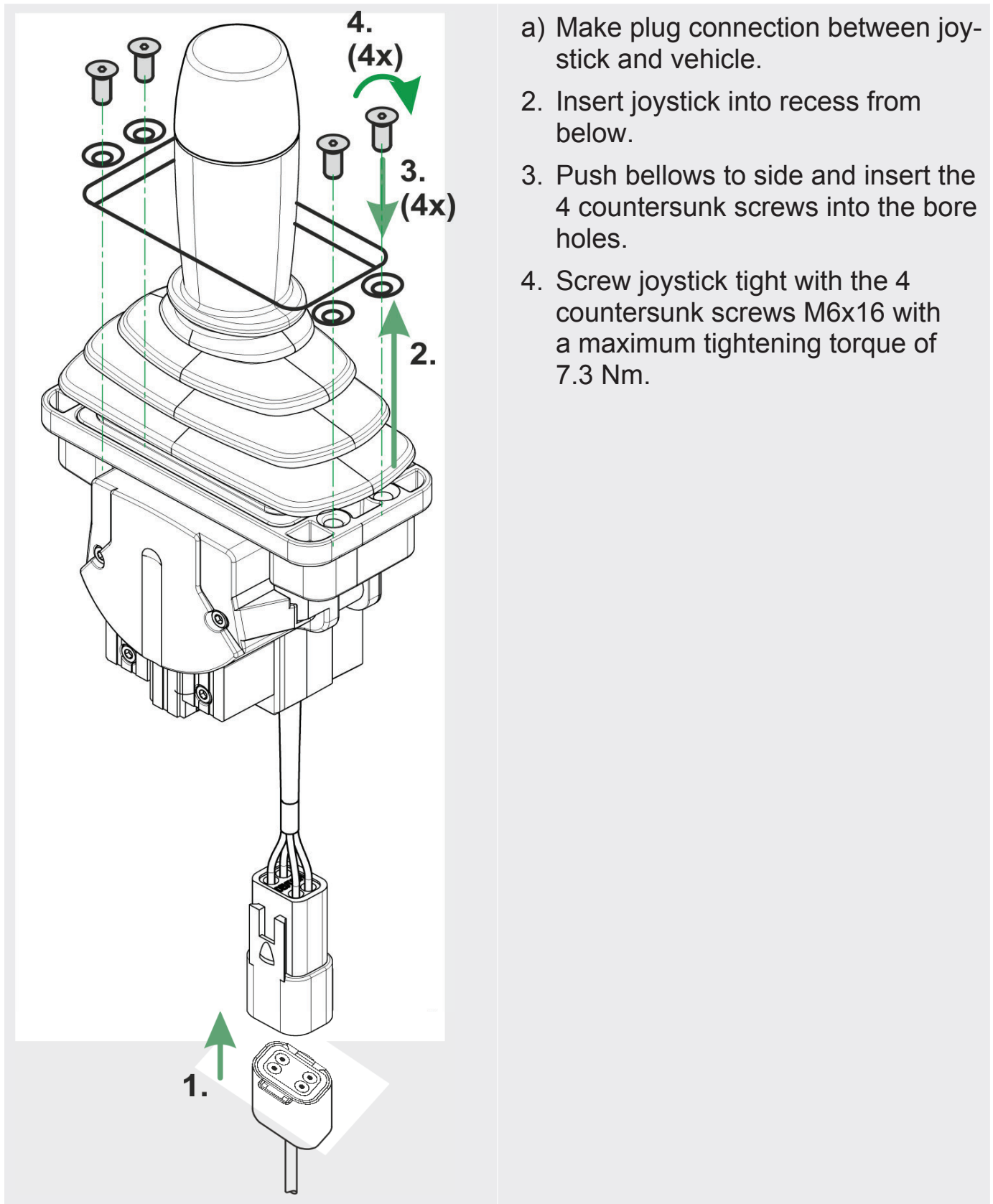


a) Apply recess and bore holes to vehicle as per assembly template.

4.2 Assembly

Accessories required: 4 x countersunk screws DIN EN ISO 10642-M6x16

See also: Mechanical Structure [► 14] and Dimensional drawing



- Make plug connection between joystick and vehicle.
- Insert joystick into recess from below.
 - Push bellows to side and insert the 4 countersunk screws into the bore holes.
 - Screw joystick tight with the 4 countersunk screws M6x16 with a maximum tightening torque of 7.3 Nm.

5 Connection

The electrical connection is carried out according to the wiring and pin assignment:

See also:

- Technical Specifications [► 10]
- Label / Specification
- Documents Supplied with Delivery [► 15]

5.1 Wiring

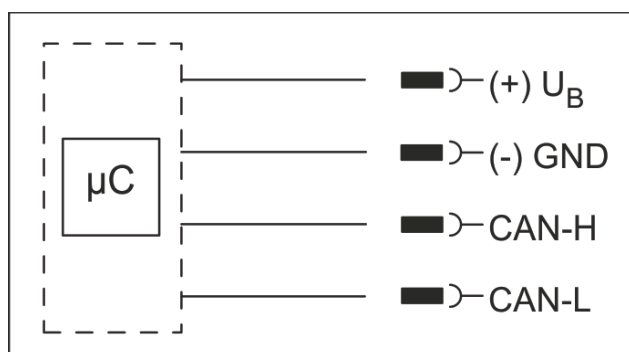


Fig. 1: Wiring CAN

5.2 Pin Assignment (Standard Version)



The pin assignment below refers to the standard version of the .

The pin assignment on the data sheet provided with the delivery has priority over the pin assignment (standard version)!

MOLEX-minifit		Deutsch DT04/DTM04	
1	GND	4	CAN-L
	U _B		CAN-H
3	CAN-H	5	
	CAN-L		U _B
4		6	
			GND
			1

6 Maintenance



Incorrect maintenance of the with lubricants may impair operation and reduce the service life.

The generally does not require maintenance.

Incorrect maintenance renders the warranty null and void.

7 Decommissioning/Disassembly

For figure, see Mechanical Structure [► 14]

1. Unscrew 4 countersunk screws M6 as per DIN EN ISO 10642 from the panel.
2. Remove joystick from the recess.
3. Disconnect plug connection between joystick and vehicle.

8 Disposal

The is to be disposed of in accordance with the valid national and local regulations for electrical components.

Disassembly work required for this may only be carried out by trained, qualified personnel.

9 Technical Specifications

9.1 Installation Dimensions

Installation size (W x H x D)	102 x 77.6 x 49 mm
without friction brake	102 x 77.6 x 55.3 mm
with friction brake	
with locking module T=55 mm	
Assembly	from below, screwed on from above, 4x countersunk screws M6 as per DIN EN ISO 10642 (tighten with defined torque: maximum screw tightening torque 7.3 Nm)
Height of operating lever	130.8 mm

9.2 Mechanical Parameters

Technology	non-contact hall sensor
Operation	single axis
Mechanical service life	>4 m. cycles (friction brake: >2 m. cycles)
Actuation angle	$\pm 25^\circ$
Breakaway torque	16.1 N (with distance of 112 mm from fulcrum)
Operation type	momentary contact, momentary contact with overpressure points, Friction brake
Static load capacity	1000 N (with distance 112 mm from fulcrum)
Storage/operating temperature	-40 °C to +85 °C
Protection class electronic system	IP67, DIN EN 60529
Protection class mechanical system	IP54, DIN EN 60529
Connection	Lead outlet with Molex Mini-Fit connector 300 \pm 15 mm Lead outlet with Deutsch DT connector 300 \pm 15 mm Lead outlet with Deutsch DTM connector 300 \pm 15 mm
Weight	800 g \pm 100 g

9.3 Electrical Parameters J7CJ / J7CO

	J7CJ	J7CO
Operating voltage (UB)	+9 – +36 V DC	+9 – +36 V DC
Output signal	CAN	
Power consumption	< 120 mA	
Resolution	< 0,09°	
Reverse battery protection	Yes	
Short-circuit protection to +UB max.	Yes	
Short-circuit protection to GND	Yes	
Protocol (see data sheet)	SAD J1939	CANopen
Baud rate (see data sheet)	250 kBit/s	configurable by manufacturer and customer
Source address / node ID (see data sheet)	configurable by manufacturer via online configurator	configurable by manufacturer and customer
Transmission cycle	configurable by manufacturer via online configurator	configurable by manufacturer and customer
Terminating resistor	no	

EMC

DIN EN ISO 14982: 2009 Agricultural and forestry
machines

DIN EN 13309: 2010 Construction machinery

ISO 13766: 2006 Earth-moving machinery

(Observe data sheet!)

10 Appendix

10.1 Mechanical Structure

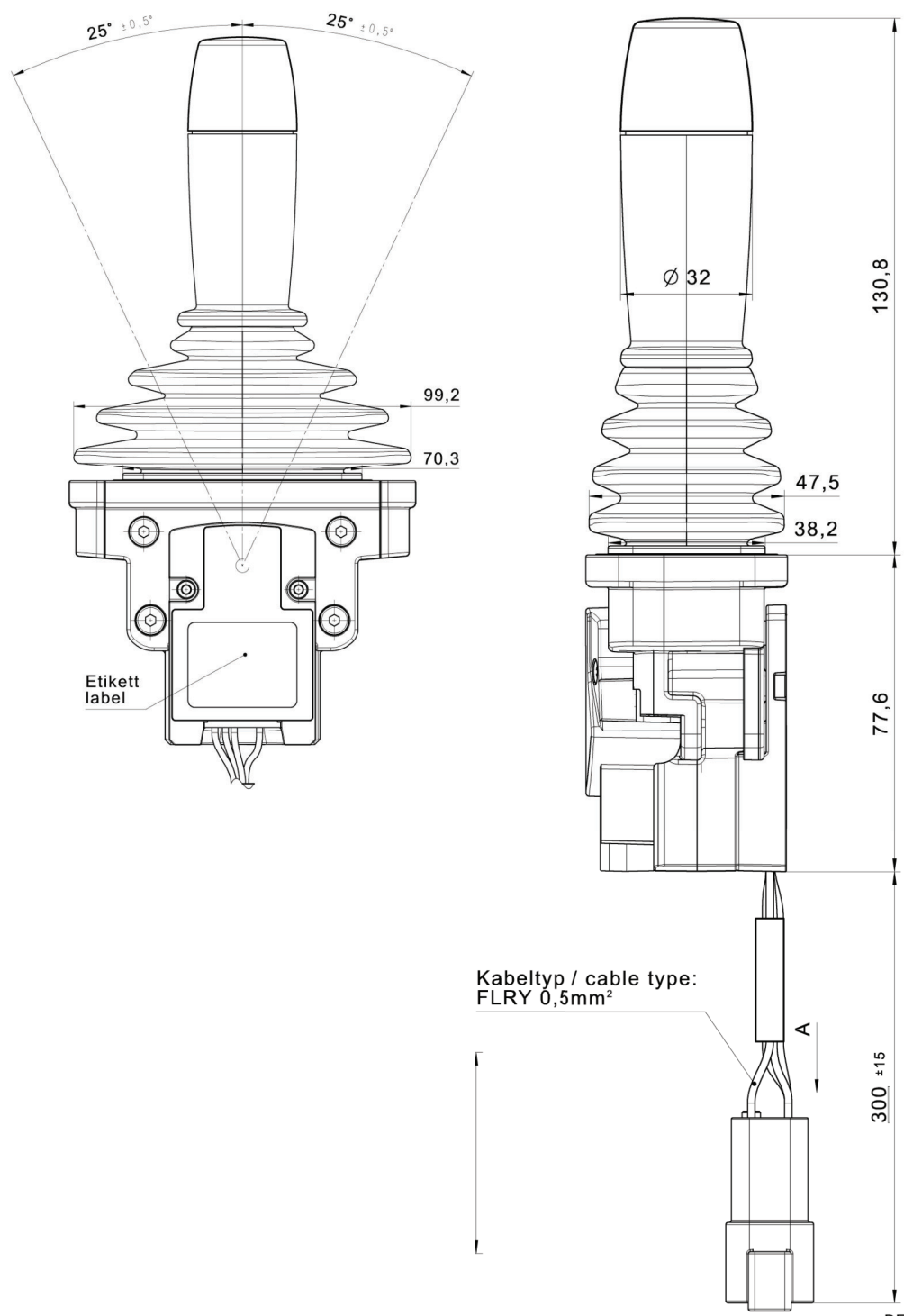


Fig. 2: Mechanical Structure

10.2 Label / Specification

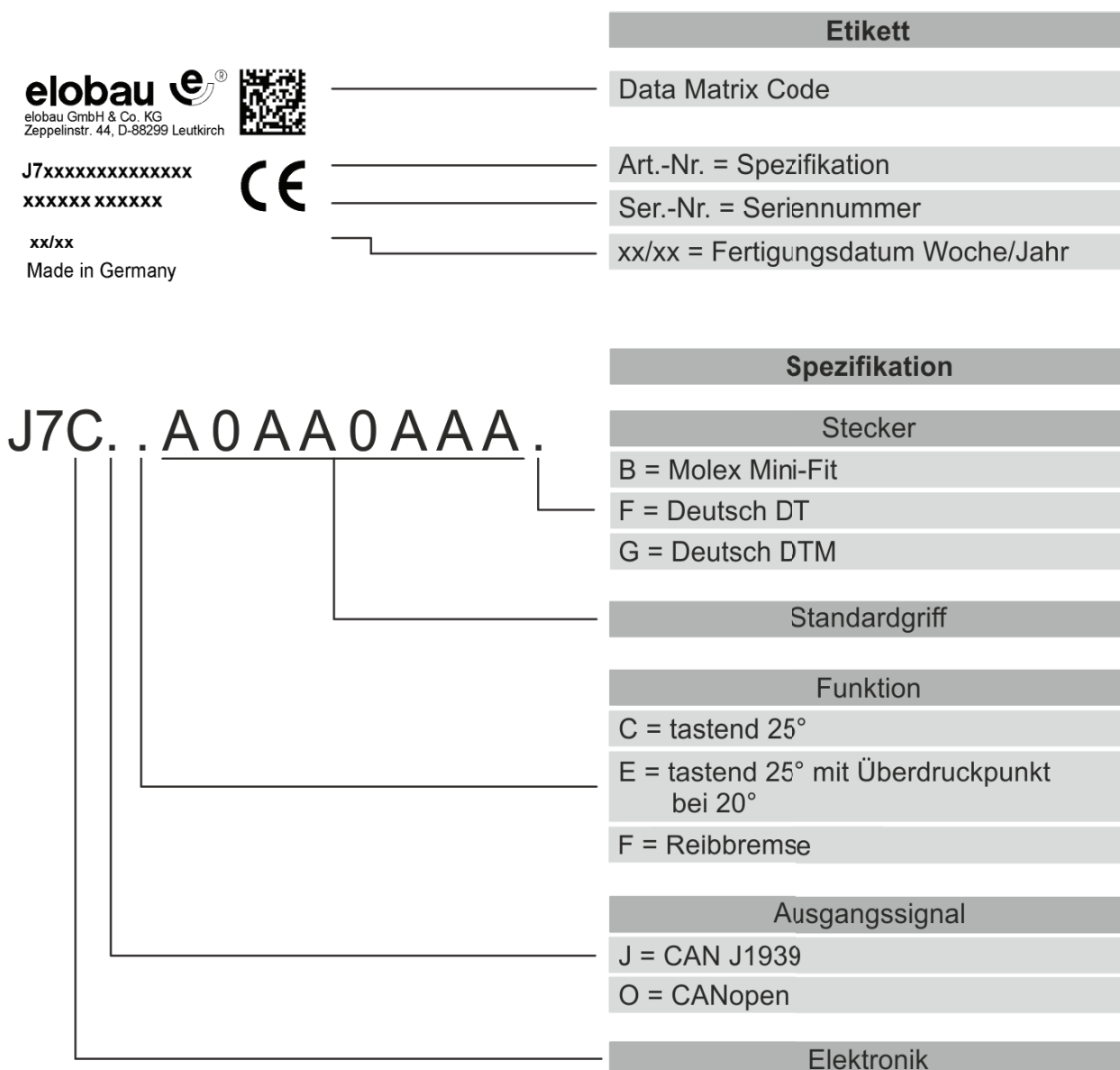


Fig. 3: Specification

10.3 Documents Supplied with Delivery

- SAE J1939 report, Robust-Joystick J7
- CANopen protocol

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