



ELECTRIC PROPORTIONAL JOYSTICK JEP



Index:

Description:	Page 3
Technical features:	Page 4
Metering curve:	Page 5
Overall dimensions:	Pages 6÷9
Control handles:	Page 10
Rubber boot:	Page 11
Ordering key:	Page 12



ELECTRIC PROPORTIONAL JOYSTICK JEP

Description

The purpose of the electrical joystick series JEP is to control remotely devices like electro-hydraulic pressure reducing valves, main directional control valves or variable displacement pumps and motors. The inlet supply is 12 or 24 VDC with a voltage stabilizer adjusted at the fixed value of 5,5 VDC.

The JEP series includes single and dual axis configuration.

The robust mechanical control device of the electric sensors, made with Hall effect contactless technology, ensures maximum reliability and life with excellent precision and tactile sensitivity. Hall effect sensors are protected against electromagnetic interferences and radiofrequencies (EMI and RFI) up to 100 V/M and can be programmed with logical magnetic compensation of the temperature, to ensure a constant and repeatable efficiency in any operating condition.



The remote controls series JEP are designed for the maximum flexibility; the modular electronic system and the analogue output signal can cover many applications from aerospace to marine, from construction equipment to agricultural machinery, material handling machines and a wide range of industrial applications.



JEP joysticks can be combined with IE2 multifunction ergo grips, IC1&IC2 straight cylindrical handles and IP1 and knobs (see related catalogues). The IE2 grips additionally can be fitted with a wide range of on-off push button switches and proportional Hall effect mini-joysticks and rollers, some of which are integrated with optional PWM electronic card.

In the Fluidex range are also available PWM and analogue amplifiers/converters, voltage stabilizers, USB interface cables and programming software for the adjustable parameters. For further information, please contact our sales office.

Peculiarities

- Single, dual and triple axis configuration
- Wide range of adapters and control grips
- 15 million life cycles in any direction
- 20° deflection angle for each semi-axis
- IP68S protection
- Electromagnetic withstand EMI/RFI up to 100V/
- Adjustable pre-stroke, extra-stroke blind angle
- Output analogue, PWM, CANbus and USB signal
- On-off optional neutral position signal

Optional proportional roller with integral PWM control



The data and the technical features in this catalogue are not binding. The manufacturer reserves the right to carry out modifications, by its unquestionable judgement and without prior notice, in order to improve its products. The manufacturer is not responsible for damage to people or properties caused by an improper use of the product.

ELECTRIC PROPORTIONAL JOYSTICK JEP

Technical features

Electrical

Nominal supply voltage (Volt)
Supply voltage (Volt)
Output signal (Volt)
Output signal tolerance at minimum angle $0^{\circ} \pm 2^{\circ}$ @ 5 V (Volt)
Output signal tolerance at maximum angle $19^{\circ} \pm 20^{\circ}$ @ 5 V (Volt)
Supply current for each sensor (mA)
Output current limits (mA)
Sensor
Sensor design



In compliance with directive 2002/95/CE

MIN	TYPICAL	MAX
5 @ 20°C and 1 mA (4.7 kΩ)		
4,50	5,00	5,50
0,5 ÷ 4,5		
-0,15	N/A	+0,15
-0,15	N/A	+0,15
N/A	N/A	10
-1	N/A	+1
Hall effect, analogue, 1 or 2 output for axis		
Double magnet		

Mechanical

Mechanical life (in any direction)
Nominal deflection angle (°)
Pre-stroke angle (°)
Extra-stroke angle (°)
Operating force at lever midpoint @ 20÷85°C (N)
Operating force at lever midpoint @ -40°C (N)

MIN	TYPICAL	MAX
15.000.000 cycles		
19	20	21
1,5	2,0	2,5
0,5	1,0	1,5
15,6	20,0	24,4
57,8	68,9	80,0

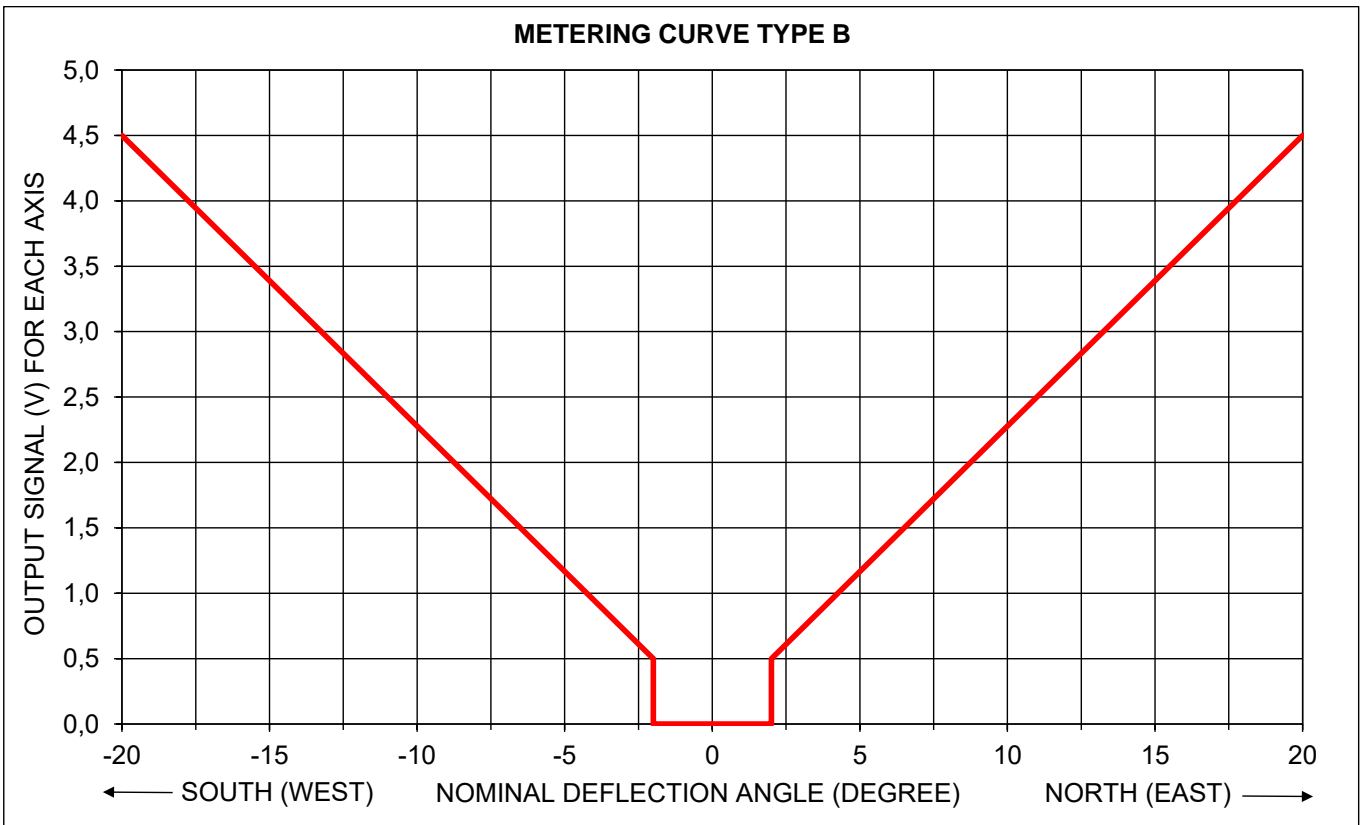
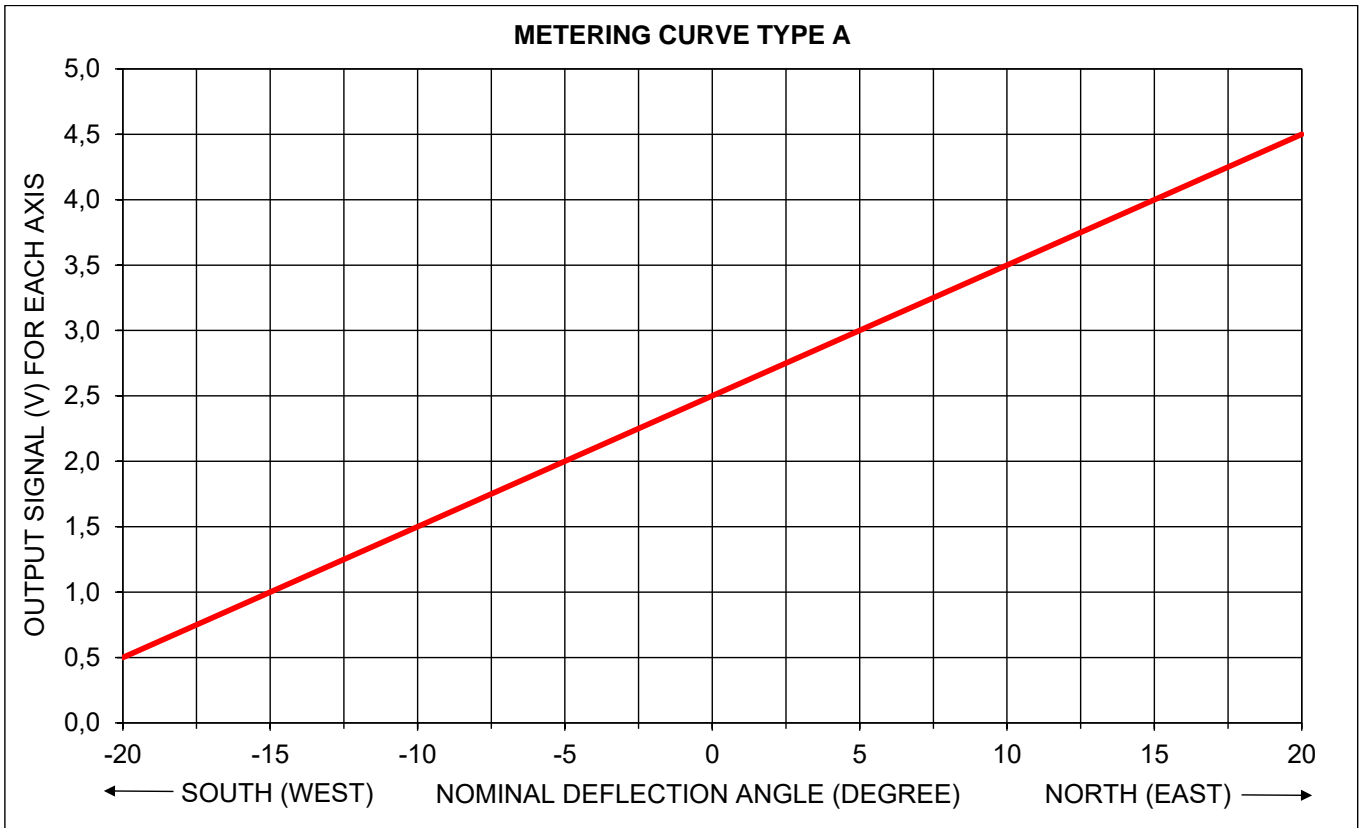
Environmental

Ambient temperature °C
Storage temperature °C
Humidity resistance test
Vibration resistance test
Protection class
RFI withstand
EMI withstand

MIN	TYPICAL	MAX
-40	20	85
-65	20	105
96% RH @ 70 °C for 96 hours		
10g, 10 Hz ÷ 2kHz sinusoidal		
IP68		
100V/M, from 14 kHz to 1 GHz		
MIL-STD-461D/SAE J1113-22		

ELECTRIC PROPORTIONAL JOYSTICK JEP

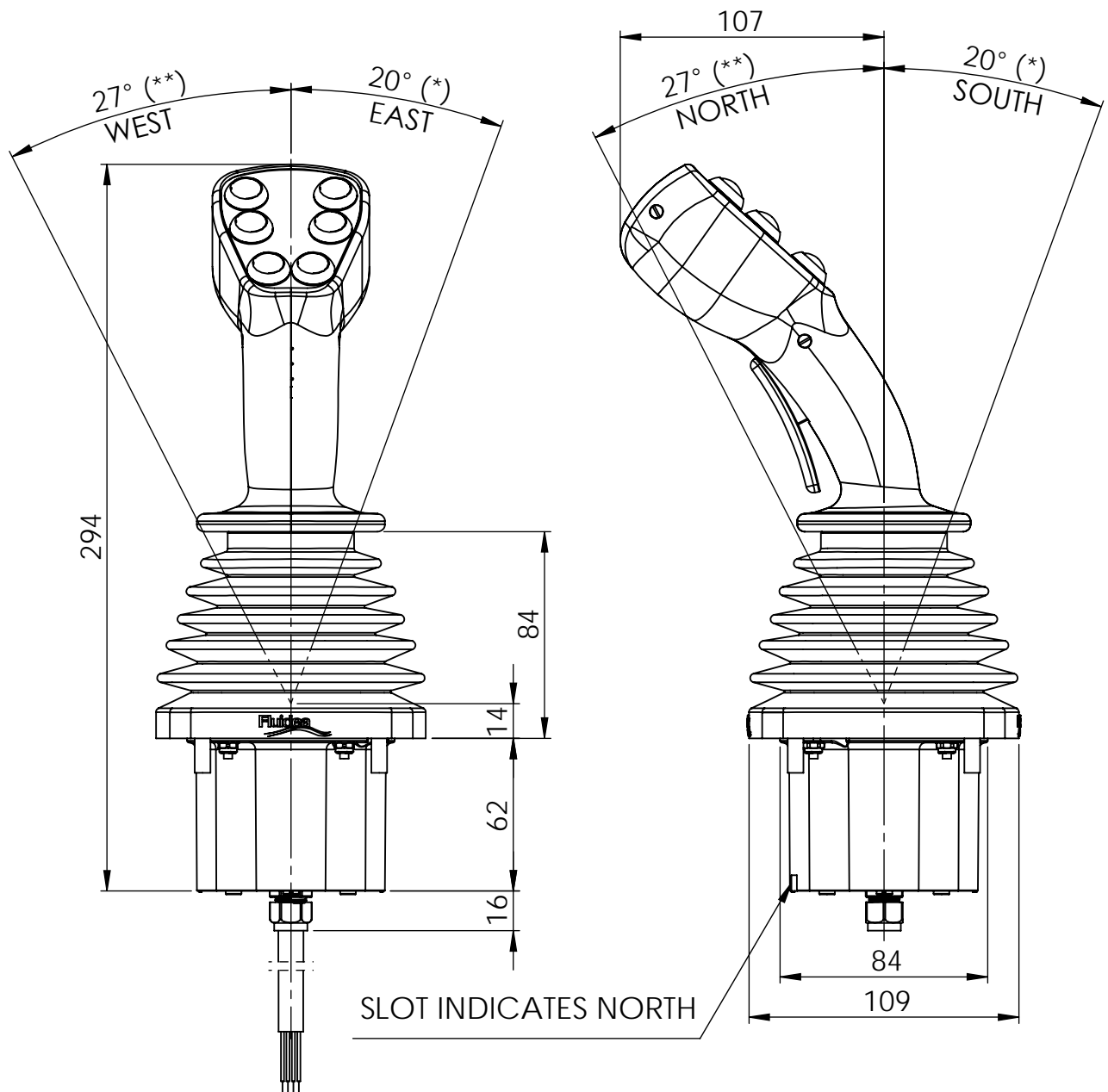
Output metering curves



ELECTRIC PROPORTIONAL JOYSTICK JEP

Overall dimensions

Dual axis joystick JEP with IE2 ergo grip IE2 and Q rubber boot



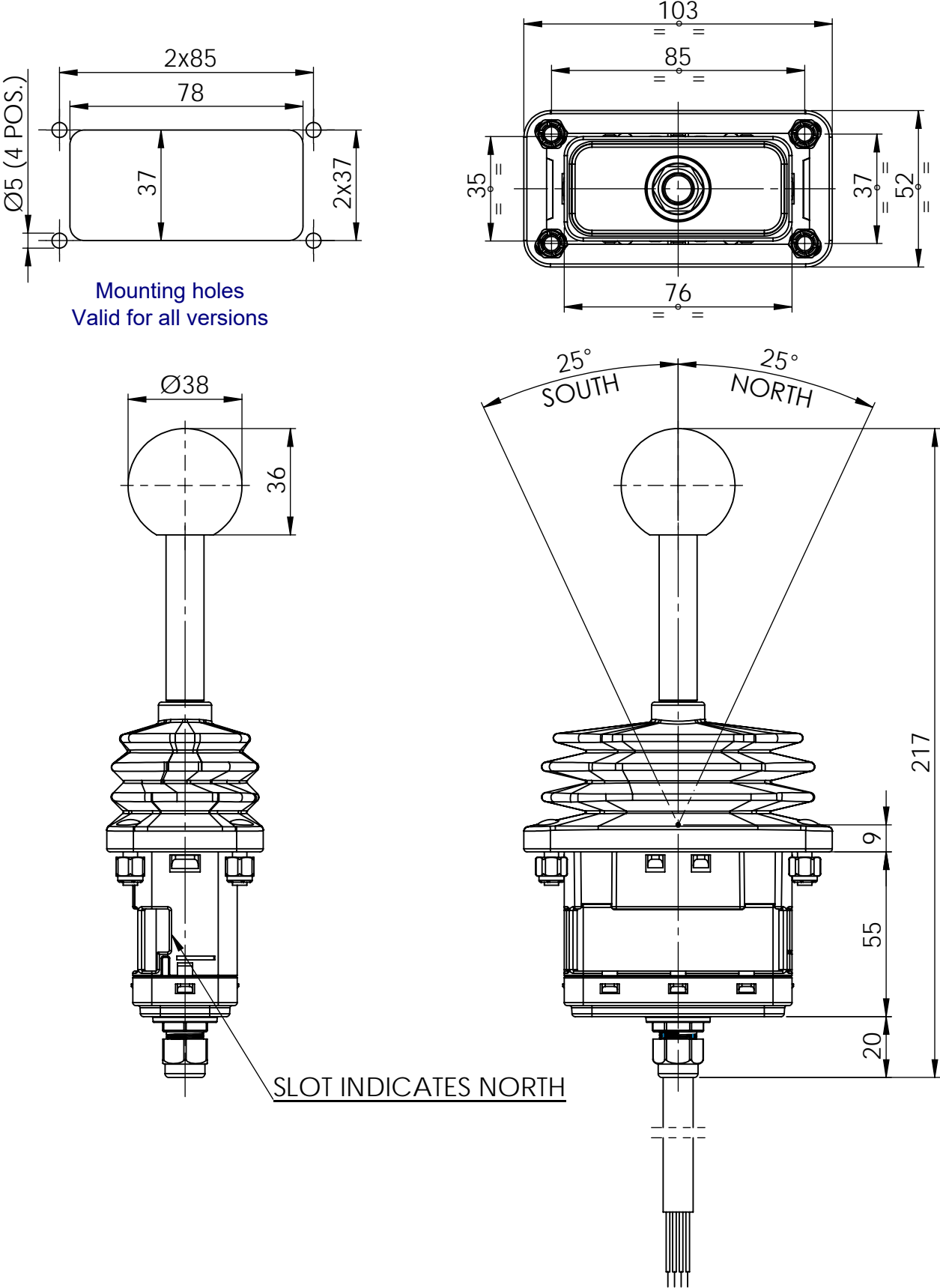
(*) Maximum angle for movements X - Y

(**) Maximum angle for combined movements

ELECTRIC PROPORTIONAL JOYSTICK JEP

Overall dimensions

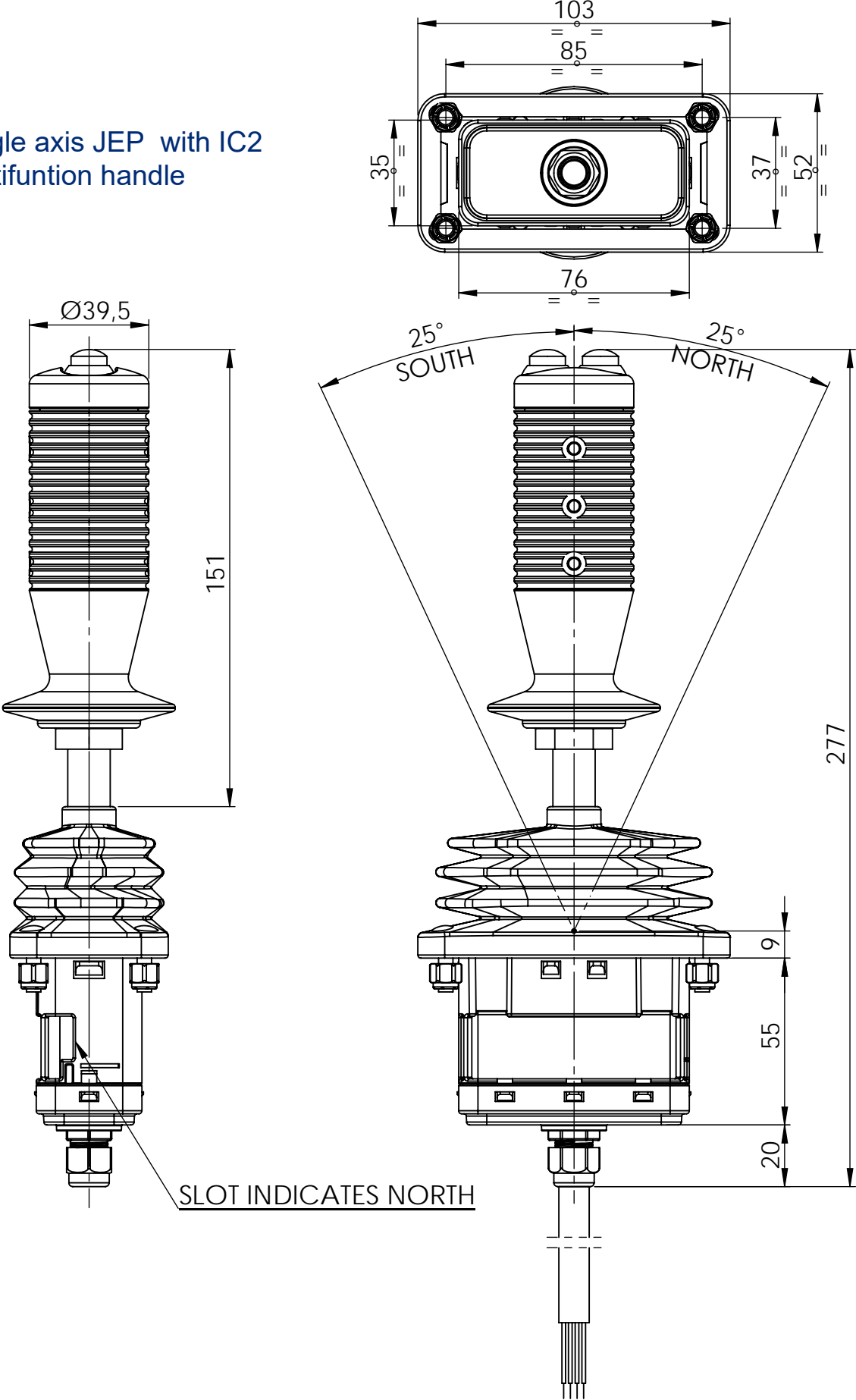
Single axis JEP with IP1 knob and R rubber boot



ELECTRIC PROPORTIONAL JOYSTICK JEP

Overall dimensions

Single axis JEP with IC2 multifunton handle



Control handle

For a detailed configuration of the handle, please refer to the technical catalogue of the required model

Without handle

Z

With knob, only for single axis M

IP1

Standard straight handle

IC1



Multifunctional straight handle

IC2



Multifunctional straight handle

IE2



Rubber boot for dual axis joystick

Without rubber boot

Z

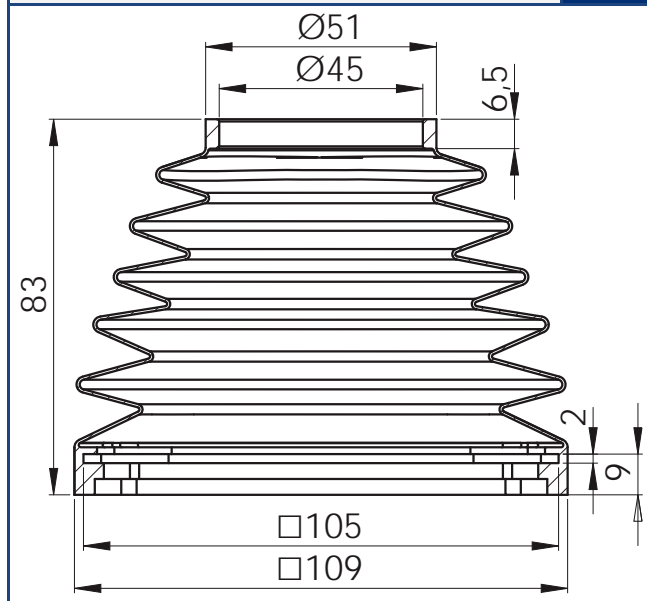
Rectangular rubber boot, available only on single axis version

R



With square rubber boot

Q



Ordering key

JEP	A	B	IE20001	Q
------------	----------	----------	----------------	----------

Rubber boot protection (page 11):

- **Z** = Without boot
- **Q** = Square boot for joystick
- **R** = Rectangular boot for single axis

Handle (page10):

- **IE20001** = Handle part number, assigned by Fluidea
(for handle option please refer to
handle technical catalogue)
- **Z** = without handle

Joystick configuration:

- **B** = Dual axis
- **MR** = Single axis spring centered
- **MF** = Single axis with lever detent in any position

Output signal metering curve - analogue only (page 5):

- **A** = from 0,5 to 4,5 VDC one output (lateral zero)
- **B** = from 0,5 to 4,5 VDC one output (central zero)

Basic model:

- **JEP** = Proportional electrical joystick



THE COMPREHENSIVE RANGE OF MANUFACTURED AND MARKETED COMPONENTS INCLUDES:

- Hydraulic gear and axial piston pumps & motors
- Directional control valves & selector valves
- Proportional EH pressure reducing valves & manifold blocks
- Hydraulic, pneumatic and electric on-off & proportional joysticks
- Control electronics
- Radio controls, push buttons stations, dashboards and armrests
- Multifunction ergonomic, cylindrical & palm grips
- Hydraulic filters & contamination control system
- Heat exchangers and cooling system
- Fluid monitoring & diagnostic instrument
- Bell housings, driving flanges & elastic coupling