

Electric On-Off Joysticks EPVJ Series Proportional Joysticks PERCJ Series



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Electric On-Off Joysticks EPVJ Series



EPVJ SERIES INTRODUCTION

ELECTRIC ON-OFF JOYSTICKS

The EPVJ series joystick provides a remote electric “on-off” signal to control solenoid operated devices.

It has been developed as a compact, light weight unit incorporating the maximum number of switches possible to be controlled by one hand in order to replace multi-switch panels on mobile machinery.

APPLICATIONS

Typical applications include agricultural tractors, mobile grass cutters, fruit picking machines, viticulture machines, material handling machines, road maintenance machines and marine applications.

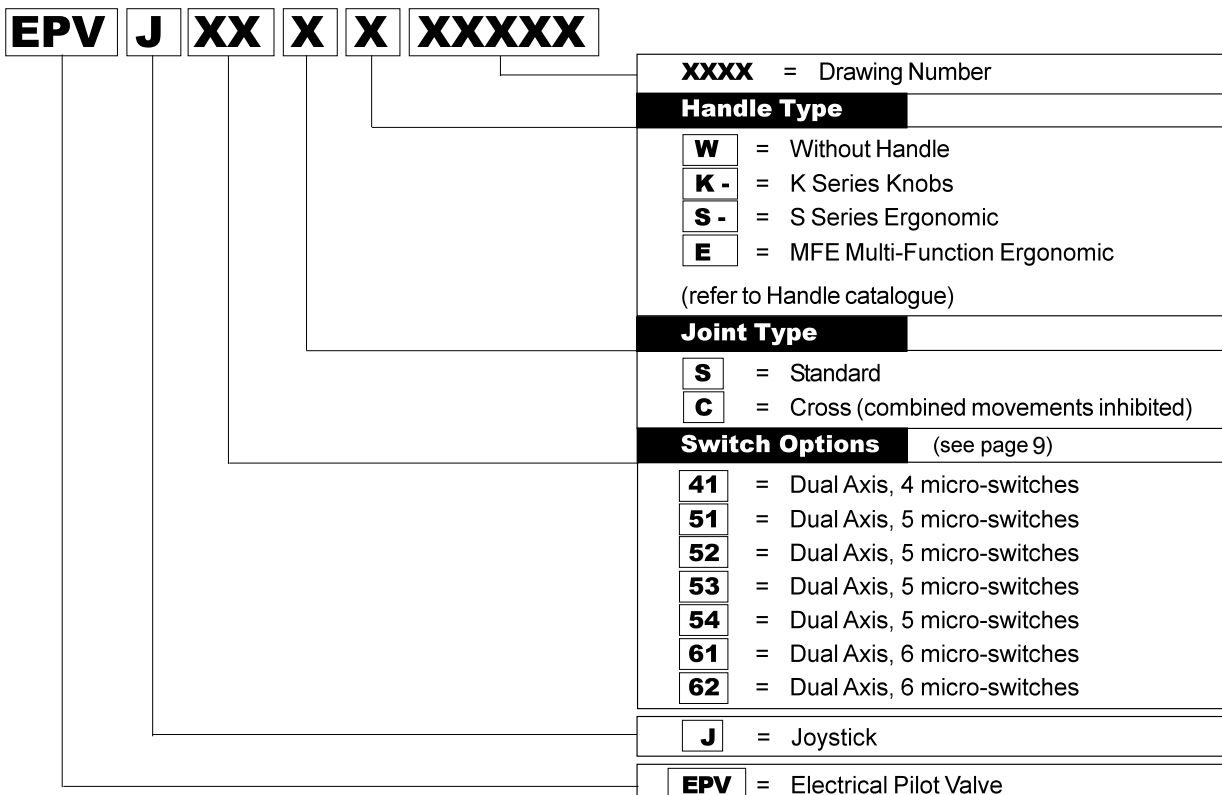
BENEFITS

- Compact and light
- Intuitive identification of basic service functions
- Up to 17 contacts, including the multifunction integral handle, controlled with one hand
- Easier and faster control of the solenoid operated devices
- Reliable for heavy duty applications
- Low control effort
- Wide range of multifunctional ergonomic handles available
- Cable and wired connectors to customer specifications
- Can be easily fitted on portable chest-packs

TECHNICAL FEATURES

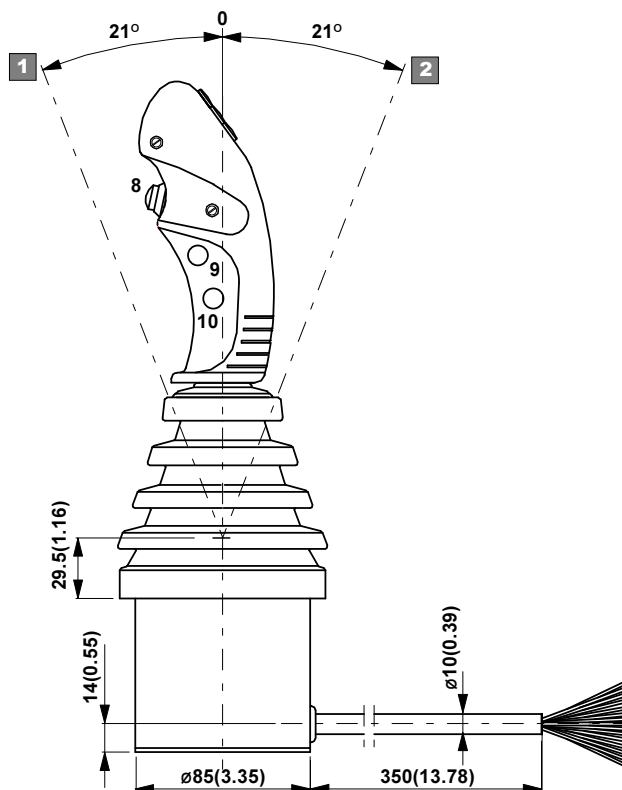
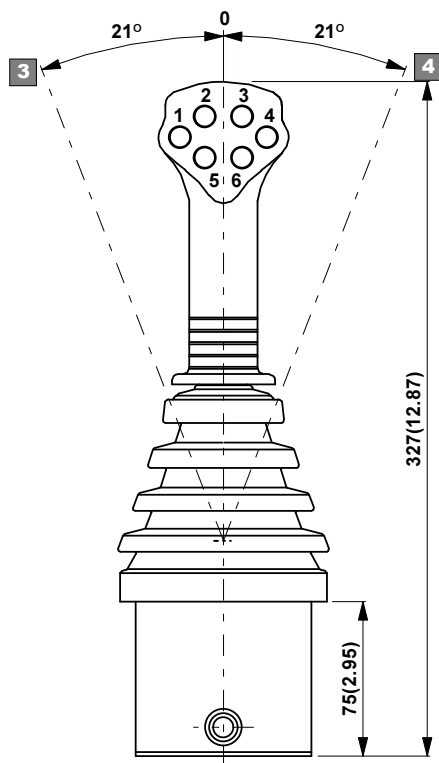
- Dual axis function
- 2 additional contact on opposite poles
- 16 Amp micro-switches
- Micro-switch rated to IP54

EPVJ SERIES MODEL CODING

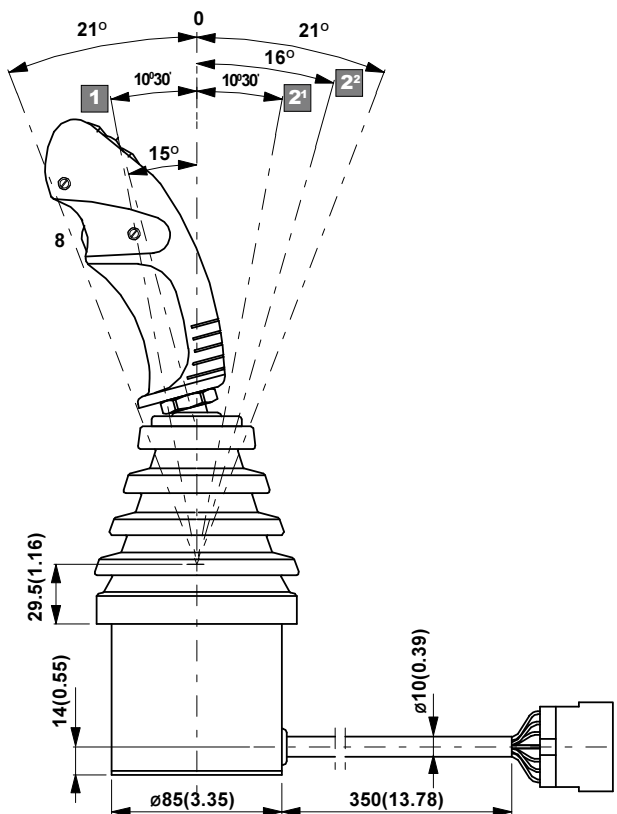
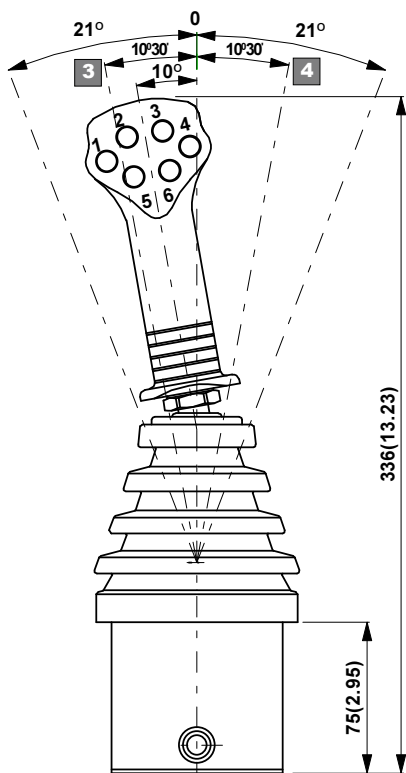


EPVJ SERIES TECHNICAL DATA

Joystick: MFE Type Handle

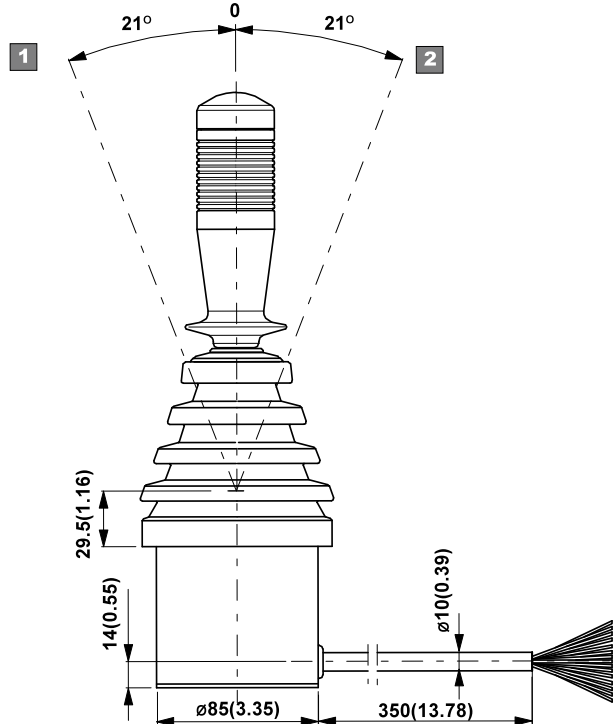
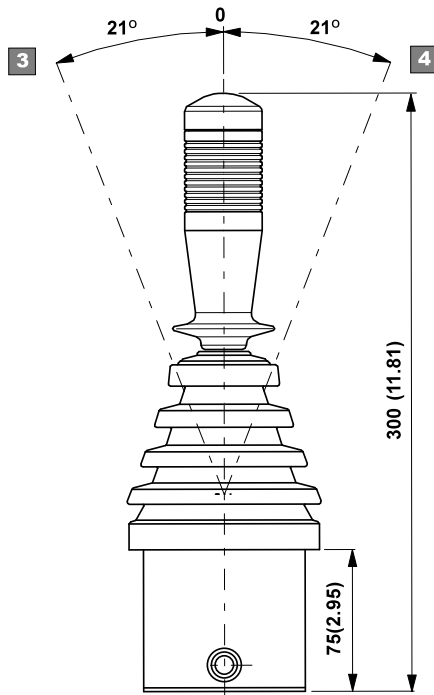


Joystick: MFE Type Handle - angled



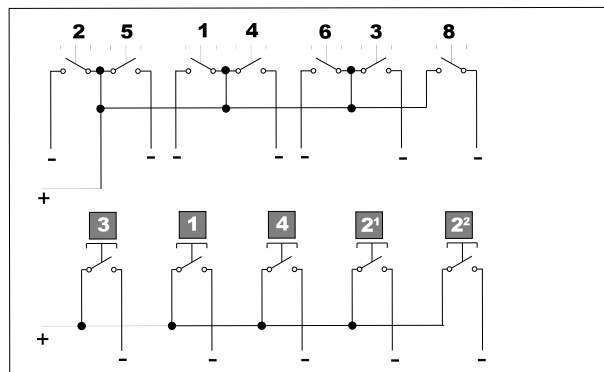
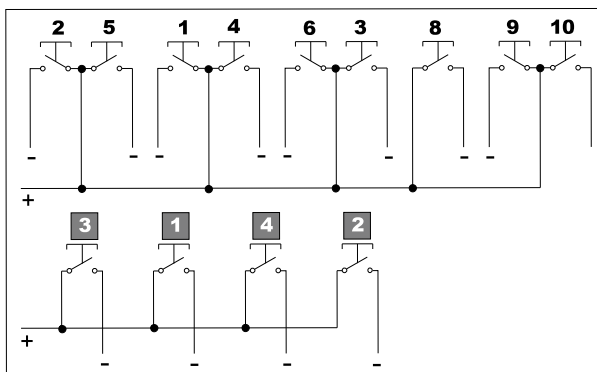
EPVJ SERIES TECHNICAL DATA

Joystick: Straight Handle



EPVJ SERIES ELECTRICAL CIRCUIT DIAGRAMS

The circuit diagrams shown here should be regarded as general examples only as the combination of buttons may vary depending on customer requirements. Please consult our Tech. Dpt. for specific electrical information. The electrical circuit diagrams shown correspond to the upper and lower diagrams on page 7.

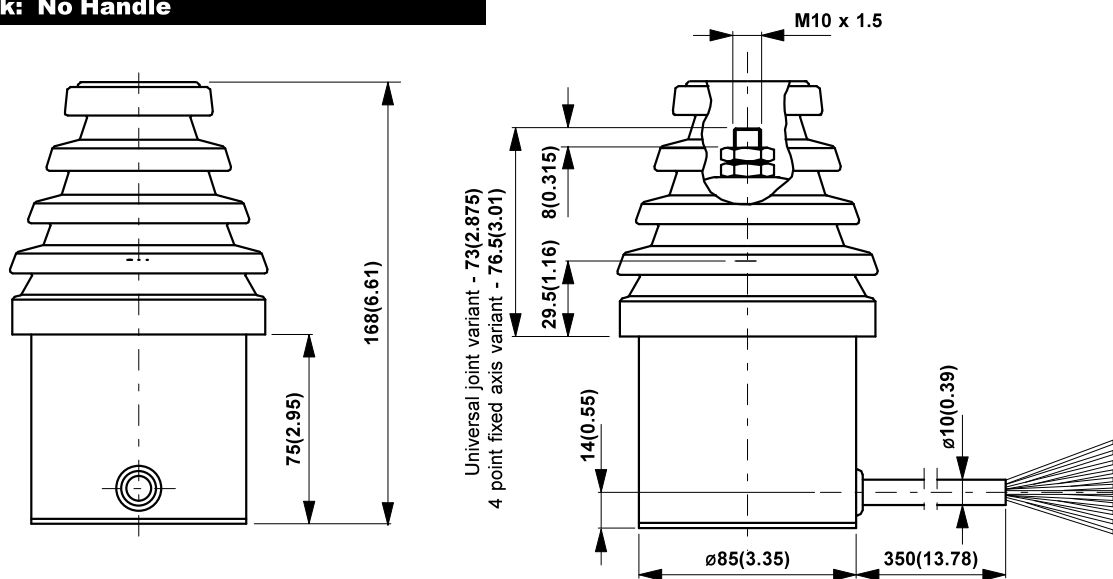


EPVJ SERIES NOTES

1. Different cable lengths can be supplied to customer requirements.
2. Other Joystick variants are available. For details please consult our Tech. Dpt.
3. For details of handle options see the handle catalogue.
4. Connectors can be fitted to customer requirements.
5. Single axis version available on request.

EPVJ SERIES TECHNICAL DATA

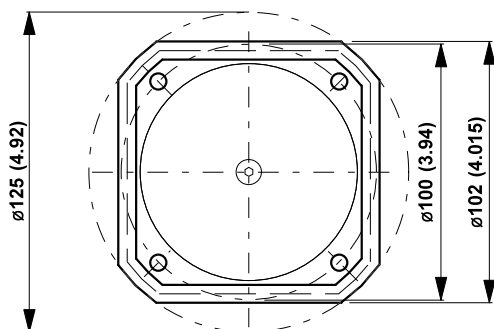
Joystick: No Handle



EPVJ SERIES MOUNTING DETAILS

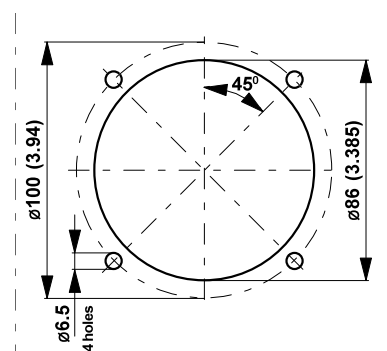
JOYSTICK FOOTPRINT

Typical across the EPVJ Series.

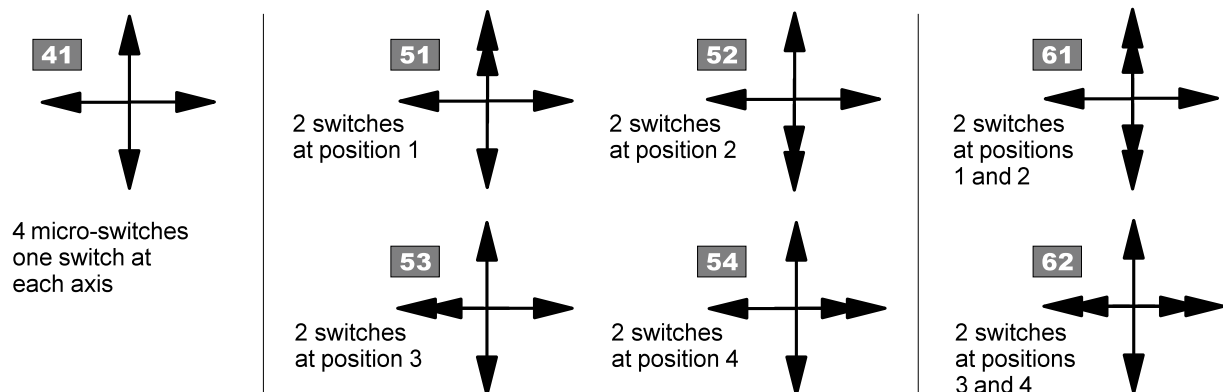


JOYSTICK MOUNTING DETAILS

Typical across the EPVJ Series.



EPVJ SERIES SWITCH POSITION OPTIONS



Proportional Joysticks PERCJ Series



PROPORTIONAL REMOTE CONTROL PERCJ Series

The PERCJ series joystick provides a remote electric proportional signal to control solenoid operated devices.

It has been developed as a compact, light weight unit to be controlled by one hand in order to replace multi-switch panels on mobile machinery.

BENEFITS

- Compact and light
- Intuitive identification of basic service functions
- Easier and faster control of the solenoid operated devices
- Reliable for heavy duty applications
- Low control effort
- Wide range of multifunctional ergonomic handles available
- Cable and wired connectors to customer specifications
- Can be easily fitted on portable chest-packs

TECHNICAL FEATURES

- Single or Dual axis function
- IP54 Protection Grade

APPLICATIONS

Typical applications include agricultural tractors, mobile grass cutters, fruit picking machines, viticulture machines, material handling machines, road maintenance machines and marine applications.

PROPORTIONAL REMOTE CONTROL PERCJ Series

Standard technical data

- Input voltage range: 8V to 30V
- Maximum input current 180 mA at 24V
- Output voltage range (A5V option): 0.5÷5V (with 2.5V in neutral position)
- Output current range (PWM option) 400-1600 mA (12Vcc) – 200-800 mA (24Vcc)
- Out of centre position senso Included as standard feature
- Life > 5 million cycles
- Operating temperature: – 40 °C ÷ 85 °C

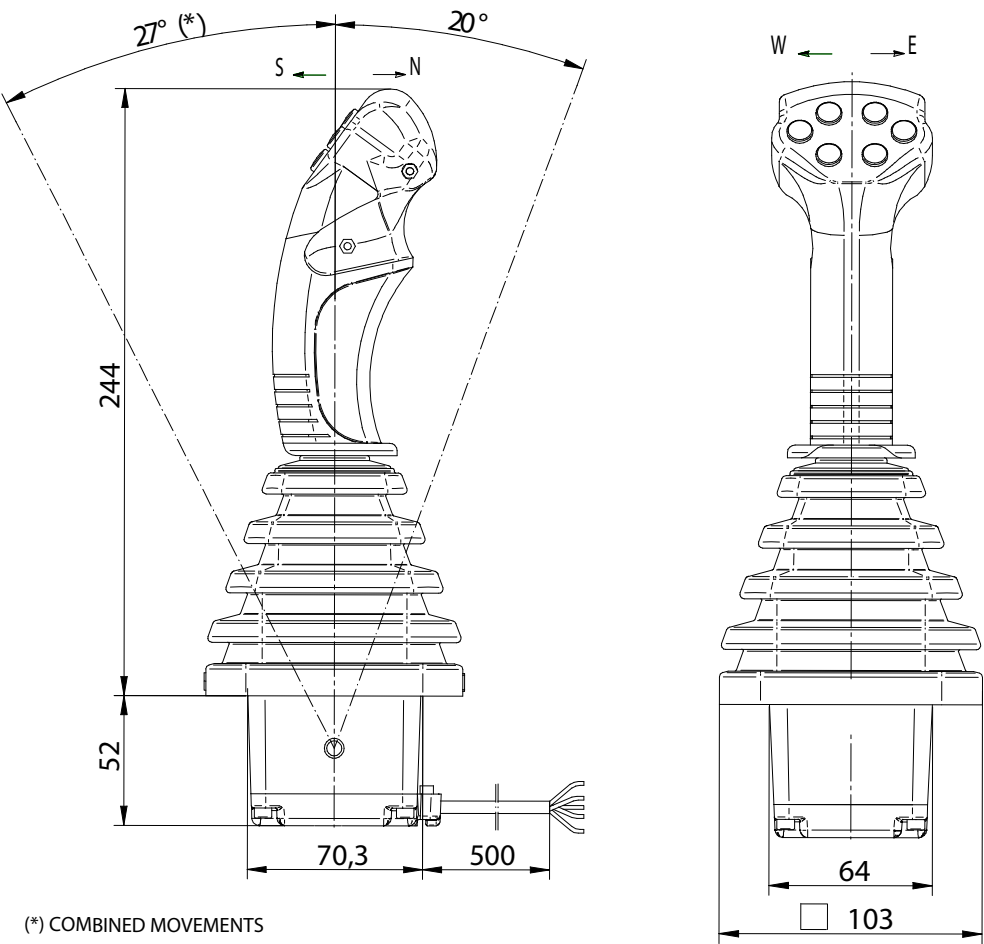
Ordering Key

PERCJ	X	XX	XXX	X	XXXX
					XXXX = Last 4 digits of MFE part number (blank with handle option W or S)
					Handle type W = Without handle S = S straight series (refer to handle catalogue) E = MFE Multi Function Ergonomic (refer to handle catalogue)
					Output Signal A5V = Analogue 0÷5V with 2.5V in neutral position PWM = PWM current signal
					Operation on the handle (X and Y axis) 08 = 8 N 12 = 12 N
					Flange Type 1 = Single axis (North-South only) 2 = Dual axis (North-South + East-West with combined movements) X = Cross (North-South + East-West with combined movements inhibited)
					PERCJ = Proportional Electrical Remote Control

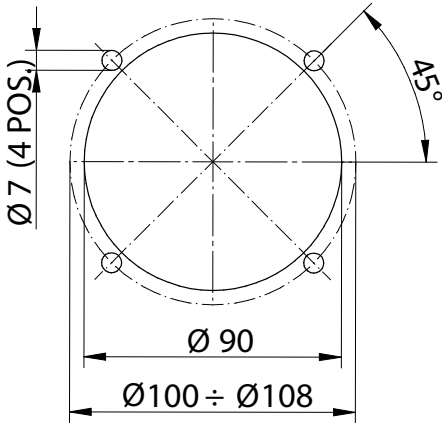
Technical data and overall dimensions of PWM card are not included in this document. The output current signal of PWM card is needed to feed the electro-hydraulic proportional solenoid valve. The PWM card can be supplied integral with the joystick body or in an aluminium box for external in line mounting. For further information please contact our engineering department.

PROPORTIONAL REMOTE CONTROL PERCJ Series

DUAL AXIS JOYSTICK – ANALOGUE VOLTAGE SIGNAL
0÷5V WITH 2.5V IN NEUTRAL POSITION

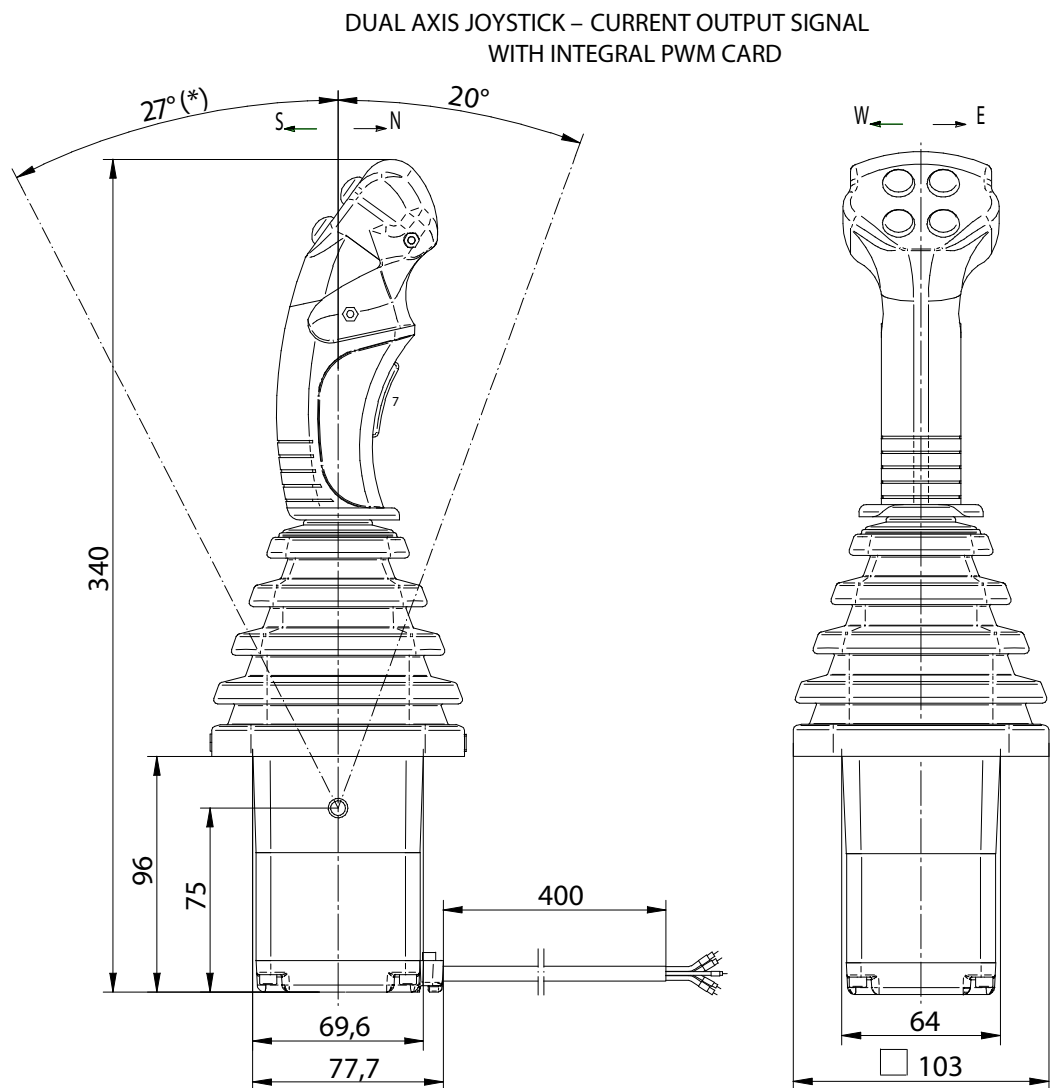


MOUNTING HOLES



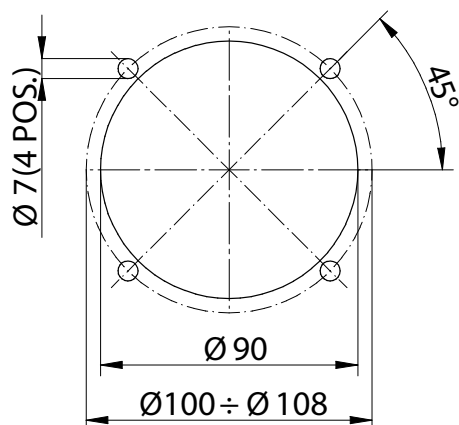
WIRE CONNECTIONS	
WIRE COLOUR	FUNCTION
YELLOW	X AXIS OUTPUT (0÷5 VDC)
BROWN	GROUND (-)
GREY	Y AXIS OUTPUT (0÷5 VDC)
GREEN	OUT OF CENTER SIGNAL
WHITE	SUPPLY

PROPORTIONAL REMOTE CONTROL PERCJ Series



(*) COMBINED MOVEMENTS

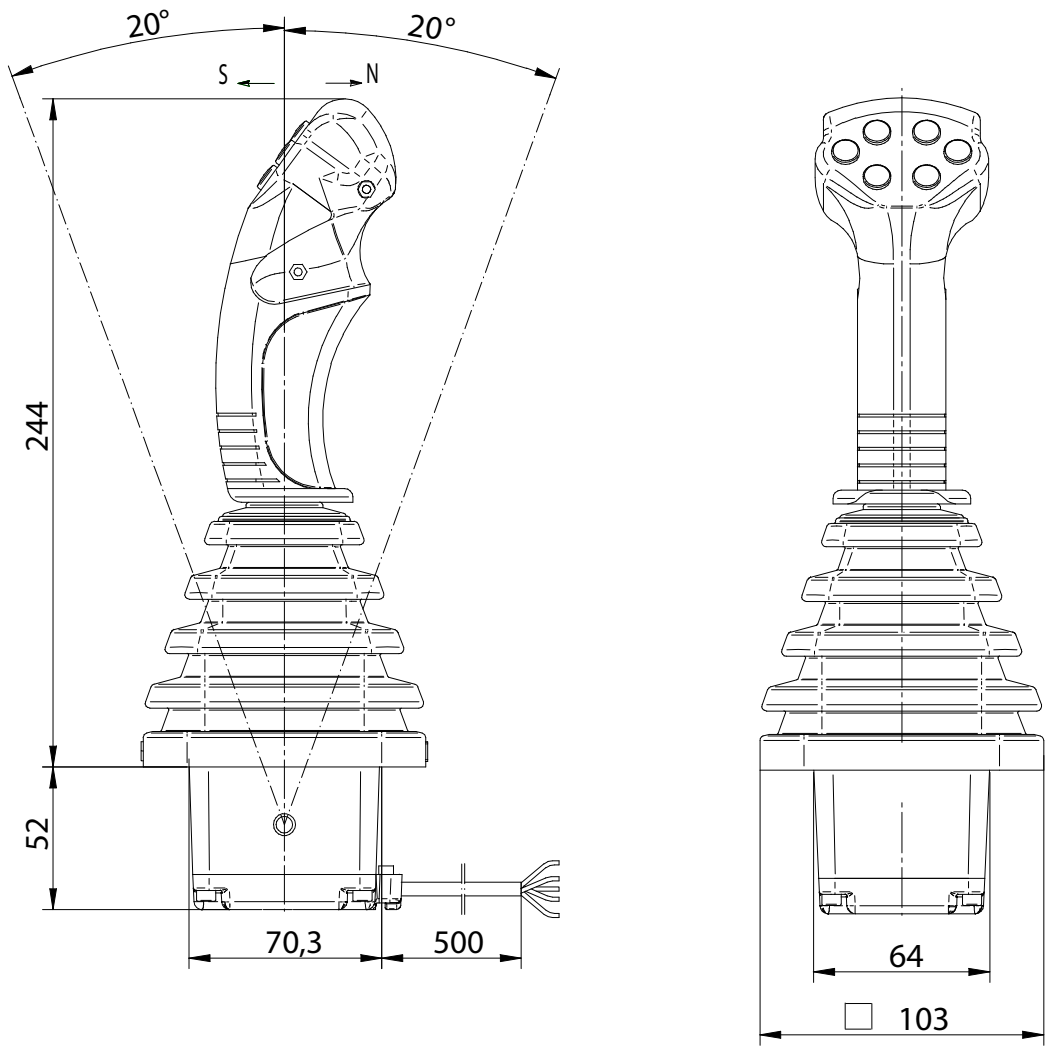
MOUNTING HOLES



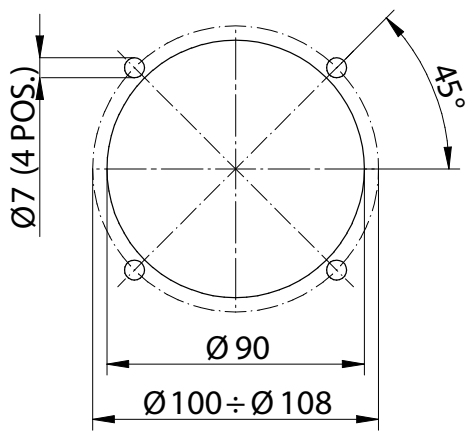
WIRE CONNECTIONS	
WIRE COLOURS	FUNCTION
BLACK	GROUND (-)
RED	SUPPLY (+)
WHITE	X AXIS OUTPUT SIGNAL (EAST)
YELLOW	Y AXIS OUTPUT SIGNAL (SOUTH)
GREEN	Y AXIS OUTPUT SIGNAL (NORTH)
GREY	X AXIS OUTPUT SIGNAL (WEST)
ORANGE	X AXIS GROUND (WEST-EAST)
BROWN	Y AXIS GROUND (NORTH-SOUTH)
BLUE (14)	OUT OF CENTER SIGNAL (SOUTH)
BLUE (15)	OUT OF CENTER SIGNAL (WEST)
BLUE (16)	OUT OF CENTER SIGNAL (EAST)
BLUE (17)	OUT OF CENTER SIGNAL (NORTH)

PROPORTIONAL REMOTE CONTROL PERCJ Series

SINGLE AXIS JOYSTICK – ANALOGUE VOLTAGE
SIGNAL 0÷5V WITH 2.5V IN NEUTRAL POSITION



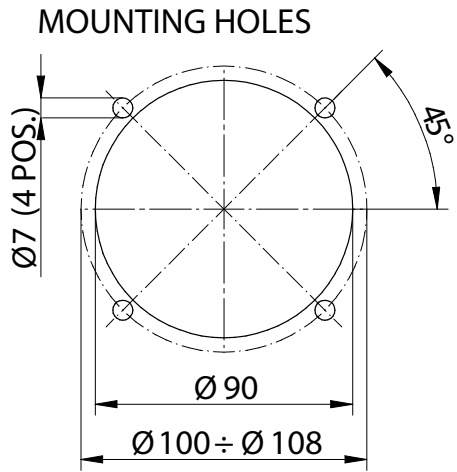
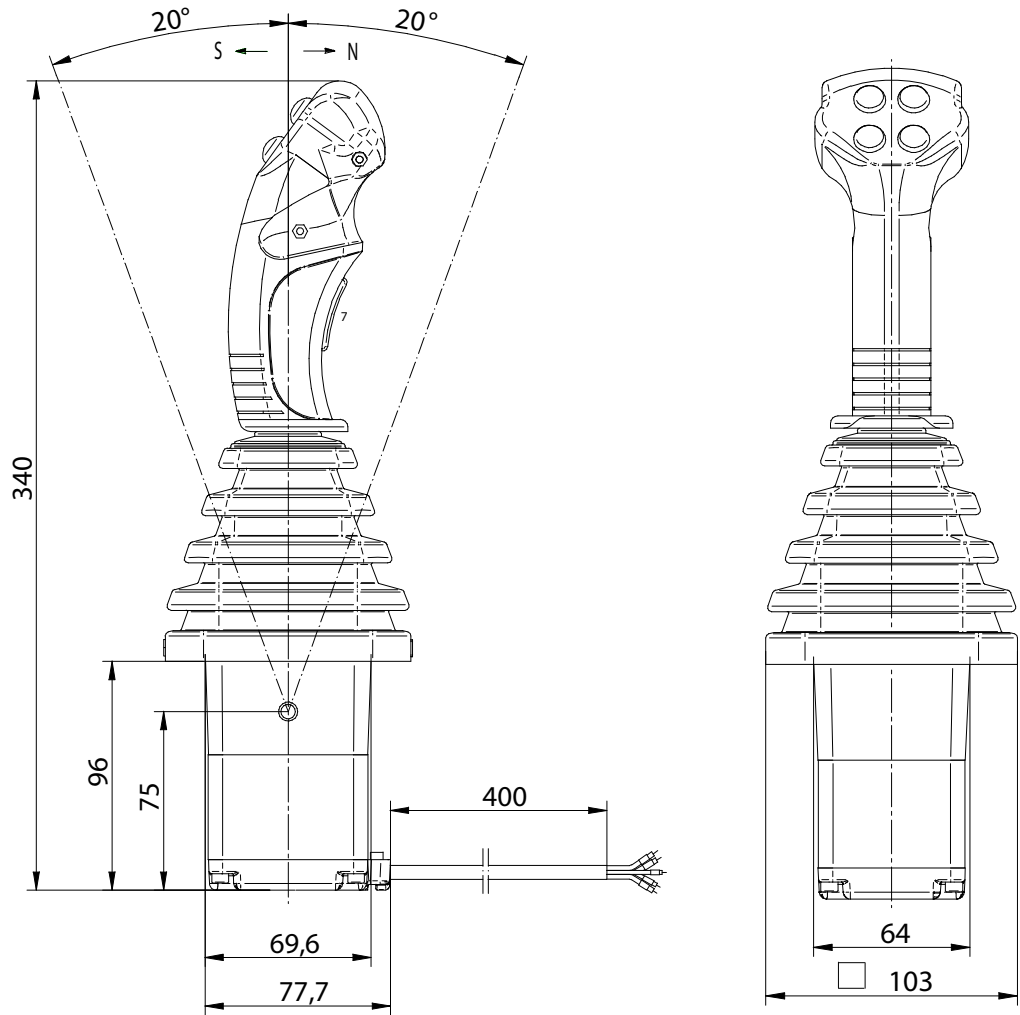
MOUNTING HOLES



WIRE CONNECTIONS	
WIRE COLOUR	FUNCTION
BROWN	GROUND (-)
GREY	Y AXIS OUTPUT (0 ÷ 5 VDC)
GREEN	OUT OF CENTER SIGNAL
WHITE	SUPPLY

PROPORTIONAL REMOTE CONTROL PERCJ Series

SINGLE AXIS JOYSTICK – CURRENT OUTPUT SIGNAL
WITH INTEGRAL PWM CARD



WIRE CONNECTIONS	
WIRE COLOURS	FUNCTION
BLACK	GROUND (-)
RED	SUPPLY (+)
YELLOW	Y AXIS OUTPUT SIGNAL (SOUTH)
GREEN	Y AXIS OUTPUT SIGNAL (NORTH)
BROWN	Y AXIS GROUND (NORTH-SOUTH)
BLUE (14)	OUT OF CENTER SIGNAL (SOUTH)
BLUE (17)	OUT OF CENTER SIGNAL (NORTH)

PWM Card for Biaxis Joystick PERCJ Series

Product description: PWM card for joystick biaxis PERC series	Product part number: C9634210113
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Function description	Values	Notes
Input voltage range	8 ÷ 32 V DC	
Input voltage signal range	0,25 ÷ 5 V	Center position 2,5 Volt
Current output signal	400 ÷ 1.600 mA	Input voltage 12 V
Current output signal	200 ÷ 800 mA	Input voltage 24 V
Maximum output current @ 20°C	2.300 mA (12 Vdc) – 1.200 mA (24 Vdc)	
PWM frequency	1.000 HZ (Dither 100 HZ)	
Maximum hysteresis	1 %	For output current signal
Life	10 ⁷ cycles	
Duty cycle	75%	
Input/output delay	From 30 up to 100 ms	
Ramp time setting	From 0,2 up to 2 s step 0,2 s	
Ramp setting system	Impulse programmer	
Operating ambient temperature	-20 ÷ 85 °C	
Card insulation	With transparent protective resin	
Y axis starting point setting	From 0 up to 800 mA	Input voltage 12 V
Y axis starting point setting	From 0 up to 400 mA	Input voltage 24 V
Y axis final point setting	From 300 up to 1.800 mA	Input voltage 12 V
Y axis final point setting	From 300 up to 1.000 mA	Input voltage 24 V
Out-neutral position signal	100 mA for 4 semiaxis	
Wire terminals	Tinned wires	
Card overall dimensions	54 x 61 mm	See Studio 144/6-A
Card fixing	With 4 screws	
Card marking	With logo and part number	

As HANSA-TMP has a very extensive range of products and some products have a variety of applications, the information supplied may often only apply to specific situations.

If the catalogue does not supply all the information required, please contact HANSA-TMP.

In order to provide a comprehensive reply to queries we may require specific data regarding the proposed application.

Whilst every reasonable endeavour has been made to ensure accuracy, this publication cannot be considered to represent part of any contract, whether expressed or implied.

HANSA-TMP reserves the right to amend specifications at their discretion.



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