



CJW CAN bus joystick

- Contactless single or double axis joysticks
- CAN bus models
- The contactless technology guarantees long life and precise comfortable control
- Robust mechanical design; specifically tailored to off-highway operating machines
- Handles with additional proportional axis

Working conditions

Electrical specifications

CJW

Supply voltage		from 8 to 32 V
Current consumption	without grip	max. 100 mA @ 32 V
Output CAN protocols		CANopen Safety, SAE J1939, CANopen, CAN 2.0A and 2.0B, ISOBUS (AUX-N compliant)

Mechanical specifications

Lever angle	operation	$\pm 20^\circ$ both axis
	tolerance	± 1
Lever force (X,Y axis)	stroke end	6 \pm 1N (fully actuated 190 mm - 7.48 in above flange)
	Operating life	on each axis (full stroke cycles)
Weight	without grip	>10 ⁶
		0.50 Kg (1.10 lb)

Environmental specifications

Working temperature		from -40° C to +85° C (from -40° F to 185° F)
Storage temperature		from -40° C to +85° C (from -40° F to 185° F)
Weather protection	above fixing plan	IP65
EMC compatibility		100 V/m - ISO13766, ISO14982

"Dead man" switch features

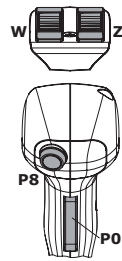
Contact type		NA
Current rating (24 VDC)		200 mA resistive load
Mechanical life (nr. of operations)		10 ⁶
Electric life (nr. of operations)		3x10 ⁴
Operating force		3.4 N
Weather protection		IP67

Test specifications

Mechanical vibration	random	from 5 to 500 Hz, 5,4x10 ⁴ to 0,56 g ² /Hz, 100 h each axis
	sinusoidal	40 m/s ² from 10 to 2000 Hz
	bumps	100 applications - 400 m/s ² x 6 ms
Humidity	96%	240 h
Thermal shock		100 cycles, from -40° C to 85° C and back, 50° C/min (100 cycles, from -40° F to 212° F and back, 122° F/min)
Salt spray	exposure	100 h

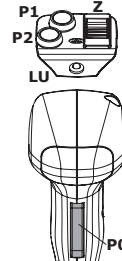
CJW CAN bus joystick

Configurations



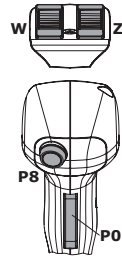
Code	183530011
Protocol	CANopen
Description	CJW2010A-PZTM0200BQ-0R-8R2-WN140-ZN140/A8F12
Plate	2 ARW* type proportional rollers (W-Z)
Front zone	"dead man" switch (P0), 1 push-button with spring return (P8)

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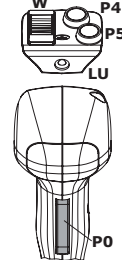
Code	183530012
Protocol	CANopen
Description	CJW2010A-PZTA2101BQ-0R-1R2-2R2-URL-ZN140/A8F12-<JOYSTICK SX>
Plate	1 ARW* type proportional roller (Z), 2 T* type push-buttons with spring return (P1-P2), 1 LED (LU); left configuration
Front zone	"dead man" switch (P0)

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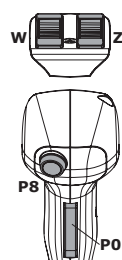
Code	183530057
Protocol	SAE J1939
Description	CJW2010A-PZTM0200BQ-0R-8R2-WN140-ZN140/A8F12
Plate	2 ARW* type proportional rollers (W-Z)
Front zone	"dead man" switch (P0), 1 push-button with spring return (P8)

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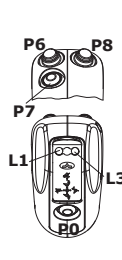
Code	183530013
Protocol	CANopen
Description	CJW2010A-PZTA2101CQ-0R-4R2-5R2-URL-WN140/A8F12-<JOYSTICK DX>
Plate	1 ARW* type proportional roller (W), 2 T* type push-buttons with spring return (P1-P2), 1 LED (LU); right configuration
Front zone	"dead man" switch (P0)

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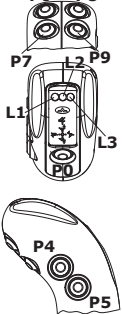
Code	183530058
Protocol	CANopen Safety
Description	CJW2010A-PZTM0200BQ-0R-8R2-WN140-ZN140/A8F12
Plate	2 ARW* type proportional rollers (W-Z)
Front zone	"dead man" switch (P0), 1 push-button with spring return (P8)

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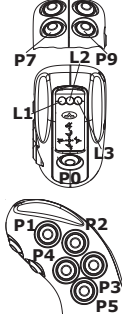
Code	183530045
Protocol	SAE J1939
Description	CJW2034A-AMHQ0402AQ-0R3(A)-6N5(K)-7RB(A)-8N5(K)-ALV-CLR/D2F08035(TC)
Plate	2 LED (L1-L3) 1M type push-button with detent (P0)
Front zone	2M type push-button (P6-P8), 1K type push-button with spring return (P9)

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Code	183530044
Protocol	SAE J1939
Description	CJW2034A-AMHQ0703AQ-0R3(A)-4RB(A)-5RB(A)-6RB(A)-7RB(A)-8RB(A)-9RB(A)-ALV-BLY-CLR/F1F05150(TC)
Plate	3 LED (L1-L2-L3), 1M type pushbutton with detent (P0)
Front zone	4M type pushbutton with spring return (P6-P7-P8-P9)
Lateral zone	2M type pushbutton with spring return (P4-P5)

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Code	183530043
Protocol	ISOBUS
Description	CJW2044A-AMHM1003AQ-0R3(A)-1RB(A)-2RB(A)-3RB(A)-4RB(A)-5RB(A)-6RB(A)-7RB(A)-8RB(A)-9RB(A)-ALV-BLY-CLR/A3M09030(TC)
Plate	3 LED (L1-L2-L3), 1M type push-button with detent (P0)
Front zone	4M type push-button with spring return (P6-P7-P8-P9)
Lateral zone	5M type push-button with spring return (P1-P2-P3-P4-P5)

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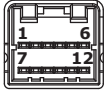


NOTE (*): for component features see page 19

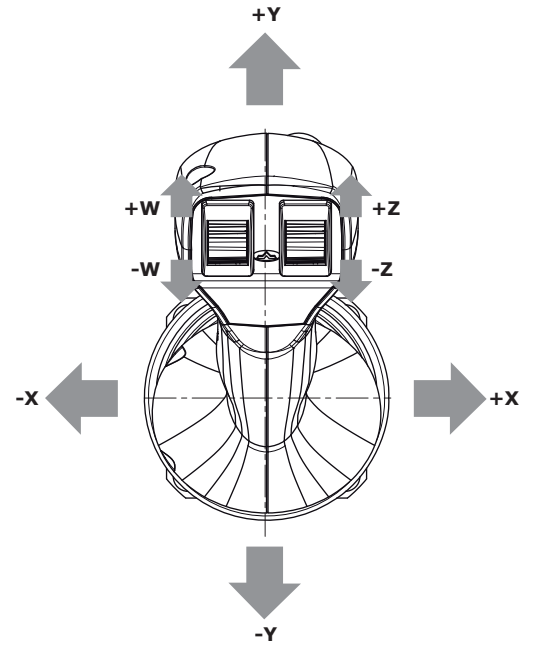
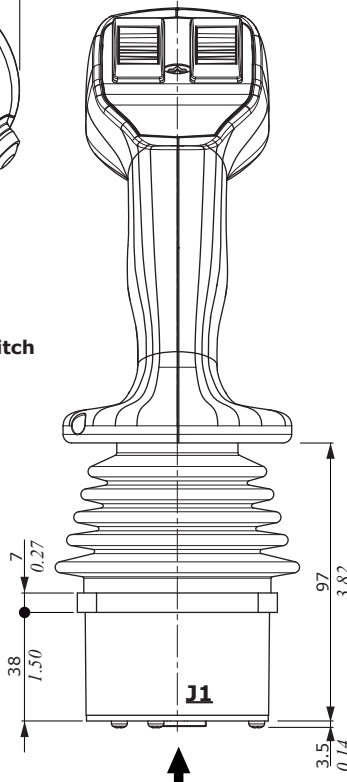
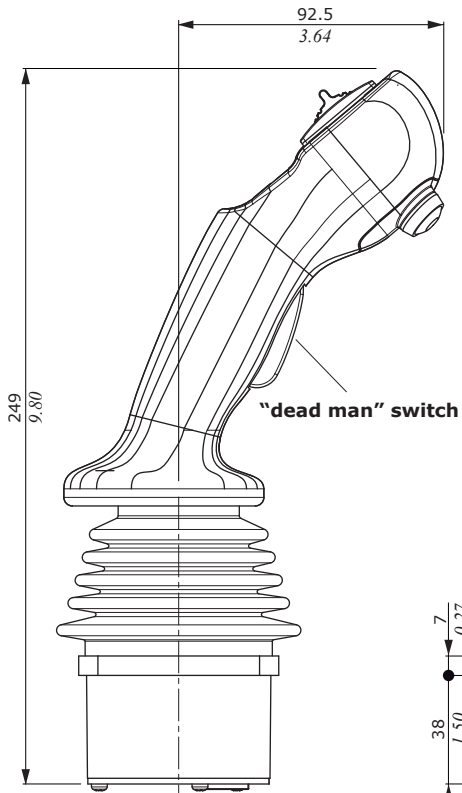
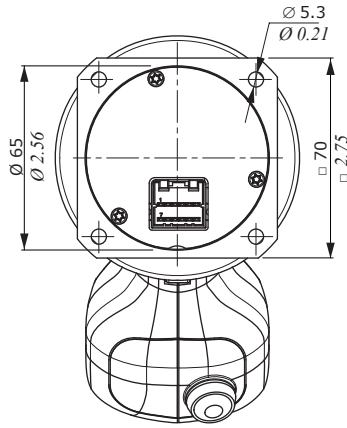
Dimensions and features

For configuration see page 14.

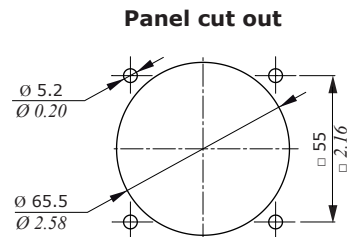
Multi-lock 040 series Tyco connector (tin plated contacts)



1	not conn.	7	not conn.
2	not conn.	8	not conn.
3	CAN_L	9	not conn.
4	CAN_H	10	not conn.
5	VJ-	11	VJ+
6	not conn.	12	not conn.



Mating connector	
Name	Type
JM1	Multilock series 040 Tyco

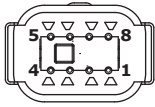


CJW CAN bus joystick

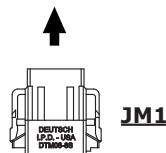
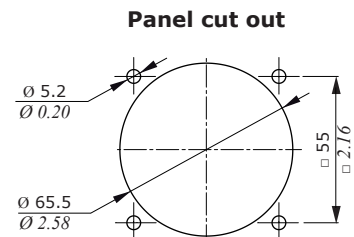
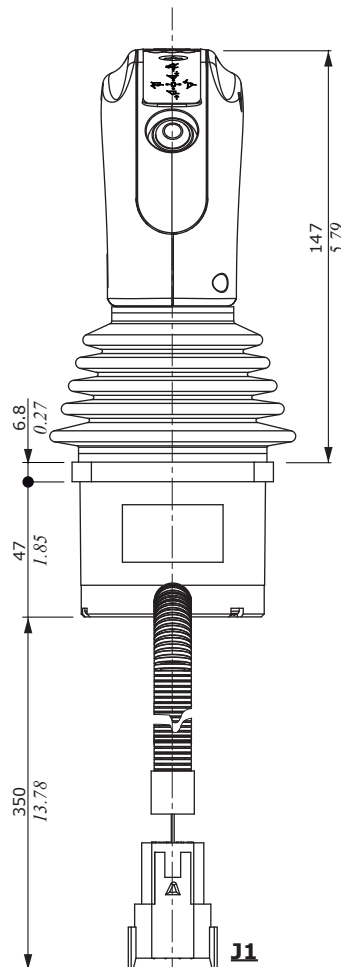
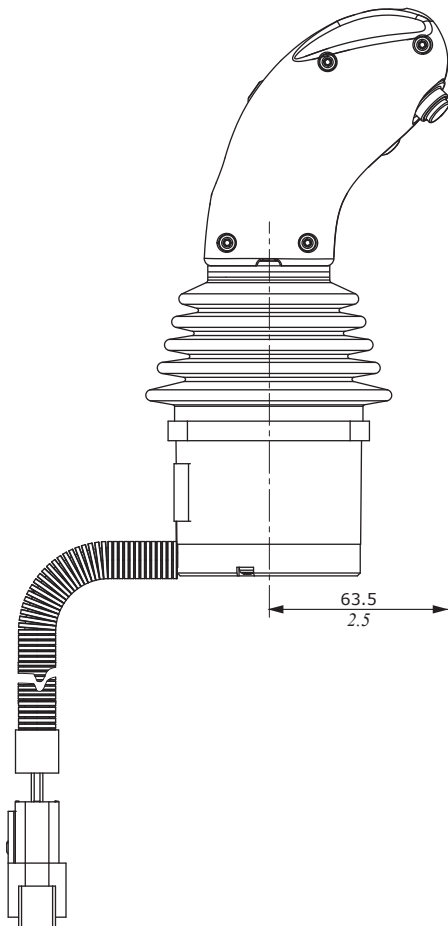
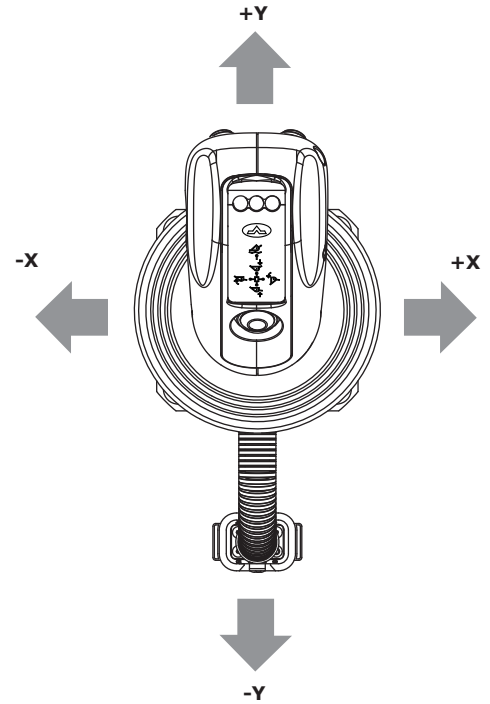
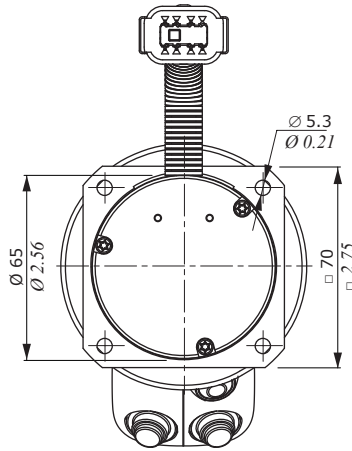
Dimensions and features

For configuration see page 14.

DTM04-8P
Deutsch connector
 (nichel plated contacts)



1	VJ+	5	Push-button P8
2	CAN_L	6	Push-button P6
3	CAN_H	7	VJ+
4	VJ-	8	plugged

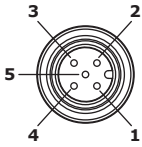


Mating connector	
Name	Type
JM1	DTM06-8S Deutsch

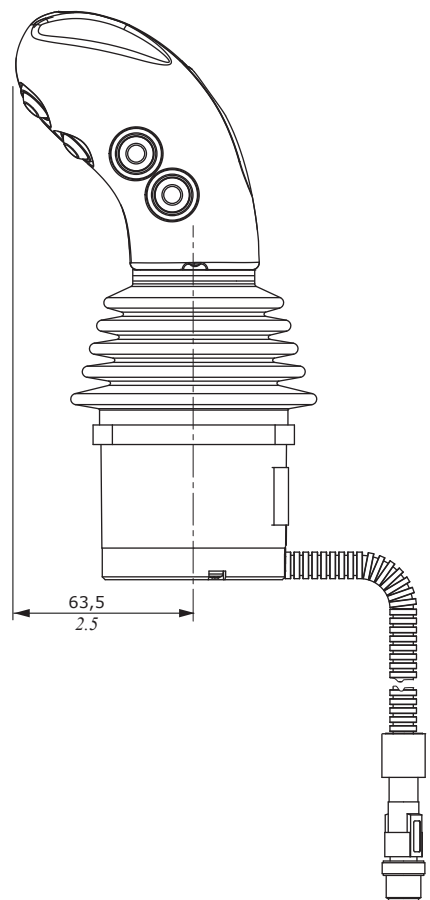
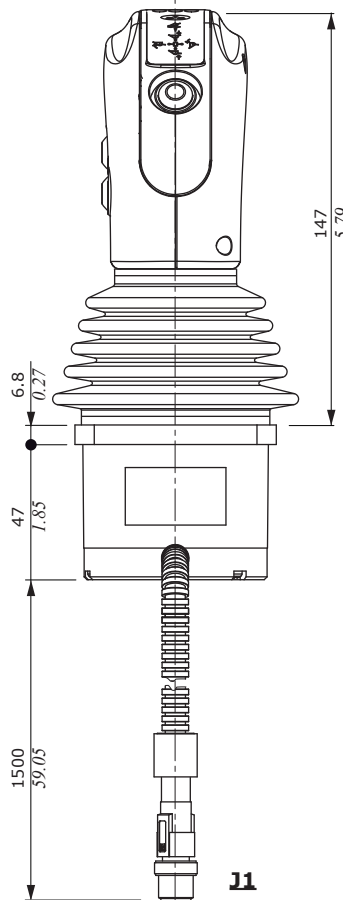
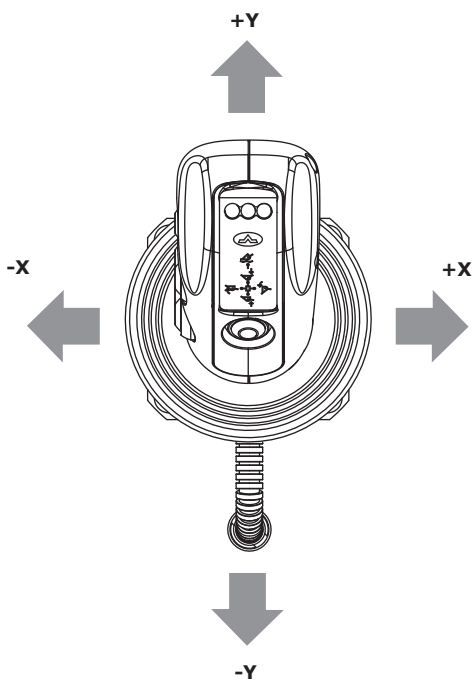
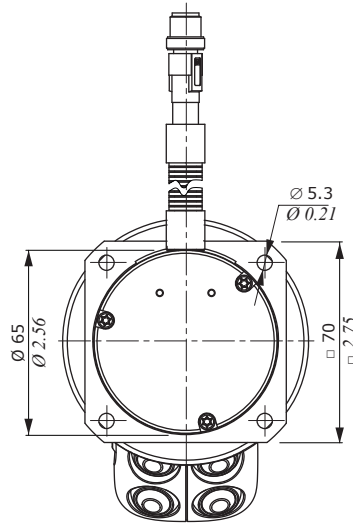
Dimensions and features

For configuration see page 14.

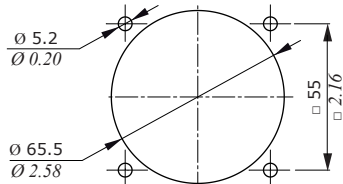
M12-5P male connector



1	CAN_H
2	CAN_L
3	VJ+
4	VJ-
5	VK+



Panel cut out



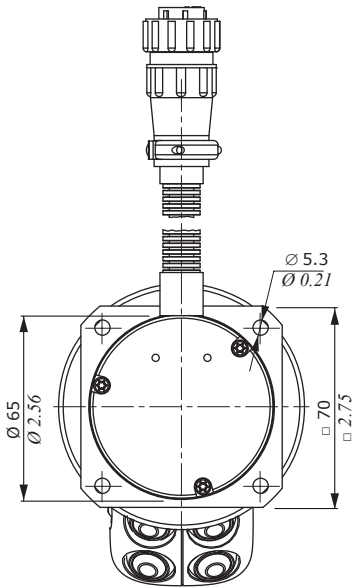
Mating connector	
Name	Type
JM1	5 poles - M12 female

Control components

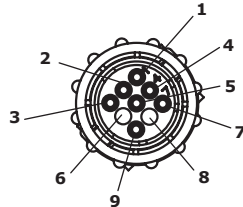
CJW CAN bus joystick

Dimensions and features

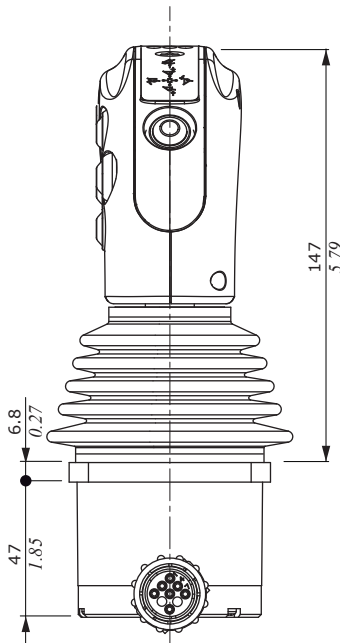
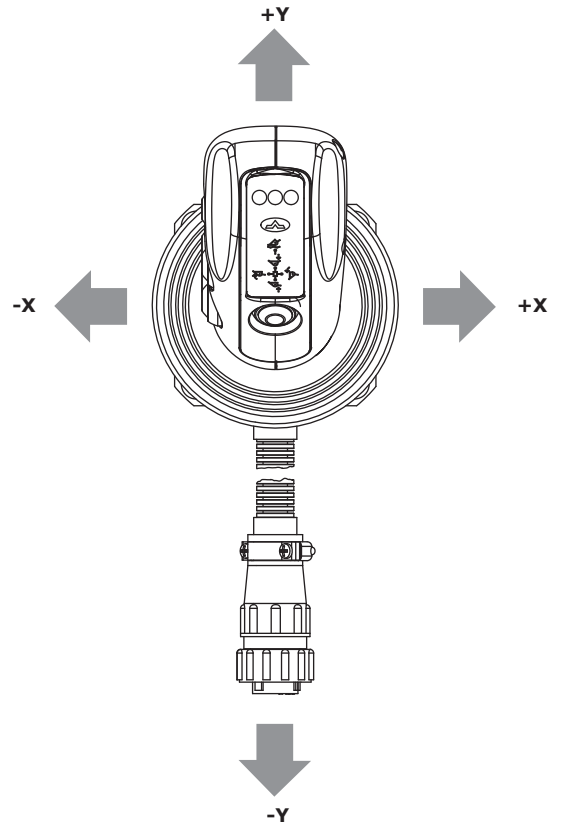
For configuration see page 14.



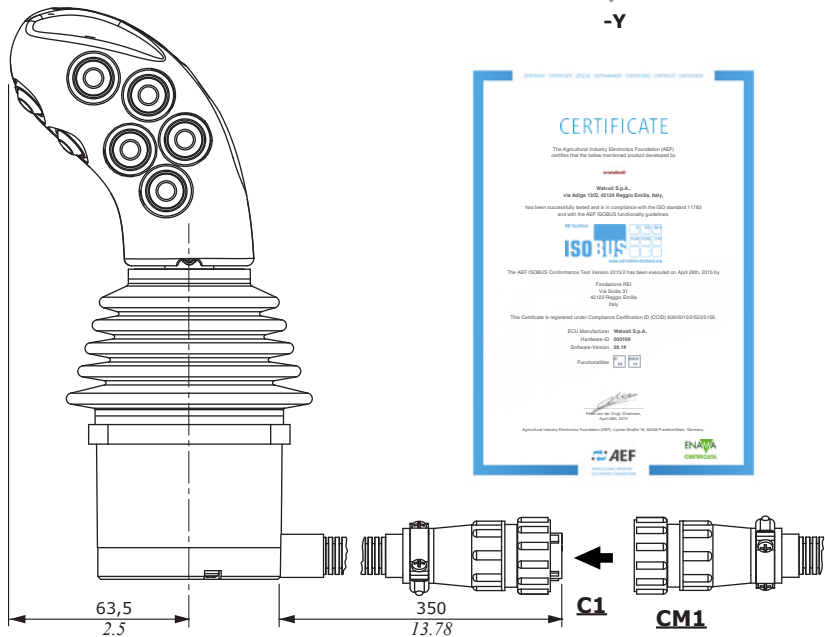
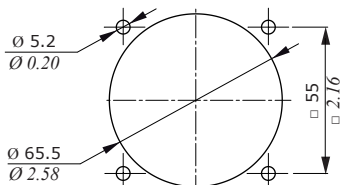
**CPC-9P
AMP MPF connector**
(selective gold plated contacts)



1	VJ+	6	not conn.
2	CAN_L	7	VJ+
3	CAN_L	8	not conn.
4	CAN_H	9	VJ-
5	CAN_H		



Panel cut out



Mating connector	
Name	Type
CM1	AMP CPC - 9 FPM

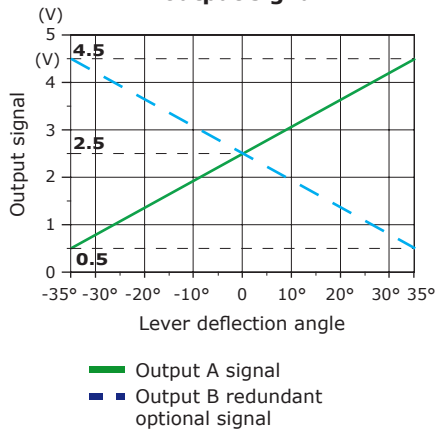
Electric device features

ARW type proportional roller

Supply voltage	from 8 to 32 VDC
Max. current consumption	< 24 mA
Max. output current	1 mA
Output signal (range)	0,5 - 4,5 V
Output signal (central position)	2,5V
Signal tolerance (central position and stroke end)	±100 mV
Minimum load	10 KΩ
Actuator deflection angle	± 35° (±1°)
Mechanical life (nr. of operations)	10 ⁶
Operating force	2 N
Mechanical vibration	IEC 68-2
	EN 60068-2-29
Mechanical shock	(pulse 400m/s ² x 6 ms, 100 times)
Weather protection	IP67-IPX9K
EMC compatibility	ISO 13766 ISO 14982



Proportional roller output signal



T type ON/OFF push-button

Execution	spring return
Contact type	normally open
Current rating	200 mA resistive load @ 12 VDC
Mechanical life (nr. of operations)	10 ⁶
Electric life (nr. of operations)	20x10 ⁴
Weather protection	IP67 with handle mounting



M type ON/OFF push-button

Execution	spring return, with detent
Contact type	normally open
Current rating	200 mA @ 12 VDC resistive load
Mechanical life (nr. of operations)	10 ⁶
Electric life (nr. of operations)	5x10 ⁵
Mechanical life (nr. of operations)	IP67 with handle mounting
Electric life (nr. of operations)	10 mA



K type ON/OFF push-button

Execution	spring return
Contact type	normally open
Current rating	5 A resistive load @ 12 VDC
Mechanical life (nr. of operations)	10 ⁵
Electric life (nr. of operations)	25x10 ³
Weather protection	IP64

