

Rotary Transducer

Analogue Rotary Transducer - Industry Type



Series WP

- ***High precision potentiometer***
- ***Rotation angle 180° / 320°
and Multiturn 3 / 5 / 10 / ... / up to 120 turns***
- ***Case diameter: 40 / 58 mm***
- ***Protection: IP60 to IP67***
- ***Output: voltage divider, 0-10 VDC, 4-20 mA***
- ***Linearity: up to 0,05%***
- ***Rotation speed: 200 rpm***
- ***Torque: 0,8 Ncm***
- ***Life expectancy: 2 mio. turns***
- ***Housing: anodised aluminium***

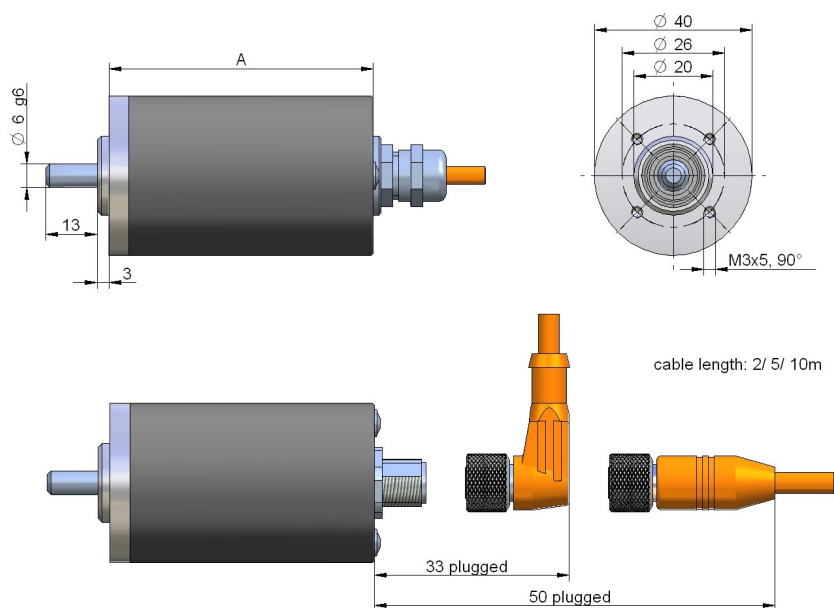
Technical data (mechanical) – WP-M series

WP-M	turns [°]	linearity [%]	continuous rotation
1 Turn	320	0,5 (0,25)	yes
3 Turn	1000	0,15 (0,10)	-
5 Turn	1800	0,15 (0,10)	-
10 Turn	3600	0,15 (0,10)	-

Linearity values in brackets are optional and available on request.

signal direction	signal increasing counter clock wise (view on shaft)
housing	aluminium, titan grey anodised
storage temperature	-30...+85°C
connection	M12-connector or TPE-cable (2m) with cable outlet
rotation speed max.	200 rpm
torque	0,8 Ncm
shaft material	stainless steel
shaft bearing	2 sealed bearings, type 2RS
shaft load	40 N radial, 25 N axial
protection class (housing)	IP65 or IP67
protection class (shaft input)	IP60 or IP65
life time	at least 2 mio. shaft turns
w eight	approx. 130 g

Technical drawing – WP-M series



output	A
potentiometer	53,5
10V / 420A	67

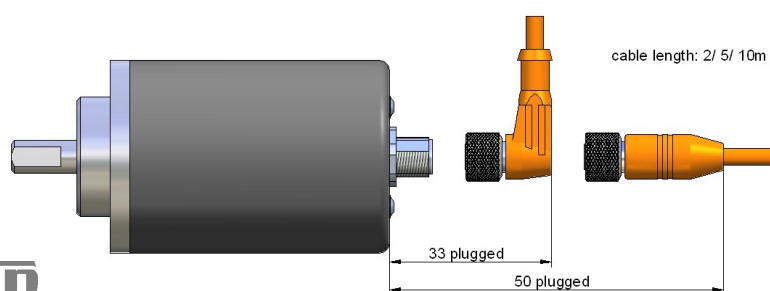
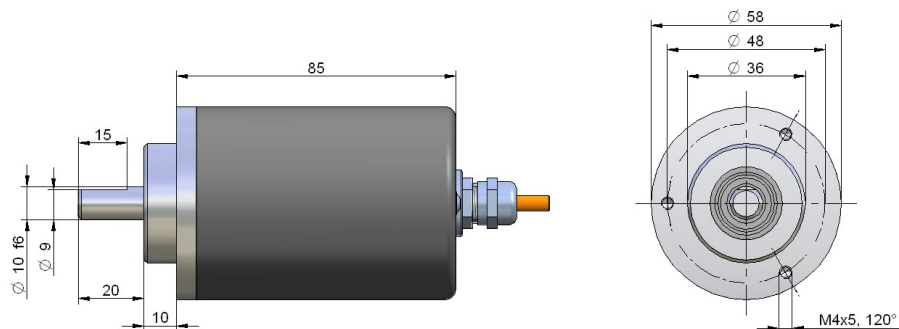
Technical data (mechanical) – WP series

WP	range [°]	linearity [%]	continuous rotation
180	180	0,50 (0,25)	yes
1 Turn	320	0,50 (0,10)	yes
3 Turn	1000	0,15 (0,10)	-
5 Turn	1800	0,15 (0,10)	-
10 Turn	3600	0,10 (0,05)	-
20 Turn	7200	0,10 (0,05)	-
30 Turn	10800	0,10 (0,05)	-
45 Turn	16200	0,10 (0,05)	-
60 Turn	21600	0,10 (0,05)	-
75 Turn	25200	0,10 (0,05)	-
90 Turn	32400	0,10 (0,05)	-
100 Turn	36000	0,10 (0,05)	-
120 Turn	43200	0,10 (0,05)	-

Other measurement ranges are available on request. Linearity values in brackets are optional and available on request.

signal direction	signal increasing counter clock w ise (view on shaft)
housing	aluminium, titan grey anodised
storage temperature	-30...+85°C
connection	M12-connector or TPE-cable (2m) w ith cable outlet
rotation speed max.	200 rpm
torque	0,8 Ncm
shaft material	stainless steel
shaft bearing	2 sealed bearings, type 2RS
shaft load	50 N radial, 30 N axial
protection class (housing)	IP65 or IP67
protection class (shaft input)	IP60, IP65 or IP67
life time	at least 2 mio. shaft turns
w eight	approx. 260 g

Technical drawing – WP series

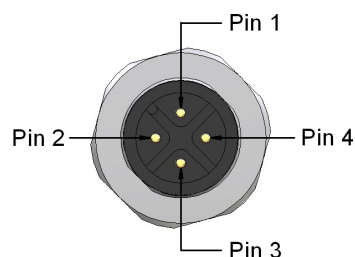


Technical data (electrical)

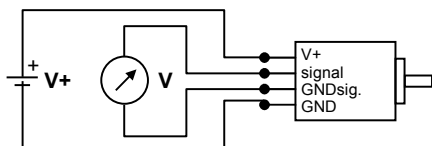
	potentiometer output (voltage divider)	0...10 V output	4...20 mA output
output	1 kOhm	0...10 V, isolated	4...20 mA
supply	max. 30 V	12...30 VDC	12...30 VDC
recommended cursor current	< 1 µA	-	-
current carrying capacity	-	22,5 mA (w ithout load)	-
output current	-	max. 10 mA, min. load 1 kOhm	max. 50 mA in case of error*
dynamic	-	< 3 ms from 0...100% a. 100...0%	< 1ms from 0...100% a. 100...0%
output ripple	depending on supply	3 mVpp typic, max. 37 mVpp	0,03 mApp = 6 mVpp on 200 Ohm
reverse polarity	-	yes, infinite	yes, infinite
shortcut protection	-	yes, permanent	-
w orking temperature	-20...+85°C	-20...+75°C	-20...+75°C
temperature coefficient	±0,0025 %/K	0,0037 %/K	0,0079 %/K

Connection

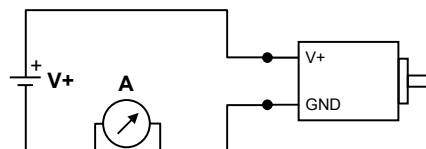
Pin/ cable colour	10 V	420 mA	1 kOhm
1 brown	V+	V+	V+
2 white	signal	n.c.	cursor
3 blue	GND	GND	GND
4 black	GNDsig.	n.c.	n.c.



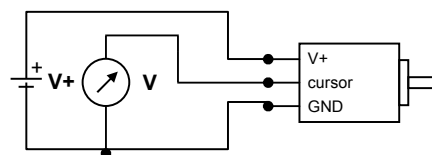
**0...10 V output
4-wire (isolated)**



**4...20 mA output
2-wire**

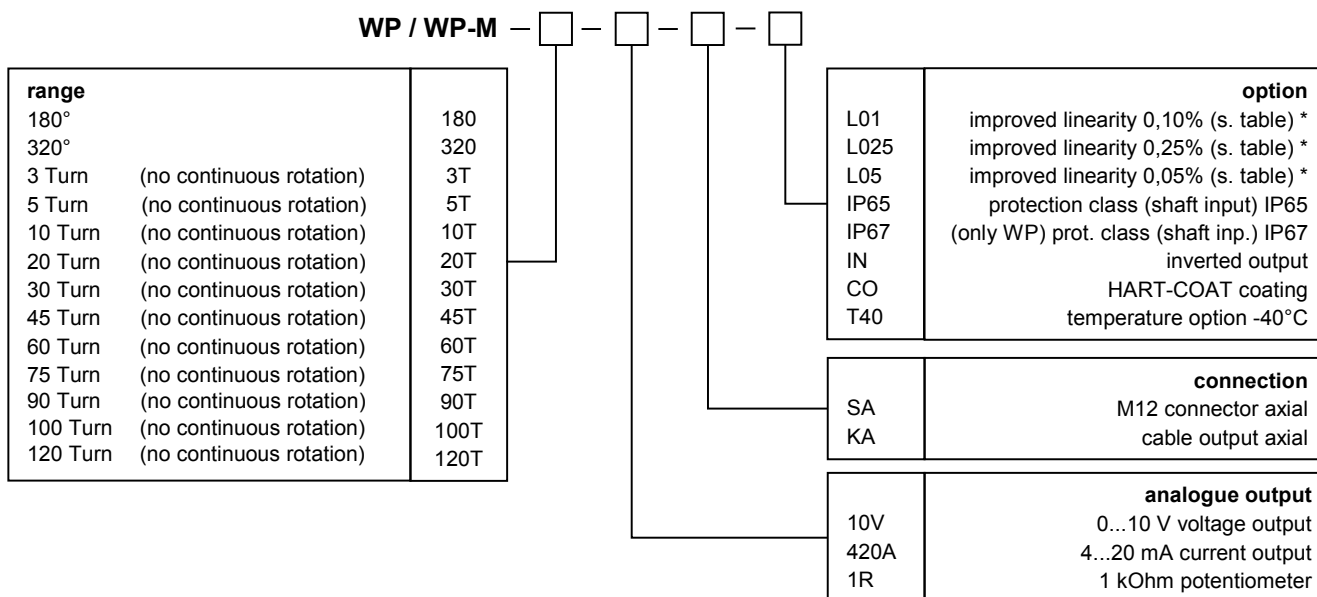


**potentiometer output
voltage divider**



* i.e. exceeding specified range by continuous rotation

Order code



* on request

Accessories

cable with M12 mating connector

K4P2M-S-M12	2m, straight connector
K4P5M-S-M12	5m, straight connector
K4P10M-S-M12	10m, straight connector
K4P2M-SW-M12	2m, angular connector
K4P5M-SW-M12	5m, angular connector
K4P10M-SW-M12	10m, angular connector

M12 mating connector

D4-G-M12-S	(straight)
D4-W-M12-S	(angular)

extended connector cable for transducer with cable output
additional metre of TPE-cable

We reserve the right to alter the specification without prior notice.

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