



Online Data Sheet

인크리멘탈 옵티컬 로터리 엔코더 - Ø53mm

WDG 53V 시리즈

Wachendorff Automation

... systems and encoders

- Complete systems
- Industrial rugged encoders to suit your application
- Standard range and customer versions
- Maximum permissible loads
- 48-hour express production
- Made in Germany
- Worldwide distributor network

Encoder WDG 53V

www.wachendorff-automation.com/wdg53v

IndustrieROBUST

Encoder WDG 53V



1. IP68의 완전 방수 로터리 엔코더
 - OUTDOOR 환경에 사용 가능
 - 열악한 환경에서 사용 가능
2. 내구성이 뛰어난 소형 로터리 엔코더
 - 좁은 공간에 설치가 용이함.
3. Screw 타입의 플랜지로 설치가 간편함
4. 옵티컬(Optical) 방식으로 정밀한 출력
5. CE 및 UL 인증 제품

www.wachendorff-automation.com/wdg53v

Resolution

Max. pulses per revolution up to 1500 PPR
PPR

Mechanical Data

Housing

Flange screw flange
Starting torque nut max. 10 Nm
Flange material stainless steel, V2A
Housing cap stainless steel, V2A
Housing Ø 53 mm

Shaft(s)

Shaft material stainless steel, V2A
Starting torque approx. 1.2 Ncm at ambient temperature

Shaft Ø 6 mm
Shaft length L: 13 mm
Max. Permissible shaft loading radial 30 N
Max. Permissible shaft loading axial 45 N

Bearings

Bearings type 2 precision ball bearings
Nominale service life
1 x 10⁹ revs. at 100 % rated shaft load
1 x 10¹⁰ revs. at 40 % rated shaft load
1 x 10¹¹ revs. at 20 % rated shaft load
Max. operating speed 6000 rpm

Machinery Directive: basic data safety integrity level

MTTF_d 200 a
Mission time (TM) 25 a
Nominale service life (L10h) 1 x 10¹¹ revs. at 20 % rated shaft load and 6000 rpm
Diagnostic coverage (DC) 0 %

Electrical Data

Power supply/Current consumption 4,75 VDC up to 5,5 VDC: typ. 70 mA
Power supply/Current consumption 10 VDC up to 30 VDC: typ. 70 mA

Output circuit	TTL, RS422 compatible, inv. HTL
Pulse frequency	TTL ≤ 1500 ppr: max. 200 kHz HTL ≤ 1500 ppr: max. 200 kHz
Channels	AB ABN and inverted signals
Load	max. 40 mA / channel
Circuit protection	circuit type H24 and R24 only

Accuracy

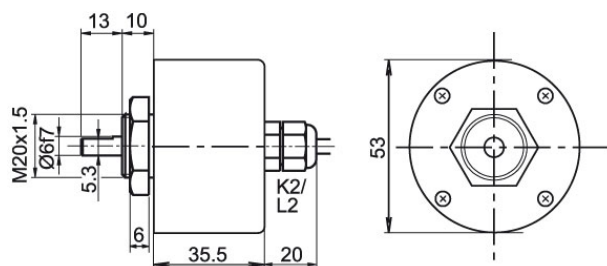
Phase offset 90° ± max. 7.5 % of the pulse length
pulse-/pause-ratio 50 % ± max. 7 %

General Data

Weight approx. 470 g
Connections cable outlet
Protection rating (EN 60529) IP68
Operating temperature -20 °C up to +80 °C
Storage temperature -30 °C up to +80 °C

More Information

General technical data and safety instructions
<http://www.wachendorff-automation.com/gtd>
Options
<http://www.wachendorff-automation.com/acc>

Cable connection K2, L2 with 2 m cable

Description
ABN inv. poss.
K2 axial, shield not connected

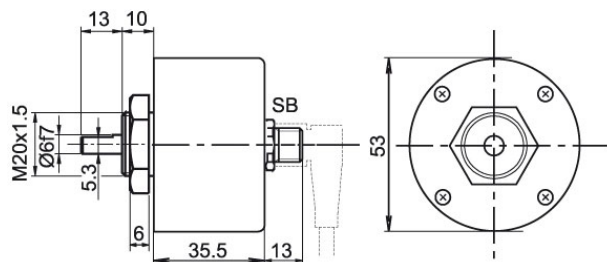
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L2 axial, shield connected to encoder housing

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Assignments

	K2, L2	K2, L2
Circuit	H05, H24	R05, R24
GND	WH	WH
(+) Vcc	BN	BN
A	GN	GN
B	YE	YE
N	GY	GY
Light reserve warning	-	-
A inv.	-	RD
B inv.	-	BK, (BU at ACA)
N inv.	-	VT
Shield	flex	flex

Sensor-connector (M12x1) SB, 4-, 5-, 8-pin

Description
ABN inv. poss.

SB4	axial, 4-pin, Connector connected to encoder housing	-
SB5	axial, 5-pin, Connector connected to encoder housing	-
SB8	axial, 8-pin, Connector connected to encoder housing	•

Assignments

	SB4	SB5	SB8	SB8
	4-pin	5-pin	8-pin	8-pin
Circuit	H05, H24	H05, H24	H05, H24	R05, R24
GND	3	3	1	1
(+) Vcc	1	1	2	2
A	2	4	3	3
B	4	2	4	4
N	-	5	5	5
Light reserve warning	-	-	-	-
A inv.	-	-	-	6
B inv.	-	-	-	7
N inv.	-	-	-	8
n. c.	-	-	6, 7, 8	-
Shield	-	-	-	-

Options

Low temperature

The encoder WDG 53V with the output circuit types H24, R24 is also available with the extended temperature range -40 °C up to +80 °C (measured at the flange).

Order key

ACA

Cable length

The encoder WDG 53V can be supplied with more than 2 m cable. The maximum cable length depends on the supply voltage and the frequency; see www.wachendorff-automation.com/atd

Please extend the standard order code with a three figure number, specifying the cable length in decimetres.

Example: 5 m cable = 050

Order key

XXX = Decimeter

Example Order No.		Type					Your encoder								
WDG 53V		WDG 53V					WDG 53V								
		Pulses per revolution PPR:													
1500		4, 9, 10, 15, 20, 25, 28, 30, 40, 50, 60, 90, 100, 120, 125, 128, 150, 160, 180, 200, 235, 250, 300, 314, 318, 360, 400, 500, 600, 625, 635, 720, 900, 1000, 1024, 1080, 1200, 1250, 1500 Other PPRs on request													
		Channels:													
ABN		AB, ABN													
		Output circuit													
H24		Resolution PPR	Power supply VDC	Output circuit			Light reserve warning		Order key						
		up to 2500	4.75 - 5.5	TTL			-		H05						
			4.75 - 5.5	TTL, RS422 comp., inverted			-		R05						
			10 - 30	HTL			-		H24						
			10 - 30	HTL inverted			-		R24						
		Electrical connections													
K2		Description					ABN inv. poss.		Order key						
		Cable: length (2 m standard, WDG 58T: 1 m)													
		axial, shield not connected					•		K2						
		axial, shield connected to encoder housing					•		L2						
		Connector: (shield connected to encoder housing)													
		sensor-connector, M12x1, 4-pin, axial					-		SB4						
		sensor-connector, M12x1, 5-pin, axial					-		SB5						
		sensor-connector, M12x1, 8-pin, axial					•		SB8						
		Options													
		Description					Order key								
		Low temperature					ACA								
		Without option					Empty								
		Cable length					XXX = Decimeter								
Example Order No.=		WDG 53V	1500	ABN	H24	K2		WDG 53V							Your encoder

Example Order No.=	WDG 53V	1500	ABN	H24	K2		WDG 53V						Your encoder
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For further information please contact our local distributor.
Here you find a list of our distributors worldwide.
http://www.wachendorff-automation.com/distributors_worldwide.html

CREKEN

주식 회사 크레켄

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