

Installation Kit for frequency-control lifts WDGAK100K with hollow shaft encoder



The following installation kits are available for fitting the encoder to a frequency controlled lift. Every installation kit consists:
1 x Encoder, 1 x with 15 m ready-made shielded cable, 6 x insulating sleeves

Mechanical Data

Housing

- Flange: hollow shaft (through-bored)
- Flange material: Aluminium
- Cap: Aluminium, powder coated
- Torque Support: Incl. 1 spring plate WDGDS10012
- Compensation: axial: $\pm 0,8$ mm, radial: $\pm 0,2$ mm
- Diameter: \varnothing 100 mm

Hollow shaft (through-bored)

- Material: stainless steel, (insulating sleeves: POM-C)
- Starting torque: approx. 1.5 Ncm at ambient temperature
- Fixing: clamping screw M4 with hexagon socket
- Shaft length: 48.8 mm
- Max. Permissible shaftloading: max. 200 N radial, max. 100 N axial

Bearings

- Type: 2 precision ball bearings
- Service life: 3x 10¹⁰ revs. at 100 % shaft load, 1x 10¹¹ revs. at 40 % shaft load, 1x 10¹² revs. at 20 % shaft load

Weight:

approx. 900 g

Connections:

SH8: radial connector, 8 pin

Protection rating:

IP54

Operating temperature: -20 °C up to +80 °C, 1 Vpp: -10 °C up to +70 °C

Storage temperature: -30 °C up to +80 °C

Electric strength Insulating sleeve: 500 V

(DIN EN 60243-2)

Machinery Directive:

- basic data safety integrity level**
- MTTF_c: 200 a
 - Mission time (T_m): 25 a
 - Nominale service life: 1x 10¹² revs. at 3500 rpm and (L_{10h}): 20 % rated shaft load
 - Diagnostic coverage: 0 % (DC)
 - Encoder-Order No.: WDG100K-45-YYYY-ABN-H24-SH8
 - YYYY: with 1024, 2048, 4096 PPR
 - 3 channels, A, B and zero marker pulse N
 - H24: 10 VDC up to 30 VDC HTL power supply
 - SH8: radial connector, 8 pin

- WDG100K-45-YYYY-ABN-R05-SH8
 - YYYY: with 1024, 2048, 4096 PPR
 - 6 channels, A, B, zero marker pulse N + Inv.
 - 4,75 up to 5 VDC, TTL, power supply with inv. output
 - SH8: radial connector, 8 pin

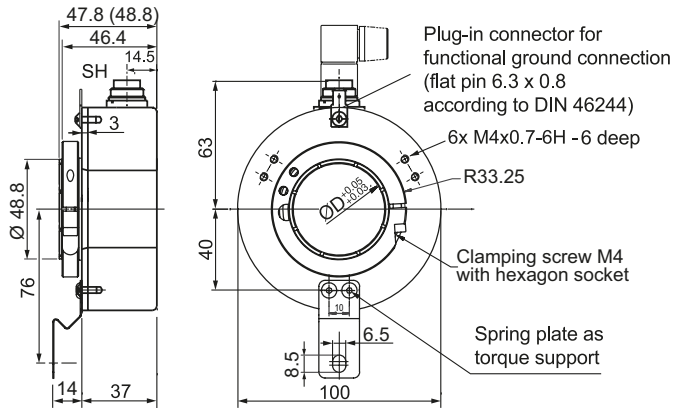
- WDG100K-45-YYYY-AB-SIN-SH8
 - YYYY: with 1024, 2048 PPR
 - 4 channels A, B (Sin/Cos)
 - 4,75 up to 5 VDC, power supply, 1 Vpp Sin/Cos
 - SH8: radial connector, 8 pin

YYYY: Please specify required your PPR

- Easy installation on all motor shafts
- Flexible mounting option
- Space-saving
- HTL, TTL or sine wave output
- for motor shafts 25, 30, 32, 38, 40, 42 and 45 mm

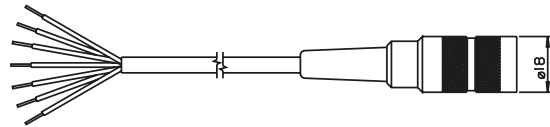
www.wachendorff-automation.com/wdgak100k

Anbaukit WDGAK100K:



Cable:

The cable is 15 m in length and is shielded, however the shield is not connected to the connector housing at HTL/TTL. With a mated connector, the encoder meets protection class IP40.

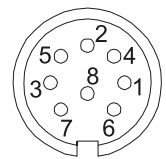


The cable has a connection as follows:

Function	Colour (HTL/TTL)	Color (Sine)
Positive	brown	brown
Negative	white	white
A	green	green
A inv.	red	yellow
B	yellow	gray
B inv.	black	rosa
N	gray	-
N inv.	violet	-
Shield:	cable braiding	cable braiding
Order No:	KD84015	KD840SIN15

Pin identification SH8:

Function	PIN (HTL)	PIN (TTL)	PIN (Sine)
Positive	2	2	2
Negative	1	1	1
A	3	3	3
A inv.	-	6	6
B	4	4	4
B inv.	-	7	7
N	5	5	-
N inv.	-	8	-



The view of the soldered side of the connector connector corresponds to the view of the pin arrangement on the encoder.



Installation Kit WDGAK100K:

- Encoder WDG100K
- 7 Shaft diameter: 1x Ø 45 mm (encoder); 6 insulating sleeves: Ø 42 mm, 40 mm, 38 mm, 32 mm, 30 mm, 25 mm.
- 15 m cable with female connector, 8-pin

Ordering information Installation Kit WDGAK100K:

Description:	Order No:
<p>Installation Kit 4.75 - 5 VDC, TTL, RS422 comprising:</p> <ul style="list-style-type: none"> - WDG100K-45-YYYY-ABN-R05-SH8 - YYYY: with 1024, 2048, 4096 Imp. - 6 channels, A, B, N, \bar{A}, \bar{B}, \bar{N} - R05: 4.75 - 5 VDC TTL power supply with inv. output circuit - SH8: radial connector, 8 pin - KD84015: 15 m ready-made cable - 6 insulating sleeves: - WDGHI4525 - WDGHI4530 - WDGHI4532 - WDGHI4538 - WDGHI4540 - WDGHI4542 	<p>WDGAK-100K-YYYY-R05</p>
<p>Installation Kit 10 - 30 VDC, HTL comprising:</p> <ul style="list-style-type: none"> - WDG100K-45-YYYY-ABN-H24-SH8 - YYYY: with 1024, 2048, 4096 Imp. - 3 channels, A, B and zero marker pulse N - H24: 10 - 30 VDC power supply - SH8: radial connector, 8 pin - KD84015: 15 m ready-made cable - 6 insulating sleeves: - WDGHI4525 - WDGHI4530 - WDGHI4532 - WDGHI4538 - WDGHI4540 - WDGHI4542 	<p>WDGAK-100K-YYYY-H24</p>
<p>Installation Kit 4,75 - 5 VDC, 1 Vpp Sin/Cos comprising:</p> <ul style="list-style-type: none"> - WDG100K-45-YYYY-AB-SIN-SH8 - YYYY: with 1024, 2048 Imp. - 4 channels, A, B, \bar{A}, \bar{B} - SIN: 4.75 - 5 VDC TTL power supply 1 Vpp Sin/Cos - SH8: radial connector, 8 pin - KD840SIN15: 15 m ready-made cable - 6 insulating sleeves - WDGHI4525 - WDGHI4530 - WDGHI4532 - WDGHI4538 - WDGHI4540 - WDGHI4542 	<p>WDGAK-100K-YYYY-SIN</p>

Customs tariff number: 90318020
Country of origin: Germany

Montageanleitung Hohlwellengeber WDG/WDGI

Assembly instructions hollowshaft encoder, Notice de montage codeur rotatif à arbre creux, Instrucciones de montaje encoder ad albero cavo, istruzioni di montaggio encoders de eje hueco.

Montage nur qualifiziertes Personal, Assembly only qualified personnel, Montage par qualifié personnel, Montaggio solo personale qualificato, Montaje solamente personal cualificado.
Sicherheitsmassnahmen/Safety instructions: Einsatz nur in Industrieumgebung und NICHT im sicherheitsrelevanten Bereich. Only for use in industrial environments and NOT for safety-relevant areas. Utilisation uniquement dans un environnement industriel et PAS dans un domaine lié à la sécurité. Utilicelo sólo en entornos industriales y NO en áreas relevantes para la seguridad. Utilizzare solo in ambienti industriali e NON in aree riguardanti la sicurezza.

Power supply: Class 2 only

DIN EN 100015-1

	WDGI (Stecker , connector, connecteur, conector, spina): -40 °C ... +85 °C (-40 °F ... +185 °F)		WDG* + WDGI (Kabel , cable, Câble, Cable, cavo)**: -20 °C ... +80 °C (-4 °F ... +176 °F) Option: * -40 °C ... +80 °C (-40 °F ... +176 °F) ** -40 °C ... +85 °C (-40 °F ... +185 °F) 1Vss: -10 °C ... +70 °C (14 °F ... +158 °F)		-30 °C ... +80 °C (-22 °F ... +176 °F)
--	--	--	---	--	---

Kabel ø, cable, Câble, Cable, cavo	R1	R2	Temperatur
≤ 7 mm	31,5 mm	94,5 mm	T > -20 °C (-4 °F)
> 7 mm	41,5 mm	124,5 mm	T > -20 °C (-4 °F)
≤ 7 mm	46,5 mm	139,5 mm	T > -40 °C (-40 °F)
> 7 mm	62,3 mm	186,9 mm	T > -40 °C (-40 °F)

58H/E 40E Artikelnr., Item number, Numéro d'article, Número de artículo : WDGDS10001

d/mm	Lmin.	Lmax.	D
58H 6, 6.35 (1/4"), 7, 8, 9.525 (3/8"), 10, 12, 12.7 (1/2"), 14, 15	11	11	56
58E opt. 6, 6.35 (1/4"), 7, 8, 9.525 (3/8"), 10, 12, 15	11	39	56
58E magn. 6, 6.35 (1/4"), 7, 8, 9.525 (3/8"), 10, 12	11	16	56
40E 6	11	20	50

M5 (8.8), Ma=3Nm
M3 (8.8), Ma=1Nm

80H Artikelnr., Item number, Numéro d'article, Número de artículo : WDGDS10001

d/mm
80H 10, 12, 14, 15, 16, 18, 20, 25, 27

M5 (8.8), Ma=3Nm
2x M4 (8.8), Ma=2Nm

100I/K Artikelnr., Item number, Numéro d'article, Número de artículo : WDGDS10012

d/mm
WDG100I 25, 30, 32, 38, 40, 42
WDG100K 45

M6 (8.8), Ma=3Nm
M4, Ma=2Nm

L < Lmax: 100 m, 150 m

Schirm, Shield, Blindage, Malla, Schermo

Vcc
GND

WDG... L1/L2/L3: Erdschleifen vermeiden, Avoid ground loops, Eviter les boucles de masse, Evitar bucles de tierra, Evitare loop di massa
K1/K2/K3: —
Sx: —

WDGI36E Artikelnr., Item number, Numéro d'article, Número de artículo :

d/mm	Lmin.	Lmax.	D
WDGDS10016 WDG36E 6, 6.35 (1/4")	8	17	42
WDGDS10021 WDG36E 8, 10, 12, 14, 15	10	14,5	42

Ma = 0,5 Nm
M3 (8.8) Ma = 1 Nm
d = Ø 6 mm, 1/4"

100H/G Artikelnr., Item number, Numéro d'article, Número de artículo : WDGDS10001

d/mm
100H/G 25, 12 (=25.4), 28, 30, 32, 35, 36, 38, 40, 42, 45

M5 (8.8), Ma=3Nm
2x M4 (8.8), Ma=2Nm

100G Artikelnr., Item number, Numéro d'article, Número de artículo : FEFB00H013-ZVK

M6 (8.8), Ma=3Nm
2x M4 (8.8), Ma=2Nm

145H Artikelnr., Item number, Numéro d'article, Número de artículo : WDGDS10001

d/mm
145H 45, 48, 50, 55, 60, 65, 72

3x M5 (8.8), Ma=3Nm
M4 (8.8), Ma=2Nm

Frühwarnausgang	OPEN-Collector	IRLED	IRLED
Early-warning output, Sortie d'alerte, Salida de advertencia temprana uscita di preavvertimento			
145H -> G24/I24/G05/I05		low	high
80H -> SIF/G24/I24/G05/I05/524			
100G/H/I/K -> SIF			
58H -> G24/I24/G05/I05/524		high	low
58E -> G24/I24/G05/I05/524			

Schaltung Circuit Couplage Commutación collegamento	Stecker, connector, Fiche, Connector, spina										M12-Sensorstecker, sensor-connector, Fiche de palpeur, Connecto de sonda, spina sensore			Kabel, cable, Câble, Cable, cavo				
	S15 axial, SH5 radial, 5-pin	S2 axial, S3 radial, 7-pin	S18 axial, SH8 radial, 8-pin	S12 axial, SH12 radial, 12-pin	S4 axial, S4R axial, S5 radial, S5R radial, 12-pin	S6 radial, 6-pin	S7 axial, 4-pin	SK8 axial, 8-pin	SB4 axial, SC4 radial, 4-pin	SB5 axial, SC5 radial, 5-pin	SB8 axial, SC8 radial, 8-pin	SB12 axial, SC12 radial, 12-pin	K1/K7/L7	I/R/P05 I/R/P24 I/R/P05 I/R/P24	ACA: 24C 30A 40	ACA: 58, 63, 67, 70, 115	58S/V	
F/H/05 F/H24 H30 N35	G/F/H/05 G/F/H24 H30 N35	F/H/05 F/H24 H30 N35	G/F/H/05 G/F/H24 H30 N35	G/F/H/05 G/F/H24 H30 N35 SIN, SIF R30 M35	G/F/H/05 G/F/H24 H30 N35	F/H/05 F/H24 H30 N35	N05 M05 N30 M30	F/H/05 F/H24 H30 N35	F/H/05 F/H24 H30 N35	F/H/05 F/H24 H30 N35	F05 H05 R05 P24 R24 H24 R30 N35 M35	G/F05/I/P/R05 H05 I/P/R24 G/F24/ 245 H24 524 H30 645 N35 R30 M35	G/F/H05 G/F/H24 H30 M05 M30 N05 R24 M35 N30 N35	I/R/P05 I/R/P24 I/R/P05 I/R/P24	SIN SIF	524 524 645 645 R30	WH WH WH WH	WH WH WH WH
Minus U-	1	1	1	10	A	1	3	3	3	1	1	3	1	3	1	3	3	3
Plus U+	2	2	2	12	F	2	2	2	2	2	2	2	2	2	2	2	2	2
A	3	3	3	5	C	3	4	3	4	3	3	4	3	4	3	4	4	4
B	4	4	4	8	B	4	5	4	4	4	4	5	4	4	4	5	6	6
N	5	5	5	3	D	-	1	5	5	5	5	7	5	7	5	7	8	8
Frühwarn- ausgang*1	-	-	-	11	E	-	-	-	-	-	-	5	-	-	-	-	5	5
A inv.	-	-	-	6	-	-	-	-	-	-	-	6	-	-	-	-	6	6
B inv.	-	-	-	6	-	-	-	-	-	-	-	7	-	-	-	-	7	7
N inv.	-	-	-	4	-	-	-	-	-	-	-	8	-	-	-	-	8	8
n. c.	-	7	6, 7, 8	1, 2, 4, 6, 7, 9 Sinus 2, 9, 11	-	-	6	-	-	-	-	6, 7, 8	-	-	-	-	-	-
Schirm*2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

WH: weiss, white, blanc, bianco, blanco
BN: braun, brown, brun, marrón, marrone
GN: grün, green, vert, verde, verde
YE: gelb, yellow, jaune, amarillo, giallo
GY: grau, grey, gris, gris, grigio
PK: rosa, pink, rose, rosa, rosa
RD: rot, red, rouge, rojo, rosso
BK: schwarz, black, noir, negro, nero
BU: blau, blue, bleu, azul, blu
VT: violett, violet, violet, violeta, violetto
Litze: Litze, Flex, Toron, Cordón, Cavetto

***1 Frühwarnausgang nur bei**
 Early-warning output only for
 Sortie d'alerte précoce
 Salida de advertencia prematura
 uscita di preavvertimento
G24, I24, G05, I05, 524, SIF (80H/100H/G/I/K)

Steckergehäuse aus Kunststoff (S7)
 Plastic connector housing (S7)
 Boîtier de connexion en matière plastique (S7)
 Caja de conector de plástico (S7)
 scatola prese in plastica (S7)

***2 Schirm**
 Shield
 Blindage
 Malla
 Schermo

Steckergehäuse/Schirm mit Gebergehäuse leitend verbunden. (Nicht S7, K1, K2, K3)
 Connector housing/shield electrically connected to encoder housing (not S7, K1, K2, K3)
 Boîtier de connexion/Ecran avec boîtier d'émetteur liés de manière conductrice (No S7, K1, K2, K3)
 Caja de conector/Malla conectada en conductancia con caja de transmisor (No S7, K1, K2, K3)
 Scatola prese/Schermo con scatola trasmettitore collegata da condurre (No S7, K1, K2, K3)

WACHENDORFF
www.wachendorff-automation.de
www.wachendorff-automation.com

Technical Support
 Germany:
 Tel.: +49 (0)67 22/99 65 131
 Fax: +49 (0)67 22/99 65 70
 eMail: support-wa@wachendorff.de

Other countries, please contact your distributor.
 Autres pays, veuillez contacter votre distributeur.
 Otros países, rogamos contactar a su distribuidor.
 Per gli altri paesi si prega di contattare il vostro distributore.

