

## Installation Kit for frequency-control lifts WDGAK58E with end 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, 5 x shaft adapter

### Mechanical Data

#### Housing

- Flange: Aluminium
- Cap: Aluminium, powder coated
- Torque Support:
  - 1. Spring plate Incl. 1 spring plate WDGDS10001
  - Compensation: axial:  $\pm 0.8$  mm
  - radial:  $\pm 0.2$  mm
- Max. operating speed: 6000 rpm

#### Hollow bore (blind)

- Material: stainless steel
- Diameter: 10
- Permitted load on shaft end: max. 80 N radial
- Starting torque: approx. 1.6 Ncm at ambient temperature
- Attachment: permanently attached clamping ring

#### Bearings

- Type: 2 precision ball bearings
- Service life:
  - 1x 10<sup>9</sup> revs. at 100 % shaft load
  - 1x 10<sup>10</sup> revs. at 40 % shaft load
  - 1x 10<sup>11</sup> revs. at 20 % shaft load

#### Weight:

Connections: SH8: radial connector, 8 pin

Protection rating: IP65  
(EN 60529)

Operating temperature: -20 °C up to +80 °C

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

### Machinery Directive: basic data safety integrity level

MTTF<sub>d</sub>: 200 a

Mission time (T<sub>M</sub>): 25 a

Nominale service life 1x 10<sup>11</sup> revs. at 6000 rpm and

(L<sub>10h</sub>): 20 % rated shaft load

Diagnostic coverage (DC): 0 %

#### Encoder-Order No.:

WDGI58E-10-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

WDGI58E-10-YYYY-ABN-R05-SH8

- YYYY: with 1024, 2048, 4096 PPR
- 6 channels, A, B, zero marker pulse N + Inv.
- 5 VDC TTL Power supply with inv. output
- SH8: radial connector, 8 pin

WDGI58E-10-YYYY-AB-SIN-SH8

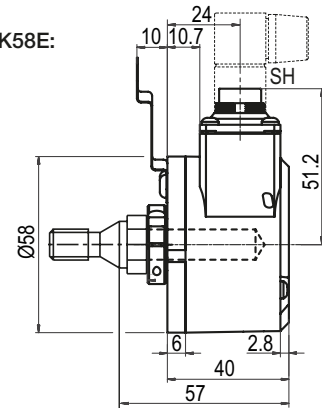
- YYYY: with 1024, 2048 PPR
- 4 channels, A, B (Sin/Cos)
- 4,75 VDC up to 5 VDC, Power supply, 1 Vpp Sin/Cos
- SH8: radial connector, 8 pin

YYYY: Please specify required PPR

- Easy installation on all motor shafts
- Flexible attachment possibilities
- Space-saving
- TTL, HTL, Sin/cos output
- Threads: M8, M10, M12, M16, M20

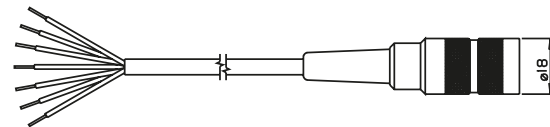
[www.wachendorff-automation.com/wdgak58e](http://www.wachendorff-automation.com/wdgak58e)

### Installation Kit WDGAK58E:



### Cable:

The cable is 15 m in length and is shielded, however the shield is not connected to the connector housing at TTL/HTL. 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

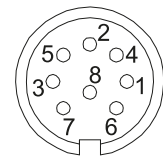
Order No:

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	-



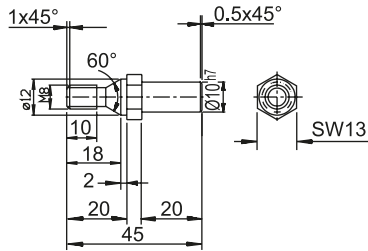
The view of the soldered side of the connector connector corresponds to the view of the pin arrangement on the encoder.

**Shaft adapters**



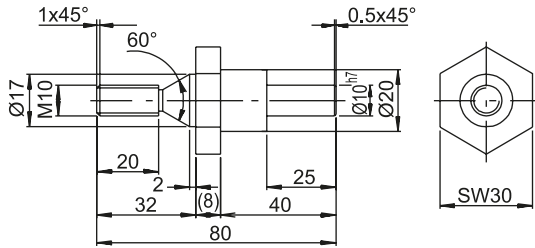
**Shaft adapters:**

The shaft adapters are screwed into an appropriate thread on the lift.



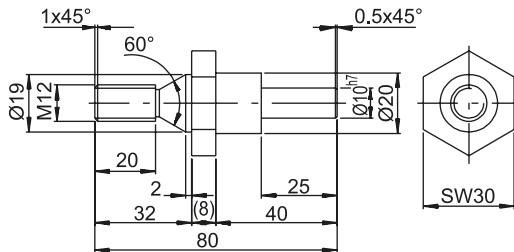
Shaft adapter M8

Order No.: WDGWA10M08



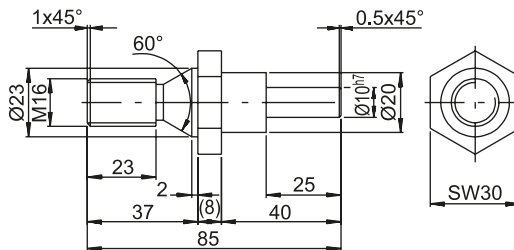
Shaft adapter M10

Order No.: WDGWA10M10



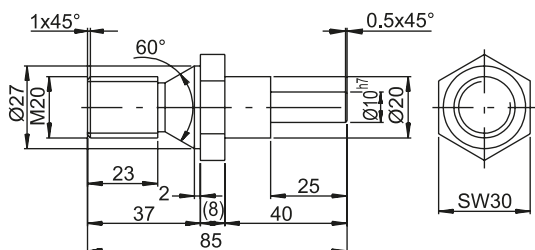
Shaft adapter M12

Order No.: WDGWA10M12



Shaft adapter M16

Order No.: WDGWA10M16



Shaft adapter M20

Order No.: WDGWA10M20

**Ordering information installation kit WDGAK58B:**

Description:	Order No.:
<b>Installation kit 10-30 VDC HTL</b> comprising: - WDG158E-10-YYYY-ABN-H24-SH8 - YYYY: with 1024, 2048, 4096 PPR - 3 channels, A, B, N - H24: 10 - 30 VDC power supply - SH8: radial connector, 8 pin - KD84015: 15 m ready-made cable - Shaft adapter: 08, 10, 12, 16, 20	WDGAK-58E-YYYY-H24
<b>Installation kit 4,75-5VDC, TTL, RS422</b> comprising: - WDG158E-10-YYYY-ABN-R05-SH8 - YYYY: with 1024, 2048, 4096 PPR - 6 channels, A, B, N, A, B, N - R05: 4,75 - 5 VDC TTL power supply with inv. output circuit - SH8: radial connector, 8 pin - KD84015: 15 m ready-made cable - Shaft adapter: 08, 10, 12, 16, 20	WDGAK-58E-YYYY-R05
<b>Installation kit 4,75-5VDC, 1Vpp Sin/Cos</b> comprising: - WDG158E-10-YYYY-AB-SIN-SH8 - YYYY: with 1024, 2048 PPR - 4 channels, A, B, A, B - SIN: 4,75 - 5 VDC Sine power supply - 1 Vpp Sin/Cos - SH8: radial connector, 8 pin - KD840SIN15: 15 m ready-made cable - Shaft adapter: 08, 10, 12, 16, 20	WDGAK-58E-YYYY-SIN

**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 ( <b>Stecker</b> , connector, connecteur, conector, spina): -40 °C ... +85 °C (-40 °F ... +185 °F)		WDG* + WDGI ( <b>Kabel</b> , 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)
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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	39	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

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"

**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

**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

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

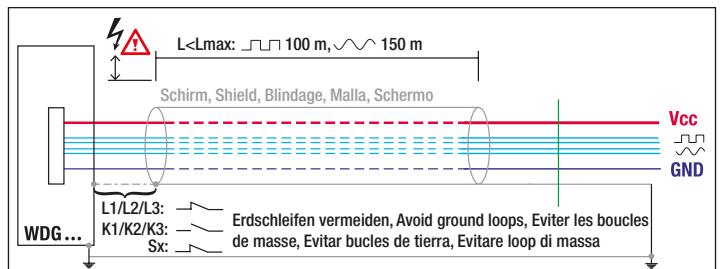
d/mm
WDG100I 25, 30, 32, 38, 40, 42
WDG100K 45

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

**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			

<b>Stecker, connector, Fiche, Connector, spina</b>											
<b>M8-</b>					<b>M12-Sensorstecker, sensor-connector,</b>					<b>Kabel, cable, Câble, Cable, cavo</b>	
<b>S7 axial, 4-pin</b>					<b>S8 axial, 8-pin</b>					<b>ACA:</b> 24C 30A 40	
S16 axial, 5-pin SH5 radial, 5-pin	S2 axial, 7-pin S3 radial, 7-pin	S8 axial, 8-pin SH8 radial, 8-pin	S12 axial, 12-pin SH12 radial, 12-pin	S4 axial, 4-pin S5 radial, 4-pin	S6 radial, 6-pin	S7 axial, 4-pin	S8 axial, 8-pin	S8 axial, 8-pin	S8 radial, 8-pin	K2/L2 axial; K3/L3 radial T3 tangential	
F/H/05 F/H24 H30 N35	G/F/H/05 G/F/H24 H30 N35	F/H05 F/H24 H30 N35	G/F/H05 G/F/H24 H30 N35 SIN, SIF R30 M35	I/P/R05 I/P/R24 245, 524 645	G/F/H/05 G/F/H24 H30 N35	F/H/05 F/H24 H30 N35	N05 M05 N30 M30	F05 H05 F24 R24 H24 H30 R30 N35 645 M35	P05 R05 P24 R24 H24 R30 N35 645 M35	G/F/H05 G/F/H24 H30 M05 M30 N05 N30 N35	I/R/P05 I/R/P24 245 524 645 M35
Schaltung Circuit Couplage Commutación collegamento	Minus U-	Plus U+	A	B	N	Frühwarn- ausgang*1	A inv.	B inv.	N inv.	n. c.	Schirm*2
1	6	1	K/L	K/L	10	A	3	1	3	1	3
2	1	2	M/B	M/B	12	F	2	2	2	2	2
3	2	3	E	E	5	C	3	3	3	3	3
4	4	4	H	H	8	B	4	4	4	4	4
5	3	5	C	C	3	D	5	5	5	5	5
-	5	-	G	G	11	E	-	-	-	-	-
-	-	-	F	F	6	-	-	-	6	-	9
-	-	-	A	A	1	-	-	-	7	-	7
-	-	-	D	D	4	-	-	-	8	-	8
-	7	6, 7, 8	A, D, F, J	J	1, 2, 4, 6, 7, 9	-	-	6,	7, 8	-	2, 10, 11, 12
-	-	-	-	-	Sinus 2, 9, 11	-	-	-	-	-	-
-	-	-	-	-	11	-	-	-	-	-	-
WH	WH	WH	WH	WH	WH	WH	WH	WH	WH	WH	WH
BN	BN	BN	BN	BN	BN	BN	BN	BN	BN	BN	BN
GN	GN	GN	GN	GN	GN	GN	GN	GN	GN	GN	GN
YE	YE	YE	YE	YE	YE	YE	YE	YE	YE	YE	YE
GY	GY	GY	GY	GY	GY	GY	GY	GY	GY	GY	GY
PK	PK	PK	PK	PK	PK	PK	PK	PK	PK	PK	PK
RD	RD	RD	RD	RD	RD	RD	RD	RD	RD	RD	RD
BU	BU	BU	BU	BU	BU	BU	BU	BU	BU	BU	BU
VT	VT	VT	VT	VT	VT	VT	VT	VT	VT	VT	VT

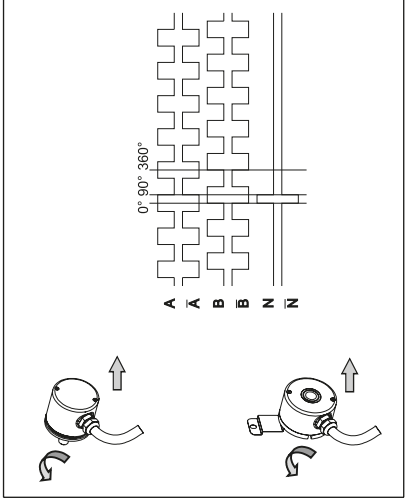
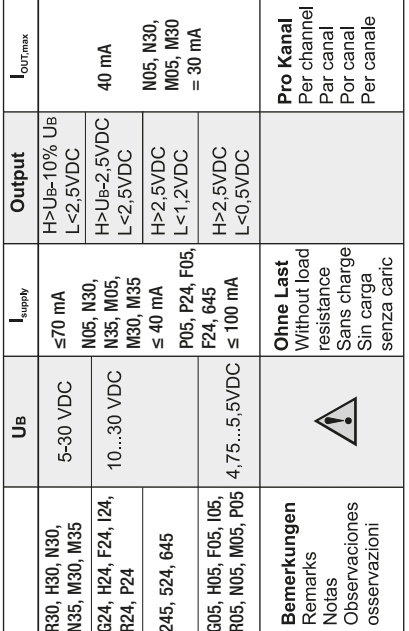
**WH:** weiss, white, blanc, bianco  
**BN:** braun, brown, brun, marrón, marrone  
**GN:** grün, green, vert, verde, verde  
**YE:** gelb, yellow, jaune, amarillo, giallo  
**GY:** grau, grey, gris, gris, grigio  
**PK:** rosa, pink, rose, rosa, rosa  
**RD:** rot, red, rouge, rojo, rosso  
**BK:** 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)**

**\*2 Schirm**  
 Shield  
 Blindage  
 Mella  
 Schermo

**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)

**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/Écran 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](http://www.wachendorff-automation.de)  
[www.wachendorff-automation.com](http://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.

