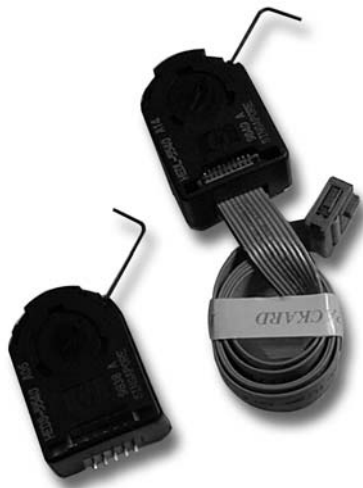




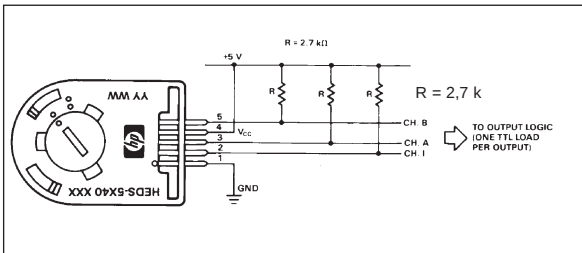
Optical Encoder

Our 3-channel encoders are, besides their compact design and extremely small mass, above all distinguished by the fast and simple mounting.

Technical Characteristics:

Operating Voltage:	DC 4,5 V to 5,5 V
max. Current Consumption:	(at 5 V) 57 mA
Pulse Width:	180 ±35 degree (HEDM ±45 degree)
Signal-Phase Shift:	(Channel A vs. B) 90 ±15 degree
Signal-Rise-/Fall-Time:	0,25 / 0,25 µS
Limit Frequency:	up to 100 kHz
Output Signals:	rectangular 2 + 1 null pulse (HEDM 2)
Pulses per Revolution:	200, 400, 500
add. Option:	with integrated line-driver
Operating Temperature:	0 °C to +70 °C

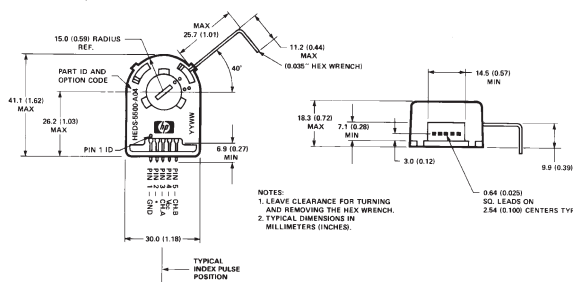
INCREMENTAL ENCODER HEDS... Pin Assignment



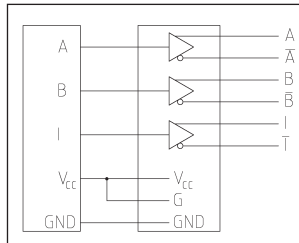
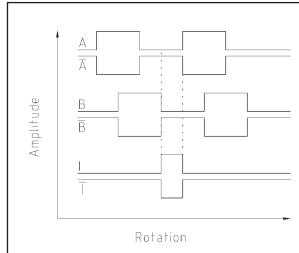
Connection Plug:

AMP 103686-4 / 640442-5; Molex 2695/2759;
Berg 65039--032 / 4825X-000

Dimensions HEDS...



INCREMENTAL ENCODER HEDL... WITH LINE-DRIVER Output Signals / Pin Assignment

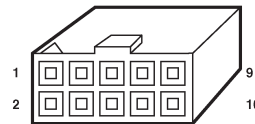


Pinouts

10-PIN CONNECTOR

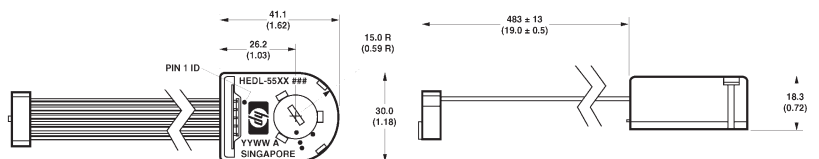
NO.	COLOR	PARAMETER
1	RED	NC
2	GREY	V _{CC} (+5 V)
3	GREY	GND
4	GREY	NC
5	GREY	A
6	GREY	A
7	GREY	B
8	GREY	B
9	GREY	I (INDEX)
10	GREY	I (INDEX)

Pin 10 = I (INDEX)

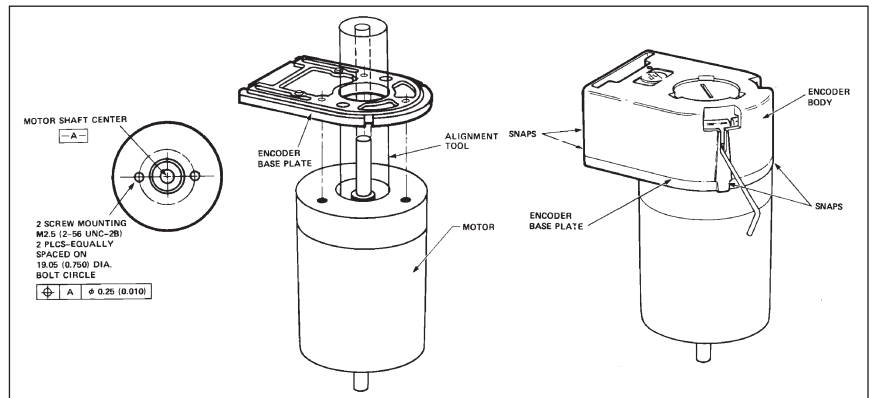
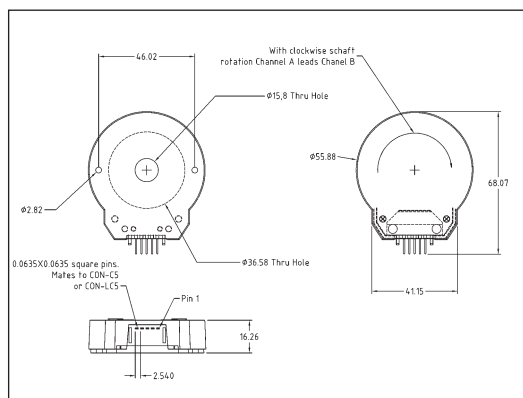


10 POSITION IDC CONNECTOR
CENTER POLARIZED.

Dimensions HEDL...



Encoder - Mounting



Optical Encoders for Stepper Motor Mounting

Order Code	Pulses/Rev.	for shaft Ø mm
HEDS-5540 E06	200	6.35
HEDS-5540 H14	400	5.0
HEDS-5540 H06	400	6.35
HEDS-5540 A02	500	3.0
HEDS-5540 A14	500	5.0
HEDS-5540 A12	500	6.0
HEDS-5540 A06	500	6.35
HEDS-5540 A13	500	8.0
HEDM-5500 B14 (2-Channel, without I-Output)	1000	5.0
HEDM-5500 B06 (2-Channel, without I-Output)	1000	6.35

Encoder with Line-Driver (for extremely fail safe application conditions or long input leads)

HEDL-5540 E06	200	6.35
HEDL-5540 H14	400	5.0
HEDL-5540 H06	400	6.35
HEDL-5540 A02	500	3.0
HEDL-5540 A14	500	5.0
HEDL-5540 A12	500	6.0
HEDL-5540 A06	500	6.35
HEDL-5540 A13	500	8.0

Anschlußkabel (passend für HEDL...)

HEDS-8903 (Stecker mit Einzellitzen, 150 mm lang)

**Hohlwellenencoder für Durchgangswelle speziell für Linearaktuatoren:**

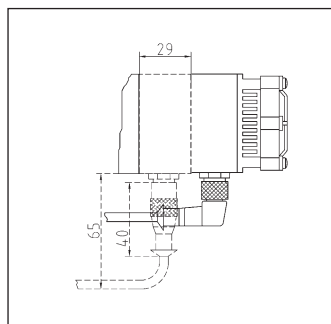
HEDS-5545 H16	400	16,0
HEDS-5545 C16	2000	16,0

andere Impulse/Umdr. oder für andere Wellendurchmesser auf Anfrage.

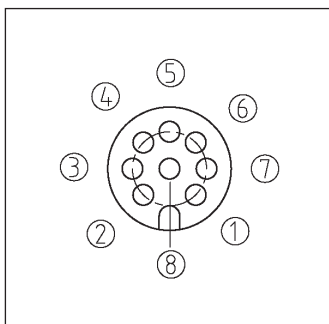
integrated Encoder-Versions

- Incrementalencoder E2 = 200 Pulses.; E4 = 400 Pulses; E5 = 500 Pulses; E1000 = 1000 Pulses
- Incrementalencoder with Line-Driver L2 = 200 Pulses, L4 = 400 Pulses; L5 = 500 Pulses

for Plug & Drive Motors



Pin Assignment 8-pin cable

**HEDS..(E2-E1000)**

- | | | |
|----|----------|-----------|
| 1) | white = | nc |
| 2) | brown = | CH B |
| 3) | green = | Vcc + 5 V |
| 4) | yellow = | CH A |
| 5) | grey = | CH I |
| 6) | pink = | GND 0 V |
| 7) | blue = | nc |
| 8) | shield = | nc |

HEDL..(L2-L5)

- | | | |
|----|----------|-----------|
| 1) | white = | CH A' |
| 2) | brown = | CH B |
| 3) | green = | Vcc + 5 V |
| 4) | yellow = | CH A |
| 5) | grey = | CH I |
| 6) | pink = | GND 0 V |
| 7) | blue = | CH B' |
| 8) | shield = | nc |



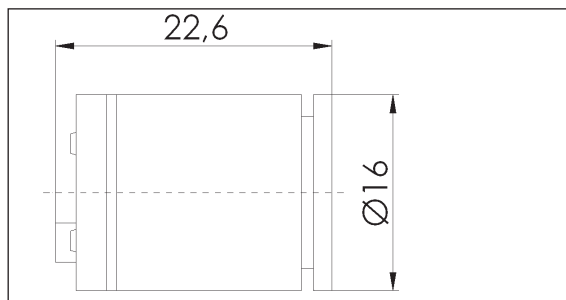
Miniature-Optical Encoder

Our 2-channel encoders are, besides their compact design and extremely small mass, above all distinguished by the fast and simple mounting. They are suited for motors with 3 mm shaft.

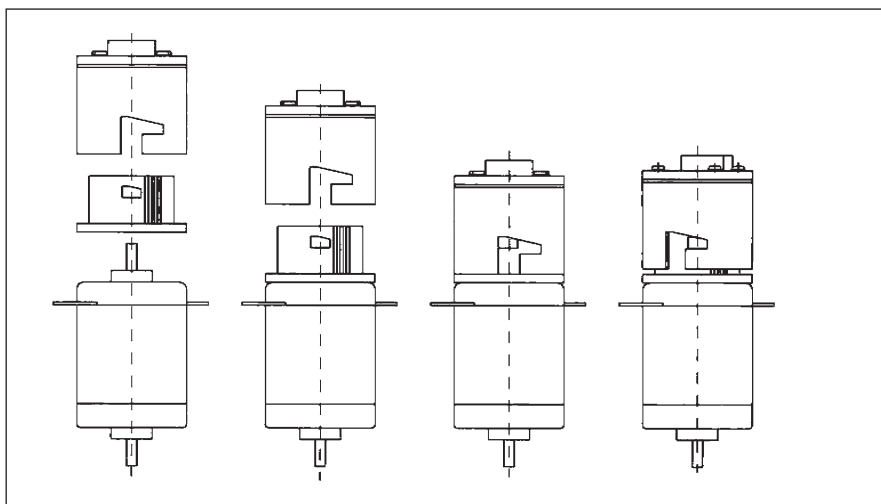
Technical Characteristics:

Operating Voltage:	DC -0,5 V to 7 V
max. Current Consumption:	(at 5 V) 18 mA
Pulse Width:	180 ±75 Grad
Signal-Phase Shift:	(Channel A to B) 90 ±60 degree
Signal-Rise-/Fall-Time:	0,15 / 0,05 µS (0,2 / 0,06 µS max)
Limit Frequency:	up to 70 kHz
Output signals:	rectangular 2
Pulses per Revolution:	200
Operating Temperature:	-10 °C to +85 °C

Dimensions HEDM1600



Encoder - Mounting



Pin Assignment / Signals

Der HEDM1660 needs 2,7 kOhm (±10%) working resistor on the contacts 2 and 4 (channels A and B).

