

Signal Processing

Fiber-optic links for interference-free transmission of square-wave signals

HEAG 171, 172, 173, 174, 175, 176



HEAG 171, HEAG 173

Technical data - electrical ratings

Transmission length ≤300 m

HEAG 171

Voltage supply 9...26 VDC
5 VDC ±5 %

Consumption ≤200 mA

Inputs 4 x TTL

Input signals K1, K2, K3, K4 + inverted

Outputs 4 x fiber-optic

Output signals Fiber-optic 1, 2, 3 and 4

HEAG 172

Voltage supply 9...26 VDC

Consumption ≤200 mA

Inputs 4 x HTL

Input signals K1, K2, K3, K4 + inverted

Outputs 4 x fiber-optic

Output signals Fiber-optic 1, 2, 3 and 4

HEAG 173

Voltage supply 5 VDC ±5 %

Consumption ≤60 mA

Inputs 3 x fiber-optic

Input signals fiber-optic 1, 2 and 3

Outputs 3 x TTL

Output signals K1, K2, K3 + inverted

HEAG 174

Voltage supply 9...26 VDC

Consumption ≤60 mA

Inputs 3 x fiber-optic

Input signals fiber-optic 1, 2 and 3

Outputs 3 x HTL

Output signals K1, K2, K3 + inverted

Features

- For high interference locations
- Converting standard square-wave signals into optical signals
- Each channel is coupled onto fiber-optic easy-to-fit plug
- Reconversion of optical to electrical signals in the receiver control cabinet (HEAG 173, HEAG 174)
- 3 different plug versions available
- Delay time over a 100 m length of fiber-optic is 1 µs
- Except of POF all fiber optic cable usable, e. g. PCF 200 µm, silica fiber 50 and 62.5 µm

Technical data - electrical ratings

HEAG 175

Voltage supply 9...26 VDC
5 VDC ±5 %

Consumption ≤200 mA

Inputs 3 x TTL

Input signals K1, K2, K3 + inverted

Outputs 3 x fiber-optic

Output signals Fiber-optic 1, 2 and 3

HEAG 176

Voltage supply 9...26 VDC

Consumption ≤200 mA

Inputs 3 x HTL

Technical data - mechanical design

HEAG 171, HEAG 172

Dimensions W x H x L 122 x 122 x 80 mm

Protection DIN EN 60529 IP 65

Operating temperature -20...+70 °C (without dew)

Connection Cable gland M20x1.5 (3x)
Cable gland M16x1.5 (4x)

HEAG 173, HEAG 174, HEAG 175, HEAG 176

Dimensions W x H x L 50 x 75 x 55 mm

Protection DIN EN 60529 IP 20

Operating temperature -20...+50 °C (without dew)

Connection Screw terminal connector
Connector (VL, ST or SMA),
(3x)

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HEAG 171, 172, 173, 174, 175, 176

Part number

HEAG 171

Type of plug connector
VL Type VL
ST Type ST
SMA Type SMA

Voltage supply
TTL 5 VDC
R 9...26 VDC

HEAG 172

Type of plug connector
VL Type VL
ST Type ST
SMA Type SMA

HEAG 173

Type of plug connector
VL Type VL
ST Type ST
SMA Type SMA

HEAG 174

Type of plug connector
VL Type VL
ST Type ST
SMA Type SMA

HEAG 175

Type of plug connector
VL Type VL
ST Type ST
SMA Type SMA

Voltage supply
TTL 5 VDC
R 9...26 VDC

HEAG 176

Type of plug connector
VL Type VL
ST Type ST
SMA Type SMA

Signal Processing

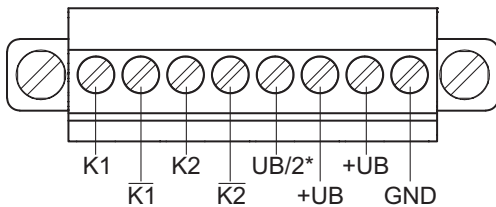
Fiber-optic links for interference-free transmission of square-wave signals

HEAG 171, 172, 173, 174, 175, 176

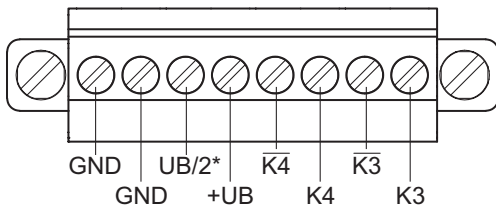
Terminal assignment

Transmitter HEAG 171, HEAG 172

Terminal 1



Terminal 2

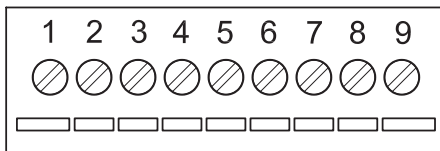


* HEAG 172 without inverted signals:
Link output UB/2 to input $\overline{K1}$ $\overline{K2}$ $\overline{K3}$ $\overline{K4}$

Transmitter HEAG 175, HEAG 176

Terminal Assignment

1	+UB
2	GND
3	K1
4	$\overline{K1}$
5	K2
6	$\overline{K2}$
7	K3
8	$\overline{K3}$
9	UB/2*

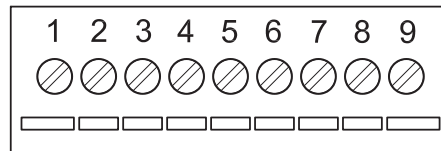


* HEAG 176 without inverted signals:
Link output UB/2 to input $\overline{K1}$ $\overline{K2}$ $\overline{K3}$

Receiver HEAG 173, HEAG 174

Terminal Assignment

1	+UB
2	GND
3	K1
4	$\overline{K1}$
5	K2
6	$\overline{K2}$
7	K3
8	$\overline{K3}$
9	n.c.



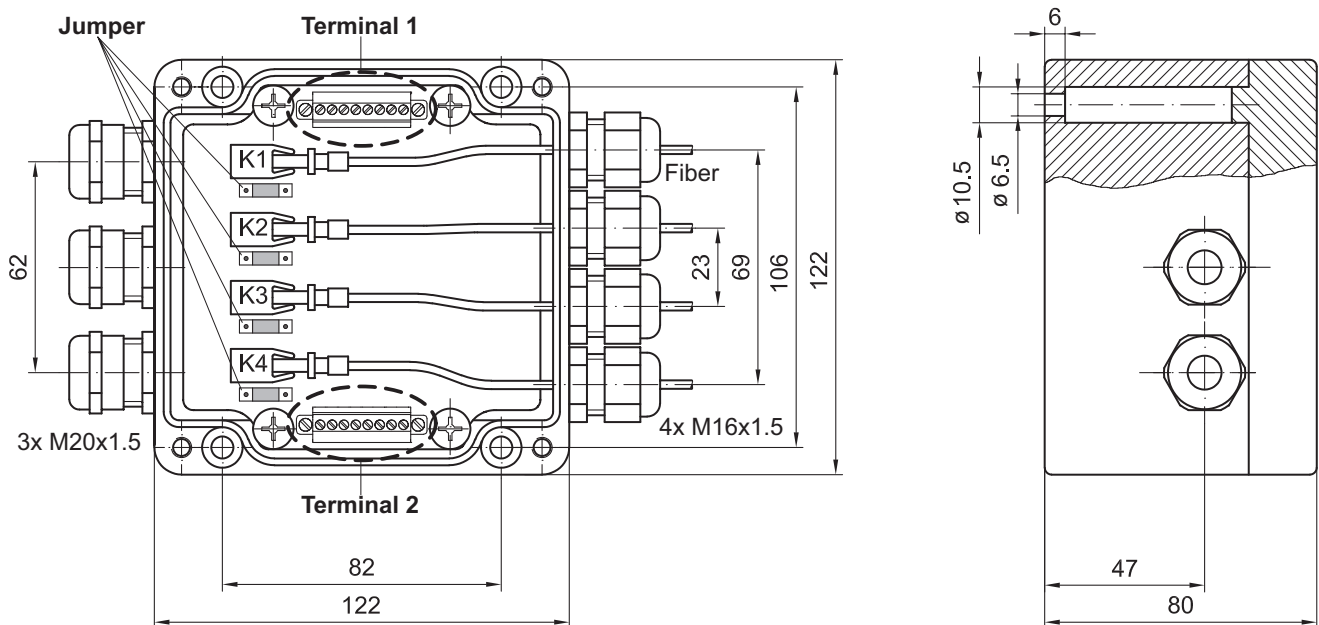
Jumper position Transmitter HEAG 171, HEAG 172, HEAG 175, HEAG 176

Position Transmitter power

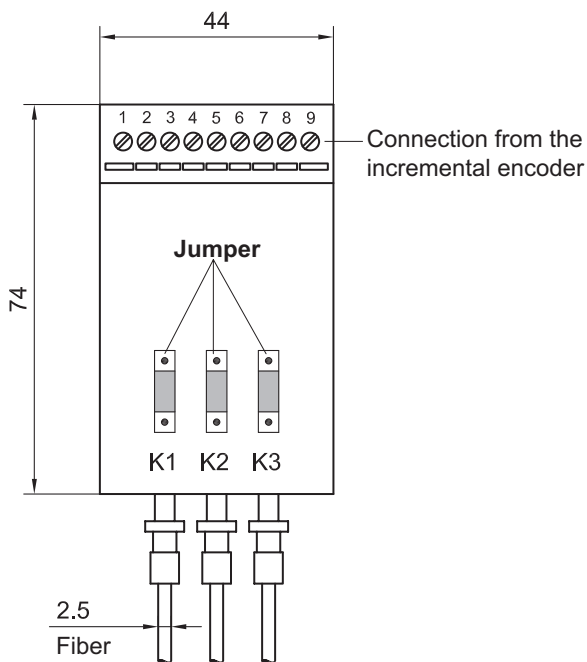
	LOW
	LOW
	MIDDLE
	HIGH

Dimensions

Emitter HEAG 171 and HEAG 172



Emitter HEAG 175 and HEAG 176



Receiver HEAG 173 and HEAG 175

