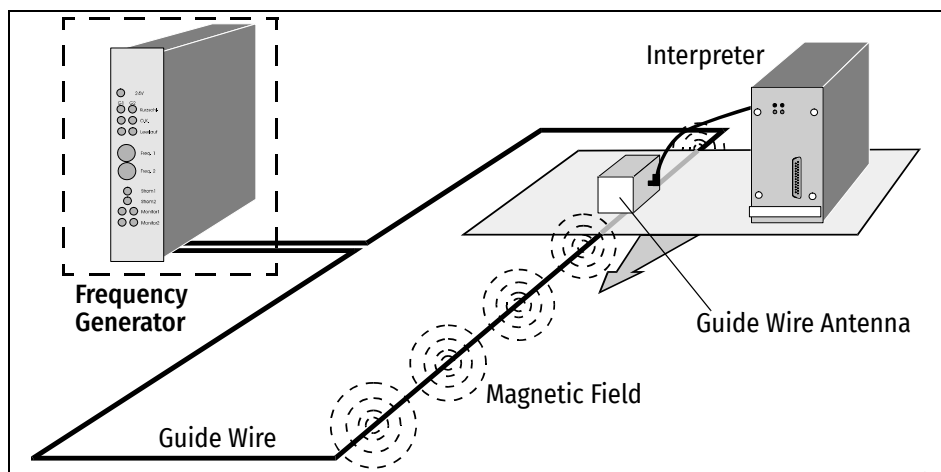




HG G-57405-F

One-Loop Frequency Generator

Functional Description



A frequency generator generates an alternating current in a conductive loop for guidance of driverless transport vehicles (FTF).

The circuit board contains a generator with power amplifiers and a transformer for galvanic isolation. The operating frequency can be selected via a HEX rotary switch with 16 positions.

The generator generates a constant output current. Short circuits or too low load impedances as well as loop interruptions or too high load impedances are indicated by an LED on the front panel and a potential-free fault signal output.

The frequency generator has separate connections for long or short loops. The maximum load impedance differs between long and short loops in a ratio of about 1:2. The loop current can be adjusted via a trimming potentiometer on the front panel.

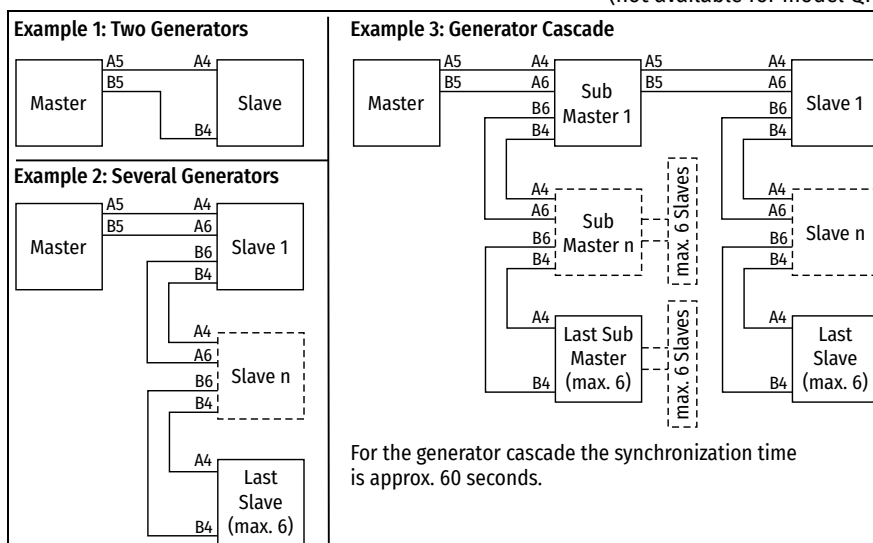
Synchronization of generators (not available for model QF)

Several generators can be synchronized to avoid beatings when using the same frequency. To do this, the generators must be set to the same frequency (up to max. 5.1 kHz) and connected according to the following scheme:

Overview

- One-loop frequency generator for track guidance of automated guided vehicles (AGV)
- Alternating current generation with a current intensity of up to $I = 600\text{mA}$
- For use with guide wire antennas
- One of 16 frequencies selectable
- Quartz stabilized frequency generation, accuracy better than 0.02 %
- Mountable on 35 mm top hat rail
- All models except QF: Synchronizable up to 5.1 kHz, max. 6 sub masters, max. 6 slaves per master/sub master
- Only model QF: Switch-on via control input

Synchronization of generators (not available for model QF)



Element	Description
Error (LED)	Short circuit or load impedance too high, wire break
OK (LED)	Load impedance o.k.
+24V (LED)	Power supply
Current Adjust	Trim Pot Loop current adjustment
Frequency	Hex-Switch Frequency selection

B	Name	QF	Description
1	Loop	<-	Loop start
2	Z _{LOW}	<-	Loop short
3	Z _{HIGH}	<-	Loop long
4	Sync-In -	-	Synchron. In -
5	Sync-Out -	-	Synchron. Out -
6	-> A6	<-	Connected to A6
7	NC	<-	Normally open contact, closed when error or switched off
8	COM	<-	Fault message contact
9	NO	<-	Normally closed contact, open when OK

Complementary Products	
HG G-19330	Guide wire antenna indoor
HG G-19334	Guide wire antenna out-door

- Belden 9438 - direct burial cable - HDPE - AWG14 (2.5 mm²)
- Helukabel Heluflon-FEP-6Y 2557x - 2.5 mm² - (Flourpolymer)
- Lappkabel Ölflex HEAT 205 SC 0086xxx - 2.5 mm² - FEP

HG G-57405ZF

Production series
(no functional relevance)

Functional Model / Version

Identification Number / Type

G: Device | K: Component |
S: System | W: Software

HG: Götting | HW: Resale

[illegible]

HEX	Frequency [Hz] / variants of the HG G-57405xx								
	ZF	YF	XF	WF	VF	SF	RF	QF	NF
0	5050	1500	5500	4096	1650	4700	5100	1650	964
1	5100	2000	7000	6554	2200	5100	5700	2200	1155
2	5150	2660	8400	10923	3100	5500	6300	3100	1710
3	5200	3520	10100	16384	4000	5700	7000	4000	2412
4	5700	4710	12200	26214	5100	6300	7800	5200	3108
5	6000	6250	15200	16000	5700	7000	9000	5700	4040
6	6300	4000	18100	17000	6000	7800	10000	6000	5213
7	6500	8000	5100	18000	6300	8400	12000	6300	6216
8	7000	16000	6000	19000	6500	9000	4000	6700	5100
9	7500	7500	6500	20000	7000	10000	4700	7000	5700
A	7800	7800	7500	21000	7500	10100	7500	7500	6300
B	8000	8000	8000	22000	7800	12000	8000	7800	5000
C	8500	8500	8500	23000	8000	12200	8200	8000	6000
D	9000	9000	9000	24000	8500	15200	8500	8500	10000
E	9500	9500	9500	25000	9000	18100	9500	9000	7800
F	10000	10000	10000	26000	10000	26700	16000	10000	12000
Synchronization	X	X	X	X	X	X	X	-	X
Control Input	-	-	-	-	-	-	-	X	-

The standard frequencies shown in the table are preset in the device for the various variants. You can switch between the frequencies using the HEX rotary switch on the front panel. Other frequencies from the range shown in the table are available on request.

Dimensions	204 mm x 105 mm x 69.1 mm (B x H x T without connector)
Weight	approx. 1020 g (incl. connector)
Temperature ranges	Operation: 0° C to +50° C / Storage: -20° C to +70° C
Supply voltage	+ 24 V ±25 %
Frequency output	Depending on variant and position of HEX rotary switch, see table above
Frequency accuracy	better than 0.02 %, quartz-stabilized
Output current	- $I_{\min}$ = 35 mA - $I_{\max}$ = 600 mA
Output voltage	- 4 to 24 V on the long loop - 2 to 12 V on the short loop
Current consumption	1.1 A at full output @ U_b = +24 V
Connection	Terminal block 18 pin, connector for cables up to max. 1.5 mm ² , Phoenix Contact DFMC1.5/9 -ST-3.5 (179019). 1x within scope of delivery