RESOLVER

G-RCC

RESOLVER TO CANOPEN CONVERTER / RESOLVER AS ENCODER IN CANOPEN-PROFILE

The LTN G-RCC is a resolver to CANopen converter to enable the integration of a resolver into a CANopen network as single CANopen node. The G-RCC drives the resolver autonomous and delivers position and speed values as encoder in CANopen-profile. The LTN G-RCC uses a monolithic RDC-IC for resolver to digital conversion and a separate microcontroller for all other functions (control, communication, scaling, computation, etc.).

G-RCC (Design example)

SPECIFICATIONS - CONVERTER OUTPUT

Protocol:	CANopen Protocol
Output data:	position value (in incremental steps), current speed value (in incremental steps per second)
Resolution:	can be free software-scaled between 2 and 65536 incremental steps per revolution by CANopen protocol, preset-function (software-zero) and change of the direction of rotation (CW - CCW) are also supported
Accuracy:	+/- 0.10° (+/- 6 arcmin) +/- 0.05° (+/- 3 arcmin) on request

Repeatability:	+/- 1 LSB (incremental step) of the set resolution, e.g. at 16 bits / 65536 incr: +/- 0.33 arcmin. for single speed resolver
Speed:	0.5 s^{-1} (mech.) for single speed and 0.166 s^{-1} (mech.) for triple speed resolver
Baudrate settings:	0, 20, 50, 125, 250, 500, 800 or 1000 kB/s
Node ID settings:	0 to 127 (dec), internal bus terminating resistor (120 Ohm / 1W) can be switched by a switch placed on the front panel. Baudrate and node-ID can be set by hardware (coding microswitches) or by LSS.

SPECIFICATIONS - RESOLVER INPUT / OUTPUT

Output Ref. Signal:	4 V$_{rms}$ / 100 mA max. / 5 kHz
Transformation Ratio:	K = 0.5 +/- 10%

POWER SUPPLY

Supply Voltage (+V$_s$):	+10 ... +36 V$_{DC}$
Power Consumption:	~2 W (e.g. 70 mA at 24 V)
Operating Temperature:	0 ... +85°C

The LTN-RCC is protected against the wrong polarity of power supply and overvoltage on all terminals.

Housing:	Phoenix Contact „ME 22.5" for top hat rail mounting
Dimensions:	l = 114.5 mm; h = 99 mm, w = 22.5 mm

RESOLVER G-RCC

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CONNECTOR TERMINALS

Power: Sub-D, 9-pin male connector in the front panel / TBUS in the back (top hat rail) / screw terminal connector
CANopen: Sub-D, 9-pin male connector in the front panel / TBUS in the back (top hat rail)
Resolver: Sub-D, 9-pin female connector in the front panel

Power and CAN signals are passed (loopthroughed) from one terminal / connector to the other one.

CONNECTOR TERMINALS

Signals	CAN (front panel) Sub-D, 9 pin male	TBUS connector top hat rail	Screw terminal
CAN Gnd	3, 6	1 (TOP)	3, 4 (RIGHT)
CAN V_s	9	2	1, 2 (LEFT)
CAN Lo	2	3	
CAN Hi	7	4	
CAN Shield/PE	5, screen	5 (BOTTOM)	
NC	1, 4, 8		

Sub-D connector bolt thread: 4-40#

Signals	Resolver (front panel) Sub-D, 9 pin female
Ref+ (R1)	7
Ref- (R2)	1
Sin+ (S2)	5
Sin- (S4)	6
Cos+ (S1)	8
Cos- (S3)	9
NC	2, 3, 4
Shield/PE	screen

Recommended additional components for using the TBUS system / Phoenix Contact part numbers:

Description	Type	Part No.	Requirement
TBUS plug component for top hat rail	ME 22.5 TBUS 1.5/5-ST-3.81 KMGY	2713722	necessary
axial plug, connector mating male side of TBUS	MC 1.5/5-ST-3.81 GY7035AU	1719697	optional
axial plug, connector mating female side of TBUS	IMC 1.5/5-ST-3.81 GY7035AU	1719707	optional
vertical plug, connector mating male side of TBUS	MCVR 1.5/5-ST-3.81 GY7035AU	1719684	optional
end clamp, stable contruction for bus connector	E/ME TBUS NS35 GY	2713780	optional
terminal cover for male side of TBUS	ME B-KA KMGY	2706302	optional
terminal cover for female side of TBUS	ME B-SA/NS35 KMGY	2706700	optional

ORDERING INFORMATION

G-RCCLDSC65536-0XX-24   3938776

Other configurations on request.

LTN Servotechnik GmbH
Georg-Hardt-Straße 4
83624 Otterfing, Germany
Tel: +49 (0)8024 6080-0
Fax: +49 (0)8024 6080-1000
ltn@ltn.de
www.ltn.de

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