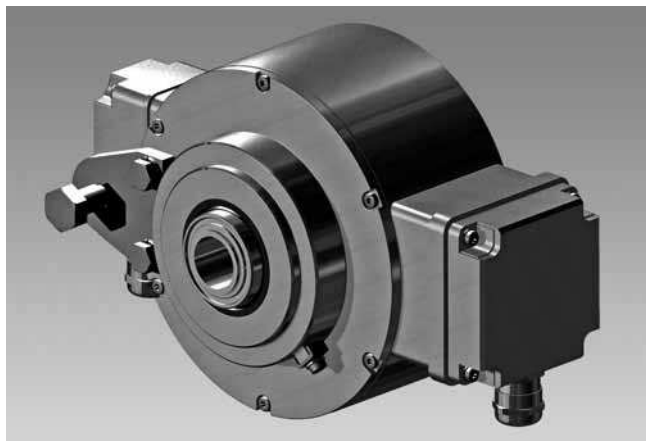


Speed switches

Programmable, digital speed switch

With incremental encoder HOG 165

HOG 165 + DSL



HOG 165 + DSL

Technical data - electrical ratings

Consumption w/o load	≤200 mA
Resolution (steps/turn)	512...4096
Phase shift	90° ±20°
Interface	RS485
Scan ratio	40...60 %
Switching accuracy	±2 % (Digit)
Switching delay time	≤40 ms
Reference signal	Zero pulse, width 90°
Output signals	K1, K2, K0 + inverted
Outputs	HTL + TTL
Output frequency	≤120 kHz
Sensing method	Optical
Interference immunity	DIN EN 61000-6-2
Emitted interference	DIN EN 61000-6-4

HOG 165 + DSL.E

Voltage supply	9...30 VDC
Switching outputs	2 outputs, speed control 1 control output
Output switching capacity	5...230 VAC/VDC 5...250 mA

HOG 165 + DSL.R

Voltage supply	15...30 VDC
Switching outputs	3 outputs, speed control
Output switching capacity	12 V High: ns 0 V Low: n≥ns ≤40 mA

Features

- Freely programmable on and off switching speed
- Operation via included software (RS485 interface)
- Additional incremental signals (HTL/TTL)
- Combination with hollow shaft ø25 mm
- DSL.R: 3 outputs speed controlled (independent transistor outputs)
- DSL.E: 2 outputs speed controlled and 1 control output

Optional

- Relay module DS 93 R (DSL.R version only)

Technical data - mechanical design

Dimensions (flange)	ø165 mm
Shaft	ø25 mm hollow shaft
Protection DIN EN 60529	IP 67
Speed (n)	≤6000 rpm
Range of switching speed (ns)	Resolution = 512: ±16...6000 rpm Resolution = 1024: ±8...6000 rpm Resolution = 2048: ±4...3500 rpm Resolution = 2500: ±3...2900 rpm
Operating torque	≤15 Ncm
Rotor moment of inertia	4.9 kgcm ²
Shaft loading	≤150 N axial ≤200 N radial
Materials	Housing: aluminium die-cast Shaft: stainless steel
Operating temperature	-30...+85 °C
Resistance	IEC 60068-2-6 Vibration 20 g, 10-2000 Hz IEC 60068-2-27 Shock 300 g, 6 ms
Explosion protection	II3G Ex nA IIC T4 Gc (gas) II3D Ex tc IIIC T135°C Dc (dust)
Weight approx.	4.2 kg
Connection	Terminal box

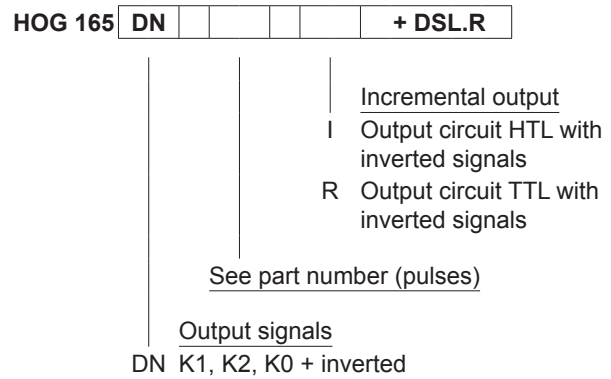
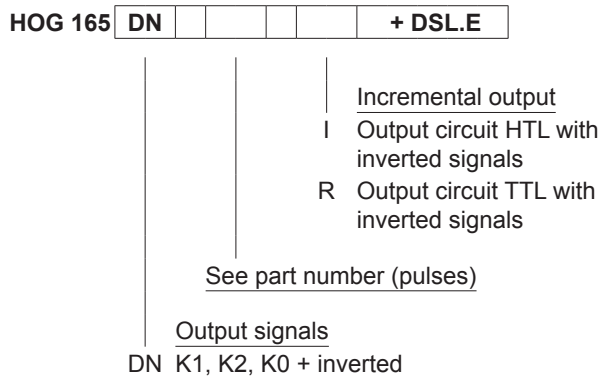
Speed switches

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HOG 165 + DSL

Part number



Part number (pulses)

512 | 1024 | 2048 | 2500 | 4096

Accessories

Adapter USB → RS485

Connectors and cables

HEK 8 Sensor cable for encoders

Mounting accessories

DMS 12 Torque arm size M12

Diagnostic accessories

HENQ 1100 Analyzer for encoders

Relay module for HOG 165 + DSL.R

DS 93 R Relay modul

Speed switches

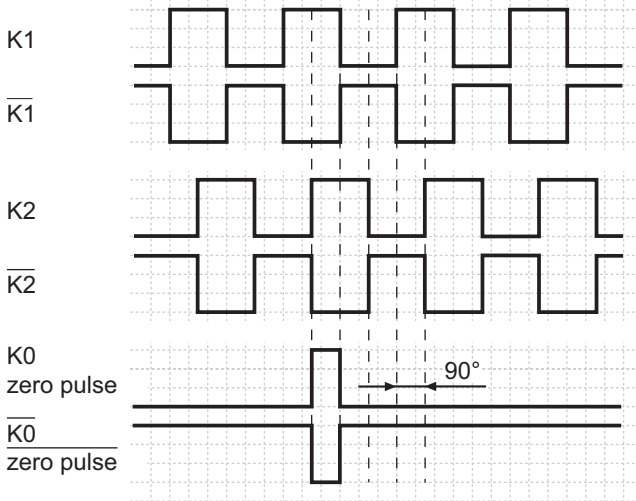
Programmable, digital speed switch

With incremental encoder HOG 165

HOG 165 + DSL

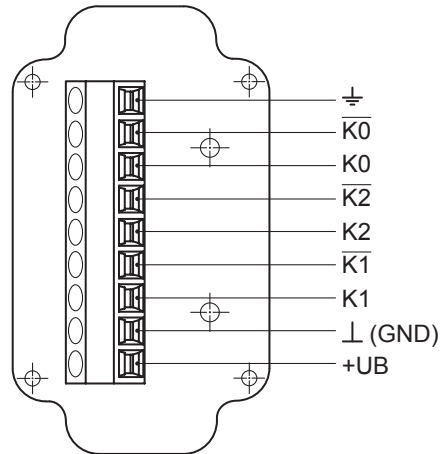
Output signals

at positive rotating direction

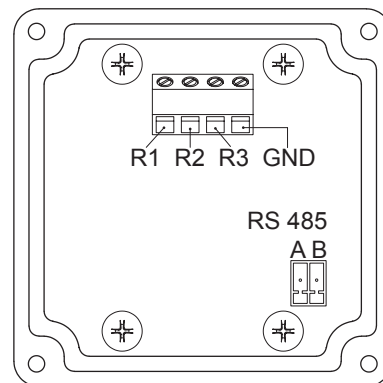


Terminal assignment

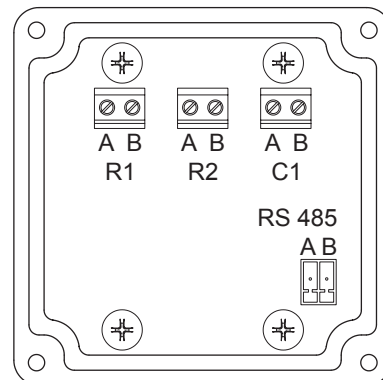
View A - Connecting terminal in terminal box



View B - Connecting terminal speed switch Version DSL.R



View B - Connecting terminal speed switch Version DSL.E



Terminal significance

Speed switch version DSL.R

R1*	Transistor switching output 1, individually adjustable switching speed, High (12 V), Low (0 V), max. 20 mA
R2*	Transistor switching output 2, individually adjustable switching speed, High (12 V), Low (0 V), max. 20 mA
R3*	Transistor switching output 3, individually adjustable switching speed, High (12 V), Low (0 V), max. 20 mA
GND*	Ground connection
RS 485	Interface for PC or Laptop (adapter required). Operation of the DSL via the included software.

* Connection to relay module, for example DS 93 R (accessory)

Speed switch version DSL.E

R1 (A+B)	Electronic relay output 1, individually adjustable switching speed, 5 ... 230 V AC/DC
R2 (A+B)	Electronic relay output 2, individually adjustable switching speed, 5 ... 230 V AC/DC
C1 (A+B)	Electronic relay output as a control output, 5 ... 250 mA
RS 485	Interface for PC or Laptop (adapter required). Operation of the DSL via the included software.

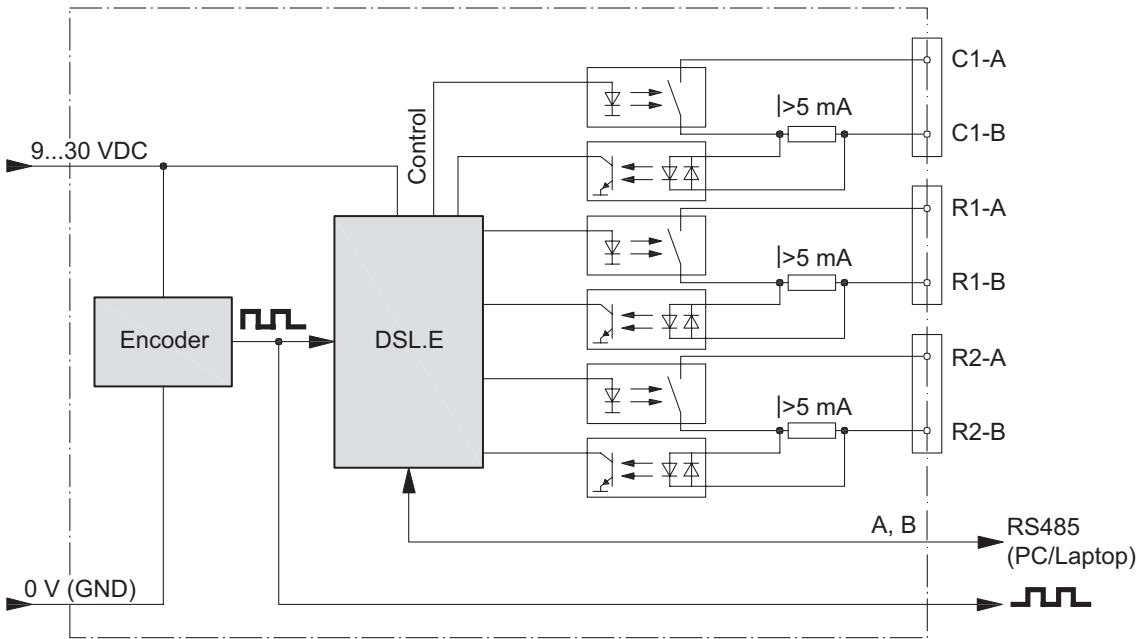
Speed switches

Programmable, digital speed switch
With incremental encoder HOG 165

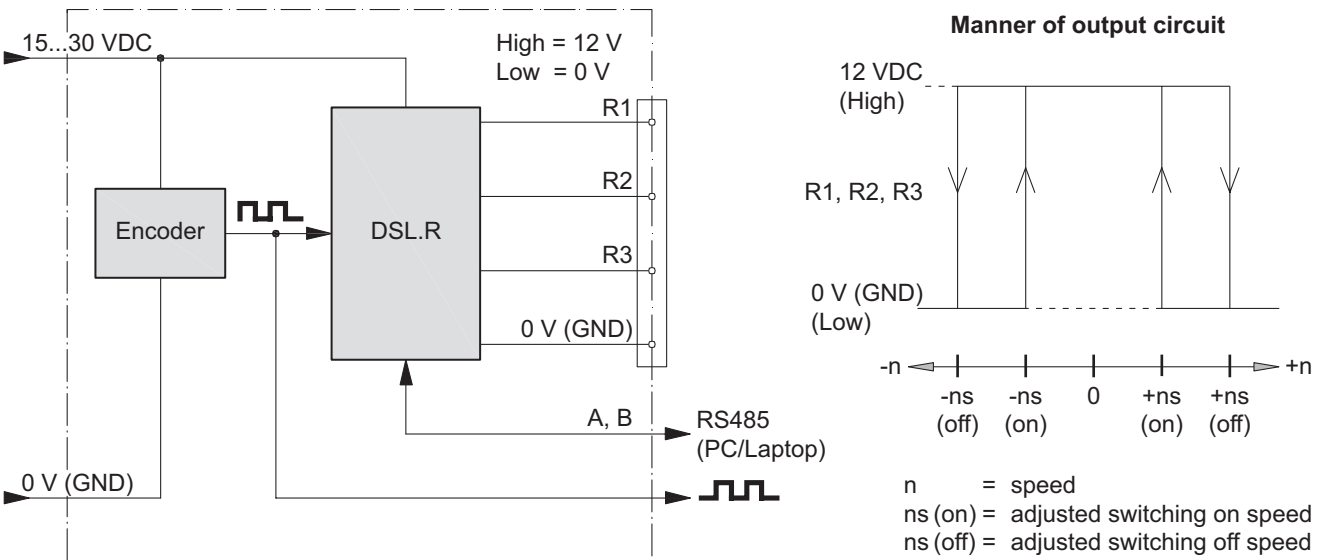
HOG 165 + DSL

Block circuit diagram

Version with DSL.E



Version with DSL.R



Speed switches

Programmable, digital speed switch

With incremental encoder HOG 165

HOG 165 + DSL

Dimensions

