



GV460 / GV470 / GV480 and GV461 / GV471 / GV481

Impulse splitters with 4 or 8 output terminals - for incremental encoders and sensors

Product Features:

- Power Supply from 10 up to 30 VDC
- 1 Encoder Input for channels A, /A, B, /B, Z, /Z
- Input-Levels selectable between RS422, TTL and HTL
- Optionally 4 or 8 Outputs available (see "Available Devices")
- Selectable Output-Levels (RS422 / TTL / HTL)
- 5.5 VDC Auxiliary Voltage Output for Encoder-Supply
- Easy Cascading of further Devices possible (incl. Select-Function)

Available Devices:

- **GV460:** Impulse splitter with 8 outputs, short circuit proof encoder supply, potential separation between input and outputs and a temperature range of -20 °C to + 60 °C / -4 °F to 140 °F .
- **GV461:** Impulse splitter with 4 outputs, short circuit proof encoder supply, potential separation between input and outputs and a temperature range of -20 °C to + 60 °C / -4 °F to 140 °F.
- **GV470:** Impulse splitter with 8 outputs, encoder supply without short-circuit proof, potential separation between input and outputs and a temperature range of 0 °C to + 50 °C / +32 °F to +122 °F.
- **GV471:** Impulse splitter with 4 outputs, encoder supply without short-circuit proof, potential separation between input and outputs and a temperature range of 0 °C to + 50 °C / +32 °F to +122 °F.
- **GV480:** Impulse splitter with 8 outputs, short circuit proof encoder supply, complete potential separation (input, power supply, outputs) and a temperature range of -20 °C to + 60 °C / -4 °F to 140 °F.
- **GV481:** Impulse splitter with 4 outputs, short circuit proof encoder supply, complete potential separation (input, power supply, outputs) and a temperature range of -20 °C to + 60 °C / -4 °F to 140 °F.

Technical Specifications:		
Power supply:	Input voltage: Protection circuit: Ripple: Consumption: Connections:	10 ... 30 VDC reverse polarity protection ≤ 10 % at 24 VDC GV460, 461, 480, 481: approx. 40 mA (unloaded) GV470 and 471: approx. 100 mA (unloaded) screw terminal, 1.5 mm ² / AWG 16
Encoder supply:	Output voltage: Output current: Protection: Connections: Further possibilities:	5.5 VDC max. 200 mA, galvanically connected with the power supply GV460, 461, 480, 481: short circuit proof GV470 and 471 : <u>no</u> protection circuit screw terminal, 1.5 mm ² / AWG 16 a) encoder supply by using a separate voltage source or b) use the 10 ... 30 V power source that already supplies the unit
Incremental input:	Signal levels (selectable): Channels: Frequency: Connections:	RS422 / TTL (differential voltage > 0.5 V), HTL (asymmetrical): LOW 0 ... 10 V, HIGH 15 ... 30 V LOW or HTL (symmetrical): 10 ... 30 V asymmetrical A, B, Z or symmetrical A, /A, B, /B, Z, /Z max. 500 kHz at RS422 / TTL max. 200 kHz at HTL screw terminal, 1.5 mm ² / AWG 16
Select input:	Signal levels: Connections:	HIGH >15 V, LOW < 10 V screw terminal, 1.5 mm ² / AWG 16
Cascading in / out:	Signal levels: Channels: Signal delay time: Connections:	5 V (CMOS, Low < 0.8 V, High >3.5 V) A, B, Z 100 ns per further cascade optional flat-ribbon cable FK470 via 9-pin female D-SUB connector
Incremental outputs:	Number of outputs: Output logic: Signal levels: Signal delay time: Output current: Protection: Connections:	4 (GV461, 471, 481) resp. 8 (GV460, 470, 480) push-pull 5 ... 30 V GV460, 461, 480 and 481: 400 ns GV470 and 471: 600 ns max. 30 mA short circuit proof screw terminal, 1.5 mm ² / AWG 16
Potential separation:	GV460,61, 70, 71: GV480, 81:	potential separation between input and the outputs complete potential separation (input, all outputs and power supply)
Indicators:	Number of indicators: Function:	4 LEDs 1 x green for "ready to operate" state and each 1 x yellow, red and orange for logical conditions of inputs A, B, Z
Housing:	Material: Mounting: Dimensions (w x h x d): Protection: Weight:	plastic 35 mm top hat rail (according to EN 60715) 72 x 144 x 60.5 mm / 2.83 x 4.89 x 2.38 inches without connectors and mounting kit 72 x 144 x 90.5 mm / 2.83 x 4.89 x 3.56 inches inclusive connectors and mounting kit IP20 approx. 400 g
Ambient temperature:	Operation (not condensing): Storage (not condensing):	GV460, 461, 480, 481: -20 °C ... +60 °C / -4 °F ... +140 °F GV470, 471: 0 °C ... +50 °C / +32 °F ... +122 °F GV460, 461, 480, 481: -30 °C ... +75 °C / -22 °F ... +167 °F GV470, 471: -25 °C ... +75 °C / -13 °F ... +167 °F
Failure rate:	MTBF in years (long-term usage at 60 °C / 140 °F):	GV460: 79.1 a / GV461: 102.9 a / GV470: 29.4 a GV471: 40.0 a / GV480: 64.2 a / GV481: 89.4 a
Conformity & standards:	EMC 2004/108/EC: Guideline 2011/65/EU:	EN 61000-6-2, EN 61000-6-3, EN 61000-6-4 RoHS-conform