

Frequency-Pulse Isolating Repeater DIN-Rail Model D1035S

Characteristics:

General Description:

The single channel DIN-Rail Frequency-Pulse repeater D1035S repeats a low level frequency signal from magnetic pick-up or proximity, located in Hazardous Area, into pulse signal to drive a Safe Area load.

Function:

1 channel I.S. input from frequency-pulse signals, provides 3 port isolation (input/output/supply). Repeats the frequency input and provides one SPST transistor.

Signalling LEDs:

Power supply indication (green), Frequency input (yellow).

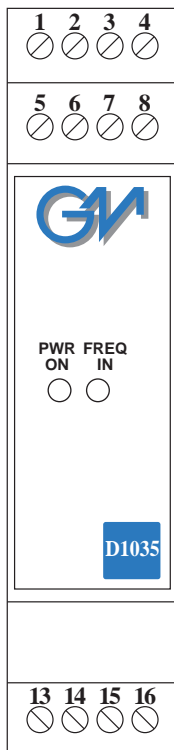
Configurability:

DIP-Switch configurable for hardware setting of input sensor.

EMC:

Fully compliant with CE marking applicable requirements.

Front Panel and Features:



- Magnetic Pick-up or proximity input sensor.
- Frequency range DC to 50 KHz input.
- Three port isolation, Input/Output/Supply.
- EMC Compatibility to EN61000-6-2, EN61000-6-4.
- ATEX Certifications.
- High Reliability, SMD components.
- High Density.
- Simplified installation using standard DIN Rail with plug-in terminal blocks.
- 250 Vrms (Um) max. voltage applied to the instruments associated with barrier.

Technical Data:

Supply: 12-24 V nom (10 to 30 V) reverse polarity protected ripple within voltage limits ≤ 5 Vpp.

Current consumption @ 24 V: 45 mA transistors output energized.

Current consumption @ 12 V: 80 mA transistors output energized.

Max. power consumption: 1.4 W with 30 V supply voltage, overload condition, transistors energized.

Isolation (Test Voltage): I.S. In/Out 1.5 KV; I.S. In/Supply 1.5 KV; Digital Out/Supply 500 V.

Input: magnetic pick-up or proximity to EN60947-5-6, for frequency signals up to 50 KHz.

Input range: 0 to 50 KHz maximum.

Repeater Output: Voltage free SPST optocoupled open-collector transistor.

Open-collector rating: 50 mA at 35 V or 100 mA at 12 V (≤ 1.5 V voltage drop).

Leakage current: ≤ 50 μ A at 35 V.

Frequency response: 50 KHz maximum.

Compatibility:

CE CE mark compliant, conforms to 94/9/EC Atex Directive and to 89/336/CEE EMC Directive.

Environmental conditions: Operating: Temperature limits -20 to +60 °C, relative humidity max 90 % non condensing, up to 35°C.

Storage: Temperature limits -40 to +80 °C.

Safety Description:

Ex II (1) G D [EEx ia] IIC or I (M2) [EEx ia] I associated electrical apparatus.
 $U_o/V_{oc} = 10.9$ V, $I_o/I_{sc} = 1.1$ mA,
 $P_o/P_o = 3$ mW at term. 13-16.
 $U_o/V_{oc} = 12.1$ V, $I_o/I_{sc} = 13$ mA,
 $P_o/P_o = 38$ mW at 14-15.
 $U_m = 250$ Vrms, -20 °C $\leq T_a \leq 60$ °C.

Approvals: DMT 01 ATEX E 042 X conforms to EN50014, EN50020.

Mounting: T35 DIN Rail according to EN50022.

Weight: about 120 g.

Connection: By polarized plug-in disconnect screw terminal blocks to accommodate terminations up to 2.5 mm².

Location: Safe Area or Zone 2, Group IIC T4 installation.

Protection class: IP 20.

Dimensions: Width 22.5 mm, Depth 99 mm, Height 114.5 mm.

Ordering Information:

Model:	D1035S	
Power Bus enclosure		/B

Parameters Table:

Safety Description	Maximum External Parameters			
	Group Cenelec	Co/Ca (μF)	Lo/La (mH)	Lo/Ro (μH/Ω)
Terminals 13-16				
Uo/Voc = 10.9 V	II C	2.05	29000	12000
Io/Isc = 1.1 mA	II B	14.40	117000	48100
Po/Po = 3 mW	II A	63.00	235000	96200
Terminals 14-15				
Uo/Voc = 12.1 V	II C	1.37	235	960
Io/Isc = 13 mA	II B	8.70	941	3840
Po/Po = 38 mW	II A	34.00	1883	7681



Function Diagram:

