



10302/2/1

Watchdog repeater (WDR)

Description

The watchdog repeater 10302/2/1 is a module that monitors the 5 Vdc and 24 Vdc supplied to the I/O modules. The watchdog output of the watchdog repeater is connected to the watchdog input of those output modules whose power supply (5 Vdc and/or 24 Vdc) is monitored.

A watchdog repeater is required in the following cases:

- in multiple-PSU configurations, for each subsequent 24 Vdc to 5 Vdc power supply unit, e.g. PSU 2, 3, 4.
- if the 24 Vdc is supplied via an M24-20 HE or M24-12 HE power supply.
- if the 24 Vdc is supplied via a power supply which can provide supply voltages that exceed 31.0 Vdc. (The maximum output voltage of the 24 Vdc supply must be less than 37 Vdc under any single or double fault condition of the 24 Vdc power supply unit.)
- if the required watchdog current exceeds 900 mA.
- in configurations which combine redundant and non-redundant I/O, in order to create the watchdog output for the output modules of the non-redundant I/O part.
- in configurations with redundant Central Parts and non-redundant I/O, in order to monitor the 5 Vdc power supply (if no 5 Vdc monitoring is done).

The watchdog repeater requires a horizontal bus connection. This means that space must be reserved in the I/O racks (positions 1, 2, 11-18).

A watchdog repeater must always be placed in the I/O section whose output modules are monitored by that watchdog repeater. This means that watchdog repeaters in configurations with multiple (redundant) I/O sections may not be installed in such a way that they control the "other" I/O section.

The watchdog repeater may be exchanged with the power supply switched on, but the Central Part will shut down, or both Central Parts will shut down if used in a configuration with redundant Central Parts and non-redundant I/O.

The watchdog repeater is fitted with a male connector according to DIN 41612, type F, with the 'd', 'b' and 'z' rows used.

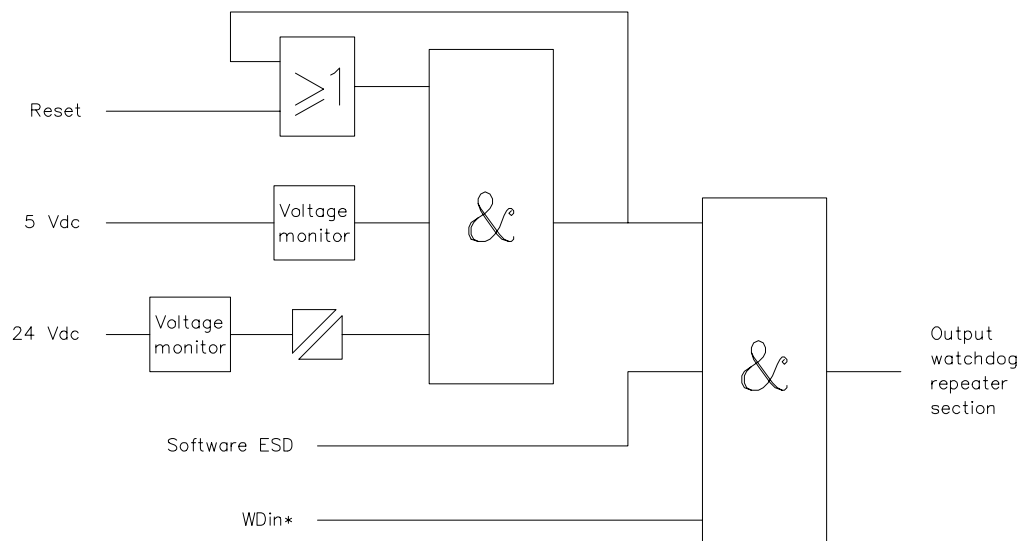


Figure 1 Logic diagram for a watchdog repeater section

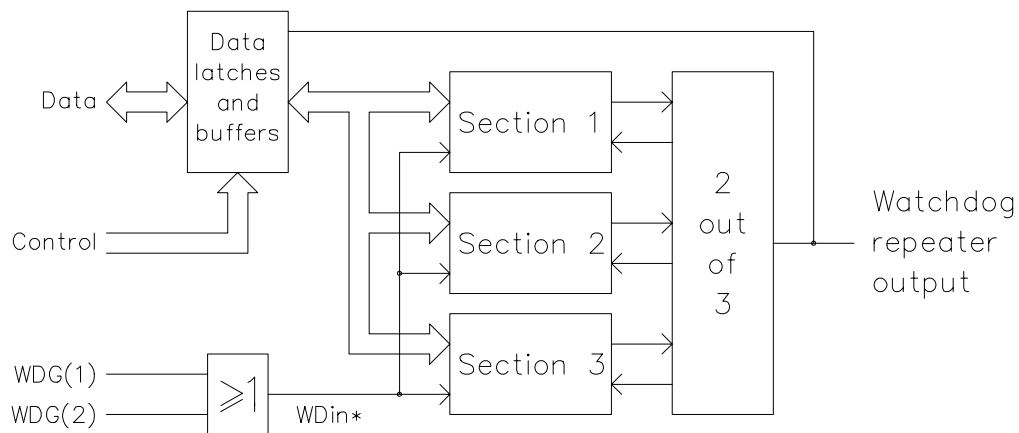
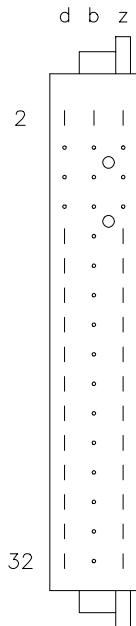


Figure 2 Block diagram for the watchdog repeater module



Pin allocation

The back view and pin allocation of the 10302/2/1 module connector are as follows:



d2		b2	GND 5 Vdc	z2	Supply 5 Vdc
d4	—			z4	—
d6	—			z6	—
d8	—			z8	—
d10	(GND 5 Vdc)			z10	(GND 5 Vdc)
d12	WDG1 IN			z12	WDG2 IN
d14	GND 5 Vdc			z14	(GND 5 Vdc)
d16	WDG OUT			z16	(GND 5 Vdc)
d18	(GND 5 Vdc)			z18	(GND 5 Vdc)
d20				z20	
d22				z22	
d24				z24	
d26				z26	
d28				z28	
d30	Supply 0 Vdc			z30	Supply 0 Vdc
d32	Supply 24 Vdc			z32	Supply 24 Vdc

Technical data

The 10302/2/1 module has the following specifications:

General

Type number:	10302/2/1 12600
Approvals:	CE, TÜV, UL
Software versions:	≥ 3.00
Space requirements:	4 TE, 3 HE (= 4 HP, 3U)

Power

Power requirements:	5 Vdc 35 mA (without WDROUT output current) 24 Vdc 25 mA
WDG1 + WDG2 input current:	0.1 mA

Key coding

(See 'Key coding' data sheet)	
Module code:	
— holes	A5, A9
Rack code:	
— large pins	A5, A9