

WRS 24Vdc SIL3 / 230Vac

The WRS 24V DC SIL 3 safety relay should be used in areas where a functionally safe switch-off is required. The SIL 3 components are capable of meeting the requirements of EN 61508.

- LED functional indicator for the safety and monitoring circuit.
- Suitable for mounting on TS35 rail
- Certified per EN 61508
- Safety requirement level SIL 3

General ordering data

Order No.	8827790000
Type	WRS 24Vdc SIL3 / 230Vac
EAN	4032248530854
Qty.	1 pc(s).

WRS 24Vdc SIL3 / 230Vac

Technical data

Dimensions

Length	92.4 mm	Width	22.5 mm
Height	112.4 mm		

Temperatures

Operating temperature	-25 °C...+50 °C	Storage temperature	-40 °C...+85 °C
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Input (monitoring)

Rated operating voltage [monitoring]	120 / 230 V AC -15 / +10%	Current consumption [monitoring]	8.6 mA (230 V AC)
Display monitoring (monitor)	LED yellow		

Input (safety circuit)

Rated operating voltage [safety circuit]	24 V DC -15 / +20%	Current consumption [safety circuit]	30 mA
Status indicator [safety circuit]	LED yellow		

Output (monitoring)

Switching current [monitoring]	8 mA...5 A	Max. permitted switching voltage [monitoring]	253 V AC / 30 V DC
Time between relay ON and acknowledgment	typ. 4.5 ms (230 VAC), typ. 5.7 ms (120 VAC)	Contact base material [monitoring]	AgNi 5µm Au

Output (safety circuit)

Max. permitted switching voltage [safety circuit]	240 V AC / DC	Max. permitted switching current [safety circuit]	5 A (refer to derating curve)
Turn-off time	typ. 5.1 ms	Turn-on time	typ. 6.8 ms
Contact base material [safety circuit]	AgNi	Short-circuit-proof	Yes
Internal fuse	5 A time-lag		

Safety specifications

Safety category	SIL 3	Safety standard	EN 61508
Proportion of safety-related outages (SFF)	98 %	Probability of outage PFD	1.1 x 10 ⁻⁵ x Tproof [years] Tproof = 9 years 10 % of SIF Tproof = 18 years 20 % of SIF
Probability of outage PFH	2.5 FIT		

Contact data

Electrical service life of AC coil	1x10 ⁵ switching cycles	Mechanical service life	20 x 10 ⁶ switching cycles
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Insulation coordination (EN 50 178)

Clearance and creepage distances for control/load side	> 5.5 mm (for safety circuit 24 VDC)	Overvoltage category	III
Pollution severity	2	Protection class	IP 20
Rated voltage	300 V		

WRS 24Vdc SIL3 / 230Vac**Technical data****Approvals**

Standards	EN 50178 EN 61000-4-4 EN 61000-4-2 EN 61000-4-5 EN 61000-4-6
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Classifications

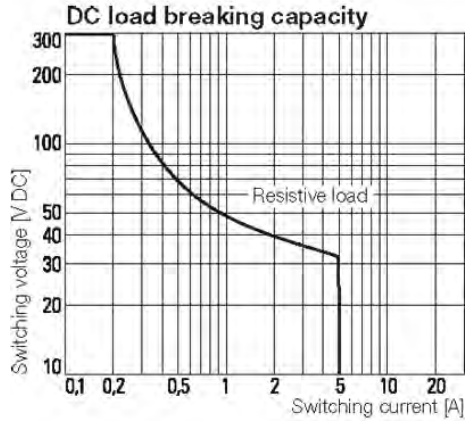
ETIM 3.0	EC001437	ETIM 4.0	EC001437
eClass 6.0	27-37-16-01		

Approvals

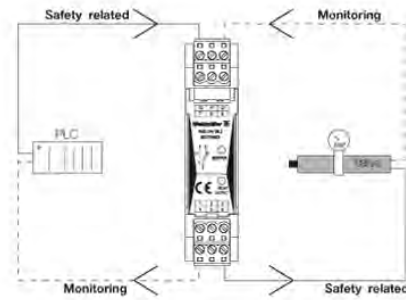
Approvals	CE
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Drawings

Derating curve



Example of use



Circuit diagram

