



Application Note

1606-XLRED40

- World-wide approvals () for industry
- Decoupling diode

- Ready relay contact
- Allows easy set-up of N+1 redundancy also on the DIN Rail

Concept

By means of the redundancy module 1606-XLRED40 you can interconnect several identical power supply units in a redundant way (N+1 redundancy); you require one 1606-XLRED40 for each power supply unit. The modules decouple the power supply outputs from each other so that in case of failure one power supply unit cannot overload the other power supply units. Moreover, the modules incorporate a ready relay contact which serves to signal the module's input voltage condition (= power supply output).

The 1606-XLRED40, designed for high load currents, is intended above all for application with the 1606-XL960... power supply unit. For smaller power values please refer to the 1606-XLRED20-30 as well as to the power supply units with an integrated redundancy module 1606-XL60DR, 1606-XL120DR and 1606-XL240DR.

Decoupling part

Voltage	
• nominal value	24V DC
• max. rated	35V, short-term 45V
Voltage drop	
$V_{in} \rightarrow V_{out}$	typ. 0.6V
Current per in- and output	
• nominal value	40 A
• max. rated	50 A
Inverse battery protection	yes
Connection	via stable screw terminals

Note: GND is not looped over the module. The GND connector on the module exclusively serves as intrinsic power supply

Construction/ Mechanics

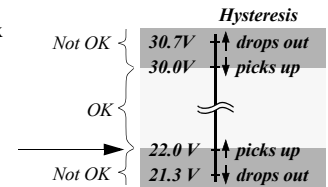
Housing dimensions and Weight	
• W x H x D	48 mm x 124 mm x 117 mm (+ DIN Rail)
• Free space for ventilation	above/below 10 mm recommended left/right 10 mm recommended
• Weight	646 g

Design advantages:

- All connection blocks are easy to reach as mounted at the front panel
- Wire Size Input/Output:
- Stranded 20...10 AWG (0.5...4 mm²), Solid 20...10 AWG (0.5...6 mm²)
- Tightening Torque: 7 lbs in (0.8 Nm) recommended

Relay contacts

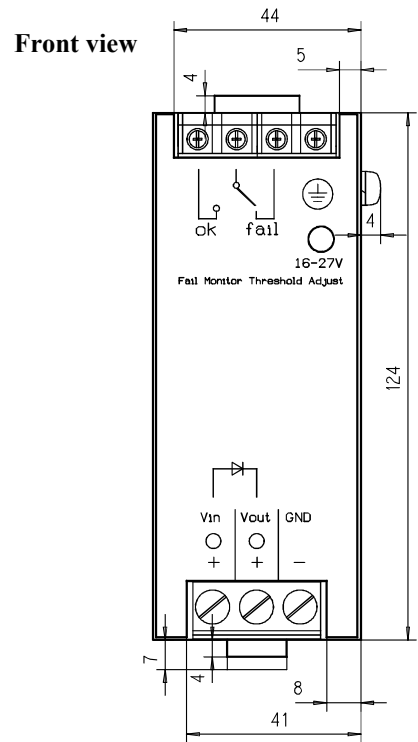
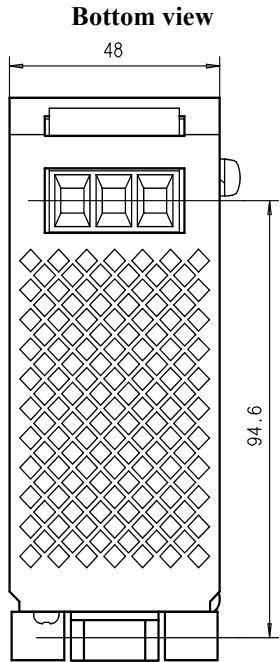
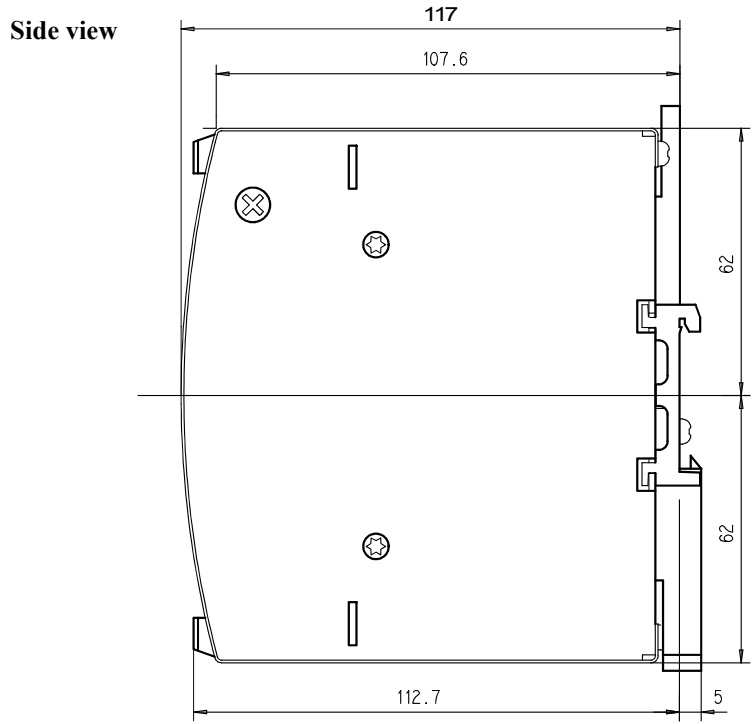
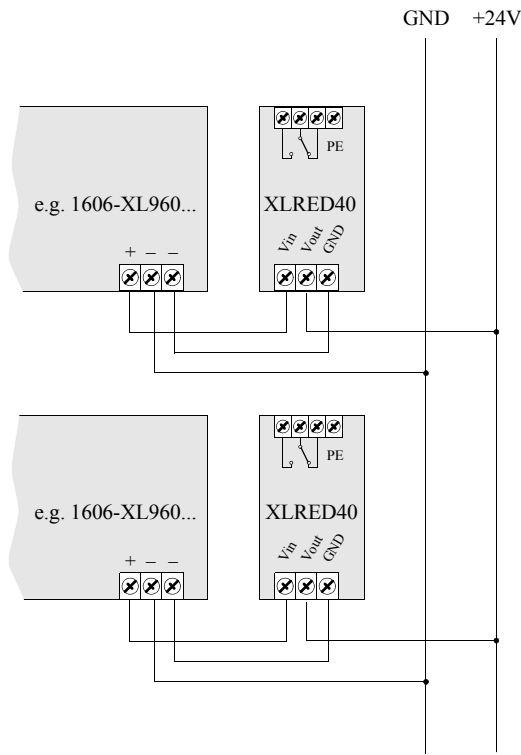
Relay type	Changeover contact, picked-up during normal operation when V_{in} between V_{low} and V_{high} when $V_{in} < V_{low}$ or $V_{in} > V_{high}$
<ul style="list-style-type: none"> • relay picks up ("ok") • relay drops out 	
Upper limit V_{high}	30V \pm 5% fix
• hysteresis	appr. 0.7V
Lower limit V_{low}	adjustable
• guaranteed range	16...27V
• preset	22V \pm 1%
• hysteresis	appr. 0.7V
• relay delay	typ. 50 ms at undervoltage
Contact load	48V DC / 1 A or 230V AC / 0.5 A
Connection	via stable screw terminals
LEDs on the front panel	
• for input	green LED, when V_{in} between V_{low} and V_{high}
• for output	green LED, when $V_{out} >$ appr. 2.5...3.5V
Note:	
• All relay contacts are potential-free	



Further information

Test voltage	
• relay cont., V_{in} , V_{out}	3 kV
• relay contacts/PE	2.5 kV
• V_{in} , V_{out} /PE	500V AC
Ambient temperature range	
Operation:	-10°C...+70°C
Storage:	-25°C...+85°C
Efficiency	> 97 %

Power wiring 1606-XLRED40



This technical information is valid for 230V AC, +25°C ambient temperature and 5 min. run-in time, unless otherwise stated. It is subject to change without prior notice.

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