



Product Overview	
Product	DS-DINR205 Mains Switching Input/Output Unit
Part No.	DS-DINR205
Digital Communication	Discovery & CoreProtocol® compatible

Compliance



Product Information

The DS-DINR205 Mains Switching Input/Output Unit provides a voltage-free, single pole change-over relay output and a monitored switch input.

The DS-DINR205 Mains Switching Input/Output Unit supervises one or more normally-open switches connected to a single pair of cables. It is set to return an analogue value of four in the event of an open or short-circuit fault and 16 during normal operation. The status of the input is reported by means of an input bit.

- Loop-powered
- Can report fault, switch open, switch closed levels
- Three visible LEDs
- Capable of switching up to 8 A at 250 V ac
- Fits a standard 35 mm DIN-Rail

Technical Data	
All data is supplied subject to change without notice. Specifications are typical at 24V, 25°C and 50% RH unless otherwise stated.	
Loop voltage	17 - 28 V dc
Modulation voltage	5 - 9 V peak to peak
Digital communication	Discovery and CoreProtocol compatible
Maximum current consumption at 28 V	
switch-on surge, max 150 ms	6 mA
quiescent, 20 kΩ EOL fitted	1.5 mA
switch input closed and 'switch closed' LED on	5.5 mA
any other condition, max 2 LEDs on	5 mA
LED disabled	
switch-on surge, max 150 ms	6 mA
quiescent, 20 kΩ EOL fitted	1.5 mA
switch input closed	2.5 mA
any other condition	2.5 mA
Rated load at 65°C ambient	5 A at 250 V ac (resistive) 2 A at 48 V dc (resistive)
Rated load at 55°C ambient	8 A at 250 V ac (resistive)
Max switching capacity	2 kVA
Switch input monitoring voltage	9 - 11 V dc (open-circuit condition)
Maximum cable resistance	50 Ω
Isolation between relay contacts and other contacts	tested to 2.2 KV
Operating temperature	-20°C to +65°C - see Note A
Humidity (no condensation or icing)	0% to 95% RH
Surface temperature under max load	BS EN 60950:2006
Rigidity	IEC 60950:2005
IP rating	IP20
Standards and approvals	EN 54-18, CPR, LPCB
Design environment	Indoor use only
Dimensions	107 mm wide x 110 mm high x 20 mm deep
Weight	95 g
Material	Flame-retardant polycarbonate

Note A: The operating ambient temperature is that at the outer surface of the Unit case. Consideration should be made of the temperature rise within the protective enclosure which, depending upon the installation, may contain other sources of heat.

Electrical description

The DS-DINR205 Mains Switching Input/Output Unit is loop powered and operates at 17 - 28 V dc with protocol voltage pulses of 5 - 9 V. The loop connections are polarity sensitive.

Protocol compatibility

The unit will only operate with control equipment using the Discovery protocols.

Protocol bit usage	
Protocol bits	Function
Output bit 2	Not used
Output bit 1	Not used
Output bit 0	1 = relay set
Analogue value bits	4 = open or short-circuit fault 16 = normal operation
Input bit 2	Not used
Input bit 1	Not used
Input bit 0	1 = switch closed
Interrupt	Not used
XP flag set	Yes
Alarm flag set	No

Enclosures

To meet the requirements of EN 54 -18 the DS-DINR205 Mains Switching Input/Output Unit should be installed within a steel enclosure weighing more than 4.75 kg, available from electrical wholesalers and distributors.

EMC Directive 2014/30/EU

The DS-DINR205 Mains Switching Input/Output Unit complies with the essential requirements of the EMC Directive 2014/30/EU, provided that it is used as described in this data sheet. A copy of the Declaration of Conformity is available from the Discovery website: www.discovery.rs
Conformity of the DS-DINR205 Mains Switching Input/Output Unit with the EMC Directive, does not confer compliance with the directive on any apparatus or systems connected to them. Construction Products Regulation 305/2011

Construction Products Regulation 305/2011/EU

The DS-DINR205 Mains Switching Input/Output Unit complies with the essential requirements of the Construction Products Regulation 305/2011/EU. A copy of the Declaration of Performance is available from the Discovery website: www.discovery.rs

Input conditions and status					
Resistance across input	Status	Analogue value	Input bit		
			2	1	0
< 100 Ω	Short-circuit fault	4	0	0	0
100 - 200 Ω	Indeterminate	4 or 16	0	0	0 or 1
200 - 11 kΩ 470 Ω	Switch closed	16	0	0	1
11 - 15 kΩ	Indeterminate	16	0	0	0 or 1
15 - 25 kΩ 20 kΩ	Normal (switch open)	16	0	0	0
25 - 30 kΩ	Indeterminate	4 or 16	0	0	0
> 30 kΩ	Open-circuit fault	4	0	0	0

DS-DINR205 Mains Switching Input/Output Unit wiring diagram

