

## Communication module - RAD-RS485-IFS - 2702184

Please be informed that the data shown in this PDF Document is generated from our Online Catalog. Please find the complete data in the user's documentation. Our General Terms of Use for Downloads are valid (<http://phoenixcontact.com/download>)




Multipoint multiplexer for RS-485 bus system, can be extended with I/O extension modules. Can be used as Modbus RTU bus coupler or combined with Radioline wireless system, screw connection. Up to 99 stations, including DIN rail connector

### Why buy this product

- Multipoint multiplexer for I/O signals
- Up to 99 bus stations in the network
- Quick and easy startup without programming
- Can be combined with Radioline wireless modules
- Modular extension with up to 32 I/O extension modules supported
- Extended temperature range, -40 °C ... +70 °C
- Suitable for ATEX zone 2



### Key Commercial Data

Packing unit	1 STK
GTIN	 4 055626 007373
GTIN	4055626007373
Weight per Piece (excluding packing)	200.000 g
Custom tariff number	85176200
Country of origin	Germany

### Technical data

#### Note

Utilization restriction	EMC: class A product, see manufacturer's declaration in the download area
-------------------------	---

#### Dimensions

Width	17.5 mm
Height	99 mm
Depth	114.5 mm

# Communication module - RAD-RS485-IFS - 2702184

## Technical data

### Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-40 °C ... 70 °C (>55°C derating)
	-40 °F ... 158 °F (>131°F derating)
Ambient temperature (storage/transport)	-40 °C ... 85 °C
	-40 °F ... 185 °F
Permissible humidity (operation)	20 % ... 85 %
Permissible humidity (storage/transport)	20 % ... 85 %
Altitude	2000 m
Vibration (operation)	in accordance with IEC 60068-2-6: 5g, 10 Hz ... 150 Hz
Shock	16g, 11 ms

### General

Operating mode	I/O data (Default setting, configuration via thumbwheel)
	Modbus RTU Slave (Default setting, configuration via thumbwheel)
Overvoltage category	II
Assembly instructions	on standard DIN rail NS 35 in accordance with EN 60715
Degree of pollution	2
Housing material	PA 6.6-FR
Flammability rating according to UL 94	V0
MTTF	1233 Years (Telcordia standard, 25°C temperature, 21% operating cycle (5 days a week, 8 hours a day))
	514 Years (Telcordia standard, 40°C temperature, 34.25% operating cycle (5 days a week, 12 hours a day))
	212 Years (Telcordia standard, temperature 40 °C, operating cycle 100 % (7 days a week, 24 hours a day))

### Supply

Supply voltage range	19.2 V DC ... 30.5 V DC
Max. current consumption	≤ 65 mA (at 24 V DC, at 25 °C, stand-alone)
Transient surge protection	Yes

### Serial interface

Interface 1	RS-485
Connection method	COMBICON plug-in screw terminal block
	2-wire
Transmission length	≤ 1200 m
Termination resistor	390 Ω (switchable via DIP switches)
	150 Ω (switchable via DIP switches)
	390 Ω (switchable via DIP switches)
Transmission speed	0,3 ... 187,5 kbit/s (Default setting: 19.2/8/E/1)
Interface 2	Configuration interface
Connection method	S-PORT (socket)

### RF link relay output

# Communication module - RAD-RS485-IFS - 2702184

## Technical data

### RF link relay output

Number of outputs	1
Contact type	PDT
Contact material	PdRu, gold-plated
Maximum switching voltage	30 V AC/DC
	60 V DC
Max. switching current	500 mA (30 V AC/DC)
Electrical service life	5 x 10 <sup>5</sup> cycles with 0.5 A @ 30 V DC

### Connection data

Connection method	Screw connection
Conductor cross section solid min.	0.2 mm <sup>2</sup>
Conductor cross section solid max.	2.5 mm <sup>2</sup>
Conductor cross section flexible min.	0.2 mm <sup>2</sup>
Conductor cross section flexible max.	2.5 mm <sup>2</sup>
Conductor cross section AWG min.	24
Conductor cross section AWG max.	14
Stripping length	7 mm
Tightening torque	0.6 Nm
Screw thread	M3

### Status indicator

Status display	Green LED (supply voltage, PWR)
	Green LED (bus communication, DAT)
	Red LED (periphery error, ERR)
	Green LED (receive data, RX)
	Green LED (transmit data, TX)

### Approvals and conformance

Conformance	CE-compliant
IECEX	Ex nA nC IIC T4 Gc
UL, USA/Canada	UL 508 Listed

### Standards and Regulations

Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Shock	16g, 11 ms
Flammability rating according to UL 94	V0
Vibration (operation)	in accordance with IEC 60068-2-6: 5g, 10 Hz ... 150 Hz
Conformance	CE-compliant
ATEX	# II 3 G Ex nA nC IIC T4 Gc
IECEX	Ex nA nC IIC T4 Gc
UL, USA/Canada	UL 508 Listed
	Class I, Div. 2, Groups A, B, C, D T4A
	Class I, Zone 2, IIC T4

# Communication module - RAD-RS485-IFS - 2702184

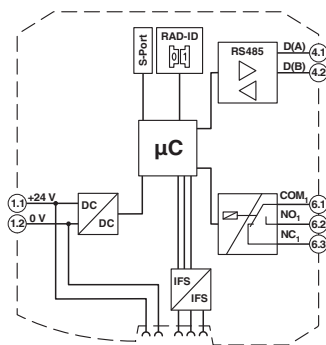
## Technical data

### Environmental Product Compliance

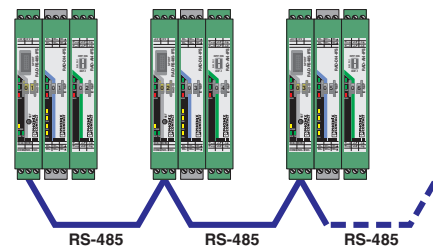
China RoHS	Environmentally Friendly Use Period = 50
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

## Drawings

Block diagram



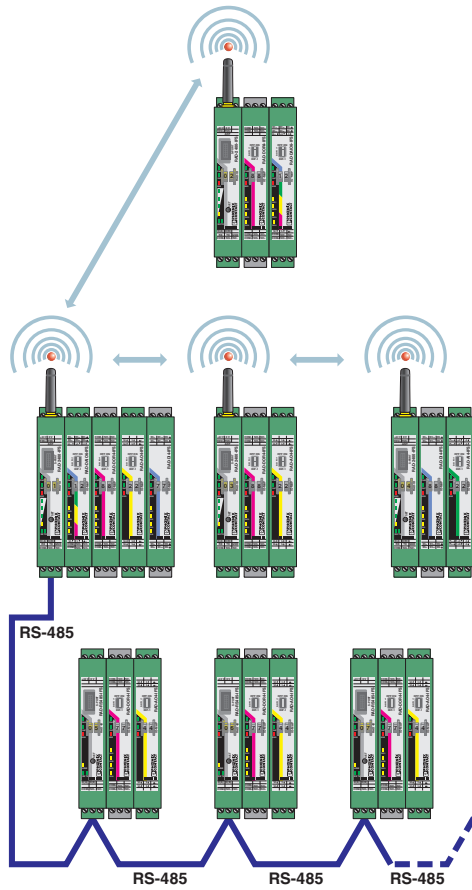
Functional drawing



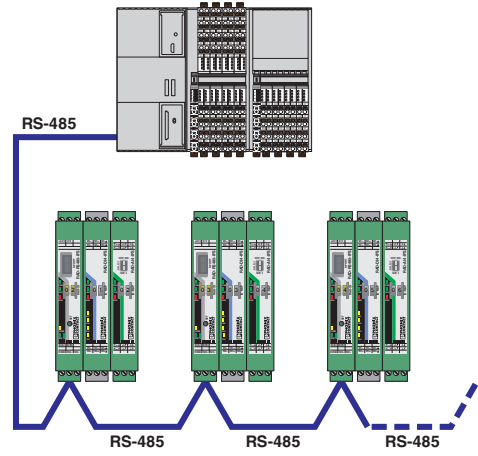
I/O-to-I/O, only RS-485

# Communication module - RAD-RS485-IFS - 2702184

Functional drawing



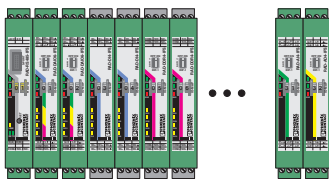
Functional drawing



Modbus/RTU slave

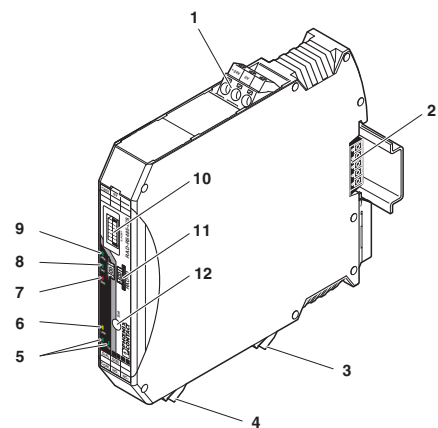
I/O-to-I/O, wireless, and RS-485

Functional drawing



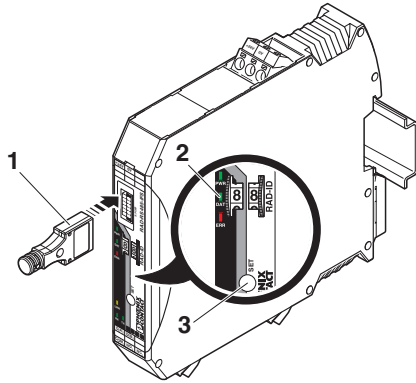
Radioline connection station with up to 32 I/O extension modules

Schematic diagram

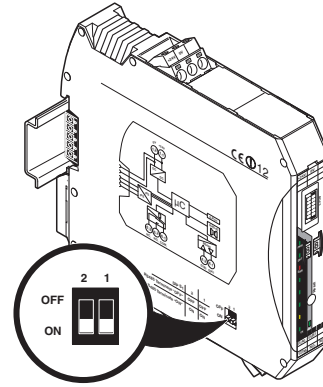


# Communication module - RAD-RS485-IFS - 2702184

Schematic diagram



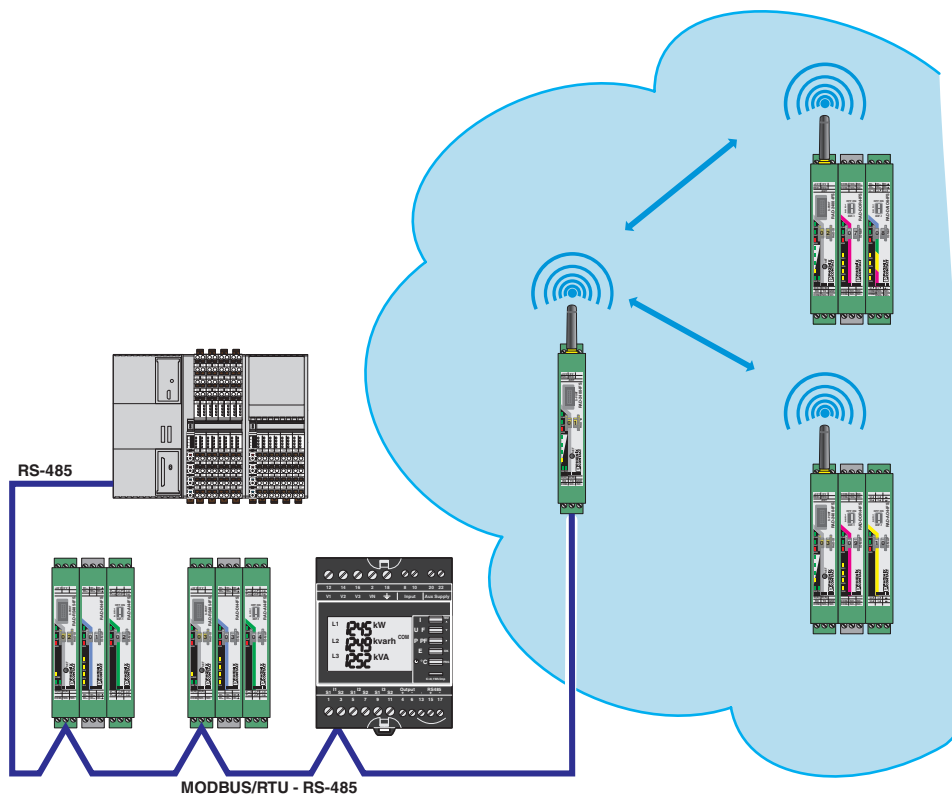
Schematic diagram



Configuration with memory stick

DIP switches

Functional drawing



Radioline wireless system and RS-485 stations at a Modbus master (I/O-to-serial)

# Communication module - RAD-RS485-IFS - 2702184

## Classifications

### eCl@ss

eCl@ss 5.1	27242208
eCl@ss 6.0	27242208
eCl@ss 8.0	19179290
eCl@ss 9.0	19179290

### ETIM

ETIM 5.0	EC000310
----------	----------

## Approvals

### Approvals

---

#### Approvals

UL Listed / cUL Listed / cULus Listed

---

#### Ex Approvals

UL Listed / cUL Listed / ATEX / IECEx / cULus Listed

---

### Approval details

UL Listed <a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a> FILE E 238705
---

cUL Listed <a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a> FILE E 238705
--

cULus Listed 
--

---