






# Industrial ETHERNET

## Rail Family > Unmanaged Rail-Switches

Type	RS2-TX	RS2-3TX/2FX EEC
Order No.	943 686-003 	943 771-001 
<b>Product description</b> Port type and quantity	8 x 10/100Base-TX, TP cable, RJ45 sockets, auto-crossing, auto-negotiation, auto-polarity	3 x 10/100BASE-TX, TP cable, RJ45 sockets, auto-crossing, auto-negotiation, auto-polarity, 2 x 100BASE-FX, MM cables, SC sockets
<b>More Interfaces</b> Power supply/signaling contact	1 plug-in terminal block, 5-pin	1 plug-in terminal block, 5-pin
<b>Network size - length of cable</b> Twisted pair (TP) Multimode fiber (MM) 50/125 µm  Multimode fiber (MM) 62.5/125 µm  Single mode fiber (SM) 9/125 µm  Single mode fiber (LH) 9/125 µm (long haul transceiver)	0 - 100 m	0 - 100 m 0 - 5000 m, 8 dB link budget at 1300 nm, A = 1 dB/km, 3 dB reserve, B = 800 MHz x km  0 - 4000 m, 11 dB link budget at 1300 nm, A = 1 dB/km, 3 dB reserve, B = 500 MHz x km
<b>Network size - cascading</b> Line - / star topology	any	any
<b>Power requirements</b> Operating voltage Current consumption at 24 V DC Power consumption	24 V DC (-25% to +30%) max. 290 mA max. 7,0 W at 24 V DC	24 V DC (-25% to +30%) max. 230 mA max. 5,9 at 24 V DC
<b>Service</b> Diagnostics	LEDs (power, link status, data, error), signal contact / fault relays (24 V DC / 1 A)	LEDs (power, link status, data, error), signal contact / fault relays (24 V DC / 1 A)
<b>Redundancy</b> Redundancy functions	redundant 24 V power supply	redundant 24 V power supply
<b>Ambient conditions</b> Operating temperature Storage/transport temperature Relative humidity (non-condensing) MTBF	0°C to +60°C -25 °C to +70 °C 10% to 95% 61 years; MIL-HDBK 217F: Gb 25 °C	-40 °C to +70 °C -40 °C to +85 °C 10% to 95% 43.4 years; MIL-HDBK 217F: Gb 25 °C
<b>Mechanical construction</b> Dimensions (W x H x D) Mounting Weight Protection class	47 mm x 135 mm x 111 mm DIN Rail 35 mm 230 g IP20	47 mm x 135 mm x 111 mm DIN Rail 35 mm 320 g IP 20
<b>Mechanical stability</b> IEC 60068-2-27 shock IEC 60068-2-6 vibration	15 g, 11 ms duration, 18 shocks 1 mm, 2 Hz - 13.2 Hz, 90 min.; 0.7g, 13.2 Hz - 100 Hz, 90 min.; 3.5 mm, 3 Hz - 9 Hz, 10 cycles, 1 octave/min.; 1g, 9 Hz - 150 Hz, 10 cycles, 1 octave/min.	15 g, 11 ms duration, 18 shocks 1 mm, 2 Hz - 13.2 Hz, 90 min.; 0.7g, 13.2 Hz - 100 Hz, 90 min.; 3.5 mm, 3 Hz - 9 Hz, 10 cycles, 1 octave/min.; 1g, 9 Hz - 150 Hz, 10 cycles, 1 octave/min.
<b>EMC interference immunity</b> EN 61000-4-2 electrostatic discharge (ESD) EN 61000-4-3 electromagnetic field EN 61000-4-4 fast transients (burst) EN 61000-4-5 surge voltage  EN 61000-4-6 conducted immunity	6 kV contact discharge, 8 kV air discharge 10 V/m (80 - 1000 MHz) 2 kV power line, 1 kV data line power line: 2 kV (line/earth), 1 kV (line/line), 1 kV data line 3 V (10 kHz - 150 kHz), 10 V (150 kHz - 80 MHz)	6 kV contact discharge, 8 kV air discharge 10 V/m (80 - 1000 MHz) 2 kV power line, 1 kV data line power line: 2 kV (line/earth), 1 kV (line/line), 1 kV data line 3 V (10 kHz - 150 kHz), 10 V (150 kHz - 80 MHz)
<b>EMC emitted immunity</b> FCC CFR47 Part 15 EN 55022	FCC CFR47 Part 15 Class A EN 55022 Class A	FCC CFR47 Part 15 Class A EN 55022 Class A
<b>Approvals</b> Safety of industrial control equipment EMV regulations for assembly in vehicles Hazardous locations Employment in vehicles Safety of information technology equipment Germanischer Lloyd	cUL 508 (E175531)  cUL 1604 Class 1 Div 2 (E203960)  cUL 60950 (E168643) Germanischer Lloyd (15 662 - 00 HH)	cUL 508 (E175531)  cUL 1604 Class 1 Div 2 (E203960)  cUL 60950 (E168643) Germanischer Lloyd (15 662 - 00 HH)
<b>Scope of delivery and accessories</b> Scope of delivery Accessories to order separately	device, terminal block, operating manual rail power supply RPS 30, RPS 80 EEC or RPS 120 EEC, 19" installation frame	device, terminal block, operating manual rail power supply RPS 30, RPS 80 EEC or RPS 120 EEC, 19" installation frame

RS2-3TX/2FX-SM EEC	RS2-4TX EEC	RS2-4TX/1FX EEC
943 772-001  Unmanaged Industrial ETHERNET Rail Switch, store and forward switching mode, Ethernet (10 Mbit/s) and Fast-Ethernet (100 Mbit/s)	943 819-001  Unmanaged Industrial ETHERNET Rail-Switch, store and forward switching mode, Ethernet (10 Mbit/s) and Fast-Ethernet (100 Mbit/s)	943 773-001  Unmanaged Industrial ETHERNET Rail Switch, store and forward switching mode, Ethernet (10 Mbit/s) and Fast-Ethernet (100 Mbit/s)
3 x 10/100BASE-TX, TP cable, RJ45 sockets, auto-crossing, auto-negotiation, auto-polarity, 2 x 100BASE-FX, SM cables, SC sockets	4 x 10/100BASE-TX, TP cable, RJ45 sockets, auto-crossing, auto-negotiation, auto-polarity	4 x 10/100BASE-TX, TP cable, RJ45 sockets, auto-crossing, auto-negotiation, auto-polarity, 1 x 100BASE-FX, MM cable, SC sockets
1 plug-in terminal block, 5-pin	1 plug-in terminal block, 5-pin	1 plug-in terminal block, 5-pin
0 - 100 m  0 - 32.5 km, 16 dB link budget at 1300 nm, A = 0.4 dB/km, 3 dB reserve, D = 3.5 ps/(nm x km)	0 - 100 m	0 - 100 m 0 - 5000 m, 8 dB link budget at 1300 nm, A = 1 dB/km, 3 dB reserve, B = 800 MHz x km  0 - 4000 m, 11 dB link budget at 1300 nm, A = 1 dB/km, 3 dB reserve, B = 500 MHz x km
any	any	any
24 V DC (-25% to +30%) max. 230 mA max. 5,9 W at 24 V DC	24 V DC power supply (-25% to +30%) max. 180 mA max 4,8 W at 24 V DC	24 V DC (-25% to +30%) max. 220 mA max. 5,4 W at 24 DC
LEDs (power, link status, data, error), signal contact / fault relais (24 V DC / 1 A)	LEDs (power, link status, data, error), signal contact / fault relais (24 V DC / 1 A)	LEDs (power, link status, data, error), signal contact / fault relais (24 V DC / 1 A)
fedundant 24 V power supply	redundant 24 V power supply	redundant 24 V power supply
-40 °C to +70 °C -40 °C to +85 °C 10% to 95% 47.2 years; MIL-HDBK 217F: Gb 25 °C	-40 °C to +70 °C -40 °C to +85 °C 10% to 95% 68.5 years; MIL-HDBK 217F: Gb 25 °C	-40 °C to +70 °C -40 °C to +85 °C 10% to 95% 51.4 years; MIL-HDBK 217F: Gb 25 °C
47 mm x 135 mm x 111 mm DIN Rail 35 mm 320 g IP 20	47 mm x 135 mm x 111 mm DIN Rail 35 mm 300 g IP 20	47 mm x 135 mm x 111 mm DIN Rail 35 mm 320 g IP 20
15 g, 11 ms duration, 18 shocks 1 mm, 2 Hz - 13.2 Hz, 90 min.; 0.7g, 13.2 Hz - 100 Hz, 90 min.; 3.5 mm, 3 Hz - 9 Hz, 10 cycles, 1 octave/min.; 1g, 9 Hz - 150 Hz, 10 cycles, 1 octave/min.	15 g, 11 ms duration, 18 shocks 1 mm, 2 Hz - 13.2 Hz, 90 min.; 0.7g, 13.2 Hz - 100 Hz, 90 min.; 3.5 mm, 3 Hz - 9 Hz, 10 cycles, 1 octave/min.; 1g, 9 Hz - 150 Hz, 10 cycles, 1 octave/min.	15 g, 11 ms duration, 18 shocks 1 mm, 2 Hz - 13.2 Hz, 90 min.; 0.7g, 13.2 Hz - 100 Hz, 90 min.; 3.5 mm, 3 Hz - 9 Hz, 10 cycles, 1 octave/min.; 1g, 9 Hz - 150 Hz, 10 cycles, 1 octave/min.
6 kV contact discharge, 8 kV air discharge 10 V/m (80 - 1000 MHz) 2 kV power line, 1 kV data line power line: 2 kV (line/earth), 1 kV (line/line), 1 kV data line 3 V (10 kHz - 150 kHz), 10 V (150 kHz - 80 MHz)	6 kV contact discharge, 8 kV air discharge 10 V/m (80 - 1000 MHz) 2 kV power line, 1 kV data line power line: 2 kV (line/earth), 1 kV (line/line), 1 kV data line 3 V (10 kHz - 150 kHz), 10 V (150 kHz - 80 MHz)	6 kV contact discharge, 8 kV air discharge 10 V/m (80 - 1000 MHz) 2 kV power line, 1 kV data line power line: 2 kV (line/earth), 1 kV (line/line), 1 kV data line 3 V (10 kHz - 150 kHz), 10 V (150 kHz - 80 MHz)
FCC CFR47 Part 15 Class A EN 55022 Class A	FCC CFR47 Part 15 Class A EN 55022 Class A	FCC CFR47 Part 15 Class A EN 55022 Class A
cUL 508 (E175531)  cUL 1604 Class 1 Div 2 (E203960)  cUL 60950 (E168643) Germanischer Lloyd (15 662 - 00 HH)	cUL 508 (E175531)  cUL 1604 Class 1 Div 2 (E203960)  cUL 60950 (E168643) Germanischer Lloyd (15 662 - 00 HH)	cUL 508 (E175531)  cUL 1604 Class 1 Div 2 (E203960)  cUL 60950 (E168643) Germanischer Lloyd (15 662 - 00 HH)
device, terminal block, operating manual rail power supply RPS 30, RPS 80 EEC or RPS 120 EEC, 19" installation frame	device, terminal block, operating manual rail power supply RPS 30, RPS 80 EEC or RPS 120 EEC, 19" installation frame	device, terminal block, operating manual rail power supply RPS 30, RPS 80 EEC or RPS 120 EEC, 19" installation frame