RS2-FX/FX

Rail Family:Managed Rail Switches

Product description	
Description	managed Industrial ETHERNET Rail Switch, store and forward switching mode, Ethernet (10 Mbit/s) and Fast-Ethernet (100 Mbit/s)
Port type and quantity	5 x 10/100BASE-TX, TP cable, RJ45 sockets, auto-crossing, auto-negotiation, auto-polarity, 2 x 100BASE-FX, MM cables, SC sockets
Type	RS2-FX/FX
Order No.	943 653-600/700
More Interfaces	
Power supply/signaling contact	1 plug-in terminal block, 5-pin
V.24 interface	1 x RJ11 socket
Standby port	1 x RJ45 socket
Network size - length of cable	
Twisted pair (TP)	0 - 100 m
Multimode fiber (MM) 50/125 µm	0 - 5000 m, 8 dB link budget at 1300 nm, A = 1 dB/km, 3 dB reserve, B = 800 MHz x km
Multimode fiber (MM) 62.5/125 µm	0 - 4000 m, 11 dB link budget at 1300 nm, A = 1 dB/km, 3 dB reserve, B = 500 MHz x km
Network size - cascadibility	
Line - / star topology	any
Ring structure (HIPER-Ring)	50 (reconfiguration time < 0.5 sec.)
Power requirements	
Operating voltage	24 V DC (-25% to +30%)
Current consumption at 24 V DC	max. 375 mA
Service	
Management	serial interface, web interface SNMP v1/v2/v3, HiVision
Diagnostics	LEDs (power, link status, data, standby, redundancy manager), signal contact / fault relais (24 V DC / 1 A), RMON (statistics, history, alarms, events), port mirroring.
Configuration	terminal SW, BOOTP, DHCP, DHCP option 82, auto-configuration adapter (ACA 11)
Security	port security
Other services	prioritization (IEEE 802.1D/p), VLAN (802.1Q), multicast (IGMP snooping/querier, GMRP), broadcastlimiter, SNTP (simple network time protocol), flow control IEEE 802.3x
Redundancy	
Redundancy functions	HIPER-Ring (ring structure), RSTP (rapid spanning tree protocol), redundant network/ring coupling, dual homing, redundant 24 V power supply

Ambient conditions	
Operating temperature	0 °C to +60 °C
Storage/transport temperature	-25 °C to +70 °C
Relative humidity (non-condensing)	10% to 95%
Mechanical construction	
Dimensions (W x H x D)	110 mm x 131 mm x 111 mm
Mounting	DIN Rail 35 mm
Weight	850 g
Protection class	IP 20
Mechanical stability	
IEC 60068-2-27 shock	15 g, 11 ms duration, 18 shocks
IEC 60068-2-6 vibration	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.
EMC interference immunity	
EN 61000-4-2 electrostatic discharge (ESD)	6 kV contact discharge, 8 kV air discharge
EN 61000-4-3 electromagnetic field	10 V/m (80 - 1000 MHz)
EN 61000-4-4 fast transients (burst)	2 kV power line, 1 kV data line
EN 61000-4-5 surge voltage	power line: 2 kV (line/earth), 1 kV (line/line), 1 kV data line
EN 61000-4-6 Conducted Immunity	3 V (10 kHz - 150 kHz), 10 V (150 kHz - 80 MHz)
EMC emitted immunity	
FCC CFR47 Part 15	FCC CFR47 Part 15 Class A
EN 55022	EN 55022 Class A
Approvals	
Safety of industrial control equipment	cUL 508 (E175531)
Hazardous locations	cUL 1604 Class 1 Div 2 (E203960)
Safety of information technology equipment	cUL 60950 (E168643)
Germanischer Lloyd	Germanischer Lloyd (15 662 - 00 HH)
Scope of delivery and accessories	
Scope of delivery	device, terminal block, operating manual
Accessories to order separately	rail power supply RPS 30, RPS 60 or RPS 120, terminal cable, HiVision network management, auto-configuration adapter (ACA 11), 19\" installation frame

RS2-16M 2MM SC

Rail Family:Managed Rail Switches

Product description	
Description	managed Industrial ETHERNET Rail Switch, store and forward switching mode, Ethernet (10 Mbit/s) and Fast-Ethernet (100 Mbit/s)
Port type and quantity	14 x 10/100BASE-TX, TP cable, RJ45 sockets, auto-crossing, auto-negotiation, auto-polarity, 2 x 100BASE-FX, MM cables, SC sockets
Type	RS2-16M 2MM SC
Order No.	943 792-001
More Interfaces	
Power supply/signaling contact	1 plug-in terminal block, 6-pin
V.24 interface	1 x RJ11 socket
Standby port	1 x RJ45 socket
Network size - length of cable	
Twisted pair (TP)	0 - 100 m
Multimode fiber (MM) 50/125 µm	0 - 5000 m, 8 dB link budget at 1300 nm, A = 1 dB/km, 3 dB reserve, B = 800 MHz x km
Multimode fiber (MM) 62.5/125 µm	0 - 4000 m, 11 dB link budget at 1300 nm, A = 1 dB/km, 3 dB reserve, B = 500 MHz x km
Network size - cascadibility	
Line - / star topology	any
Ring structure (HIPER-Ring)	50 (reconfiguration time < 0.5 sec.)
Power requirements	
Operating voltage	24 V DC (-25% to +30%)
Current consumption at 24 V DC	max. 600 mA
Service	
Management	serial interface, web interface SNMP v1/v2/v3, HiVision
Diagnostics	LEDs (power, link status, data, standby, redundancy manager), signal contact / fault relais (24 V DC / 1 A), RMON (statistics, history, alarms, events), port mirroring.
Configuration	terminal SW, BOOTP, DHCP, DHCP option 82, auto-configuration adapter (ACA 11)
Security	port security
Other services	prioritization (IEEE 802.1D/p), VLAN (802.1Q), multicast (IGMP snooping/querier, GMRP), broadcastlimiter, SNTP (simple network time protocol), flow control IEEE 802.3x
Redundancy	
Redundancy functions	HIPER-Ring (ring structure), RSTP (rapid spanning tree protocol), redundant network/ring coupling, dual homing, redundant 24 V power supply
Ambient conditions	

Operating temperature	0 °C to +60 °C
Storage/transport temperature	-25 °C to +70 °C
Relative humidity (non-condensing)	10% to 95%
Mechanical construction	
Dimensions (W x H x D)	110 mm x 131 mm x 111 mm
Mounting	DIN Rail 35 mm
Weight	650 g
Protection class	IP 20
Mechanical stability	
IEC 60068-2-27 shock	15 g, 11 ms duration, 18 shocks
IEC 60068-2-6 vibration	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.
EMC interference immunity	
EN 61000-4-2 electrostatic discharge (ESD)	6 kV contact discharge, 8 kV air discharge
EN 61000-4-3 electromagnetic field	10 V/m (80 - 1000 MHz)
EN 61000-4-4 fast transients (burst)	2 kV power line, 1 kV data line
EN 61000-4-5 surge voltage	power line: 2 kV (line/earth), 1 kV (line/line), 1 kV data line
EN 61000-4-6 Conducted Immunity	3 V (10 kHz - 150 kHz), 10 V (150 kHz - 80 MHz)
EMC emitted immunity	
FCC CFR47 Part 15	FCC CFR47 Part 15 Class A
EN 55022	EN 55022 Class A
Approvals	
Safety of industrial control equipment	cUL 508 (E175531) in preparation
Hazardous locations	cUL 1604 Class 1 Div 2 (E203960) in preparation
Germanischer Lloyd	Germanischer Lloyd (15 662 - 00 HH) in preparation
Scope of delivery and accessories	
Scope of delivery	device, terminal block, operating manual
Accessories to order separately	rail power supply RPS 30, RPS 60 or RPS 120, terminal cable, HiVision network management, auto-configuration adapter (ACA 11), 19\" installation frame

RT2-TX/FX

Rail Family:Rail Transceiver

Product description	
Description	Industrial ETHERNET media converter, 100BASE-FX-Multimode and 100BASE-TX
Port type and quantity	1 x 100BASE-FX, MM cables, SC sockets, 1 x 100BASE-TX, TP cable, RJ45 socket
Type	RT2-TX/FX
Order No.	943 658-002
More Interfaces	
Power supply/signaling contact	1 plug-in terminal block, 5-pin
Network size - length of cable	
Twisted pair (TP)	0 - 100 m
Multimode fiber (MM) 50/125 µm	0 - 5000 m, 8 dB link budget at 1300 nm, A = 1 dB/km, 3 dB reserve, B = 800 MHz x km
Multimode fiber (MM) 62.5/125 µm	0 - 4000 m, 11 dB link budget at 1300 nm, A = 1 dB/km, 3 dB reserve, B = 500 MHz x km
Network size - cascadibility	
Path delay value	84 BT (Class 2 Repeater)
Power requirements	
Operating voltage	24 V DC (-25% to +30%)
Current consumption at 24 V DC	max. 240 mA
Service	
Diagnostics	LEDs (power, data, link status), signal contact (24 V DC / 1 A)
Redundancy	
Redundancy functions	redundant 24 V power supply
Mechanical construction	
Dimensions (W x H x D)	47 mm x 135 mm x 111 mm
Mounting	DIN Rail 35 mm
Weight	230 g
Protection class	IP 20
Ambient conditions	
Operating temperature	0 °C to +60 °C
Storage/transport temperature	-25 °C to +75 °C
Relative humidity (non-condensing)	10% to 95%
Mechanical stability	
IEC 60068-2-27 shock	15 g, 11 ms duration, 18 shocks

IEC 60068-2-6 vibration	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.
EMC interference immunity	
EN 61000-4-2 electrostatic discharge (ESD)	6 kV contact discharge, 8 kV air discharge
EN 61000-4-3 electromagnetic field	10 V/m (80 - 1000 MHz)
EN 61000-4-4 fast transients (burst)	2 kV power line, 1 kV data line
EN 61000-4-5 surge voltage	power line: 2 kV (line/earth), 1 kV (line/line), 1 kV data line
EN 61000-4-6 Conducted Immunity	3 V (10 kHz - 150 kHz), 10 V (150 kHz - 80 MHz)
EMC emitted immunity	
FCC CFR47 Part 15	FCC CFR47 Part 15 Class A
EN 55022	EN 55022 Class A
Approvals	
Safety of industrial control equipment	cUL 508 (E175531)
Hazardous locations	cUL 1604 Class 1 Div 2 (E203960)
Safety of information technology equipment	cUL 60950 (E168643)
Germanischer Lloyd	Germanischer Lloyd (15662-00HH)
Scope of delivery and accessories	
Scope of delivery	device, terminal block, operating manual
Accessories to order separately	rail power supply RPS 30, RPS 60 or RPS 120, 19\" installation frame