

HARTING



eCon / mCon 9000 Family

19" Fast Ethernet Switch

When operating in locomotives, railcars or railway control cars, Ethernet switches are exposed to vibration, electrical fields and other external influences.

This field of application demands extraordinary reliability and longevity from all electrical components. The 19" product line supports the railway industry requirements.

The 9000 product line offers pure RJ45 products, in combination with two optical ports, and M12 solutions.



Characteristics

The eCon/sCon Ethernet switches operate as unmanaged switches in store-and-forward switching mode. They support Auto-crossing, Auto-negotiation and Auto-polarity.





The mCon Ethernet switches function as managed Ethernet switches and feature the standard SNMP access methods. They are equipped with a wide range of management functions.

Management Functions


- Store-and-forward switching mode (IEEE 802.3)
- Multicast filtering and bandwidth throttling
- IGMP snooping and querier
- VLAN (IEEE 802.1Q)
- Rapid spanning tree (RSTP)
- QoS (IEEE 802.1p)
- DHCP client
- SNMP V1 and SNMP V3
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eCon 9000 Series

Technical Data	eCon 9100-AA	eCon 9082-AE	eCon 9070-B	eCon 9080-B
				
Order No.	20 76 110 7000	20 76 110 7200	20 76 207 7000	20 76 208 7000
Input voltage	24/48 V DC	24/48 V DC	24/48 V DC	24 V DC
Input current	8 V to 60 V	8 V to 60 V	8 V to 60 V	12 V to 48 V
Connection Power supply	DIN plug connect., type F	DIN plug connect., type F	M12 A- Coding, front panel	DIN plug connect., type F
Weight	Approx. 0.6 kg	Approx. 0.6 kg	Approx. 0.6 kg	Approx. 0.6 kg
Dimensions (W x H x D)	60.6 x 128.4 x 173.5 mm	60.6 x 128.4 x 173.5 mm	60.6 x 128.4 x 173.5 mm	50.5 x 128.4 x 173.5 mm
Signalling contact	Relay potential-free 24 V DC; 0.5A	Relay potential-free 24 V DC; 0.5A	-----	Relay potential-free 24 V DC; 0.5A
Ethernet Interface				
Number of ports	8x 10/100Base-TX 2x 10/100/1000Base-TX	8x 10/100Base-TX 2x 100Base-FX	7x 10/100Base-TX	8x 10/100Base-TX (7x front, 1x backplane)
Connection	RJ45	RJ45 and ST	M12 D-Coding	M12 D-Coding
Environmental conditions				
Operating temperature	-40 °C to +70 °C	-40 °C to +70 °C	-40 °C to +70 °C	-40 °C to +70 °C
Mechanical stability				
Shock-proof	acc. to IEC 60 068-2-27	acc. to IEC 60 068-2-27	acc. to IEC 60 068-2-27	acc. to IEC 60 068-2-27
Vibration-proof	acc. to IEC 60 068-2-6	acc. to IEC 60 068-2-6	acc. to IEC 60 068-2-6	acc. to IEC 60 068-2-6
Railway standard	acc. to DIN EN 50 155, Class 1	acc. to DIN EN 50 155, Class 1	acc. to DIN EN 50 155, Class 1	acc. to DIN EN 50 155, Class 1
EMC-standards				
Interference immunity ESD	EN 61 000-4-2	EN 61 000-4-2	EN 61 000-4-2	EN 61 000-4-2
Interf. immunity, HF radiated	EN 61 000-4-3	EN 61 000-4-3	EN 61 000-4-3	EN 61 000-4-3
Interf. immunity, burst	EN 61 000-4-4	EN 61 000-4-4	EN 61 000-4-4	EN 61 000-4-4
Interf. immunity, surge	EN 61 000-4-5	EN 61 000-4-5	EN 61 000-4-5	EN 61 000-4-6
Interf. immunity, HF conducted	EN 61 000-4-6	EN 61 000-4-6	EN 61 000-4-6	EN 61 000-4-6
Emitted radiation	EN 55 011, Class A EN 55 022, Class A	EN 55 011, Class A EN 55 022, Class A	EN 55 011, Class A EN 55 022, Class A	EN 55 011, Class A EN 55 022, Class A
Railway standard	EN 50 155 EN 50 121-3-2	EN 50 155 EN 50 121-3-2	EN 50 155 EN 50 121-3-2	EN 50 155 EN 50 121-3-2
Approvals	----- UL pending	----- UL pending	----- UL pending	e1 03 5049 UL pending

sCon 9000

Technical Data	sCon 9060-A
	
Order No.	20 76 106 7000
Input voltage	24 V DC
Input current	12 V to 30 V
Connection Power supply	DIN plug connect., type H
Weight	Approx. 0.5 kg
Dimensions (W x H x D)	60.7 x 128.4 x 173.5 mm
Signalling contact	Relay potential-free 24 V DC; 0.5A
Ethernet Interface	
Number of ports	6x 10/100Base-TX
Connection	RJ45
Environmental conditions	
Operating temperature	-20 °C to +75 °C
Mechanical stability	
Shock-proof	acc. to IEC 60 068-2-27
Vibration-proof	acc. to IEC 60 068-2-6
Railway standard	acc. to DIN EN 50 155, Class 1
EMC-standards	
Interference immunity ESD	EN 61 000-4-2
Interf. immunity, HF radiated	EN 61 000-4-3
Interf. immunity, burst	EN 61 000-4-4
Interf. immunity, surge	EN 61 000-4-5
Interf. immunity, HF conducted	EN 61 000-4-6
Emitted radiation	EN 55 011, Class A EN 55 022, Class A
Railway standard	EN 50 155EN 50 121-3-2
Approvals	e1 03 5012 UL pending

mCon 9000 Series

Technical Data	mCon 9100-AA	mCon 9082-AE	mCon 9070-B	mCon 9080-B
				
Order No.	20 76 110 7001	20 76 110 7201	20 76 207 7001	20 76 208 7001
Input voltage	24/48 V DC	24/48 V DC	24/48 V DC	24 V DC
Input current	8 V to 60 V	8 V to 60 V	8 V to 60 V	12 V to 48 V
Connection Power supply	DIN plug connect., type F	DIN plug connect., type F	M12 A-coding, front panel	DIN plug connect., type F
Weight	Approx. 0.8 kg	Approx. 0.8 kg	Approx. 0.8 kg	Approx. 0.8kg
Dimensions (W x H x D)	60.6 x 128.4 x 173.5 mm	60.6 x 128.4 x 173.5 mm	60.6 x 128.4 x 173.5 mm	50.5 x 128.4 x 173.5 mm
Signalling contact	Relay potential-free 24 V DC; 0.5A	Relay potential-free 24 V DC; 0.5A	-----	Relay potential-free 24 V DC; 0.5A
Ethernet Interface				
Number of ports	8x 10/100Base-TX 2x 10/100/1000Base-TX	8x 10/100Base-TX 2x 100Base-FX	7x 10/100Base-TX	8x 10/100Base-TX (7x front, 1x backplane)
Connection	RJ45	RJ45 and ST	M12 D-Coding	M12 D-Coding
Environmental conditions				
Operating temperature	-40 °C to +70 °C	-40 °C to +70 °C	-40 °C to +70 °C	-40 °C to +70 °C
Mechanical stability				
Shock-proof	acc. to IEC 60 068-2-27	acc. to IEC 60 068-2-27	acc. to IEC 60 068-2-27	acc. to IEC 60 068-2-27
Vibration-proof	acc. to IEC 60 068-2-6	acc. to IEC 60 068-2-6	acc. to IEC 60 068-2-6	acc. to IEC 60 068-2-6
Railway standard	acc. to DIN EN 50 155, Class 1	acc. to DIN EN 50 155, Class 1	acc. to DIN EN 50 155, Class 1	acc. to DIN EN 50 155, Class 1
EMC-standards				
Interference immunity ESD	EN 61 000-4-2	EN 61 000-4-2	EN 61 000-4-2	EN 61 000-4-2
Interf. immunity, HF radiated	EN 61 000-4-3	EN 61 000-4-3	EN 61 000-4-3	EN 61 000-4-3
Interf. immunity, burst	EN 61 000-4-4	EN 61 000-4-4	EN 61 000-4-4	EN 61 000-4-4
Interf. immunity, surge	EN 61 000-4-5	EN 61 000-4-5	EN 61 000-4-5	EN 61 000-4-5
Interf. immunity, HF conducted	EN 61 000-4-6	EN 61 000-4-6	EN 61 000-4-6	EN 61 000-4-6
Emitted radiation	EN 55 011, Class A EN 55 022, Class A	EN 55 011, Class A EN 55 022, Class A	EN 55 011, Class A EN 55 022, Class A	EN 55 011, Class A EN 55 022, Class A
Railway standard	EN 50 155EN 50 121-3-2	EN 50 155EN 50 121-3-2	EN 50 155EN 50 121-3-2	EN 50 155EN 50 121-3-2
Approvals	----- UL pending	----- UL pending	----- UL pending	e1 03 5049 UL pending



Pushing Performance

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