D-Link
Building Networks for People



DGS-F3000 Series

4 or 8-Port Industrial Managed Gigabit PoE Switch

Features

- Up to 8 10/100/1000 BASE-T(X) RJ45 ports or 1000 BASE-X SFP slots
- Up to 8 802.3af/ 802.3at Power over Ethernet ports, with maximum 30W PoE power per port and maximum 240 W device power budget
- Powerful Switching Platform, supporting Redundancy advanced Protocols, such as ERPS, RSTP, STP, MRP (Manager/Client) and compatible rings
- Profinet CC-B v2.33 certified and GSDML file provided
- IEEE 1588v2 Precision Time Protocol Hw-Based Transparent clock
- CE/FCC/UL and NEMA TS-2 Certified for Traffic Control Applications
- EN50155/EN50121-4 certified for Railway and Trackside applications
- Works from -20°C~70°C
- Security features based on IEC62443-4-2

The DGS-F3000 Series is an Industrial Grade Managed Gigabit Ethernet PoE Switch. Designed to provide a highly reliable, fault-tolerant, extremely fast network connection in a harsh environment, DGS-F3000 Series equips two terminal blocks to provide dual redundant power inputs with Reverse Polarity Protection and allows field engineers to build up a stand-alone fault alarm system. DGS-F3000 series is UL, CE, FCC and NEMA TS-2 certified, allowing the use in Traffic Control Applications.

Within its compact DIN-Rail housing design, the DGS-F3000 series allows you to choose between different port combinations: 10/100/1000 BASE-T(X) RJ45 port, 1000 BASE-X SFP port and IEEE 802.3af/at complaint PoE RJ45. DGS-F3000 provide, in its 8-PoE-Port Version, up to 240W power budget.

This is the right choice if you want to set up a Reliable network environment with its intelligent features and keep equipment connected all the time, even in case of temporary network breakdowns through RSTP, ERPS Rings and MRP (Manager/Client) redundancy. Supporting multiple Compatible Rings, D-Link can be the best choice to have a painless enhancement of an existing infrastructure that doesn't jeopardize network Topology and existing working pattern. To prevent network intrusions, it is necessary to have a good accessing control mechanism that can identify, authenticate and authorize users. 4 Ports and 8 Ports support user account, password policy, and authentication interface managements functions that comply with IEC62443 standard.

Being Profinet CC-B v2.33 certified, this switch Series is Automation and IoT ready. Profinet allows wired and wireless combinations for an array of connectivity options, providing a more effective backbone for your automation operations.

Having undergone environmental testing to ensure reliable performance under a variety of power supply conditions, such as voltage variations, power interruptions, and supply changeovers, this switch Series is fully EN50155-certified for today's demanding railway applications, as well as complying with essential sections of EN50121-4 for ground equipment.

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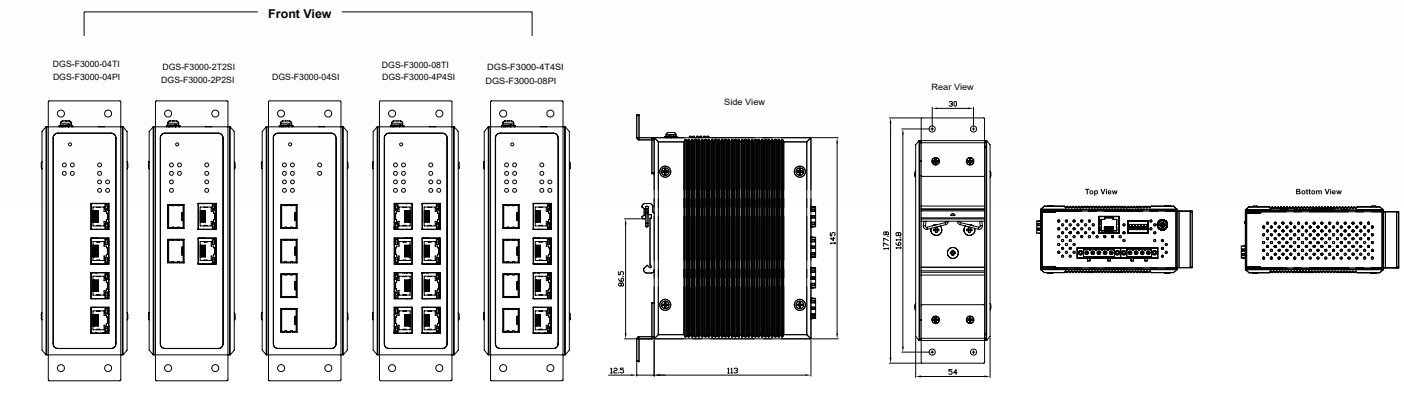
Technical Specifications		
Model Name	DGS-F3000 Series	
Switch Properties		
Priority Queues	8	
VLAN Table	4096	
MAC-Based VLAN	512	
VLAN ID Range	VID 1 to 4094	
Trunk Group	4	
Static IGMP Groups	128	
Dynamic IGMP Groups	256	
MAC Table Size	16K	
Packet Buffer Size	1.5 MB	
Jumbo Frame	9216 Byte	
Ethernet		
Standards	IEEE 802.3af / 802.3at for Power-over-Ethernet IEEE 802.3/802.3u for 10BASE-T/100BASE-T(X) IEEE 802.3ab for 1000BASE-T IEEE 802.3z for 1000BASE-X IEEE 802.3x for Flow Control IEEE 802.1d-2004 for Spanning Tree Protocol IEEE 802.1w for Rapid Spanning Tree Protocol IEEE 802.1s for Multiple Spanning Tree Protocol IEEE 802.1q/p for VLAN Tagging and Class of Service	IEEE 8021x for Authentication IEEE 802.3ad for Port Trunk with LACP IEEE 802.3az fir Energy Efficient Ethernet
Protocols	IPv4, IPv6, IGMPv1/v2/v3, IGMP Snooping, GARP, GMRP, GVRP, SNMPv1/v2c/ v3, SNMP Inform, ICMP, Telnet, SSH, Client/IP-port-mapping, BootP, TFTP, SMTP, SMTP (Gmail), RMON, HTTP, HTTPS, Syslog, MRP (Manager/Client), LLDP, 802.1x, EAP,RADIUS, TACACS+, Mirror port, QoS, ACL, ITU-T G.8032 ERPS Ring, STP, RSTP, MSTP, Compatible Ring/Chain, U-Ring, NTP Server/Client, Serial Console, Modbus/TCP, IEEE 1588 PTP V1/V2, UDLD, Security, PoE, Trunk, LACP, MLD, 802.1Q VLAN, Port-Based VLAN, MAC-Based VLAN, IP-Subnet-Based VLAN, Protocol-Based VLAN, QinQ, 802.1x, ARP spoof Prevention, DHCP snooping. IP source Guard, Dynamic ARP Inspection, Profinet, DHCP relay Agent, Voice VLAN, sFlow, PoE continue	
Redundancy	ITU-T G.8032 ERPS, STP, RSTP, MSTP, MRP(Manager/Client), Compatible Ring/Chain, U-Ring	
Time Synchronization	Network Synchronization	NTP Server/Client, SNTP
	Precision Network Synchronization	IEEE1588v1 OC/BC (Software) IEEE1588v2 TC (Hardware) - ns accuracy IEEE1588v2 OC/BC (Software)
Automation Profiles	Profinet v2.33 CC-B certified, Modbus/TCP device status registers provided	
SNMP MIB	MIB II, IF-MIB, SNMPv2 MIB, BRIDGE-MIB, RMON MIB Group 1,2,3,9, RFC RFC 1157, RFC 1213, RFC 1215, RFC 1493, RFC 1643, RFC 1757, RFC 2011, RFC 2012, RFC 2013, RFC 2233, RFC 2571, RFC 2742, RFC 2819, RFC 2863, RFC 3411, RFC 3412, RFC 3413, RFC 3414, RFC 3415	

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Power	
Input Voltage	9-57 VDC for Non-PoE models 45-57 VDC for 802.3af mode 51-57 VDC for 802.3at mode
Input Current (System)	Max. 1.4A @ 9VDC (without PoE) Max. 2.9A @ 45VDC (Support up to 8 ports at 15.4W per PoE port) Max. 5.0A @ 51VDC (Support up to 8 ports at 30W per PoE port)
Power Consumption (System)	Max 12.6 W @9 VDC (without PoE) Max 130.5 W @45VDC (802.3af, with 15.4W PoE per port for 8 ports) Max 255 W @51VDC (802.3at, with 30W PoE per port for 8 ports)
Connector Reverse Polarity Protection	5-Pin 5.08mm Lockable Terminal Block Yes
Interfaces	
RJ45 Ports	Up to 8 10/100/1000BASE-T(X) auto negotiation speed
Fiber Optics Ports	Up to 4 1000BASE-X SFP slot
LED Indicators	PWR1, PWR2, Alarm, Run, Ring, Ring Master, RJ-45 Link/Speed, SFP Link, PoE
Console	RS232 (RJ45 connector)
Relay Output	2 relay outputs with current carrying capacity of 1A @ 24 VDC
DIP Switches	Ring Control and Profinet Setting
Button	Reset Button
Physical Characteristics	
Housing	IP30 aluminum housing
Dimension (W x H x D)	54 x 113 x 145 mm
Weight	800g
Installation	DIN-Rail, Wall mount (optional kit)
Environmental Limits	
Operating Temperature	-20°C to +70°C (-4°F to +158°F)
Storage Temperature	-40°C to +85°C (-40°F to +185°F)
Ambient Relative Humidity	5% to 95%, 55°C (Non-condensing)
Dimensions & Layout	



Regulatory Approvals				
Safety	UL 60950-1 2nd Ed. /CSA C22.2 No.60950-1-07 2nd Ed. / CB (IEC/EN62368-1 & IEC/EN60950-1)			
Traffic Control	NEMA TS-2			
EMC	FCC Part 15, Subpart B, Class A EN 55032, EN 55024, EN 61000-3-2, EN 61000-3-3, EN 61000-6-2, EN 61000-6-4			
Rail Traffic	EN50155 / EN50121-4			
Test	**Item**		**Value**	**Level**
IEC 61000-4-2	ESD	Contact Discharge Air Discharge	±6KV ±8KV	3 3
IEC 61000-4-3	RS	80-1000MHz 1.4-2.0GHz 2.0-2.7GHz	10(V/m) 3 (V/m) 10(V/m)	3
IEC 61000-4-4	EFT	AC Power Port DC Power Port Signal Port	±2.0KV ±2.0KV ±1.0KV	3 3 3
IEC 61000-4-5	Surge	DC Power Port DC Power Port Signal Port	Line-to Line±1.0KV Line-to Earth±2.0KV Line-to Earth±2.0KV	3 3 3
IEC 61000-4-6	CS	0.15-80MHz	10V rms	3
IEC 61000-4-8	PFMF	Enclosure	30 V/m	4
IEC 61000-4-11	DIP	AC Power Port	-	A
Shock	MIL-STD-810G Method 516.5			
Drop	MIL-STD-810F Method 516.5			
Vibration	MIL-STD-810F Method 514.5 C-1 & C-2			
Traffic Control	NEMA TS-2			
High Altitude	Certified for 400m altitude according to IEC 60068-2-13			
RoHS II	Yes			
MTBF	20 Years			

Ordering Information	
Model name	**Description**
DGS-F3000-2P2SI	2*1000TX RJ45/PoE;2P*1000FX SFP
DGS-F3000-04TI	4P*1000TX RJ45
DGS-F3000-04PI	4P*1000TX RJ45/PoE
DGS-F3000-2T2SI	2P*1000TX RJ45;2P*1000FX SFP
DGS-F3000-04SI	4P*1000FX SFP
DGS-F3000-08PI	4P*1000TX RJ45/PoE;4P*1000FX SFP
DGS-F3000-08TI	8P*1000TX RJ45
DGS-F3000-4P4SI	8P*1000TX RJ45/PoE
DGS-F3000-4T4SI	4P*1000TX RJ45;4P*1000FX SFP