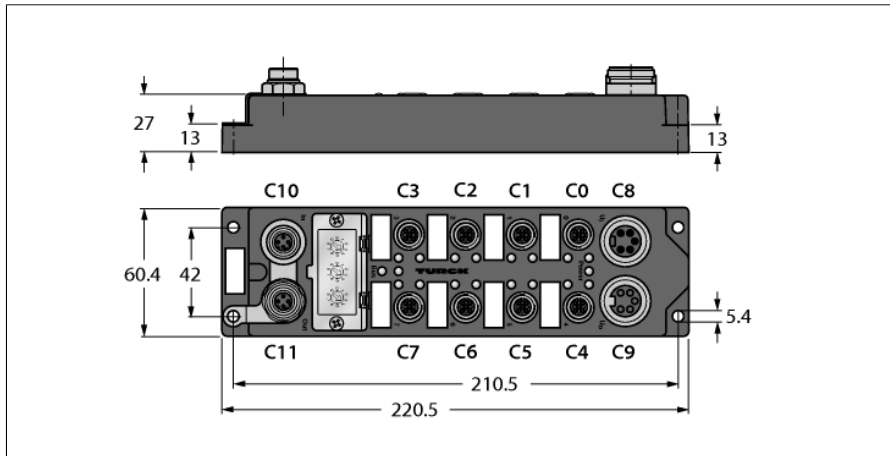


Compact multiprotocol I/O module for Ethernet
16 digital outputs 2 A
FGEN-OM16-5001



- Multiprotocol I/O Module for the Ethernet protocols Modbus TCP®, EtherNet/IP™ and PROFINET®
- PROFINET® supports Fast Start-Up (FSU)
- EtherNet/IP™ supports QuickConnect (QC)
- Integrated Ethernet Switch
- FDT/DTM supported
- Output diagnostics per channel
- Two outputs per port
- 7/8", 5-pin, for power supply
- Power supply, galvanically separated
- Fibre-glass reinforced PA6 housing
- Vibration and shock-resistant
- Encapsulated module electronics
- Metal connectors
- Degree of protection IP67

Type designation	FGEN-OM16-5001
Ident-No.	6825430
Voltage supply connection	2 x 7/8"
Operating current	< 200 mA
Electrical isolation	operating and load voltage galvanically separated
System data	
Fieldbus connection technology	2 x M12
Protocol detection	automatic
Web server	from FW 3.1.0.0
Service interface	Ethernet
Modbus TCP	
Addressing	Static IP, BOOTP, DHCP
Supported function codes	FC1, FC2, FC3, FC4, FC5, FC6, FC15, FC16, FC23
Number of TCP connections	8
EtherNet/IP™	
Addressing	acc. to EtherNet/IP™ specification
Quick Connect (QC)	< 150 ms
Device Level Ring (DLR)	supported
Class 3 connections	3
Class 1 connections	10
PROFINET	
Addressing	DCP
Conformance class	B (RT)
MinCycleTime	1 ms
Fast Start-Up (FSU)	< 150 ms
Diagnostics	acc. to PROFINET alarm handling
Topology detection	supported
Automatic addressing	supported
Number of channels	(16) DC actuators
Output voltage	18...30 VDC from load voltage UL
Output current per channel	2.0 A, short-circuit proof
Simultaneity factor	0.25 for entire module 1* 2A or 2* 1A per port total current max. 9 A per module
Load type	resistive, inductive, lamp load
Electrical isolation	galvanically separated against the bus
Vibration test	acc. to EN 60068-2-6
Shock test	acc. to EN 60068-2-27
Electromagnetic compatibility	acc. to EN 61131-2
UL Certificate	pol. deg.2, env. temp. max. 40 °C, cl.2 ps req.

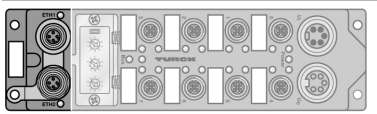
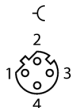

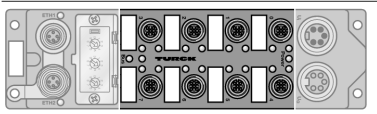
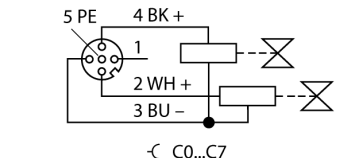

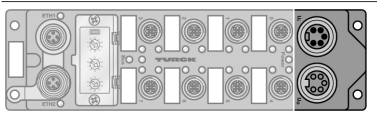


Compact multiprotocol I/O module for Ethernet

16 digital outputs 2 A

FGEN-OM16-5001

Dimensions (W x L x H)	60 x 220.5 x 27mm
Operating temperature	0...+55 °C
Storage temperature	-25 ...+70 °C
Altitude	max.5000 m
Protection class	IP67
MTTF	149 years
Housing material	fibre-glass reinforced Polyamide (PA6-GF30)
Halogen-free	yes
Mounting	4 mounting holes Ø 5,4 mm

Compact multiprotocol I/O module for Ethernet
16 digital outputs 2 A
FGEN-OM16-5001

	<p>Accessories Ethernet cable (example): RSSD RSSD 441-2M Ident-No. U-02482</p>	<p>M12 x 1 Ethernet</p> <p>  1 = TD + 2 = RD + 3 = TD - 4 = RD - </p> <p>C10</p> <p>  1 = RD + 2 = TD + 3 = RD - 4 = TD - </p> <p>C11</p>
	<p>Accessories Connection cable for dual channels (example): RK 4.4T-2-RS 4.4T Ident-No. U2445 Splitter for single channels (example): YB2-FSM 4.5-2FKM 4.5 Ident-No. U0875-78</p>	<p>M12 x 1 Output</p>  <p>  C0..C7 </p>
	<p>Accessories Power supply cable (example): RSM RKM 50-2M Ident-No. U2282-0</p>	<p>7/8" Power Supply</p> <p>  1 = GND_L 2 = GND_B 3 = PE 4 = U_B 5 = U_L </p> <p>C8</p> <p>  1 = GND_L 2 = GND_B 3 = PE 4 = U_B 5 = U_L </p> <p>C9</p>

Compact multiprotocol I/O module for Ethernet

16 digital outputs 2 A

FGEN-OM16-5001

LED status module

LED	Color	Status	Description
ETH1 / ETH2	green	on	Ethernet Link (100 Mbps)
		flashing	Ethernet communication (100 Mbps)
	yellow	on	Ethernet Link (10 Mbps)
		flashing	Ethernet communication (10 Mbps)
		off	no Ethernet link
Bus	green	on	Active connection to a master
		flashing	ready
	red	on	IP address conflict or Restore Mode
		flashing	Blink/Wink command active
Power	green	on	Operating voltage U_s and load voltage U_L within the defined tolerances
		red	Load voltage U_L below the defined tolerances
	off	Operating voltage U_s below the defined tolerances	

LED status IOs

LED	Color	Status	Description
C0.O1 ... C7.O16	green	on	Output active
	red	on	Output active with overload / short circuit
		off	Output inactive

Compact multiprotocol I/O module for Ethernet

16 digital outputs 2 A

FGEN-OM16-5001

Process data mapping of single protocols

Modbus TCP Register Mapping

	Reg	Bit 15	Bit 14	Bit 13	Bit 12	Bit 11	Bit 10	Bit 9	Bit 8	Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
Status (RO)	0x0000	-	FCE	-	-	CFG	COM	UB	-	UL	-	-	-	-	-	-	Diag Warn
Diag (RO)	0x0001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	I/O Diag
Outputs (RW)	0x0800	DO15 C7P2	DO14 C7P4	DO13 C6P2	DO12 C6P4	DO11 C5P2	DO10 C5P4	DO9 C4P2	DO8 C4P4	DO7 C3P2	DO6 C3P4	DO5 C2P2	DO4 C2P4	DO3 C1P2	DO2 C1P4	DO1 C0P2	DO0 C0P4
I/O Diag (RO)	0xA000	SCO7	SCO6	SCO5	SCO4	SCO3	SCO2	SCO1	SCO0	-	-	-	-	-	-	-	-
I/O Diag (RO)	0xA001	-	-	-	-	-	-	-	-	SCO15	SCO14	SCO13	SCO12	SCO11	SCO10	SCO9	SCO8

EtherNet/IP™ data mapping with activated Scheduled Diagnostics

	Word	Bit 14	Bit 13	Bit 12	Bit 11	Bit 10	Bit 9	Bit 8	Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
Input data (Station -> Scanner)																
GW Status	1	FCE	-	-	CFG	COM	UB	-	UL	-	-	-	-	-	-	Diag Warn
Diag 1	2	-	Sched Diag	-	-	-	-	-	-	-	-	-	-	-	-	I/O Diag
Diag 2	3	SCO6	SCO5	SCO4	SCO3	SCO2	SCO1	SCO0	-	-	-	-	-	-	-	-
Diag 3	4	-	-	-	-	-	-	-	-	SCO15	SCO14	SCO13	SCO12	SCO11	SCO10	SCO9 SCO8
Output (Scanner -> Station)																
Control	1	reserved														
Outputs	2	DO14 C7P4	DO13 C6P2	DO12 C6P4	DO11 C5P2	DO10 C5P4	DO9 C4P2	DO8 C4P4	DO7 C3P2	DO6 C3P4	DO5 C2P2	DO4 C2P4	DO3 C1P2	DO2 C1P4	DO1 C0P2	DO0 C0P4

EtherNet/IP™ data mapping with activated Summarized Diagnostics

	Word	Bit 15	Bit 14	Bit 13	Bit 12	Bit 11	Bit 10	Bit 9	Bit 8	Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
Input data (Station -> Scanner)																	
GW Status	1	-	FCE	-	-	CFG	COM	UB	-	UL	-	-	-	-	-	-	Diag Warn
Diag 1	2	-														I/O Diag	
Output (Scanner -> Station)																	
Control	1	reserved															
Outputs	2	DO15 C7P2	DO14 C7P4	DO13 C6P2	DO12 C6P4	DO11 C5P2	DO10 C5P4	DO9 C4P2	DO8 C4P4	DO7 C3P2	DO6 C3P4	DO5 C2P2	DO4 C2P4	DO3 C1P2	DO2 C1P4	DO1 C0P2	DO0 C0P4

PROFINET Process Data

	Byte	Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
Outputs	0	DO7 C3P2	DO6 C3P4	DO5 C2P2	DO4 C2P4	DO3 C1P2	DO2 C1P4	DO1 C0P2	DO0 C0P4
	1	DO15 C7P2	DO14 C7P4	DO13 C6P2	DO12 C6P4	DO11 C5P2	DO10 C5P4	DO9 C4P2	DO8 C4P4

Legend:

DI	Digital input	COM	Communication error on internal module bus
DO	Digital output	CFG	I/O configuration error
Cx	female	FCE	I/O-ASSISTANT Force Mode active
Px	Pin	I/ODiag	I/O diagnostics available
DiagWarn	Diagnostic at least on 1 channel	SchedDiag	Manufacturer-specific diagnostics configured and active
UL	Undervoltage UL	SCSx	Short-circuit on sensor supply at female x
UB	Undervoltage UB	SCOx	Short-circuit output x