

AXL F DO32/1 1F - Digital module

2688051

<https://www.phoenixcontact.com/il/products/2688051>



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Axioline F, Digital output module, Digital outputs: 32, 24 V DC, 500 mA, connection technology: 1-conductor, transmission speed in the local bus: 100 Mbps, degree of protection: IP20, including bus base module and Axioline F connectors

Product description

The module is designed for use within an Axioline F station. It is used to output digital signals. The outputs are protected against short circuit and overload.

Your advantages

- 32 digital outputs
- 24 V DC, 500 mA
- Connection of actuators in 1-conductor technology
- Minimum update time of < 100 µs
- Device rating plate stored

Commercial data

Item number	2688051
Packing unit	1 pc
Minimum order quantity	1 pc
Product key	DRI232
Catalog page	Page 77 (C-6-2019)
GTIN	4046356501576
Weight per piece (including packing)	235.6 g
Weight per piece (excluding packing)	235.6 g
Customs tariff number	85389091
Country of origin	DE

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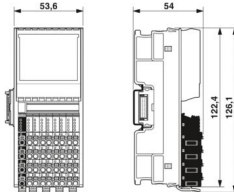
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Technical data

Dimensions

Dimensional drawing	
Width	53.6 mm
Height	126.1 mm
Depth	54 mm
Note on dimensions	The depth applies when a TH 35-7.5 DIN rail is used (in accordance with EN 60715).

Interfaces

Axioline F local bus

Number of interfaces	2
Connection method	Bus base module
Transmission speed	100 Mbps

System properties

Module

Input address area	0 Byte
Output address area	4 Byte
Required parameter data	1 Byte
Required configuration data	6 Byte

Output data

Digital:

Output name	Digital outputs
Connection method	Push-in connection
Connection technology	1-conductor
Number of outputs	32
Protective circuit	Short-circuit protection, overload protection of the outputs; electronic
Output voltage	24 V DC
Limitation of the voltage induced on circuit interruption	-32.8 V ... -15 V
Maximum output current per module	8 A (up to HW 04, provide external protection) 16 A (from HW 05, provide external protection)
Nominal output voltage	24 V DC
Load min.	10 kΩ

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Output voltage when switched off	max. 1 V
Output current when switched off	max. 300 µA
Nominal load, inductive	max. 12 VA (1.2 H, 48 Ω, with nominal voltage)
Nominal load, lamp	max. 12 W (at nominal voltage)
Nominal load, ohmic	max. 12 W (48 Ω, with nominal voltage)
Switching frequency	max. 5500 per second (with ohmic load)
	max. 1 per second (with inductive load)
	max. 16 per second (with nominal lamp load)
Reverse voltage resistance to short pulses	limited protection up to 0.5 A for 1 s
Behavior with overload	Shutdown with automatic restart
Behavior with inductive overload	Output can be destroyed
Signal delay	max. 150 µs (when switched on)
	max. 200 µs (during switching off with ohmic nominal load)
Overcurrent shut-down	as of 0.7 A
Output current with ground connection interrupt when switched off	< 1 mA

Product properties

Product type	I/O component
Product family	Axioline F
Type	block modular
Mounting position	any (no temperature derating)
Scope of delivery	including bus base module and Axioline F connectors

Insulation characteristics

Overvoltage category	II (IEC 60664-1, EN 60664-1)
Pollution degree	2 (IEC 60664-1, EN 60664-1)

Electrical properties

Maximum power dissipation for nominal condition	2.7 W
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Potentials: Axioline F local bus supply (U_{Bus})

Supply voltage	5 V DC (via bus base module)
Current draw	max. 120 mA (up to HW 04)
	max. 60 mA (from HW 05)
Power consumption	max. 600 mW (up to HW 04)
	max. 300 mW (from HW 05)

Potentials: Supply for digital output modules (U_{O})

Supply voltage	24 V DC
Supply voltage range	19.2 V DC ... 30 V DC (including all tolerances, including ripple)
Current draw	max. 8 A (up to HW 04, provide external protection)
	max. 16 A (from HW 05, provide external protection; if the total current of 8 A is exceeded, connect the supply at the power connector parallel via both terminal points.)
Power consumption	max. 240 W (up to HW 04, of which 1.5 W constitute internal losses)

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	max. 480 W (from HW 05, of which max. 2.4 W constitute internal losses)
Protective circuit	Surge protection; electronic (35 V, 0.5 s) Reverse polarity protection; parallel diode; with external 5 A fuse (only for commissioning)
Electrical isolation/isolation of the voltage ranges	
Test voltage: 5 V supply of the local bus (U_{BUS}) / 24 V supply (I/Os)	500 V AC, 50 Hz, 1 min.
Test voltage: 5 V supply of the local bus (U_{BUS}) / functional ground	500 V AC, 50 Hz, 1 min.
Test voltage: 24 V supply (I/O) / functional ground	500 V AC, 50 Hz, 1 min.

Connection data

Connection technology

Connection name	Axioline F connector
Note on the connection method	Please observe the information provided on conductor cross sections in the "Axioline F: system and installation" user manual.

Conductor connection

Connection method	Push-in connection
Conductor cross section rigid	0.2 mm ² ... 1.5 mm ²
Conductor cross section flexible	0.2 mm ² ... 1.5 mm ²
Conductor cross section AWG	24 ... 16
Stripping length	8 mm

Axioline F connector

Connection method	Push-in connection
Note on the connection method	Please observe the information provided on conductor cross sections in the "Axioline F: system and installation" user manual.
Conductor cross section, rigid	0.2 mm ² ... 1.5 mm ²
Conductor cross section, flexible	0.2 mm ² ... 1.5 mm ²
Conductor cross section AWG	24 ... 16
Stripping length	8 mm

Environmental and real-life conditions

Ambient conditions

Ambient temperature (operation)	-25 °C ... 60 °C
Degree of protection	IP20
Air pressure (operation)	70 kPa ... 106 kPa (up to 3000 m above sea level)
Air pressure (storage/transport)	70 kPa ... 106 kPa (up to 3000 m above sea level)
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Permissible humidity (operation)	5 % ... 95 % (non-condensing)
Permissible humidity (storage/transport)	5 % ... 95 % (non-condensing)

Standards and regulations

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Protection class	III (IEC 61140, EN 61140, VDE 0140-1)
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Mounting

Mounting type	DIN rail mounting
Mounting position	any (no temperature derating)

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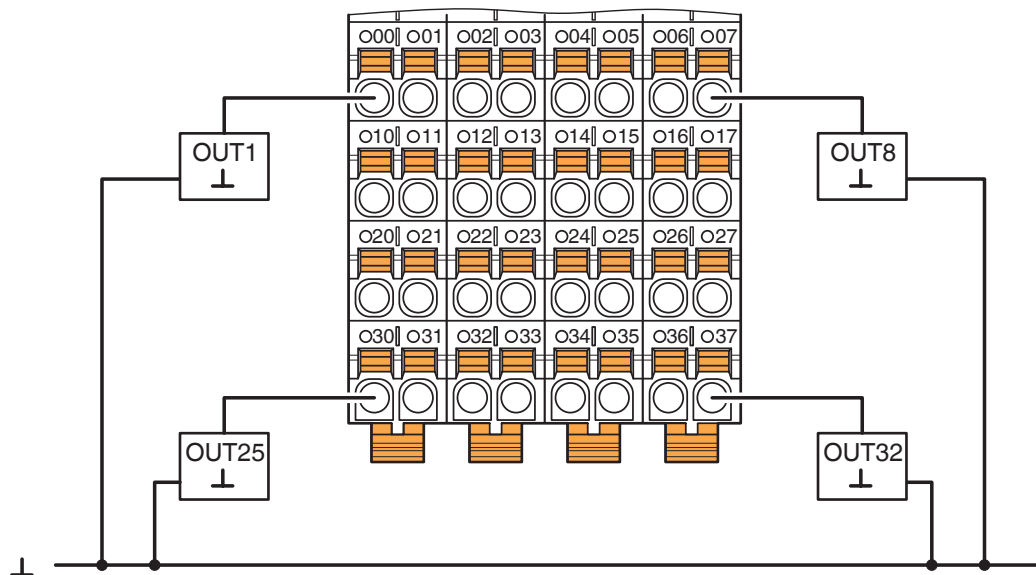
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Drawings

Connection diagram



Connection example

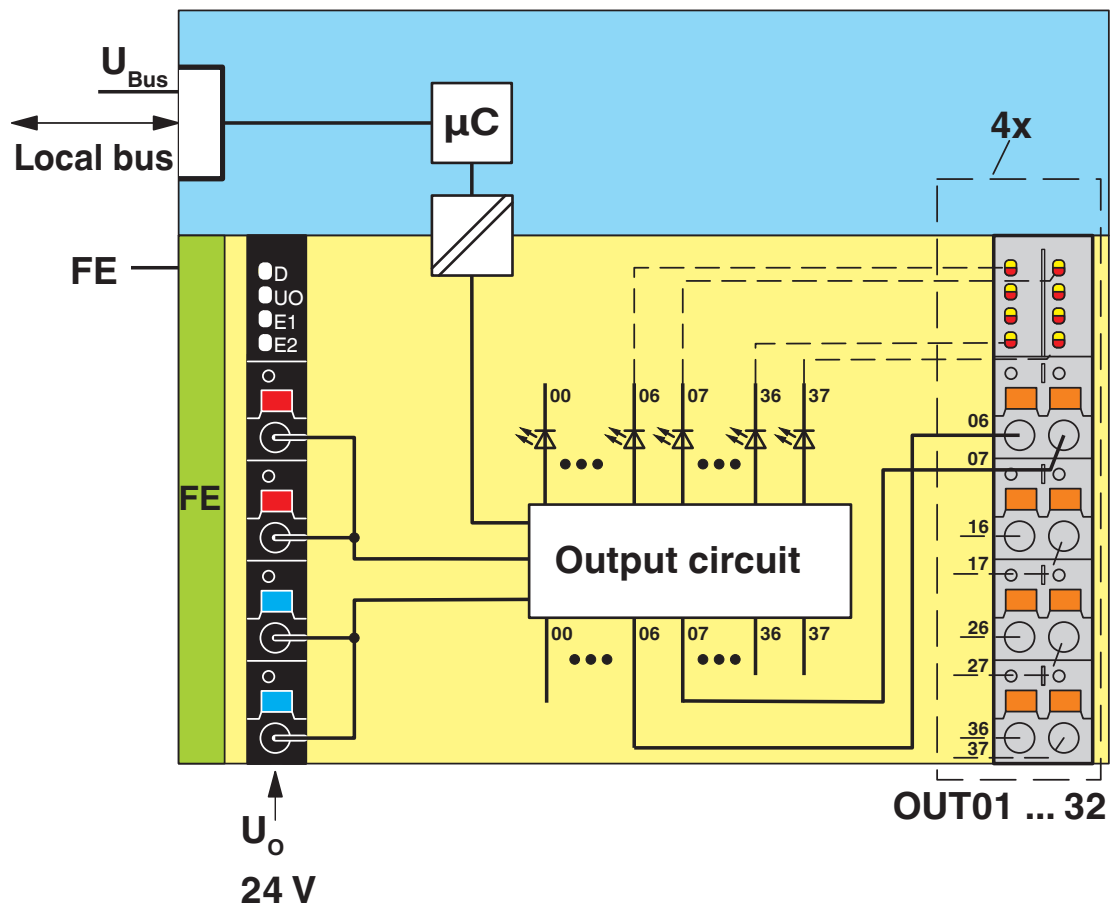
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Block diagram



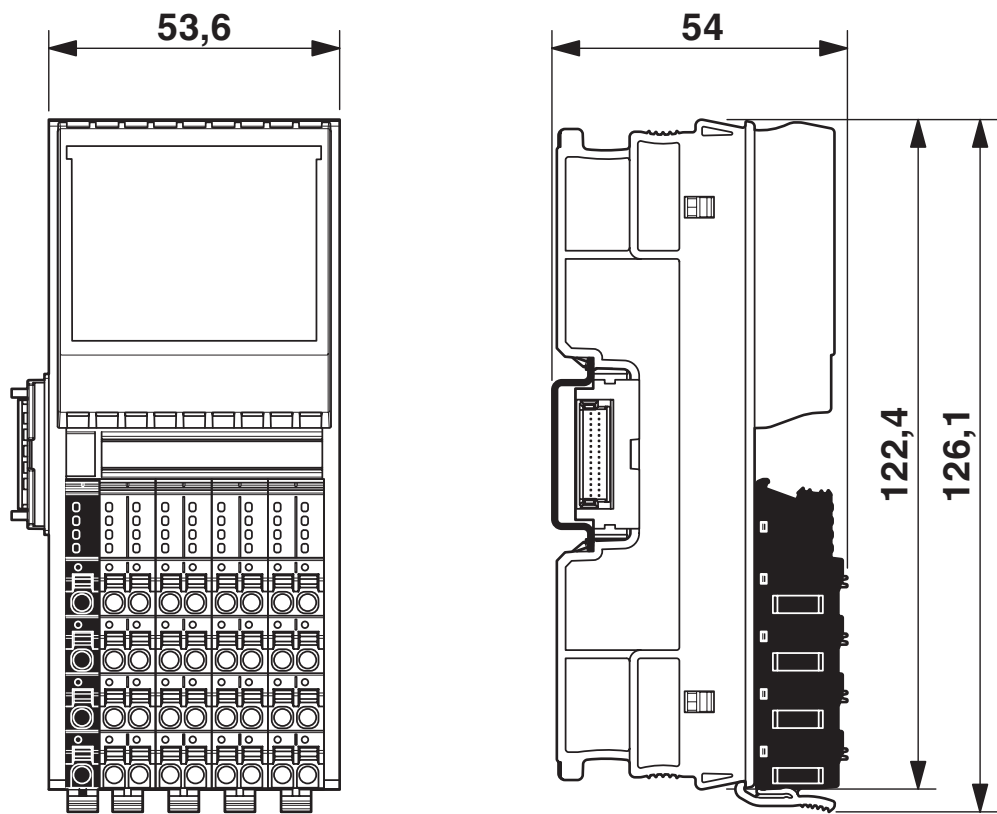
Internal wiring of the terminal points

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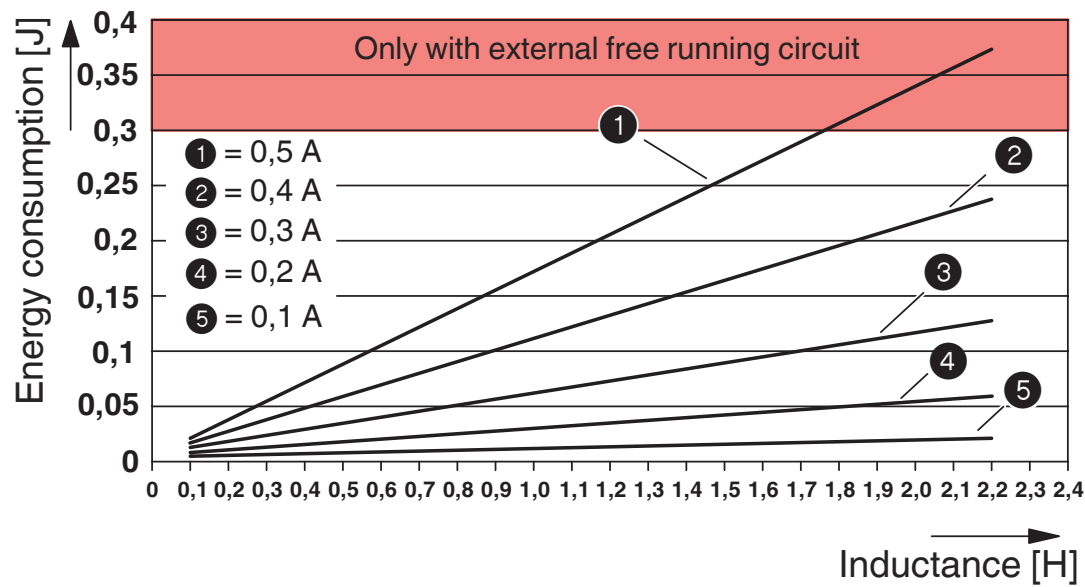
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Dimensional drawing



Dimensions

Diagram



Maximum outputs power consumption when inductive loads are switched off

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Approvals

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EAC

Approval ID: EAC-Zulassung



DNV GL

Approval ID: TAA0000DF Rev.12



LR

Approval ID: LR2480202TA



BV

Approval ID: 36433/B4 BV



PRS

Approval ID: TE/1020/880590/21

BSH

Approval ID: 840



RINA

Approval ID: ELE008423XG

ABS

Approval ID: 20-2059154-PDA



cULus Listed

Approval ID: E238705

ABS

Approval ID: 20-2059154-PDA

BSH

Approval ID: 840

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BV

Approval ID: 36433/B4 BV



DNV GL

Approval ID: TAA0000DF Rev.12



PRS

Approval ID: TE/1020/880590/21



RINA

Approval ID: ELE008423XG



LR

Approval ID: LR2480202TA



cULus Listed

Approval ID: E238705



EAC

Approval ID: TR_TS_D_01831-19

UAE-RoHS

Approval ID: 23-02-63242

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Classifications

ECLASS

ECLASS-11.0	27242604
ECLASS-12.0	27242604
ECLASS-13.0	27242604

ETIM

ETIM 9.0	EC001599
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UNSPSC

UNSPSC 21.0	32151600
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Environmental product compliance

EU RoHS	
Fulfills EU RoHS substance requirements	Yes
Exemption	7(a), 7(c)-I
China RoHS	
Environment friendly use period (EFUP)	EFUP-50
	An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.
EU REACH SVHC	
REACH candidate substance (CAS No.)	Lead(CAS: 7439-92-1)
SCIP	074fe18a-e086-4e4a-876c-db4c9a95421a

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