DIO248, DIO264, DIO280
Digital Input/Output Modules

The input/output module DIO248, DIO264 and DIO280 are used for controlling digital consumer like contactors, relays, pneumatic and hydraulic valves, as well as for reading signals of digital working sensors, detectors or switches. On events can be reacted expressly via 8 available interrupt inputs. Alternatively there are available up to four counters, for detecting e.g. positions or counting goods. For the energy-saving operation of inductivities all outputs can be operated as PWM. Especially for the PWM operation of valves a hold time is additionaly configurable between 0 up to 2 s. Outputs are parallel connectable, in case it is operated in the same operation mode.

• 48/64 or 80 digital channels
• 16 channels can be configured as input or output
• Configurable interrupt inputs
• Configurable 32 bit counter
• Mode: event counter, incremental encoder, gate measurement, cycle time or frequency measurement
• Configurable input filter
• PWM output mode for e.g. valve economy mode
• Status display for each channel via LED
• Supply voltage 18 to 34 VDC
• Supply voltage protected against reverse polarity
• Cost effective and space saving

Item	Item-No.
DIO248	00019116-00
DIO264	00019115-00
DIO280	00019114-00
DIO280 CC	00019119-00

	DIO248	DIO264	DIO280 DIO280 CC
Inputs			
Quantity	16 to 32	24 to 40	32 to 48
Input voltage range (H)	15 to 34 VDC		
Input voltage range (L)	0 to 5 VDC		
Input delay (normally)	Standard: 600 µs Settable 10 µs to 270 ms		
Internal resistance	8 kOhm		
Status indication (LED)	Green		
Interrupt inputs	8, configurable as counter inputs or interrupt inputs		
Counter			
Quantity	up to 4		
Resolution	32 Bit		
Operating mode	Event counter, incremental encoder, gate measurement, cycle time or frequency measurement		
Encoder types	Incremental encoder with A and B channel and one-channel pulse encoder		
Input signal	A, B, Initator (interrupt inputs configurable)		
Signal evaluation	1 / 2 / 4-fold edge evaluation or pulse direction mode		
Max. input frequency	One-channel: 50 kHz	Dual-channel (A/B): 20 kHz	
Outputs			
Quantity	16 to 32	24 to 40	32 to 48
Output voltage range	18 to 34 VDC		
Output current per channel (max.)	0.5 A		
Total current (max.)	16 A	20 A	24 A
Status indication (LED)	Green		
Switching frequency (max., ohmic load)	1 kHz		
Inductive breaking capacity	1,15 H		
PWM			
Quantity	Like outputs		
Pulse duty ratio / resolution	0 to 100 % / 13 Bit		
Frequency	1 Hz to 1 kHz		
Holding time (valve mode)	0 to 2 s configurable		
Start/Stopp	By dedicated output		
Internal power supply			
Galvanic isolation from system	500 V		
Internal power supply	BS2xx		
Internal current consumption (at 5 V)	180 mA		

	DIO248	DIO264	DIO280 DIO280 CC
External power supply			
Reverse polarity protection	Yes		
Energetic recovery	Sensor energetic recovery of DIO by switched-off supply		
Input voltage	Nominal 24 VDC		
Approvals / Certificates			
General	CE, cULus, CCC		
Marine	DNV GL, LR, ABS, BV		
Ambient conditions	**Standard**		**ColdClimate (❄)**
Operating temperature	-30 to +60 °C		
Working temperature	-40 to +60 °C		
Rel. humidity operation	5 to 95 % without condensation		5 to 95 % with condensation
Storage temperature	-40 to +60 °C		
Rel. humidity storage	5 to 95 % with condensation		
Pollution degree	2 (without condensation; according to IEC 60664-1)		2 (according to IEC 60664-1)

Order Codes		
Item	**Item No.**	**Description**
DIO248	00019116-00	Digital input/output module; 16x DI; 600µs filter; 16x DIO; 16x DO; 24V / 0.5A; 4 groups, 600µs filter; 8 interrupt channel; 50µs delay; isolated
DIO264	00019115-00	Digital input/output module; 24x DI; 600µs filter; 16x DIO; 24x DO; 24V / 0.5A; 5 groups; 600µs filter; 8 interrupt channel; 50µs delay; isolated
DIO280	00019114-00	Digital input/output module; 32x DI; 600µs filter; 16x DIO; 32x DO; 24V / 0.5A; 6 groups; 600µs filter; 8 interrupt channel; 50µs delay; isolated
DIO280 CC	00019119-00	Like DIO280; ColdClimate (❄)
Accessories		
SS-DIO248 B+C	00012539-50	Terminal set Phoenix screw side (4x SS 35/16) with labeling strip and coding elements
KZ-DIO248 B+C	00011976-50	Terminal set Phoenix cage clamp (4x KZ 35/16) with labeling strip and coding elements
SS-DIO264 B+C	00012539-50	Terminal set Phoenix screw side (5x SS 35/16) with labeling strip and coding elements
KZ-DIO264 B+C	00011977-50	Terminal set Phoenix cage clamp (5x KZ 35/16) with labeling strip and coding elements
SS-DIO280 B+C	00012538-50	Terminal set Phoenix screw side (6x SS 35/16) with labeling strip and coding elements
KZ-DIO280 B+C	00011978-50	Terminal set Phoenix cage clamp (6x KZ 35/16) with labeling strip and coding elements