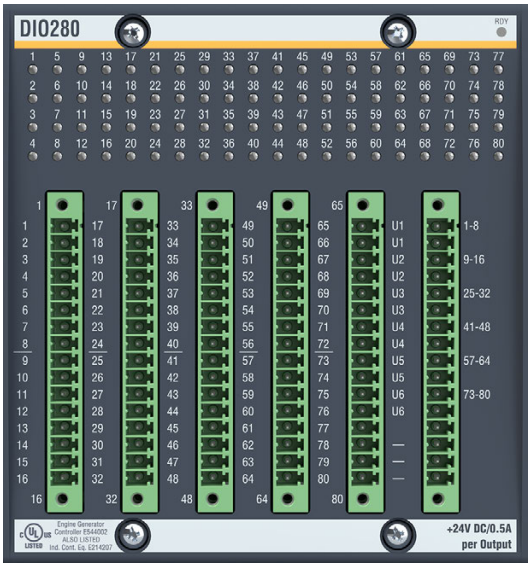

Part type designation	Part number
DIO248	00019116-00
DIO264	00019115-00
DIO280	00019114-00
DIO280 CC	00019119-00

DIO248, DIO264, DIO280
Digital Input/Output Modules

The digital input/output modules DIO248, DIO264 and DIO280 can be used to operate consumers of digital control devices such as contractors, relays, pneumatic and hydraulic valves as well as for reading signals from digitally operating sources such as sensors, photocells or switches. On events can be reacted expressly via 8 available interrupt inputs. Alternatively there are up to 4 counters available, 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 additionally configurable between 0 s up to 2 s. Outputs are parallel connectable, in case it is operated in the same operation mode.

Features

- 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 time measurement, period duration or frequency measurement
- Configurable input filter
- PWM output mode for e.g. valve economy mode
- Status indication for each channel via LED
- Supply voltage 18 V DC to 34 V DC
- Supply voltage protected against reverse polarity
- Cost effective and space saving

DIO248, DIO264, DIO280

Inputs	DIO248	DIO264	DIO280 DIO280 CC
Number	16 to 32	24 to 40	32 to 48
Input voltage range (H)	15 V DC to 34 V DC		
Input voltage range (L)	0 V DC to 5 V DC		
Input filter (typ.)	Standard: 600 µs Settable 10 µs to 270 ms		
Internal resistance	8 kΩ		
Status indication (LED)	Green		
Interrupt inputs	8, configurable as counter inputs or interrupt inputs		
Counters			
Number	Up to 4		
Resolution	32 bit		
Operation Modes	event counter, incremental encoder, gate time measurement, period duration or frequency measurement		
Encoder types	Incremental encoder with A and B channel and one-channel pulse encoder		
Input signals	A, B, Initator (interrupt inputs configurable)		
Signal evaluation	1- / 2- / 4-fold edge evaluation or pulse direction mode		
Maximum input frequency	One-channel: 50 kHz	Dual-channel: 20 kHz	
Outputs	**DIO248**	**DIO264**	**DIO280 DIO280 CC**
Number	16 to 32	24 to 40	32 to 48
Output voltage range	18 V DC to 34 V DC		
Output current per channel (max.)	0.5 A		
Total current (max.)	16 A	20 A	24 A
Status indication (LED)	Green		
Switching frequency (max. resistive load)	1 kHz		
Inductive breaking capacity	1.15 H		
PWM			
Number	Like outputs		
Mark-to-space ratio / resolution	0 % to 100 % / 13 bit		
Frequency	1 Hz to 1 kHz		
Holding time (valve mode)	0 s to 2 s configurable		
Start/Stop	By dedicated output		
Internal power supply			
Galvanic isolation from the system	500 V		
Internal power supply	BS2xx		
Internal current consumption (at 5 V)	180 mA		
External power supply			
Reverse polarity protection	Yes		
Energetic recovery	Sensor energetic recovery of DIO by switched-off supply		
Input voltage	Nominal 24 V DC		
Approvals/Certificates			
General	CE, UKCA, cULus		
Marine	ABS, BV, DNV, KR, LR, NK, RINA		

Environmental conditions	Standard	ColdClimate (❄)
Operating temperature	-30 °C to +60 °C	
Working temperature	-40 °C to +60 °C	
Relative humidity, operation	5 % to 95 % noncondensing	5 % to 95 % with condensation
Storage temperature	-40 °C to +60 °C	
Relative humidity, storage	5 % to 95 % with condensation	
Pollution degree (IEC 60664-1)	2 (noncondensing)	2

Order data

Part type designation	Part number	Description
DIO248	00019116-00	Digital input/output module, 16x DIO; 16x DI; 16x DO; 24 V/0.5 A; 4 groups; 10 µs to 270 ms configurable filter; 4x numerator/period/gate time; A,A/B; 20 kHz; 32 bit; PWM; 8 interrupt channels; isolated
DIO264	00019115-00	Digital input/output module, 16x DIO; 24x DI; 24x DO; 24 V/0,5 A; 5 groups; 10 µs to 270 ms configurable filter; 4x numerator/period/gate time; A,A/B; 20 kHz; 32 bit; PWM; 8 interrupt channels; isolated
DIO280	00019114-00	Digital input/output module, 16x DIO; 32x DI; 32x DO; 24 V/0.5 A; 6 groups; 10 µs to 270 ms configurable filter; 4x numerator/period/gate time; A,A/B; 20 kHz; 32 bit; PWM; 8 interrupt channels; isolated
DIO280 CC	00019119-00	Like DIO280; ColdClimate (❄)

Accessories

Part type designation	Part number	Description
KZ-DIO248 B+C	00011976-50	Terminal set Phoenix cage clamp (4x KZ 35/16) with labeling strips + keying elements
SS-DIO248 B+C	00012539-50	Terminal set Phoenix screw lateral (4x SS 35/16) with labeling strips + keying elements
KZ-DIO264 B+C	00011977-50	Terminal set Phoenix cage clamp (5x KZ 35/16) with labeling strips + keying elements
KZ-DIO280 B+C	00011978-50	Terminal set Phoenix cage clamp (6x KZ 35/16) with labeling strips + keying elements
SS-DIO280 B+C	00012538-50	Terminal set Phoenix screw lateral (6x SS 35/16) with labeling strips + keying elements