Discrete Output Module: High Density, Isolated

20 Output Channels with User-configurable Default Output States

DESCRIPTION

The MAQ®20-DODC20SK module has 20 isolated discrete output channels that can switch up to 60VDC signals and sink up to 3A of current. Channels can be switched individually or in block format. User-configurable default output states which are set upon power up or module reset ensure fail-safe operation for critical applications. Logic polarity can be user defined as standard or inverted. The isolated field outputs are designed for harsh industrial environments and have fast switching times. Field output connections are made through high-density spring cage terminal blocks.

Output-to-bus isolation is a robust 1500Vrms and each individual channel is protected up to 60VDC continuous overload in case of inadvertent wiring errors. 150Vrms channel-to-channel isolation gives the module the ability to control equipment with or without common signal grounds or different pieces of equipment with multiple reference potentials.

The high channel count within the narrow module package gives exceptional functionality while preserving valuable mounting space. The high density minimizes cost per channel resulting in economical control solutions.

All MAQ20 modules are designed for installation in Class I, Division 2 hazardous locations and have a high level of immunity to environmental noise commonly present in heavy industrial environments.

FEATURES

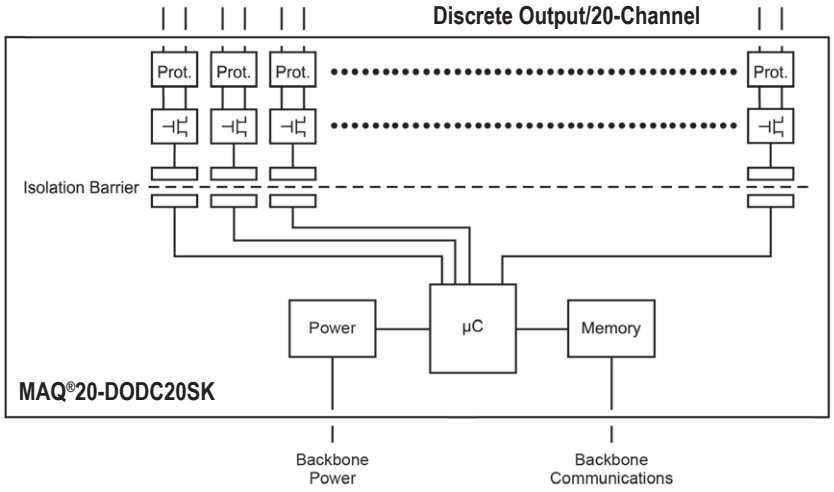
- 20 Isolated Discrete Output Channels with User-configurable Default Output States
- Channels Switch up to 60VDC Signals and Sink up to 3A Current
- Channels Switched Individually or in Blocks
- 1500Vrms Output-to-Bus Isolation
- 150Vrms Channel-to-Channel Isolation
- Each Channel Protected up to 60VDC Continuous Overload
- User-defined Logic Polarity
- Fast Switching Times
- Field Output Connections Use Spring Cage Terminal Blocks
- Most Affordable Price per Channel
- Heavy Industrial CE Compliant
- UL/cUL (Class I, Div 2, Groups A, B, C, D) File E232858
- ATEX Compliance Pending
- Manufactured per RoHS III Directive 2015/863

BENEFITS

- Highly Compact
- Low Cost per Channel
- Modular
- On-vehicle/-mobile Use Possible (Wide Power Supply Voltage)
- Open Software Platform Options
- Easy and Fast Setup/Installation

APPLICATIONS

- Process Control
- Factory Measurement and Control
- Machine Automation
- Military and Aerospace
- Scientific Measurement and Monitoring
- Battery Management



MAQ20-DODC20SK Discrete Output Voltage Module Block Diagram

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Specifications

Typical* at T_A =+25°C and +24VDC system power

Module	Description
MAQ20-DODC20SK	10-60VDC-output at 3A (max) per Channel
Number of Channels Output Configuration	20 Open Drain MOSFET
Switching Characteristics Turn-on/Turn-off Time Output Load (Combined load, all channels) T_A = +25°C T_A = +85°C	 1ms /1ms 30A 10A
Output Protection Continuous Transient CMV Channel-to-Bus Channel-to-channel Transient	 60VDC (max) ANSI/IEEE C37.90.1 1500Vrms, 1 Minute 150Vrms, 212 V_{PEAK} ANSI/IEEE C37.90.1
Output Functions Logic Selection Block Write Default Relay State on Power Up/Reset	 Standard / Inverted 20 Channel User-configurable
Update Rate Power Supply Current	1300 Ch/s net, 65 Ch/s at 20-ch Simultaneous 30mA
Dimensions (h)x(w)x(d)	3.27" x 4.51" x 0.60" (83.1mm x 114.6mm x 15.3mm)
Environmental Operating Temperature Storage Temperature Relative Humidity Emissions, EN61000-6-4 Radiated, Conducted Immunity EN61000-6-2 RF ESD, EFT	 –40°C to +85°C –40°C to +85°C 0 to 95% Noncondensing ISM Group 1 Class A ISM Group 1 Performance A Performance B
Certifications	Heavy Industrial CE Compliant UL/cUL (Class I, Division 2, Groups A, B, C, D) File E232858 ATEX Compliance Pending

NOTES:
*Contact factory or your local Dataforth sales office for maximum values.

Ordering Information

Model	Description
MAQ20-DODC20SK	Discrete Output Module; Up to 60VDC Signals, 3A Current, 20-ch

Field Connection (MAQ20–DODC20SK)	Terminal	Terminal	Field Connection (MAQ20–DODC20SK)
CH0 +OUT	1	2	CH0 –OUT
CH1 +OUT	3	4	CH1 –OUT
CH2 +OUT	5	6	CH2 –OUT
CH3 +OUT	7	8	CH3 –OUT
CH4 +OUT	9	10	CH4 –OUT
CH5 +OUT	11	12	CH5 –OUT
CH6 +OUT	13	14	CH6 –OUT
CH7 +OUT	15	16	CH7 –OUT
CH8 +OUT	17	18	CH8 –OUT
CH9 +OUT	19	20	CH9 –OUT
CH10 +OUT	21	22	CH10 –OUT
CH11 +OUT	23	24	CH11 –OUT
CH12 +OUT	25	26	CH12 –OUT
CH13 +OUT	27	28	CH13 –OUT
CH14 +OUT	29	30	CH14 –OUT
CH15 +OUT	31	32	CH15 –OUT
CH16 +OUT	33	34	CH16 –OUT
CH17 +OUT	35	36	CH17 –OUT
CH18 +OUT	37	38	CH18 –OUT
CH19 +OUT	39	40	CH19 –OUT

For input connections and full details on module operation, refer to:
MAQ20-DODC20SK Discrete Output Module Hardware User Manual

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