TRUSTED TMR

Product Data Sheet

T8451C

Forty-channel digital output module

DIGITAL OUTPUTS	POWER GROUPS	BACKPLANE VOLTAGE	BACKPLANE POWER
40	**5, with 8 channels each**	**20 to 32 V DC**	**27 W**

ICS Triplex T8451C is a forty-channel digital output module in the Trusted TMR family. Its triplicated processing and channel diagnostics deliver voted output control, with the field outputs divided into five independently powered groups of eight channels.

01 TECHNICAL DATA

Digital outputs	40
Power groups	5, with 8 channels each
Backplane voltage	20 to 32 V DC
Backplane power	27 W
Field voltage	18 to 32 V DC
Continuous channel current	2 A maximum
Minimum ON load	50 mA
ON-state resistance	1.6 Ω
Field current at 50 °C	40 A total; 8 A per group
Field current at 60 °C	30 A total; 6 A per group

02 ADDITIONAL PRODUCT DATA

Current measurement range	0 to 2.7 A
Voltage measurement range	0 to +30 V DC, ±2 V
Maximum load capacitance	3000 µF
Event resolution	1 ms
Operating temperature	0 to +60 °C

03 PRODUCT FUNCTION

The T8451 hardware uses a 20-32 V DC backplane supply and an 18-32 V DC field supply. Individual outputs are rated up to 2 A continuous, while the total and group current limits depend on ambient temperature. Electronic latching short-circuit protection, current and voltage monitoring, and event reporting provide detailed output diagnostics.

04 SYSTEM COMPATIBILITY

Budget 27 W for the backplane supply and maintain field power within 18-32 V DC. At 50 °C the limit is 8 A per group and 40 A total; at 60 °C it falls to 6 A per group and 30 A total even though an individual channel is rated 2 A.

05 DOCUMENT BASIS

ICS Triplex manufacturer documentation. Selected source pages: 1, 5, 7, 9, 10, 13, 14, 37, 38.

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