3664 and 3674 Specifications

This table lists the specifications for models 3664 and 3674, which are Dual Digital Output Modules with a nominal voltage range of 24 VDC.

Note Models 3664 and 3674 are not recommended for use in energize-to-trip applications because specific hardware faults may cause its outputs to be stuck-Off (de-energized).

Table 45 3664 and 3674 Dual Digital Output Specifications

Feature	Specification
Color code	Dark blue
Number of output signals	32, commoned
Output Configuration	Dual, serial
Recommended voltage range	16–30 VDC
Maximum voltage	36 VDC
Logic power	< 10 watts
Current ratings, maximum	2 amps/point, 10 amps surge/10 ms
Leakage current to load	2 mA, maximum
Fuses (field termination)	Not required; output switches are self-protected against over-voltage, over-temperature, and over-current
Status indicator: On or Off state	1 per point
Status indicator: Module status	Pass, Fault, Active
Status indicator: Field alarm[1]	Load/fuse
Point isolation	1500 VDC minimum
Diagnostic glitch duration[2]	2 ms maximum, 500 µs typical
Output diagnostic fault coverage[3:]	
Maximum output toggle rate	Every 100 ms plus one scan
Minimum output toggle rate	Not required
Output behavior under *fault* conditions[4::]	
Output value before fault	Commanded state—On or Off
Output value after stuck-On fault	Commanded state—On or Off
Output value after stuck-Off fault[5]	Off (de-energized)
Output value after all other faults	Commanded state—On or Off
Output behavior under *field fault* conditions:	
Load alarm, output stuck-On: (model 3664)	Stuck point On, all others commanded state—On or Off
Load alarm, output stuck-On: (model 3674)	Stuck point On, all others Off (de-energized)

Table 45 3664 and 3674 Dual Digital Output Specifications *(continued)*

Feature	Specification
Load alarm, output stuck-Off: (models 3664 and 3674)	Stuck point Off, all others commanded state—On or Off
On-state voltage drop: At backplane	< 0.5 VDC typical @ 500mA < 0.5 VDC maximum @ 2A
On-state voltage drop: With external termination, 10-foot cable	< 1.5 VDC typical @ 500mA < 2.5 VDC maximum @ 2A
On-state voltage drop: With external termination, 99-foot cable	< 3.5 VDC typical @ 500mA < 8.5 VDC maximum @ 2A
Inductive kick-back protection (reverse EMF)	Output switches are self-protected

1. Power must be supplied to all points, including unused points on non-commoned panels.
2. Diagnostic glitching can be disabled by using the OVD disable function.
3. The maximum output toggle rate enables proper operation of I/O diagnostics and detection of all normally detectable faults. The minimum toggle rate provides fault coverage of normally undetectable faults within 10% of the calculated mean-time-between-faults (MTBF) for the module.
4. The Dual DO module performs a complete set of diagnostics on each output point periodically. All faults are 100% detectable and are independently reported to the Main Processor by each channel. Specific faults in the output circuitry can force the output to the Off (de-energized) state.
5. A stuck-Off fault results in both a Load/Fuse alarm and a fault in the Dual DO Module. If a Load/Fuse alarm is detected by the Dual DO Module, normal switch-over to a hot-spare module is disabled. This action prevents the output from being forced Off by a stuck-Off fault and then forced back On after the switch-over a few seconds later. To allow switch-over to a healthy module, re-seat the spare module.