

Order code	Input Voltage (V)	Output Voltage1 (V)	Output Voltage2 (V)	Output Current1 (MA)	Output Current2 (MA)	Efficiency (%)	MTTF <sup>1</sup> (KHRS)
RD050503XD	5	5	3.3	100	152	70	1615
RD050505XD	5	5	5	100	100	70	1615
RD050509XD	5	5	9	100	56	80	669
RD050512XD	5	5	12	100	42	80	339
RD050515XD	5	5	15	100	34	80	187
RD050503XS	5	5	3.3	100	152	70	1615
RD050505XS	5	5	5	100	100	70	1615
RD050509XS	5	5	9	100	56	80	669
RD050512XS	5	5	12	100	42	80	339
RD050515XS	5	5	15	100	34	80	187
RD120505XD	12	5	5	100	100	70	489
RD120509XD	12	5	9	100	56	80	343
RD120512XD	12	5	12	100	42	80	229
RD120515XD	12	5	15	100	34	80	148
RD120505XS	12						



**ISOLATION VOLTAGE**

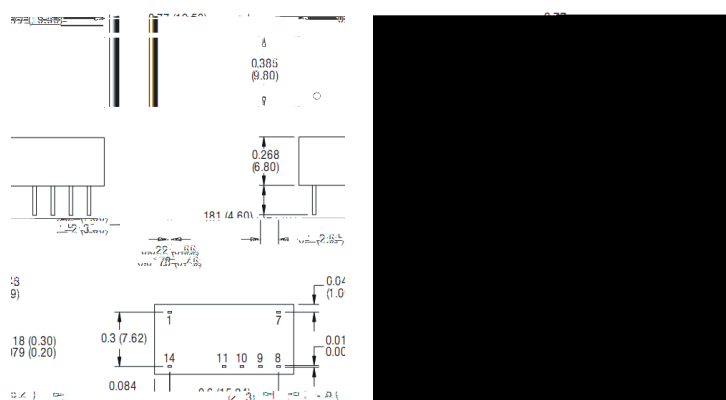
"Hi Pot Test", "Flash Tested", "Withstand Voltage", "Dielectric Withstand Voltage" & "Isolation Test Voltage" are all terms that relate to the same thing, a test voltage. Applied for a specified time, across a component designed to provide electrical isolation, to verify the integrity of that isolation. Professional Power Module D-X(S)D series of DC/DC converters are all 100% production tested at their stated isolation voltage. This is 1KVDC for 1 second.

A question commonly asked is, "What is the continuous voltage that can be applied across the part in normal operation?"

For a part holding no specific agency approvals, such as the D-X(S)D series, both input and output should normally be maintained within SELV limits i.e. less than 42.4V peak, or 60VDC. The isolation test voltage represents a measure of immunity to transient voltages and the part should never be used as an element of a safety isolation system. The part could be expected to function correctly with several hundred volts offset applied continuously across the isolation barrier, but then the circuitry on both sides of the barrier must be regarded as operating at an unsafe voltage and further isolation/insulation systems must form a barrier between these circuits and any user accessible circuitry according to safety standard requirements.

**REPEATED HIGH-VOLTAGE ISOLATION TESTING**

It is well known that repeated high-voltage isolation testing of a barrier component can actually degrade isolation capability, to a lesser or greater degree depending on materials, construction and environment. The D-X(S)D series has toroidal isolation transformers, with no additional insulation between primary and secondary windings of enameled wire. While parts can be expected to withstand several times the stated test voltage, the isolation capability does depend on the wire insulation. Any material, including this enamel (typically polyurethane) is susceptible to eventual chemical degradation when subject to very high applied voltages thus implying that the number of tests should be strictly limited. We therefore strongly advise against repeated high voltage isolation testing, but if it is absolutely required, that the voltage be reduced by 20% from specified test voltage. This consideration equally applies to agency recognized parts for better than functional isolation where the wire enamel insulation is always supplemented by a further insulation system of physical spacing or barriers.



All dimensions in inches  $\pm 0.01$  (mm  $\pm 0.25$ mm). All pins on a 0.1 (2.54) pitch and within  $\pm 0.01$  (0.25) of true position.

pin	Function
1	-VIN
7	NC
8	-VOUT2
9	+VOUT2
10	-VOUT1
11	+VOUT1
14	+VIN

pin	Function
1	+VIN
2	-VIN
4	+VOUT1
5	-VOUT1
6	+VOUT2
7	-VOUT2

NC - Not available for electrical connection.