VSHOLDING.COM
Panel Mount

Series "µDPL" SPST-NO SSRs
From 50A to 140A & 100 VDC
1 Form A, SPST-NO Solid-State Relays

MOSFET output
Ratings available up to 2500 VDC
DC control
Required no a heat sink at the rated current
Relays are easily paralleled for higher-current applications
Low control power of only 1.4 mW at 2.8VDC
Low control voltage 2.8 – 5 VDC
Medium switching frequency, up to 2 KHz (50 A)

PRODUCT SELECTON

Rating Currents (maximum)	**50A**	**75A**	**100A**	**130A**	**140A**
Device description	**µPDL100D50**	**µPDL100D50**	**µPDL100D100**	**µPDL100D130**	**µPDL100D140**
Part Number	**EDR83116**	**EDR83115**	**EDR83113**	**EDR83114**	**EDR83137**

OUTPUT SPECIFICATIONS (of 100-Volts rated devices)

Description					
Operating Voltage [VDC]	0-100	0-100	0-100	0-100	0-100
Max. OFF-State Leakage [nA]	10	10	15	25	30
Max. ON-State Res. [Ohms]	0.0019	0.0012	0.0009	0.0008	.0007
Max. Load Current	50	75	100	130	140
Max. Surge Current (1s)	500	750	1000	1300	1400
Max. ON-State Voltage Drop	0.095	0.09	0.09	0.104	**.098**

INPUT SPECIFICATIONS

Description					
Control Voltage		from 2.8 to 5.2 VDC			
Minimum Turn-ON Voltage		2.6 VDC			
Minimum Turn-OFF Voltage		2.0 VDC			
Maximum Input Current		0.6 mA (2.8VDC), 10 mA (5.2 VDC)			
Max. Turn-ON delay µsec	20	30	50	73	75
Max. Turn-OFF delay µsec		8.1			
Max, Switching Frequency [Hz]	3000	2500	1200	800	750

GENERAL SPECIFICATIONS

Description	Parameters			
Dielectric Strength, Input /Output/Base (50/60Hz)	2500 V rms			
Min. Insulation Resistance [& 500 VDC]	10^9 Ohm			
Max. Capacitance, Input /Output	50 pF			
Ambient Operating Temperature Range	-45 to 85°C			
Ambient Storage Temperature Range	-50 to 125°C			
Wight (average)	2.5 oz	3.0 oz	3.5 oz	4.0 oz	4.6 oz
Encapsulation	Thermally conductive Epoxy			
Terminals	6-32 Screws (controls)	8-32 Screws and 10-32 (power)		

1 Form A, SPST-NO Solid-State Relays to replace electromechanical relays

OUTPUT SPECIFICATIONS (We rate our devices at the maximum voltage/current at 75°C, a heat sink is not required)

MODEL	V RANGE(VDC)	I RMS	IDM	RDS[ON]	I SURGE	P/N
µDPL40D50	0 TO +40	50	150	.0017	800	EDR83128
µDPL40D100	0 TO +40	100	300	.0008	1100	EDR83129
µDPL40D150	0 TO +40	150	600	.00035	1400	EDR83130
µDPL55D50	0 TO +55	50	150	.0017	800	EDR83131
µDPL55D100	0 TO +55	100	300	.0008	1100	EDR83132
µDPL55D150	0 TO +55	150	600	.00036	1400	EDR83133
µDPL75D50	0 TO +75	50	100	.0023	800	EDR83134
µDPL75D100	0 TO +75	100	300	.0013	1000	EDR83135
µDPL75D150	0 TO +75	150	600	.0007	1200	EDR83136
µDPL100D50	0 TO +100	50	150	.0019	500	EDR83116
µDPL100D75	0 TO +100	75	250	.0017	750	EDR83115
µDPL100D100	0 TO +100	100	350	.0009	1000	EDR83113
µDPL100D110	0 TO +100	110	370	.00085	1200	EDR83143
µDPL100D130	0 TO +100	130	420	.0008	1300	EDR83114
µDPL100D140	0 TO +100	140	520	.0007	1400	EDR83137
µDPL150D80	0 TO +150	80	350	.002	800	EDR83117
µDPL150D55	0 TO +150	55	250	.0028	550	EDR83118
µDPL200D50	0 TO +200	50	200	.0037	500	EDR83119
µDPL300D35	0 TO +300	35	140	.009	350	EDR83120
µDPL500D30	0 TO +500	30	120	.019	300	EDR83121
µDPL600D5	0 TO +600	5	25	.028	250	EDR83122
µDPL600D25	0 TO +600	25	90	.110	100	EDR83123
µDPL800D2	0 TO +800	3	12	.500	25	EDR83124
µDPL900D8	0 TO +900	8	40	.040	100	EDR83138
µDPL900D16	0 TO +900	16	80	.020	180	EDR83139
µDPL102D10	0 to +1000	10	40	.100	40	EDR83140
µDPL172D1	0 to +1700	1	4	.7	6	EDR83141
µDPL172D2	0 to +1700	2	8	.35	12	EDR83142

NOTE: We recommend applying 20% lesser voltage and current down form rated for maiming safety margins.

V range a range of voltages that can be applied to the output terminals
I rms a maximum allowed an average current (amperes) though the output terminals
I dm a maximum allowed pulsing current (amperes) maintaining a 10% duty cycle.
Rds (ON) a maximum resistance between output terminals while the control signal applied
I surge a maximum allowed a surge current for pulse shorter than 25 S 1000% duty c.

There are some differences between devices such as a maximum switching frequency, turn-on delay and slope, consumption control current, etc. that somewhat depends on the output rating. Please request a specific data sheet if that is important for your application.

The above is a list of popular devices. You're welcome requesting a device with a different voltage/current rating. There is no additional charge and cost calculated based on a market price of MOSFETS that would require meeting you request.

We manufacture large varieties of Solid-State Modules included but limited to relays [SPST, SPDT and DPST], switches, ½ drivers, H-drivers, High-voltage relays and switches, Super-High current switching systems, etc.

We charge no production set-up fee for an order of 400 and above for any type (input and output specifications) Solid State Relay/Switch and Solid State Breaker.

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1 Form B, SPST-NC Solid State Relays to replace electromechanical relays

OUTPUT SPECIFICATIONS (We rate our devices at maximum current/voltage, no a heat sink is required)

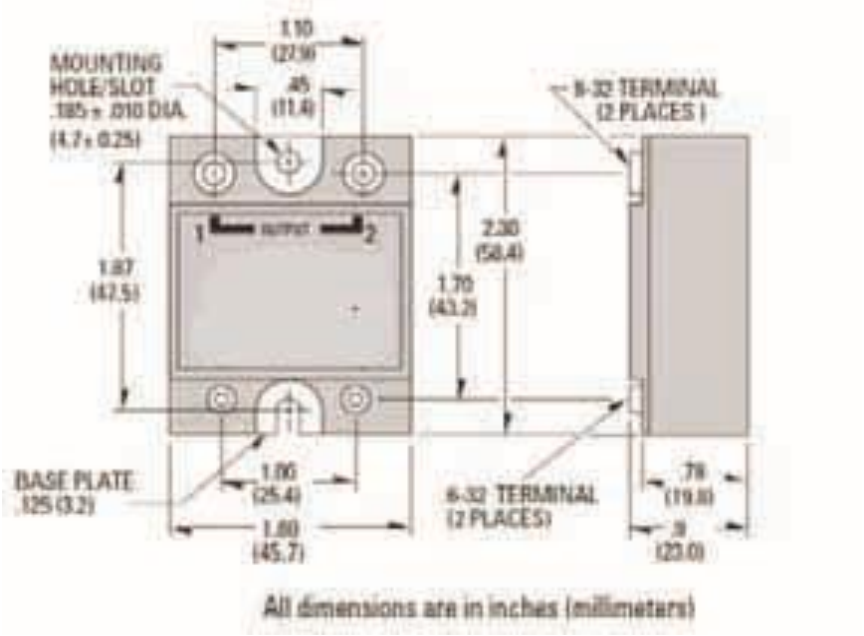
MODEL	VCC	ID	IDM	P/N
µRPM24D22	0 TO 24VDC	22	200	EDR83051/P
µRPM24A20	+/-24VDC	20	190	EDR83052/P
µRPM24D40	0 TO 24VDC	40	410	EDR83053/P
µRPM24A40	+/-24VDC	40	400	EDR83054/P
µRPM30D20	0 TO 30VDC	28	260	EDR83057/P
µRPM30A20	+/-30VDC	26	250	EDR83058/P
µRPM60D20	0 TO 60VDC	20	190	EDR83063/P
µRPM60A18	+/- 60VDC	18	160	EDR83064/P
µRPM60D40	0 TO 60VDC	40	380	EDR83065/P
µRPM60A38	+/- 60VDC	38	380	EDR83066/P
µRPM75D16	0 TO 75VDC	16	150	EDR83067/P
µRPM75A15	+/- 75VDC	15	140	EDR83068/P
µRPM75D30	0 TO 75VDC	30	280	EDR83069/P
µRPM75A28	+/-75VDC	28	240	EDR83070/P
µRPM100D20	0 TO 100VDC	20	190	EDR83071/P
µRPM100A20	+/-100VDC	20	190	EDR83072/P
µRPM100D35	0 TO 100VDC	35	360	EDR83073/P
µRPM100A30	+/-100VDC	30	300	EDR83040/P
µRPM150D12	0 TO 150VDC	12	160	EDR83074/P
µRPM150A12	+/-150VDC	12	150	EDR83075/P
µRPM150A21	0 TO 150VDC	21	200	EDR83076/P
µRPM150A20	+/-150VDC	20	190	EDR83077/P
µRPM250D5	0 TO 250VDC	5	50	EDR83078/P
µRP2M250A5	+/-250VDC	5	50	EDR83079/P

Any listed above relay can be encapsulated in a SIP-4 box for a PC Board mounting. In this case, the third symbol "P" should be replaces with a "2" to make part as a µR2M100A30 and the suffix "/P" should be removed, P/N EDR83040

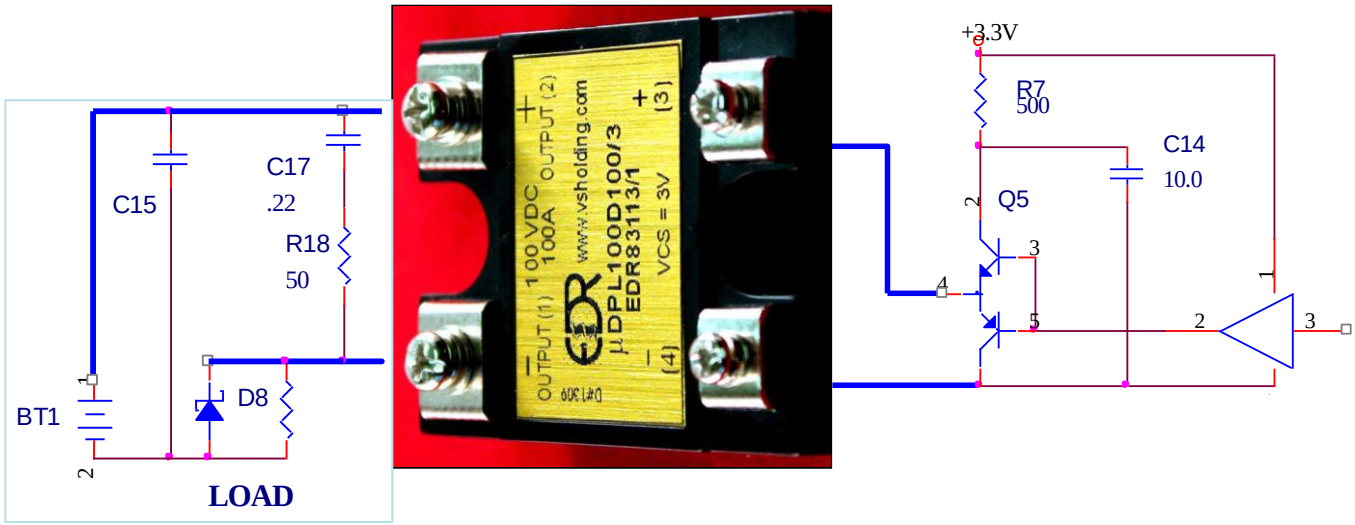
All input ratings, specifications and other properties of **µR2M** –type relays are very much resembled the p/n EDR83040 (PAGE #11). There are some differences for various relays related to a switching frequency, turn-on delay, slope, etc. there are somewhat depend on the output rating. Please request a specific data sheet if that is important for your application.

We charge no production set-up fee for an order of 400 and above for any type (input and output specifications) Solid State Relay/Switch and Solid State Breaker.

***Mechanical* dimensions**



Application



GENERAL NOTES

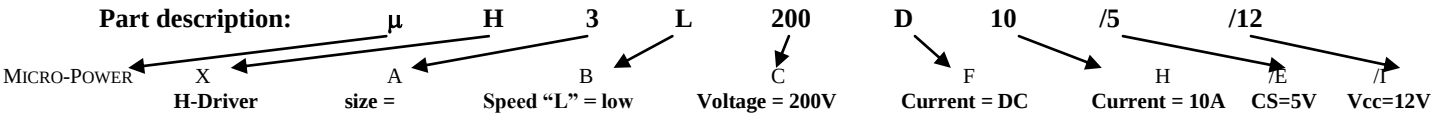
All parameters at 25°C and per section unless otherwise specified

Dielectric strength and isolation resistance are measured between input and output rated at others voltages/currents µPDL SPST-NO (1 Form A or normally opened) series relays are presented on the previous page

In the same package, µPDL SPST-NC (1 Form B or normally closed) relays are available

Solid-State Modules such as Relays, Switches, Breakers, ½ and Full-bridge Drivers, etc.

Notes: During past ten years rapid development of new and additional [products gave us no choice but to expend, modify and unify part descriptions. Below represent the third modification. Our modules description will be marked according to the specifications below but p/n EDR11111 will stay the same for already items in circulation (already sold).



"X" **MODULE TYPE**

D	Solid-State Relay or Switch with output terminals: SPST-NO (normally open)
R	Solid-State Relay or Switch with output terminals: WITH ONE OR MORE normally closed terminal
W	Solid-State Relay or Switch with output terminals: DPST
T	Driver, such as ½-bridge or a SPDT relay which can work as a ½ driver
M	Driver, such as a switch with built-in PWM controller
H	Full-bridge (H-bridge) Driver
C	Relay with built-in de-bouncing or a turn-on/off delay
B	Solid State Breaker and brakes control modules

"A" package dimensions

1	0.615"H x 1.48"L x 0.290"W
2	1.75"H x 1.80"L x 0.595"W
3	1.125"H x 1.75"L x 0.8"W
4	1.15"H x 2.0"L x 0.92"W
5	1.15"H x 2.8"L x 1.15"W
6	DIP24, 0.375"H x 0.925"L x 0.53"W
7	panel mount, .82"H x 3.95"L x 1.96"W
8	.575"H x 1.1"L x .2"W
9	panel mount 3"H x 10"L x 8"W
0	DIN type enclosure, 2.36"H x 2.36"L x 1.5"W, for 35mm DIN Rail
P	panel mount, .8"H x 2.275" L x 1.75"W
R	panel mount, 1.82"H x 6.0"L x 3.3"W

"B" Speed - A device's ability to turn ON/OFF output terminal(s) times per second

L	a low speed relay/switch, rated DC – 500 Hz, direct driving control
M	a low switching frequency, rated DC – 2,000 Hz
A	a low speed relay/switch, AC input relays
N	a medium speed relay/switch, rated DC - 25 KHz, direct driving control
G	a medium speed relay/switch, rated DC - 25 KHz, low current control and power
F	a fast relay/switch, rated up to DC - 350 KHz, low current control and power
S	a super-fast relay/switch, rated DC - 1.4 MHz, low current control and power
U	a super-fast relay/switch, rated DC – 1.2 MHz, direct driving control

"V" Fast, High Voltage Solid-State Switches with Nanoseconds rise time

"C" Output Voltage - A maximum allowed voltage between output terminals, up to 100kV
It must be replaced with required voltage and we offer the closest and highest value available.
Note: In an "AC" -relay a voltage specified a peak-to-peak maximum voltage and the maximum VAC could be calculated by multiplying, a maximum allowed voltage by factor of 0.7

"F" A relay can be use to control either AC, DC or AC/DC power

A	- a relay/switch designed to switch/chop an AC/DC power
D	- a relay/switch designed to switch/chop a DC power
"none"	- relay with a SCR or TRIAC on the output to control only AC power

"H" A maximum allowed RMS CURRENT (Ampere) without a heat sink we can manufacture a device for any required current.

"I" Some of our products use an internal DC/DC converter no provide a power to the internal electronics
Varieties voltages are available: 5VDC+/-5%, 12VDC+/-5%, 24VDC+/-5% and 48VDC+/-5%. For a wider input power voltage swing, please add "W" after the voltage. For an example, 24W is for 24V +/-12V.

"E" We offer several standard control voltages 5VDC, 12VDC, 24VDC, 48VDC, 3-20VDC and 18-38VDC
Please specify the input control voltage, as for example D1L30D12/xx. Replace xx with a 3, 5, 12, 24, 48, 3-20 and 18-38 that is for 3VDC, 5VDC, 12VDC, 24VDC, 48VDC, 3-20VDC and 18-38VDC. Respectful control voltage represented at the end of part number in the following way, for an example EDR82653/1 and EDR82653/8. Both relays are almost the same and difference is only an applied control voltage, "1" if for 3VDC and "8" is for 18-38VDC;

Control Voltage	Representation	Control Voltage	Representation	Control Voltage	Representation
3VDC	1	5VDC	2	12VDC	3
24VDC	4	48VDC	5	26VDC	6
3-20VDC	7	18-38VDC	8	90-120VAC	9
74VDC	10				

"Z" A relay/switch built with following standard isolations

"L" or "none"	type relay is 2500 V
"N"	type relay is 3000V, 4000VDC ("H4") and 5200 ("H5") VDC.

"T" Turn-on delays; "S" for seconds, "M" for milliseconds, "U" for microseconds, M102 – 100mS turn-off delay, 102MmS – turn-on delay

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