ENCLOSURE DISSIPATED WATTAGE

Enclosure Type	Temperature Class				
	T6 40°C & T5 55°C	T6 55°C	T5 40°C	T6 65°C	T5 65°C
PL612 GRP	4.1	2.5	5.6	1.5	3
PL615 GRP	6.4	4	8.8	2.4	4.8
PL620 GRP	11.4	7.1	15.6	4.2	8.5
PL630 GRP	20.8	13	28.6	7.8	15.6
PL712 GRP	3.352	2.148	4.6	1.2	2.4
PL722 GRP	5.318	3.323	7.3	1.9	3.9
SIZE 1 Stainless Steel	13.95	8.7	19.1	5.2	10.4
SIZE 2 Stainless Steel	18.15	11.3	24.9	6.8	13.6
SIZE 3 Stainless Steel	23.7	14.8	32.5	8.8	17.7
SIZE 4 Stainless Steel	29.95	18.7	41.1	11.2	22.4
SIZE 5 Stainless Steel	32.85	20.5	45.1	12.3	24.6
SIZE 6 Stainless Steel	40	25	55	15	30
SIZE 7 Stainless Steel	52	23.5	71.5	19.5	39
SIZE 8 Stainless Steel	65	40.6	89.3	24.3	48.7
SIZE 9 Stainless Steel	79.35	49.5	109.1	29.7	59.5

Dissipated Wattage Factor
The Dissipated Wattage Factor of the enclosures has been established by test to ensure that the maximum temperature as permitted by temperature certification is not exceeded.
When terminal quantities greater than those at maximum amps are required (up to maximum physical quantity only) then the current shall be reduced accordingly to remain within the Dissipated Wattage Factor of the enclosure.

Combined Terminal Resistance Factor (See page 39)
This factor is used to determine the number of terminals that can be accomodated within the enclosure without exceeding the Wattage Factor. The Combined Terminal Resistance Factor is the sum of the individual terminal resistances and the resistance of the cable core equal in length to the enclosure maximum diagonal.
(Core Resistance is taken from BS6360).

Wattage to be Dissipated = $N \times F \times I^2$
N = Number of Terminals. F = Combined Terminal Resistance Factor. I = Maximum Current.

e.g. Number of terminals in a PL630 enclosure at **20.8** Watts : 10 x 'WDU 2.5' (I=21A), 2 x 'WDU 6' (I=36A),
(10 x 0.00290465 x 21^2 = 12.9) + (2 x 0.0012142 x 36^2 = 3.2 Watts).
Total Watts = 12.9 + 3.2 = 16.1 Watts.
Therefore : This terminal combination is acceptable as the wattage is less than that of the PL630 maximum Watts of 20.8W.

Note : If a smaller than maximum permitted conductor is fitted into a power terminal, then the smaller conductor resistance must be used when calculating the combined terminal resistance.

Transposed Formula :
$W = N \times F \times I^2$ $\quad N = \frac{W}{F \times I^2}$ $\quad I = \sqrt{\frac{W}{N \times F}}$