Hello Mr. Coots:

I was asked to contact you by Mr. Sunil Karamchandani to briefly discuss why Pushna's enclosures do not carry a temperature code rating.

First, I will start with a quick definition of T-codes. Refer to the table below. Electrical equipment, when certified for hazardous locations are required to be marked with a temperature code. The temperature code simply identifies the maximum temperature the equipment will attain during operation. So, equipment marked with a T6 simply means that the equipment surfaces will not exceed 85°C during operation.

Temperature Class

Marking	US (NEC® 505) CA (CEC) Section 18) EU IEC	US (NEC® 500) CA (CEC Annex J)
450°C	T1	T1
300°C	T2	T2
280°C		T2A
260°C		T2B
230°C		T2C
215°C		T2D
200°C	T3	T3
180°C		T3A
165°C		T3B
160°C		T3C
135°C	T4	T4
120°C		T4A
100°C	T5	T5
85°C	T6	T6

With that said, a certified empty enclosure is not considered “equipment” and will not carry a temperature code. Why? What is the maximum temperature an empty enclosure will attain during operation? It can’t attain any temperature (except ambient). There are no electronics present in an empty enclosure to elevate the surface temperature above ambient.

The temperature code marking is then the responsibility of the end user (if they choose to have the end product certified). The end user will select the certified component enclosure, install their electronics and submit the product for certification (if they wish to have it certified and marked with a T-code). A certified component enclosure is intended to allow the end user to have certain tests waived during the certification process of the end equipment. It makes the certification process easier for the end user since the majority of testing has already been completed on a certified component enclosure.

Another way to look at it is this: if an empty enclosure is marked T6 (85°C), what is stopping the end user from installing components that will elevate the surface temperature of that enclosure beyond 85°C? Nothing. Then you have a situation where product is incorrectly marked and misrepresented.

Anyone marking empty enclosures with a T-code is doing so improperly. Not all of the certification agencies are reinforcing this. I have even found older enclosures certified by FM (many years ago) that carry T-code ratings. This is, perhaps, how it was done in the past, but I know today, the preferred (and more technically correct) method for marking component enclosures is to specify the ambient temperature range that the enclosure can be used in. The responsibility of the T-code marking then falls on the end user.

I hope that my explanation helps. If you have any additional questions, please feel free to contact me. Thank you.

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