

BATTERY POWERED INDICATING THERMOMETERS

DM640TC and DM640P

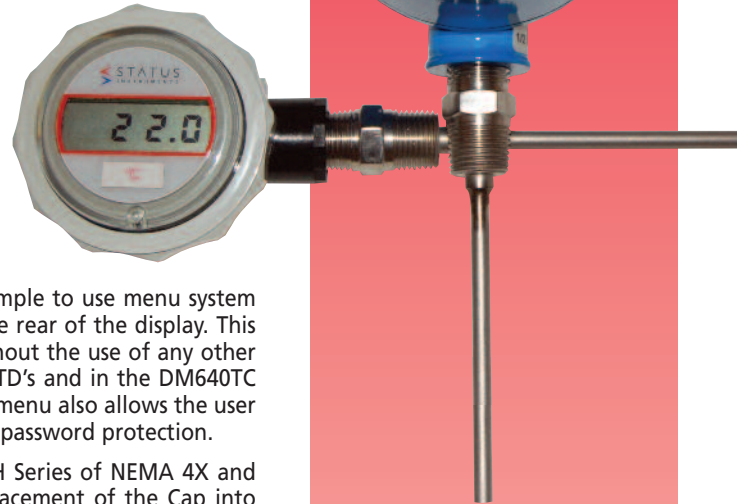
- BATTERY POWERED
- 4 DIGIT DISPLAY
- RTD or THERMOCOUPLE INPUT
- PUSH BUTTON CONFIGURABLE
- ATEX APPROVED IN ABS HOUSING (optional)
- EXPLOSION PROOF & NEMA 4X HOUSINGS
- ENCAPSULATED ELECTRONICS (IP67)

INTRODUCTION

The Model DM640 Cap series is a line of battery powered temperature indicators which accept a Thermocouple (DM640TC) or RTD (DM640P) input depending on the model. The face of the Cap houses a 4 digit LCD display. The back contains the screw terminal connections, battery, and three push buttons used to program and calibrate the unit.

The unit is microprocessor based. The sensor type is selected from a simple to use menu system which is navigated by the use of the three push buttons located on the rear of the display. This feature enables the user to easily configure the device in the field without the use of any other equipment. In the DM640P you can choose between Pt100 or Ni120 RTD's and in the DM640TC you can choose between K, J, T, R, S, E, L, N, and B thermocouples. The menu also allows the user to select units °F or °C, offset temperature, decimal point position, and password protection.

The entire assembly is sealed into a Cap that fits directly into our SCH Series of NEMA 4X and Explosion Proof housings. Optional mounting kits are available for placement of the Cap into other style housings if needed. Intrinsically Safe ATEX approved version is available.



INPUTS

MODEL	INPUT	RANGE	ACCURACY (Note 1)	O/C	CJ (Note 3)
DM640TC	K	-328 to 2498°F	±0.1% of FSR ±0.9°F	Yes	Yes
	J	-328 to 2192°F			
	E	-328 to 1832°F			
	N	-292 to 2372°F			
	L	-148 to 1112°F	±0.2% of FSR ±0.9°F		
	B	32 to 3272°F			
	T	-346 to 752°F			
	R	14 to 3200°F			
S	14 to 3200°F	±0.9°F ±0.1% of FSR (Note 2)			
DM640P	RTD: Pt100	-148 to 1472°F	±0.18°F/ ±0.05% of Rdg		N/A
	RTD: Ni120Ω				

Key: Rdg = Reading; FSR = Full Scale Range; O/C = Open Circuit Sensor Detect; CJ = Cold Junction Error

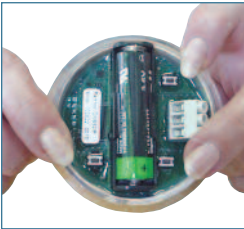
- Notes:**
1. Accuracy for Pt100 and T/C do not include sensor and cold junction errors.
 2. Only over the range 1472 to 2912°F.
 3. Cold junction range: -4 to 158°F, Accuracy: ±0.9°F, Tracking: ±0.09°F.

GENERAL

Ambient DM640	Operating: 14 to 158°F, 10 to 95% RH non condensing. Storage: -40 to 185°F
Ambient DM640X	Operating: 14 to 122°F, 10 to 95% RH non condensing. Storage: -40 to 185°F
Battery Type	3.6 V Lithium AA Replacement
Battery Life	1 Year Minimum
Low Battery Alarm	Via Display
Approvals	CE tested to BS EN 61326
I.S. Approval	ATEX II 1 GD EEx ia IIC T4 - In ABS Housing (Optional)
Protection	IP67 when used with SCAH4 housing
Configuration	Security Password Protected
Display	4 Digit seven segment Red LCD 7.3 mm High
Display Resolution	1, 0.1, 0.01 or 0.001 °F or °C

MECHANICAL

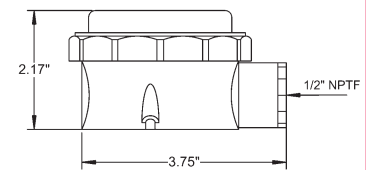
Terminals	3 Terminal screw block
Cable	16 AWG maximum
Material	ABS



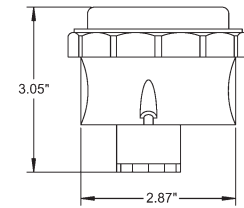
The pictures on the left show the operation of the easy to use configuration menu. By pressing the three buttons, the user gains access to all configuration parameters including the following:

- Security password protection
- Sensor type: K, J, E, N, T, L, B, R or S for DM640TC; Pt100 or Ni120 for DM640P.
- Temperature units: °F or °C
- User offset: intended to offset the displayed temperature by a user-configurable amount.
- Display resolution: 1, 0.1, 0.01 or 0.001 °F or °C
- Configuration menu time out adjustment.
- Low battery alarm.
- Reset to factory default
- Easy on-site re-calibration when required.
- Pt100 offset/scale adjustment: intended to adjust BS EN 60751 to mimic other standards such as JISC 1604.

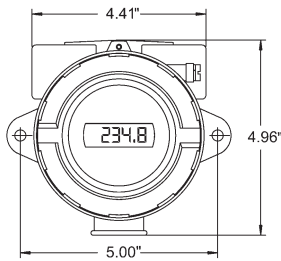
ABS NEMA 4X HOUSINGS



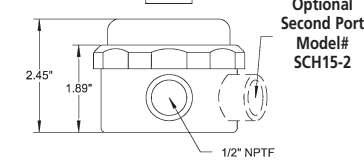
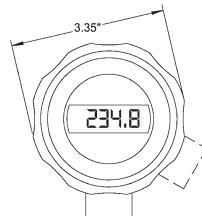
SCH4/A



SCH4/E



SCH18



SCH15
STAINLESS STEEL HOUSING

ORDER CODES:

DM640	/	Sensor	/	Housing
Blank – General Purpose X – Intrinsically Safe (ATEX Approved)				SCH4/A,E – NEMA 4X, IP67 SCH15 – Stainless Steel, NEMA 4X, IP67 SCH18 – Aluminum EX FM(3615)
P – RTD Input (PT100, Ni120) TC – Thermocouple Input				

SCH4/A housing will be supplied if no housing is specified.

ALUMINUM EXPLOSION PROOF HOUSING

For More Information Contact:



W. H. Cooke & Co., Inc. Manufacturer of thermocouples & RTD's Made in the USA
Supplier of industrial controls, heaters, and sensors since 1963

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