SCH4X & DM650XLP Monitoring System

SCH4X & DM650XLP (SCH4X-X-X-X-X-X)

➤ **(4 to 20) mA LOOP POWERED**

➤ **UKEX, ATEX, IECEx GAS GROUP IIC, ZONE 0**

➤ **PUSH BUTTON / CONTACTLESS NFC CONFIGURATION**

➤ **ATEX Transmitter option**

➤ **For use with RTD, Thermocouple or Resistance sensors**

SCH4X & DM650XLP
MONITORING SYSTEM

Introduction

The SCH4X & DM650XLP (SCH4X-X-X-X-X-X) is an approved system comprised of up to 4 elements as shown below

1. SCH4X Connection Head enclosure which is the main housing for the system.

2. DM650XLP (4 to 20) mA signal display which is an optional loop-powered indicator mounted to the SCH4X base. Capable of taking an existing (4 to 20) mA signal and displaying its process value.

3. A Signal transmitter. This is a suitable IS approved transmitter that connects to an RTD, Thermocouple or Resistance sensor and converts the sensor reading to a (4 to 20) mA signal.

4. Sensor element This is a simple apparatus item with an RTD, Thermocouple, Resistance or Potentiometer sensor fitted. This is fitted when used with a signal transmitter (3) and optionally with the DM650XLP (2).
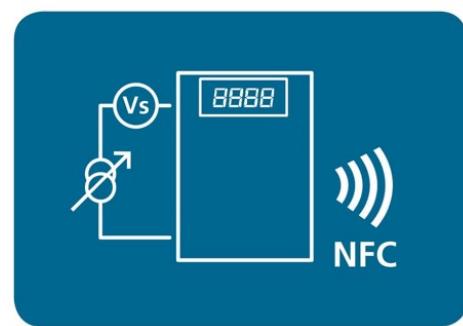
➤ **FEATURE HIGHLIGHTS**

ATEX Approved for use in Zone 0 (Gas)

LOOP POWERED The instrument is powered by the loop current, no additional power supply is required.

PUSH BUTTON CONFIGURATION (DM650XLP) This method of configuration may be performed without the need for additional configuration equipment. All function can be set by the user. A (4 to 20) mA loop current source is required, preferably with an adjustable range.

CONTACTLESS CONFIGURATION (DM650XLP) This method of configuration can be performed with an NFC enabled Android device running NFC Link in the safe area.

UNITS Four-unit display options are available, off, fixed (digit 6 used to display fixed character including °C, °F), string (one-to-six-digit character string flashes periodically), or a custom user set one-to-six-digit string flashed periodically.

STATUS
INSTRUMENTS

SCH4X & DM650XLP Monitoring System

ATEX TRANSMITTERS

The Status Instruments range of hazardous area transmitters can be used with or without the DM650XLP and mounted internally in the SCH4X housing.

Alternatively, suitably certified Ex Equipment (which may be external to the SCH4X connection head) which itself is powered from an Intrinsically safe power source may also be used providing a remote loop powered process display with the DM650XLP and SCH4X.

Please refer to www.status.co.uk for the ATEX range of products (TTR200X, TTC200X, SEM210X MKII & SEM310X MKII) that can be used with the SCH4X system.

SCH4X

Can be specified with, single side entry, double side entry or single side with base entry options. The housing can be probe or surface mounted (pipe mounting kit available).

DM650XLP SPECIFICATIONS

ELECTRICAL INPUT mA		SPECIFICATIONS @20˚C
Type	**Accuracy**	**Stability**
(4 to 20) mA Working Range	0.01 % (0.002 mA) Resolution Better than ±0.25 uA	0.01 %/˚C (0.002 mA/˚C)
(3.5 to 4) mA, (20 to 23)mA Full Range	0.04% (0.008 mA)	
Type/ options/ function	**Description**	**Notes**
Maximum current	±50 mA	
Loop voltage drop	(2.8 to 3.0) V	
Protection	Reverse connection	External 50 mA fuse recommended
Filter	Off, 2 Second, 10 Second Average filter	
Maths Function	Power and root options Off, ^ (1/2), ^ (1/3), ^ (3/2),, ^ (5/2), ^ (2), ^ (3)	
To maintain full accuracy annual calibration is required contact support@status.co.uk for details		

DISPLAY	
Type / options / function	**Description**
Display height	7.9 mm non-backlit
Display information options	6 digits 14 segment input value plus "Warning"," Transmit", "NFC", 8 segment signal indicators.
Display Range	-999999 to 999999
Decimal place	None to 5 places
High intensity LED	Warning

DISPLAY UNIT OPTIONS	
Off	No units displayed
Fixed Constant Display	Display reduces to 5-digit, digit 6 uses to display fixed capital character (A to Z) plus ˚C, ˚F, %
String – Displayed for 0.4S every 4 S	PSI, BAR, mBAR, INH2, mmH2O, mmHG, Pa, KPa, torr, ATM, GAL/s, GAL/m, GAL/h, L/min, L/sec, L/hr, mA, A, mm, cm, M, In, ft, LUX
Custom Displayed for 0.4S every 4 S	User defined string 6 Characters

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PUSH BUTTON CONFIGURATION
In safe area

Type / options / function	Description
Method	Menu navigation by 3 internally mounted push buttons - Enter, Up, Down
Functions	
Range	-999999 to 999999 counts
Decimal Place	888888, 88888.8, 8888.88, 888.888, 88.8888, 8.88888
Maths Functions	Off, ^ (1/2), ^ (1/3), ^ (3/2), ^ (5/2), ^ (2), ^ (3)
Filter	Off, 2 second, 10 second
Units	Off, Fixed, String, Custom + Enter Custom String
Requirements	Signal between (4 to 20) mA

CONTACTLESS NFC CONFIGURATION   (NFC LINK download from Google play store)
In safe area

Type / options / function	Description	
Method	Android device with NFC capability	
Functions		
Range	-999999 to 999999 counts	
Decimal Place	888888, 88888.8, 8888.88, 888.888, 88.8888, 8.88888	
Maths Functions	Off, ^ (1/2), ^ (1/3), ^ (3/2), ^ (5/2), ^ (2), ^ (3)	
Pre-set sensor to setpoint mA	Locks display value	For diagnostics
Units	Off, Fixed, String, Custom + Enter Custom String	
Read Live Data	mA signal, Process Variable	
Filter	Off, 2 second, 10 second	
Requirements	Signal between (4 to 20) mA	

GENERAL

Function	Description
Update rate	0.4 Seconds

ENVIRONMENTAL

Function	Description
Ambient temperature	Operating/storage (-30 to 70) ˚C **Atex applications (-20 to 60) ˚C**
Ambient humidity	Operating/storage (10 to 90) %RH non-condensing
Protection	To be used with SCH4X housing.

CONNECTIONS

Function	Description
Input signal	Two-part screw connector

SCH4X SPECIFICATIONS

Function	Description
Enclosure	ABS, grey
Display cover	Polycarbonate screen, clear (when used with DM650XLP display)
Low profile cap option	ABS, grey (when used with Ex ia transmitter only, no display)
Case entries	M24, M20, M16, ½" BSP, ½" NPT see order codes below
Front of display diameter	65 mm
Weight (approximate)	170 g (with DM650XLP fitted)

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APPROVALS

Function	Description
EMC	BS EN IEC 61326
Ingress protection	BS EN 60529: IP20 Minimum (IP65 possible with suitable glands and seals)
RoHS	Directive 2011/65/EU Incorporating Amendment Directive EU2015/863 and UK designated standard.
Hazardous Area	UKEX, ATEX, IECEx

ORDER CODE: SCH4X & DM650XLP (SCH4X-X-X-X-X-X)

NB: DM650xLP must be supplied with the SCH4X base

SCH4X Body	Entry Type A: Single Side B: Double Side C: Single Side with Base				
Display	No display fitted	0*			
	Display fitted (DM650XLP)	1			
Ex ia in head transmitter			0: None ** 1: TTR200X 2: TTC200C 3: SEM210X 4: SEM310X		
SCH4X Side Entry A				1: 1/2" BSP 2: 1/2" NPT 3: M24 4: M20 5: M16	
SCH4X Side Entry B Or Base Entry					0: Single Entry 1: 1/2" BSP 2: 1/2" NPT 3: M24 4: M20 5: M16

* If 0 is selected, SCH4X must be fitted with an Ex ia transmitter (supplied with low profile cap)

** If 0 is selected, SCH4X must be fitted with DM650XLP

SCH4X can be supplied with both a DM650XLP and an Ex ia transmitter fitted

Example DM650XLP required with double side entries M20 and M16 no Transmitter fitted

SCH4X	B		1	0	4	5

ACCESSORIES

NFC Configuration software	NFC Link, free of charge from to Google Play Store
Calibration certificates	Refer to sales@status.co.uk

To maintain full accuracy annual calibration is required contact support@status.co.uk for details
The data in this document is subject to change. Status Instruments assumes no responsibility for errors

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