DM670PM FIELD/WALL MOUNTED PRESSURE DISPLAY

> **PRESSURE/TEMPERATURE DISPLAY/LOGGING**

> **GAUGE OR ABSOLUTE**

> **DUAL RELAYS, MAX/MIN INFORMATION**

> **USER-SET DISPLAY MESSAGING**

> **3600 POINT LOGGER (USB or COMPATIBLE ANDROID DEVICE)**

> INTRODUCTION

The DM670PM series of battery powered indicators accept gauge or absolute pressure and displays the sensor pressure in BAR, PSI or the user's engineering unit on a 6-digit LCD display. The instrument offers an advanced display mode allowing the user to also display one or two (1 to 32) character messages. Additional to the messages, the user may select an alert-event to occur when the pressure is within a band. The two change-over relays can be used together with the messaging and alerts to provide switching at user-set points. In addition to this, on-board datalogging is also available to record pressure and process temperature process details at up to 3600 points.
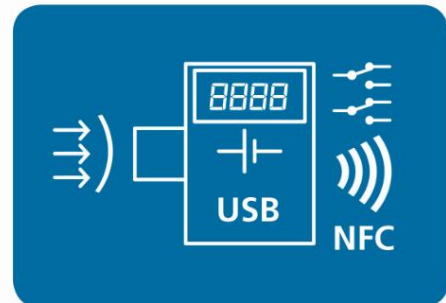
> FEATURE HIGHLIGHTS

DUAL RELAYS
The instrument is equipped with dual volt-free changeover-type relays, operating independently. The user may select one of seven actions, including deviation, latched or non-latched operation, with fully adjustable set point and dead band. The Relays may be turned off if not required to extend battery life. An option is provided to trigger an alert-event when a relay contact is on.

DATA LOGGING FUNCTION
DM670PM also provides a powerful data logging function. The log points can be set up to 3600 points, each point is time and date-stamped together with pressure, temperature and relay state information.
The log rate is selectable in steps. The start of log can be delayed if required. Either fixed or rolling logs may be performed.
Two methods of reading the log are available. The USB configuration reads the log and allows the user to save to a text file for export to other programmes. While the NFC android interface allows data transfer to compatible android phones or tablets, by using the downloadable App the data can be graphed and forwarded by email, Bluetooth etc. The NFC interface is also capable of starting a new log with different log period and modes.

CALIBRATION/USER-LINEARISATION
5-point calibration can be applied using the USBSpeedLink software.
As well as straight line interpolation, up to 22 points (x,y) of user-linearization are available for creating custom curves and corrections.

REAL-TIME CLOCK
Date and time-stamped maximum, minimum and average temperature values as well as relay on and relay off data is recorded and can be displayed along with the current time and date. The real-time clock is also used to record the data logged points.

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INPUT			SPECIFICATIONS @20°C
Pressure			
Type	**bar Gauge = bar Absolute**		**Accuracy/stability**
Sealed gauge *1	-0.5 to 0.5	0.5 to 1.5	
	0 to 3	1 to 4	±0.15% of full scale at 20°C *2
	-1 to 9	0 to 10	±0.5% of full scale between (0 to 50) °C *3
	0 to 30	1 to 31	±0.7% of full scale between (-10 to 80) °C *3
	0 to 100	1 to 101	
Overpressure	4 x pressure range		Up to maximum 350 Bar
Thermal drift			(-10 to 80) °C compensated
*1 Shows zero bar at 1.0 bar absolute, use custom scaling to display as absolute			
*2 Linearity best straight line, hysteresis, repeatability			
*3 Total error band: Maximum deviation within specified pressure and operating temperature range			
To maintain full accuracy annual calibration is recommended: contact support@status.co.uk for details			

INPUT		SPECIFICATIONS @20°C
Temperature		
Type	**Range**	**Accuracy/stability**
Medium temperature	(-40 to 110)°C	Typically, ±2.0°C

DISPLAY	
Type/options/function	**Description**
Display height	15.8 mm non-backlit
Display information options Some information is displayed scrolling.	6 digits 14 segment input value plus "Warning"," Transmit", "NFC", "USB", "Log", "Battery"," Off-set" icons, 8 segment log volume indicators. Maximum, minimum, average*1. Date and time. Custom messages for visual alarms/information. Relay condition.
High intensity LED	Alarm and warning options
*1 Rolling average data log is independent of data logging	

RELAYS	
Relay 1 and Relay 2	
Type/ options/ function	**Description**
2 x independent relays	Single pole change-over (common, N/o, N/c)
Rating	48 VDC maximum @ 1 A (5 mA minimum) 28 VAC RMS maximum @ 1 A

USB CONFIGURATION USER INTERFACE		
Type/options/function	**Description**	**Notes**
Configuration hardware	USB Mini B port	Cable not included
Configuration software	USBSpeedLink	Download www.status.co.uk
Operating system	Microsoft Windows	Win 7 or later
Sensor configuration	User calibration Off-set in Bar	Up to 5 points Applied by button action
Display configuration	Display mode	Basic with advanced options °C or °F
	Pressure units	Bar, PSI, mBar, Pa, KPa, MPa Kgf/m², Kgf/cm², Kgf/mm² Atm, custom units (any)
	Custom units	With 22-point linearisation
Pre-set sensor to setpoint	Locks input value to setpoint	For diagnostics
LED alert (advanced mode)	Eight user-adjustable pressure bands	Alert LED flash
Warning symbol	Out of range Low battery level	Warning symbol will flash on LCD display

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USB CONFIGURATION USER INTERFACE (Continued)		
Basic display mode	Update rate	1 s/ 5 s
	Display variable options	Input, input + units, input + units + temperature
	Temperature units	°C or °F
	Push buttons	Active, active with time stamp, off
	Alert LED	Options
	Rolling average	Period, number of samples
Advanced display mode *1	Display variable (see basic mode) with messaging options	
Battery monitor	Alert LED plus message	Relay option
Logger	Set device passkey number	Device passkey is used to protect the NFC interface.
	Clear/start new log	
Other device options	Synchronise clock	
	Write tag/contact address	
	Read/reset maximum and minimum input values	
	Latitude longitude settings	
Relay control	Name(s)	10 characters
	Action	High, low, band, low battery, on, off
	Setpoint	In engineering units
	Dead band	On/off
	Latch	
Live data	Read sensor pressure	bar
	Read displayed value	Selected engineering unit
	Read sensor temperature	°C
	Relay 1 state. Relay 2 state	
	Time and date	
*1 Only use advanced display above -5°C ambient temperature, below use basic display		

USB LOGGER USER INTERFACE		
Type/options/function	**Description**	**Notes**
Logger hardware	USB Mini B port	Cable not included
Logger software	USBLogLink	Download www.status.co.uk
Operating system	Microsoft Windows	Win 7 or later
Logger records pressure and temperature points	Start/set log parameters	Interval, rate, (delay) start, number of points, rolling or fixed log
	Read log parameters	
	Stop, start new log, synchronise, read clock, reset maximum and minimum	
	View log data/graph log data	Save data to CSV file

NFC ENABLED ANDROID DEVICE REQUEMENTS	
Tag Type	NFC Forum Tag Type 4 (max capacity 65536 Bytes)
RF Interface	ISO/IEC 14443 Type B Compliant (13.56 MHz)
Android device	Compatibility to read NFC Tag type 4 to full capacity 65536 bytes
Note: If the Android device cannot read full bytes the maximum number of log points will be reduced.	

NFC LOGGER USER INTERFACE ANDROID		
Type/options/function	**Description**	**Notes**
Logger software	NFCLogLink	@ Google Play Store
Operating system	Android V4.4 Kitkat or later	NFC enabled
Logger records pressure and temperature points	Start/set log parameters	Interval, rate, (delay) start, number of points, rolling or fixed log
	Read log parameters	
	Stop, start new log, synchronise, read clock Reset maximum and minimum	
	View log data/ graph log data	Save data to text file
	Transfer data via email etc.	Standard Android functions

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PUSH BUTTON USER INTERFACE		
Button	**Description**	**Notes**
Maximum and minimum	Display, display and reset	Time and date stamp option
	Offset, offset reset	
	Rolling average option	Number and rate options
Relay	Display relay configuration Reset latched relay	Time and date stamp option
Relay setpoint adjustment is not possible using front panel buttons, USBSpeedLink required		
Buttons can be locked out to avoided tampering		

GENERAL	
Function	**Description**
Update rate	1 or 5 seconds
Relay response time	< 10 seconds
Battery	1 x (AA 3.6 V lithium)
Battery life	1 year minimum **@20°C** (longer depending on options selected)
Clock accuracy	±2 seconds per month typically

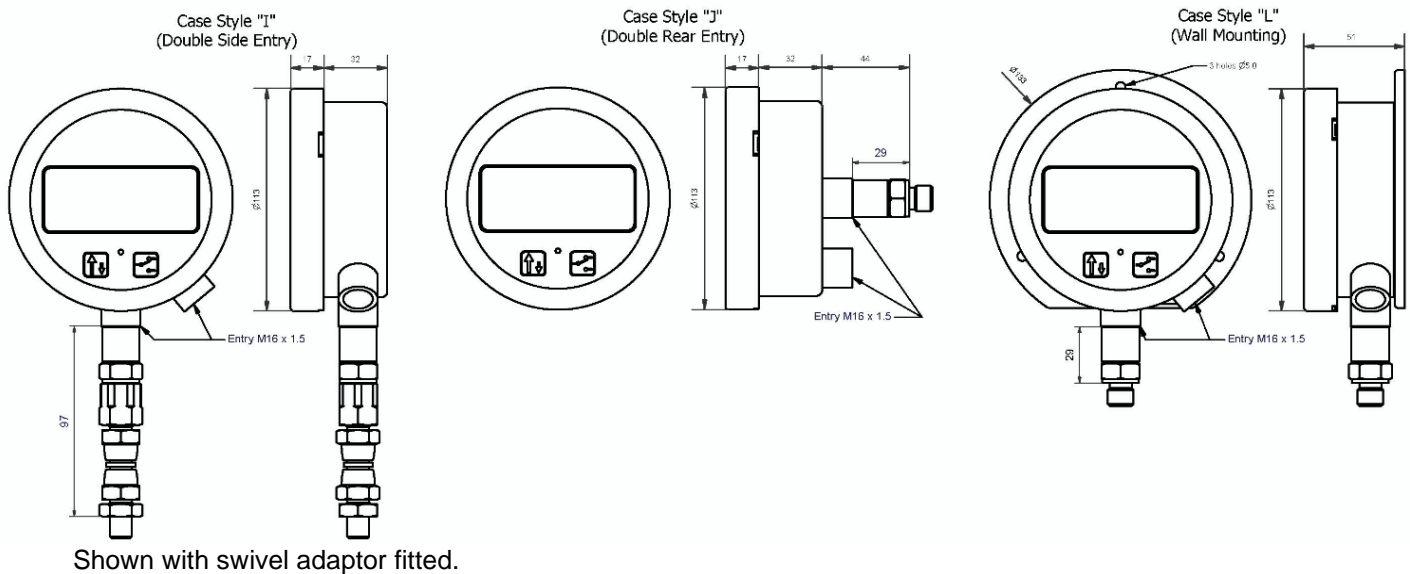| ENVIRONMENTAL	
Function	**Description**
Ambient housing temperature	Operating/storage (-30 to 70)°C
Ambient sensor temperature	Operating (-40 to 110)°C
Ambient humidity	Operating/storage (10 to 90) %RH non-condensing
Protection	IP65, cable entry must be sealed to IP65
USB configuration ambient	(10 to 30)°C

CONNECTIONS	
Sensor to process	¼ inch BSP male with adaptor options (see accessories)
Output relays	2 x Two-part screw connectors
USB connection	USB mini B port

MECHANICAL	
Enclosure (case)	Stainless steel, side or base mount options
Case entry	1 x M16 female thread, blanking plug supplied
Front bezel diameter	113 mm
Weight (approximate)	520 g
Material in contact with media	Stainless steel 316L
O-ring	Viton

APPROVALS	
EMC	BS EN 61326
Ingress protection	BS EN 60529
RoHS	Directive 2011/65/EU

DM670PM FIELD/WALL MOUNTED PRESSURE DISPLAY

ORDER CODE	DM670PM		
Case	Body type	Order Input range required in bar gauge	
Side mounted	/I	/option	**Input range in bar gauge** 9 = (-1 to 9) 0.5 = (-0.5 to 0.5)
Base mounted	/J	/option	
Wall mount	/L	/option	3 = (0 to 3) 30 = (0 to 30) 100 = (0 to 100) See Input specification for absolute ranges
Example: Side mounted, (0 to 30) bar			Cable entry M16
DM670PM	**/I**	**/30**	

Shown with swivel adaptor fitted.

ACCESSORIES	
Swivel adaptor ¼ BSPP	SA14BSP
Swivel adaptor ½ BSPP	SA12BSP
Swivel adaptor ¼ NPT	SA14NPT
Swivel adaptor other options available	sales@status.co.uk
Hygienic fittings available	sales@status.co.uk
Configuration software	USBSpeedLink free of charge from www.status.co.uk
USB logging software	USBLogLink free of charge from www.status.co.uk
NFC logging software	NFCLogLink free of charge, refer to Google Play Store
USB lead	USB lead, part number 42-200-0001-01
Battery 3.6 V lithium	Contact sales@status.co.uk

To maintain full accuracy annual calibration is required contact: support@status.co.uk for details.
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