



DIGITAL DISPLAY INDICATORS

3420 & 3600

HYC3420

INTELLIGENT DIGITAL INDICATOR

HYC3420 is a highly accurate and stable digital indicator.

Designed without compromise HYC3420 uses leading edge technology to accept all commonly used process inputs. Engineering units are displayed on a high efficiency Red LED display that provides daylight readability.

The display can be set to show a fixed number of decimal places or to auto scale to show the maximum resolution.

The innovative case design enables option 'Pods' to be easily installed without the need for dismantling or re-calibration. 'Plug and Play' Pods are available covering:-

- Relay outputs
- Isolated re-transmission (0-10, 0-20, 4-20 mA)

The flexibility of plug-in option pods combined with the switch mode power supply results in reduced stock holdings and, low 'cost of ownership'.

The front is sealed to IP65 and the case has a moulded-in rubber gasket to seal to the panel maintaining the IP65 rating, ideal for 'dusty' areas or where low pressure jets of water are used to clean down equipment.

Tension clamp two part connectors are provided for 'fast wiring' enabling installation to be completed in typically half the time it would take using conventional screw terminals. These high quality connections are manufactured to IEC-947-1 and IEC-947-7 standards and maintain the contact permanently under tension to also provide superior long-term performance in the presence of vibration.

SET UP

Programming is via the front panel keys following a logical menu structure which can be set to 'Short' (default), whereby only the common usage features are presented to the operator, or 'Full' where the full range of programmable features is available.

MENU MODE

Two front panel programming menus can be selected as follows with the option of password protection.



TRANSMITTER EXCITATION

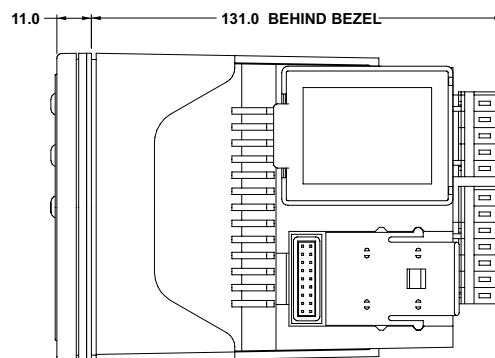
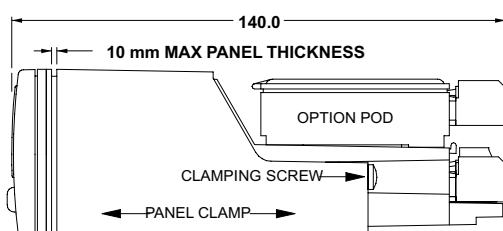
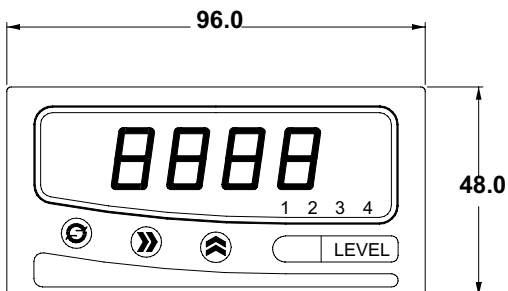
IP65 FRONT PANEL SEALING

PLUG & PLAY OPTION PODS

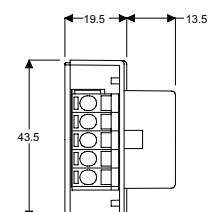
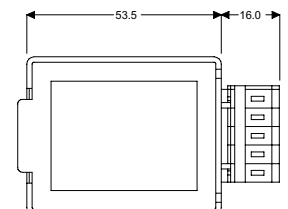
COMPETITIVE COST

2 YEAR WARRANTY

MECHANICAL DETAILS in mm



IP65 seal to panel
Weight 230gms. Panel cut out 92 x 45mm
Material ABS/PC
Flammability IEC707 FV0



SPECIFICATIONS

HYC3420 accepts all common process signals, current or voltage, and displays the signal digitally in engineering units. An internal power supply provides excitation for field transmitters.

PROCESS

Voltage Range	0-1V 1-5V 0-10V
Accuracy	0.05% FS
Thermal Drift zero span	0.1µV/°C 100 ppm/°C
Current Range	0-20 mA 4-20 mA 0-10 mA
Input Impedance	47 ohm (current) 1 Mohm (voltage)
Accuracy	0.05% FS
Thermal Drift	100 ppm/°C
Excitation	24V ±5% @ 50 mA

GENERAL SPECIFICATION @ 20°C

Input/output isolation	500 V AC rms (Galvanically Isolated)
Update time	250 ms maximum
Time constant (Filter off)	<1 second (to 63% of final value)
Filter Factor Programmable:	Off, 2 seconds, 10 seconds or Adaptive
Warm-up time	2 minutes to full accuracy
Display range	-999 to 9999
Power Supply	S1 90-253 V AC 50/60 Hz S2 20-35 V DC
Power Consumption	10VA Max. (options fitted)

DISPLAY

4 Digit RED LED standard	14.2mm high / high intensity
4 Digit GREEN LED option	14.2mm high / high intensity
4 Alarm RED LED indicators	2.5mm high numeric

ENVIRONMENTAL

Sealing to panel	IP65
Ambient operating range	-30 to +60 °C
Ambient storage temperature	-50 to +85 °C
Ambient humidity range	10 to 90% RH non condensing

APPROVALS

EMC	BS EN61326
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ELECTRICAL SAFETY	BS EN61010-1
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OUTPUT OPTIONS

Plug and Play Option Pods

Simple plug in pre-calibrated units, no dismantling or recalibration

Pod-3000/02 Dual relay Alarm

Two independent relay outputs

Contacts	2 x Changeover relays (common feed)	
Ratings	AC	DC
Maximum Load	5A@250V	5A@30V
Maximum Power	1750VA	210W
Maximum Switching	253V	125V
Electrical Life	10 ⁵ operations at rated load	
Mechanical Life	50 million operations	
Termination	Standard	5 way tension clamp connector
	Optional	Screw terminals

Pod-3000/03 Isolated re-transmission

Ranges	0-10mA (Active or Passive) 0-20 mA (Active or Passive) 4-20 mA (Active or Passive)
Minimum current output	0 mA
Maximum current output	23 mA
Accuracy	0.07% F.S.
Max. Output load	Active 1 K ohm Passive [(Vsupply-2)/20] K ohms
Max. External Supply Voltage	30V (Passive mode)
Voltage effect	0.2 µA/V
Ripple current	<3µA
Isolation	500V AC
Stability	1µA/°C
Termination	Standard 5 way tension clamp connector Optional Screw terminals

ORDER CODE

Series HYC342 [] / []

RED LED version 0
GREEN LED version 1

Power supply 90-253V AC 50/60Hz S1
Power supply 20-35V DC S2

HYC3600

INTELLIGENT DIGITAL INDICATOR

The HYC3600 is an intelligent digital panel meter that can accept inputs from a wide variety of sensors and display the signal digitally. In addition, it has the facility to accept up to two option 'pods' which can be either isolated (4 to 20) mA re-transmission or two alarm relays.

All functions are programmable via the integral front panel keys or via the optional RS485 serial communications port using the Modbus protocol.

The HYC3600 supports TFML (Transfer Function Module Library) i.e. The ability to download custom functionality by means of standard modules available from the web site. This allows pre-written or custom control functions to be quickly and easily incorporated.

The HYC3600 totaliser function enables non-volatile storage of the integrated total to be maintained within the unit, even after loss of power. Output options can be selected to operate on Process Variable (PV) or Total.

TRANSFER FUNCTION MODULE LIBRARY (TFML)

TFML has been designed to offer the user enhanced power and flexibility by providing a mechanism whereby each unit can be customised to perform a particular function.

SET UP

Programming is via the front panel keys following a logical menu structure which can be set to 'Short' (default), whereby only the common usage features are presented to the operator, or 'Full' where the full range of programmable features is available.

MENU MODE

Two front panel programming menus can be selected as follows with the option of password protection.



TRANSMITTER EXCITATION

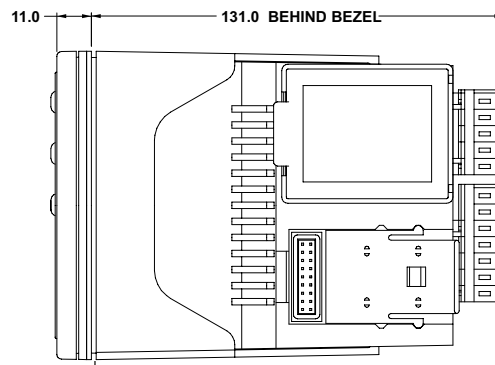
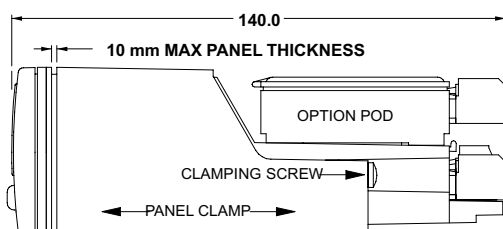
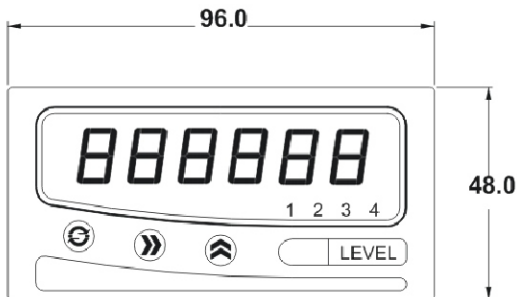
IP65 FRONT PANEL SEALING

PLUG & PLAY OPTION PODS

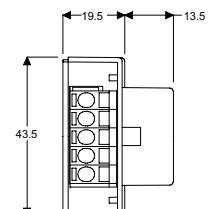
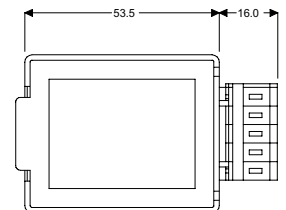
COMPETITIVE COST

2 YEAR WARRANTY

MECHANICAL DETAILS in mm



Weight 230gms. Panel cut out 92 x 45mm
Material ABS/PC
Flammability IEC707 FV0



SPECIFICATIONS

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Voltage Range	0-1V 1-5V 0-10V
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Thermal Drift zero span	0.1µV/°C 100 ppm/°C
Current Range	0-20 mA 4-20 mA 0-10 mA
Input Impedance	47 ohm (current) 1 Mohm (voltage)
Accuracy	0.05% FS
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Excitation	24V ±5% @ 50 mA

GENERAL SPECIFICATION @ 20°C

Input/output isolation	500 V AC rms (Galvanically Isolated)
Update time	250 ms maximum
Time constant (Filter off)	<1 second (to 63% of final value)
Filter Factor Programmable:	Off, 2 seconds, 10 seconds or Adaptive
Warm-up time	2 minutes to full accuracy
Display range	-99999 to 999999
Power Supply	S1 90-253 V AC 50/60 Hz S2 20-35 V DC
Power Consumption	10VA Max. (options fitted)

DISPLAY

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Max. External Supply Voltage	30V (Passive mode)
Voltage effect	0.2 µA/V
Ripple current	<3µA
Isolation	500V AC
Stability	1µA/°C
Termination	Standard 5 way tension clamp connector Optional Screw terminals

ORDER CODE

Series HYC360

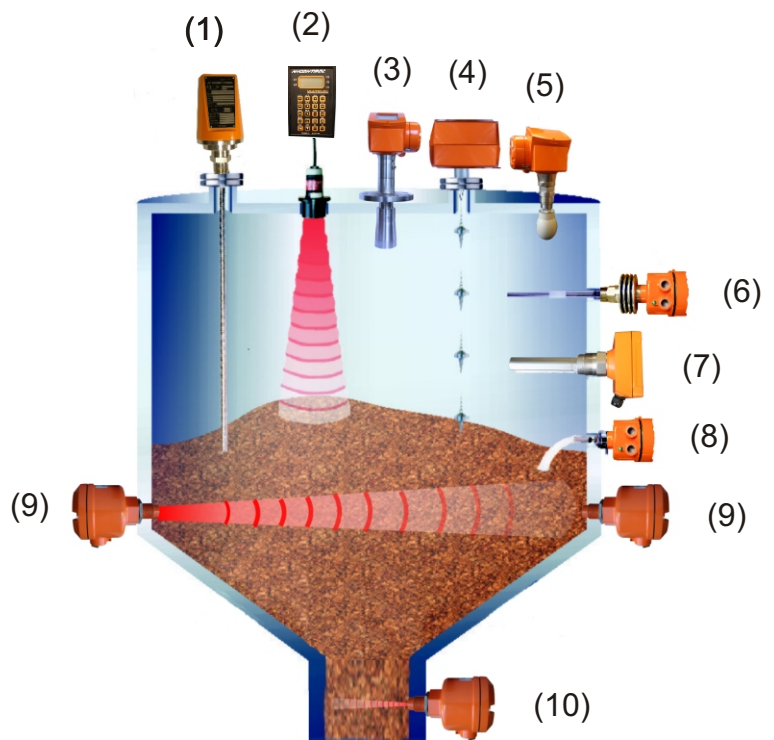
RED LED version	0
GREEN LED version	1

Power supply 90-253V AC 50/60Hz	S1
Power supply 20-35V DC	S2

HYCONTROL LEVEL TECHNOLOGIES

Product Range For Solids :-

- (1) TDR Radar For Solids
- (2) Ultrasonic, 'Through Air'
- (2) 2 Wire Ultrasonic Transmitter
- (3) FMCW 2 Wire Radar
- (4) Continuous 'Servo' Level Indicator
- (5) FMCW 2 Wire Radar
- (6) Capacitance Level Switch
- (7) Vibrating Probe Level Switch
- (8) Rotating Paddle Level switch
- (9) Microwave Level Switch
- (10) Doppler Flow Switch



Product Range For Liquids :-

- (1) By-Pass Level Indicator With Radar
- (2) TDR Radar For Liquids
- (3) 2 Wire Ultrasonic Transmitter
- (4) FMCW 'Horn' Radar 2 Wire
- (5) Magnetic Float Switches
- (6) FMCW 2 Wire Radar
- (7) Foam Level Switch
- (8) Capacitance Level Switch
- (9) RF Admittance Level Switch
- (10) Side Mounting 316 SS Float Switch
- (11) Tuning Fork Level Switch
- (11) Tuning Fork Level Switch
- (12) Ultrasonics 'Through Wall'
- (13) Mini Magnetic Float Level Switch

