

PID PROCESS CONTROLLER WITH COMPUTER CONTROLLED BASE UNIT (MODULAR SYSTEM SENSORS)








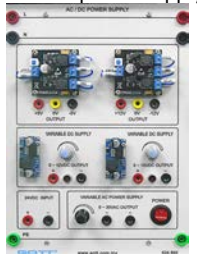
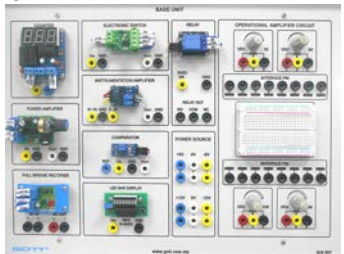
Model Number : GOTT-MSFSS-CCBU



DESCRIPTION :

This unit is common for the different test modules type GOTT-MSFSS-CCBU, and can work with one or several modules. The Computer Controlled Base Unit is a complete unit designed to provide signal conditioning for many sensors and transducers output signals that must be conditioned before a data acquisition system can effectively and accurately acquire the signal. These circuits consist of differential and instrumentation amplifiers, filters, current to voltage and frequency to voltage converters. This is also includes a PID controller, industrial controller, and other interesting elements that can be used to introduce students the concepts about process control.

PRODUCT MODULES

<p>MAINS POWER SUPPLY CODE 452-026</p> <ul style="list-style-type: none"> Input voltage: AC220-240V FCCB 2 Pole 16A RCCB 2 pole 25A 	<p>DC VOLTMETER CODE 624-896</p> <ul style="list-style-type: none"> Analog Voltmeter (-10V to 10V) Digital Voltmeter (0 to 100V) 	<p>PID PROCESS CONTROLLER CODE 624-891</p> <ul style="list-style-type: none"> Intelligent Universal PID process controller Temperature sensor Input DC 0~5V, 4~20mA Input RS 485 	<p>DC POWER SUPPLY CODE 955-124</p> <ul style="list-style-type: none"> Input voltage: AC220-240V Output Voltage: <ul style="list-style-type: none"> +24VDC/2A +12VDC/7A +5VDC/7A 
<p>PWM FREQUENCY GENERATOR CODE 624-895</p> <ul style="list-style-type: none"> Frequency range: 1Hz-150KHz Adjustable duty cycle Square wave output 	<p>WAVEFORM GENERATOR CODE 624-894</p> <ul style="list-style-type: none"> Voltages: 9V DC Sine wave, triangular, square, sawtooth 1~65KHz output. High speed square wave 1mhz,2mhz,4mhz,8mhz 	<p>CONVERTER MODULE CODE 624-893</p> <ul style="list-style-type: none"> Voltage to Frequency <ul style="list-style-type: none"> Input voltage: 0-10V DC Input Output frequency: 0-10KHz Frequency to Voltage control <ul style="list-style-type: none"> Input: 0-10KHz Output : 0-10V DC Voltage to Current Converter <ul style="list-style-type: none"> Input: 0-5V Output: 4-20mA Current to Voltage Converter <ul style="list-style-type: none"> Output: 0-5V DC 	
<p>AC/DC POWER SUPPLY CODE 624-892</p> <ul style="list-style-type: none"> Fixed : ± 5V DC, ±12V DC Variable: 0-12 V DC, 0-5V DC Variable AC power supply: 0-30V AC 	<p>BASE UNIT CODE 624-897</p> <ul style="list-style-type: none"> Power Amplifier <ul style="list-style-type: none"> Voltage range: 3V-12V Electronic Switch <ul style="list-style-type: none"> Input signal: 3-20V PWM PWM frequency: 0-20KHz Comparator <ul style="list-style-type: none"> Operating Voltage: 3.3 V to 5 V Output: DO digital switching output (0 and 1) and AO analog voltage output LED Bar Display <ul style="list-style-type: none"> Input : 0-5V DC Relay <ul style="list-style-type: none"> Operating Voltage: 5V DC Power source Input: ± 5V DC, ±12V DC Contact Type: NC and NO Counter <ul style="list-style-type: none"> 5V DC input 3 digit digital display Operational Amplifier <ul style="list-style-type: none"> Breadboard 82 x 54mm Potentiometer 1K, 5K, 10K, 20K Interface Pin (4pin/banana socket) 		

***This module is design as a based module that can only function with at least one of the optional item**

*Proposed design only, subject to changes without any notice.

MODULAR SYSTEM SENSORS TEMPERATURE TEST MODULE




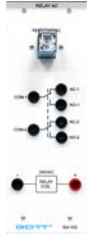





Model Number : GOTT-MFSS-TTM2



DESCRIPTION :

GOTT-MFSS-TTM2 has been designed to teach the use and applications of sensors of temperature as a measure, and its control. To measure the temperatures there are different type of sensors placed in different positions that are at different distances from the warming source, in order to get higher or lower temperatures. GOTT-MFSS-TTM2 has been invented as a whole unit but only can be conducted together with our Computer controlled based unit GOTT-MSFSS-CCBU.

PRODUCT MODULES

<p>MAINS POWER SUPPLY CODE 452-026</p> <ul style="list-style-type: none"> Input voltage: AC220-240V FCCB 2 Pole 16A RCCB 2 pole 25A 	<p>TEMPERATURE SENSOR CODE 624-812</p> <ul style="list-style-type: none"> Thermocouple Type K (-50°C) to (+350°C) 	<p>HALOGEN LAMP CODE 624-831</p> <ul style="list-style-type: none"> Halogen Lamp 	<p>RELAY AC CODE 624-832</p> <ul style="list-style-type: none"> Relay Coil : 240 VAC 
<p>CAPILLARY THERMOSTAT CODE 624-833</p> <ul style="list-style-type: none"> Power: AC 250V 16A Type: NC 	<p>ADJUSTABLE BIMETALLIC THERMOSTAT CODE 624-834</p> <ul style="list-style-type: none"> AC250V 16A bimetallic discs adjustable heating limiter hot thermostat Power: AC 250V 16A 	<p>MAGNETIC BLOCK CODE 624-836</p> <ul style="list-style-type: none"> Magnetic Bar 	<p>UPPER AND LOWER HEATING BLOCK CODE 624-835</p> <ul style="list-style-type: none"> Upper Part Heating Block (-80°C) Lower Part Heating Block (-40°C) Thermostat Switch Type: NC 
<p>DC POWER SUPPLY CODE 955-124</p> <ul style="list-style-type: none"> Input voltage: AC220-240V Output Voltage: +24VDC/2A +12VDC/7A +5VDC/7A 	<p>EXPERIMENT TOPICS</p> <ul style="list-style-type: none"> To understand the Curie Effect theory. To measure Curie temperature of a ferrite To use the bimetallic thermostat as a temperature controller. To use the Bimetallic Switch Sensor that will cut off at 50°C to control the temperature. To study the function of the capillary thermostat 		

*This module is design as a whole unit but only can be conducted together with our Computer controlled based unit GOTT-MSFSS-CCBU.

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MODULAR SYSTEM SENSORS PRESSURE TEST MODULE

Model Number : ÖUVVËT ÙØÙËÛT H



DESCRIPTION :

GOTT-MSFSS-PTM3 has been designed to teach the use and applications of this kind of sensors measurement systems. It shows the different pressure measurement techniques. In GOTT-MSFSS-PTM3 there is a pressure chamber with several sensors adjusted to measure the pressure changes. There is also a compressor that gives the system pressure with which the pressure chamber maximum pressure can be adjusted. GOTT-MSFSS-PTM3 has been designed as a whole unit but only can be conducted together with our Computer controlled based unit GOTT-MSFSS-CCBU.

PRODUCT MODULES

<p>MAINS POWER SUPPLY CODE 452-026</p> <ul style="list-style-type: none"> Input voltage: AC220-240V FCCB 2 Pole 16A RCCB 2 pole 25A 	<p>STRAIN GAUGE CODE 624-856</p> <ul style="list-style-type: none"> Characteristics: Resistance 120Ω at 24°C 	<p>T- OINT CODE 624-858</p> <ul style="list-style-type: none"> Tubing Size : 1/4 inch 	<p>LINEAR POSITIONING SENSOR CODE 624-853</p> <ul style="list-style-type: none"> Resistance: 0-5K OHM Output: 0-5VDC Power supply: 10-16VDC
<p>AIR REGULATOR CODE 624-854</p> <ul style="list-style-type: none"> 0-150 psi (0-10 bar) 	<p>LVDT SENSOR CODE 624-811</p> <ul style="list-style-type: none"> Range: 0-5MM Output: 0-5VDC Power supply: 1-5VDC 	<p>DC POWER SUPPLY CODE 955-124</p> <ul style="list-style-type: none"> Input voltage: AC220-240V Output Voltage: <ul style="list-style-type: none"> +24VDC/2A +12VDC/7A +5VDC/7A 	<p>PRESSURE SWITCH CODE 452-003</p> <ul style="list-style-type: none"> Maximum pressure input 1MPa
<p>AIR DIFFERENTIAL PRESSURE SENSOR CODE 624-855</p> <ul style="list-style-type: none"> Power supply: ≤2.0mADC; ≤10VDC Pressure range: 0kPa-200kPa DC Voltmeter LCD 	<p>3-FOLD RELAY CODE 013-030</p> <ul style="list-style-type: none"> Relay Coil: 24VDC 	<p>AIR COMPRESSOR CODE 624-851</p> <ul style="list-style-type: none"> Max: 150 psi 	<p>PRESSURE CHAM ER CODE 624-857</p> <ul style="list-style-type: none"> Maximum pressure: 16kPa (2psi) LVDT Sensor Linear Positioning Sensor

*This module is design as a whole unit but only can be conducted together with our Computer controlled based unit GOTT-MSFSS-CCBU.

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MODULAR SYSTEM SENSORS FLOW TEST MODULE

Model Number : GOTT-MSFSS-FTM4



DESCRIPTION :

GOTT-MSFSS-FTM4 is designed to show techniques to measure changeable fluids. The module is made up of tanks assembled on a structure. Inside them there is a pumping system that allows to pump the water. The pump enables that a big amount of water from the tank flows. It is possible to change the flow volume by changing the pump power supply voltage using the terminals placed on the front panel. GOTT-MSFSS-FTM4 has been invented as a whole unit but only can be conducted together with our Computer controlled based unit GOTT-MSFSS-CCBU.

PRODUCT MODULES

<p>MAINS POWER SUPPLY CODE 452-026</p> <ul style="list-style-type: none"> • Input voltage: AC220-240V • FCCB 2 Pole 16A • RCCB 2 pole 25A 	<p>T- JOINT CODE 624-877</p> <ul style="list-style-type: none"> • Tubing Size : 1/4 inch 	<p>PRESSURE SENSOR CODE 624-873</p> <ul style="list-style-type: none"> • Mini Pressure Transducer Sender Sensor Stainless Steel For Oil Fuel Air Water (30 Psi) • Range : 0 to 30 psi • Voltage: DC 5V 	<p>WATER FLOW SWITCHH CODE 624-872</p> <ul style="list-style-type: none"> • AC240V Contact : NO • Water flow: 1.0L/min 
<p>WATER FLOW METER CODE 624-871</p> <ul style="list-style-type: none"> • Range : 0-4 l/min 	<p>WATER FLOW SENSOR CODE 624-874</p> <ul style="list-style-type: none"> • Power Supply : DC 5V • Range : 1-5L/min • Working voltage: DC 5V-24V 	<p>WATER DIFFERENTIAL PRESSURE SENSOR CODE 624-875</p> <ul style="list-style-type: none"> • Pressure range: 0kPa-100kPa • Power supply: ≤2.0mA DC; ≤10V DC 	<p>DC POWER SUPPLY CODE 955-124</p> <ul style="list-style-type: none"> • Input voltage: AC220-240V • Output Voltage: <ul style="list-style-type: none"> • +24VDC/2A • +12VDC/7A • +5VDC/7A 
<p>WATER TANK CODE 624-876</p> <ul style="list-style-type: none"> • Diameter: 195mm • Height: 500mm 	<p>UNDERWATER PUMP CODE 624-874</p> <ul style="list-style-type: none"> • Super Submersible Pump • AC220V 50Hz 60W • Flow rate : 3000 L/H 	<p>EXPERIMENT TOPICS</p> <ul style="list-style-type: none"> • Study the function of water flow meter. • To measure the water flow rate generated by an underwater pump using a water flow meter of changeable area. • Study the function of water flow switch • To use the water flow switch to detect the water flow • Study the function of the water flow sensor. • To measure the output signal produced by an underwater pump using the water flow sensor. • Study the function of the pressure sensor. • To use the pressure sensor to measure the output voltage of different liquid level in the water tank. • Study the function of water differential pressure sensor. • To measure the output voltage of water differential pressure sensor. 	

***This module is design as a whole unit but only can be conducted together with our Computer controlled based unit GOTT-MSFSS-CCBU.**

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MODULAR SYSTEM SENSORS VIBRATION LEVEL TEST MODULE



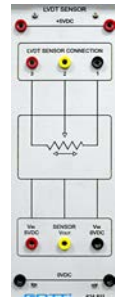



Model Number : GOTT-MFSS-VLTM1



DESCRIPTION :

This GOTT-MFSS-VLTM1 is design to teach mechanical vibration and displacement variable measurement techniques. It has been design to teach the students the effect of deformation on the elastic plate. On top of that, students can also learn to measure the deformation of elastic plate using strain gauge. Furthermore, students can determine the way to measure the temperature of the elastic plate using thermocouple type K and the effect of temperature variation on the strain gauge. GOTT-MFSS-VLTM1 has been designed as a whole unit but only can be conducted together with our Computer controlled based unit GOTT-MSFSS-CCBU.

PRODUCT MODULES

MAINS POWER SUPPLY	CODE 452-026	STRAIN GAUGE	CODE 624-856	LVDT SENSOR	CODE 624-811	TEMPERATURE SENSOR	CODE 624-812	
<ul style="list-style-type: none"> Input voltage: AC220-240V FCCB 2 Pole 16A RCCB 2 pole 25A 		<ul style="list-style-type: none"> Characteristics: Resistance 120Ω at 24°C 		<ul style="list-style-type: none"> Range: 0-5MM Output: 0-5VDC Power Supply : 0-5 VDC 		<ul style="list-style-type: none"> Thermocouple Type K 50 deg C - 350 deg C 		
<ul style="list-style-type: none"> Vibrant Girder Vibrator Vibrator Sensor 	CODE 624-813	<ul style="list-style-type: none"> Input voltage: AC220-240V Triple Output Voltage: +24VDC/2A +12VDC/7A +5VDC/7A 	CODE 955-124	EXPERIMENT TOPICS : <ul style="list-style-type: none"> Effect of deformation on the elastic plate To measure the deformation of elastic plate using strain gauge Effect of temperature variation on the strain gauge To measure the temperature of the elastic plate using thermocouple type K To measure the vibration of vibration plate using vibrator sensor To measure the output of LVDT sensor <p>*This module is design as a whole unit but only can be conducted together with our Computer controlled based unit GOTT-MSFSS-CCBU.</p>				

Manuals :

- (1) All manuals are written in English.
- (2) Model Answer
- (3) Teaching Manuals

General Terms :

- (1) Accessories will be provided where applicable.
- (2) Manual & Training will be provided where applicable.
- (3) Design & specifications are subject to change without notice.
- (4) We reserve the right to discontinue the manufacturing of any product.

Warranty :

2 Years

ORDERING INFORMATION :

ITEM	MODEL NUMBER	CODE
PID PROCESS CONTROLLER WITH COMPUTER CONTROLLED BASE UNIT(MODULAR SYSTEM SENSORS)	GOTT-MSFSS-CCBU	624-810
MODULAR SYSTEM SENSORS TEMPERATURE TEST MODULE	GOTT-MFSS-TTM2	624-801
MODULAR SYSTEM SENSORS PRESSURE TEST MODULE	GOTT-MSFSS-PTM3	624-802
MODULAR SYSTEM SENSORS FLOW TEST MODULE	GOTT-MSFSS-FTM4	624-803
MODULAR SYSTEM SENSORS VIBRATION LEVEL TEST MODULE	GOTT-MSFSS-VLTM1	624-800

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