GP:50

GPR700/770 1/4 DIN

MELT PRESSURE INDICATOR/CONTROLLER

FEATURES

- **Universal + strain gauge inputs**
- **Three fast-acting alarms to protect against overpressure**
- **High visibility three color LED display**
- **High reliability and quality**
- **Three year warranty**
- **Optional secondary input for differential pressure/temperature display or control**
- **Analog retransmission**
- **Easy, effective auto-tune**
- **Direct replacement for UPR700/770 models**

TECHNICAL DATA

Power Requirements	Main Power Supply Pwr. Sup. Var. Pwr. Consumption Optional Power Sup. Pwr. Sup. Var. Pwr. Consumption	100 to 230V ac 50/60 Hz 100 to 230V ac 50/60 Hz ± 15% Max 22VA at 50Hz; Max 27VA at 60Hz 24V ac/dc From 14 to 30V ac From 14 to 32V dc Max 18VA at 24V ac 50/60 Hz; Max 12W at 24Vdc
	Electromagnetic Compatibility	Compliant with the European Directive 2004/108/CE according to Product Standard EN 61326-1
	Approvals	CE, cUL, RoHS 2
Environmental Performance	Temperature Limits	**Operation:** 0 to 50°C (32 to 122°F) **Storage:** -20 to 70°C (-4 to 158°F)
	Altitude	<6500 ft.
	Humidity Limits	0 to 95% RH non-condensing
	Panel Sealing	IP55
Physical	Panel mounting	1/4 DIN
	Dimensions:	96W x 96H x 128Dmm (Panel cut-out 92Wx92H)
	Weight	1.43 lb (650 g.)
Operator Interface	Type	LED (visible from 20ft.)
	Main PV Display	5 digits, green, 13.3mm high
	Secondary Display	5 digits, amber, 10.7mm high
	Bar Graph	35 segments, green with 3% resolution
	Status Beacons	4 engineering units, 3 alarms, 18 active status beacons, including engineering units and alarms

Communications	Protocol:	Modbus RTU slave
	Transmission Standard	EIA485
Process Variable Input (Main Input)	Strain Gauge Input:	From 340 to 5000Ω bridge
	Sensitivity:	1-4 mV/V
	Connection:	4 or 5 wire (5 uses internal shunt)
	Excitation:	10 V± 7%
	Calibration Accuracy	± 0.1% FSO ± digit@25°C± 1°C
	Input span:	-25/125% of full scale (approx. 10/50mV)
	Linear Input:	0-5 Vdc, 0-10 V, 0-20 mA, 4-20 mA
	Sample rate:	50 ms (typical)
	Resolution:	4000 counts/12 bits
	Zero balance:	± 25% of full scale (approximately ± 10 mV
	Drift with temperature	<300 ppm/K of full span for current, voltage and strain gauge input
	Common mode rejection:	>120dB @ 50/60Hz
	Series mode rejection:	>60dB @ 50/60Hz

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TECHNICAL DATA

The GPR700 is a fully programmable indicator with a single input configured for melt pressure measurement and the choice of wiring either strain gauge or amplified transducers to the unit. An optional second input provides an additional facility for differential pressure measurement if required.

The update time for each channel is 50ms to respond to very fast processes. To provide full process measurement, the second input can be configured for either thermocouple or RTD temperature measurement.

Three pre-configured and ready to use alarms are associated to the process to detect high and low pressure conditions. A flexible alarm strategy enables shutdown of the extruder at dangerous pressure levels.

Secondary Process Variable Input	Strain gauge input:	For differential pressure calculation
	Input features:	See main input features above
	Linear input: GPR770 only	For differential pressure or remote set point see main input (above)
	Input features:	See main input (above)
	Thermocouple: GPR 700 only	J,K,L,N,T,E
	RTD Resistance: GPR 700 only	3-wire Pt 100, Pt 500
	Input impedance:	>1MΩ for thermocouple input <10Ω for linear current input >165kΩ for linear voltage input
	Sample rate temp. input:	100, 200, 500 or 1000ms
Software Features	**Control** Number of loops: Control loop update: Control types: Modes: Autotune:	1 50ms (typical) PI/PID Auto, manual, forced manual Tune algorithm from manual mode. Adaptive algorithm in auto mode
	Transducer calibration Calibration types: Shunt resistor:	With or without shunt resistor Programmable from 40 to 100%, default 80%
	Alarms Number: Type:	3 Absolute high & low, deviation high, Low or band Low masked on start up Auto / Manual reset
	Other Features: Peak monitor: Automatic stand-by:	Stores high or low values Avoids overshoot caused by temporary process interruptions

Main Analogue Output	Function: GPR700	PV retransmission
	GPR770	Control Output
	Rating:	Configurable between: 0/10 VDC, min. load 5kΩ -10/+10 VDC, min. load 5kΩ 0/5 VDC min. load 5kΩ 0/20 mA, max. load 500Ω 4/20 mA, max. load 500Ω
	Accuracy:	0.1% in manual mode, 0.03% in automatic mode
	Resolution:	0.1% of output span
	Isolation:	From input / output
	Output filter:	Selectable: OFF, 0.4,1, 2, 3, 4, 5s
Secondary Analogue Output	Function: GPR700 GPR770	Configured as pressure or temp. input retransmission Acts as pressure input retransmission
	Output features:	See main analogue output (above)
Relay Output	**Alarm 1-2** Type: Rating: Functions:	Form C (changeover) 2A max @ 240V ac resistive load Process alarm
	Alarm 3 Type: Rating: Functions:	Form A (normally open) 2A max @ 240V ac resistive load Process alarm
Digital Input	**Reset/Cal (GPR 700/770** Isolation: Functions:	None from PV Configurable as: Alarm reset Peak reset Alarm and peak reset Zero calibration of the primary input: Zero calibration of the primary input, alarm and Peak reset
	1-2-3-4 (GPR770) Isolation: Functions:	Opto-isolated from input/output Dig In 1: Automatic/manual control Dig In 2: Control output value increase Dig In 3: Control output value decrease Dig In 4: Automatic to manual mode setting to zero the control output

ORDERING GUIDE

MODEL: GPR7X0—X—X—X / X

BASE MODEL	
7	Controller
0	Indicator

POWER SUPPLY	
0	120/240VAC Power
1	24DC Power

SECONDARY INPUT	
0	None
1	GRR700/ Second Input (PV 2)
2	GPR770/ Second Input (remote SP and PV 2)

OTHER	
SSU	System Set-Up

COMMUNICATIONS	
0	No Communications
1	RS-485 ModBus/24VDC Xmitter PSU/Retransmission
2	24VDC Xmitter PSU / Retransmission

Please contact the factory on all critical dimensions and specifications for verification.

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