

GPR700/770 1/4 DIN

MELT PRESSURE INDICATOR/CONTROLLER

FEATURES

- ◆ Universal + strain gauge inputs.
- ◆ Three fast-acting alarms to protect against over-pressure
- ◆ High visibility three color LED display
- ◆ High reliability and quality
- ◆ Three year warranty
- ◆ Optional secondary input for differential pressure/temperature display or control
- ◆ Analogue retransmission
- ◆ Easy, effective auto-tune
- ◆ Easy and flexible configuration via PC software or front panel



TECHNICAL DATA

Power Requirements	Main Power Supply Pwr. Sup. Var. Pwr. Consumption Optional Power Sup. Pwr. Sup. Var.	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	Communications	Protocol:	Modbus RTU slave
	Pwr. Consumption			Transmission Standard	EIA485
	Electromagnetic Compatibility	Compliant with the European Directive 2004/108/CE according to Product Standard EN 61326-1		Strain Gauge Input:	From 340 to 5000Ω bridge
Environmental Performance	Approvals	CE, cUL, RoHS 2	Process Variable Input (Main Input)	Sensitivity:	1-4 mV/V
	Temperature Limits	Operation: 0 to 50°C (32 to 122°F) Storage: -20 to 70°C (-4 to 158°F)		Connection:	4 or 5 wire (5 uses internal shunt)
	Altitude	<6500 ft.		Excitation:	10 V± 7%
	Humidity Limits	0 to 95% RH non-condensing		Calibration Accuracy	± 0.1% FSO ± digit@25°C± 1°C
Physical	Panel Sealing	IP55		Input span:	-25/125% of full scale (approx. 10/50mV)
	Panel mounting	1/4 DIN		Linear Input:	0-5 Vdc, 0-10 V, 0-20 mA, 4-20 mA
	Dimensions:	96W x 96H x 128Dmm (Panel cut-out 92Wx92H)		Sample rate:	50 ms (typical)
Operator Interface	Weight	1.43 lb (650 g.)		Resolution:	4000 counts/12 bits
	Type	LED (visible from 20ft.)		Zero balance:	± 25% of full scale (approximately ± 10 mV)
	Main PV Display	5 digits, green, 13.3mm high		Drift with temperature	<300 ppm/K of full span for current, voltage and strain gauge input
	Secondary Display	5 digits, amber, 10.7mm high		Common mode rejection:	>120dB @ 50/60Hz
	Bar Graph	35 segments, green with 3% resolution		Series mode rejection:	>60dB @ 50/60Hz
Status Beacons	4 engineering units, 3 alarms, 18 active status beacons, including engineering units and alarms				

TECHNICAL DATA

The GRR700 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:	>1M Ω for thermocouple input <10 Ω for linear current input >165k Ω 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 GPR770	PV retransmission Control Output
	Rating:	Configurable between: 0/10 VDC, min. load 5k Ω -10/+10 VDC, min. load 5k Ω 0/5 VDC min. load 5k Ω 0/20 mA, max. load 500 Ω 4/20 mA, max. load 500 Ω
	Accuracy:	0.1% in manual mode, 0.03% in automatic mode
	Resolution:	0.1% of output span
	Isolation:	From input / output
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: GPR7XX-X-X-X / X

BASE MODEL	
70	Controller
00	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