

# Pishtaz

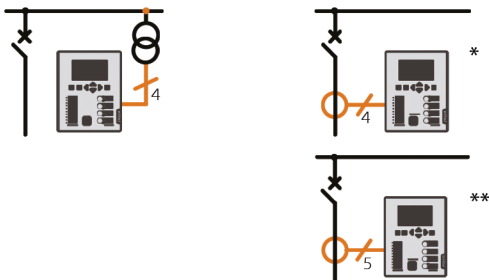
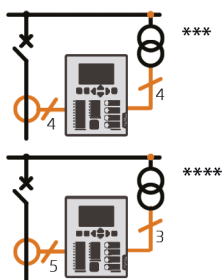
## Protection Relay



Description	ANSICODE	Series 20				Series 40		
		Substation	Transformer	Motor	Busbar	Substation	Transformer	Motor
		PS20	PT20	PM20	PB22	PS40	PT42	PM41
Phase overcurrent	50/51	4	4	4	-	4	4	4
Earth fault	50N/51N	3	3	3	-	3	3	3
Sensitive earth fault	50G/51G	4	4	4	-	4	4	4
Breaker failure	50BF	3	3	3	-	3	3	3
Negative sequence	46	2	2	2	-	2	2	2
Thermal overload	49/49M	2	2	1	-	2	2	1
Restricted earth fault	87N (64REF)	-	-	-	-	-	1	-
Directional phase overcurrent	67	-	-	-	-	4	4	4
Directional earth fault	67N/67NC	-	-	-	-	4	4	4
Power protection	32	-	-	-	-	6	6	6
Phase undercurrent	37	-	-	1	-	-	-	1
Motor starting time supervision	48	-	-	1	-	-	-	1
Locked rotor protection	51LR	-	-	2	-	-	-	2
Motor start inhibit	66	-	-	2	-	-	-	2
Undervoltage	27	-	-	-	4	4	4	4
Positive sequence undervoltage	27D	-	-	-	3	3	3	3
Remanent undervoltage	27R	-	-	-	1	-	-	1
Overvoltage	59	-	-	-	4	4	4	4
Zero sequence overvoltage	59N	-	-	-	3	3	3	3
Negative sequence overvoltage	47	-	-	-	3	3	3	3
Overfrequency	81O	-	-	-	4	4	4	4
Underfrequency	81U	-	-	-	5	5	5	5
Rate of change of frequency (ROCOF)	81R	-	-	-	4	4	4	4
Recloser	79	4	-	-	-	4	-	-
Temperature monitoring (8 or 16 RTDs)	38/49T	-	○	○	-	-	○	○
Synchro-check	25	-	-	-	●	●	●	-
Latching	86	●	●	●	●	●	●	●
Trip circuit supervision	74TCS	●	●	●	●	●	●	●
Broken conductor	46BC	2	2	-	-	2	2	-
Switch on to fault (SOTF)	50HS	1	-	-	-	1	-	-
CB monitoring	CB Monitoring	●	●	●	-	●	●	●
Cold load pickup	CLP	●	●	●	-	●	●	●
Inrush blocking	68 Inrush	1	1	1	-	1	1	1
Logic discrimination	68	●	●	●	●	●	●	●
Fault locator	21FL	-	-	-	-	1	1	1
CT supervision	CT Supervision	●	●	●	-	●	●	●
Emergency overcurrent	50 Emerg.	-	-	-	-	●	●	●
Emergency earth fault	50N Emerg.	-	-	-	-	●	●	●
VT supervision	VTFF	-	-	-	●	●	●	●
Logic design (configuration)		●	●	●	●	●	●	●
Breaker control		●	●	●	●	●	●	●
Setting groups <sup>(1)</sup>		4	4	4	4	4	4	4

● standard, ○ according to parameter setting and RTD module options.

(1) Not all protection functions have 4 setting groups. See details in the manual.

Pishtaz Relay 2 Series in 7 Application		Pishtaz Series 20		Pishtaz Series 40
				
Substation		-	PS20	PS40
Transformer		-	PT20	PT42
Motor		-	PM20	PM41
Busbar		PB22	-	-
<b>Characteristics</b>				
Measuring inputs	Phase current	-	1/5 A CT (x3)	1/5 A CT (x3)
	Residual current	-	1/5 A CT or CSH 30/120/200* 1/5 A CT (x2) **	1/5 A CT or CSH 30/120/200*** 1/5 A CT (x2) ****
	Voltage	VT (x4)	-	VT (x4)*** VT (x3)****
Digital	Input	8/16	8/16	8/16
	Output	6/12	6/12	6/12
Temperature sensor input		-	8/16 RTD	8/16 RTD
Front port		USB type B	USB type B	USB type B
Nominal power supply		48 - 240 V DC/AC	48 - 240 V DC/AC	48 - 240 V DC/AC
Ambient temperature, in service		-10 to 55°C	-10 to 55°C	-10 to 55°C
<b>Communication</b>				
Modbus RTU		●	●	●
IEC61850 Ed.1 & Ed.2		○	○	○
DNP3 serial & ethernet		○	○	○
Modbus TCP-IP		○	○	○
<b>Other</b>				
Control	Logic	●	●	●
	Object	4 Object	4 Object	4 Object
Withdrawable CT connector with shorting	Clamp	-	●	●
	Ring-lug	-	○	○
Display		4.3" Graphical TFT	4.3" Graphical TFT	4.3" Graphical TFT

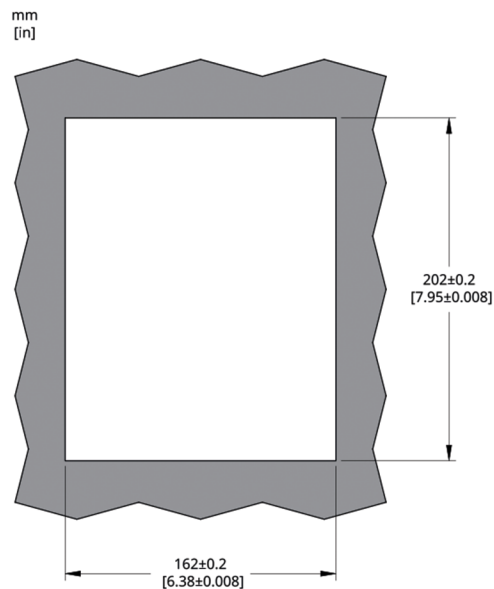
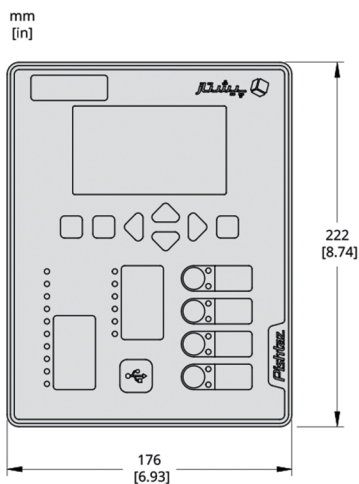
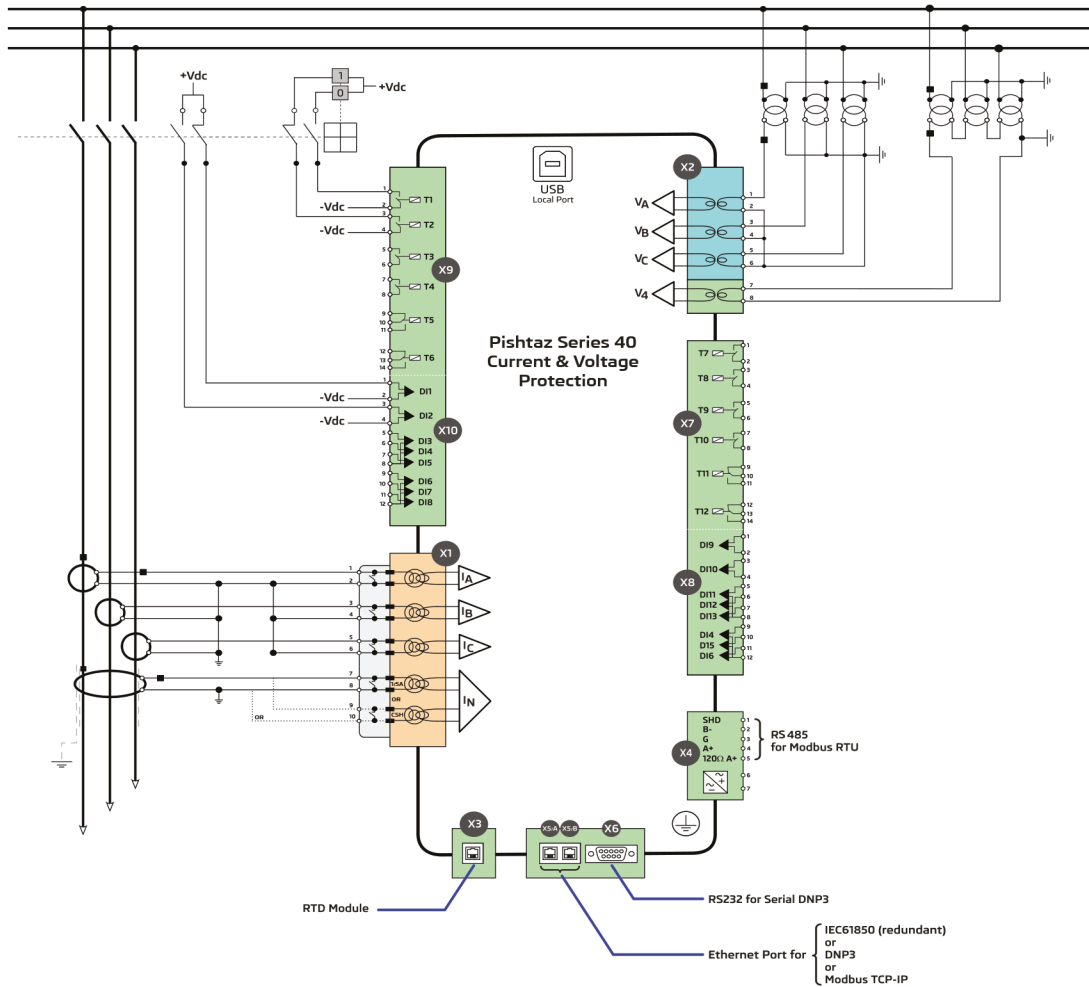
● standard, ○ according to the order.

## 8 Temperature Sensor Module

### PRTD08



# Connection Diagram



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