

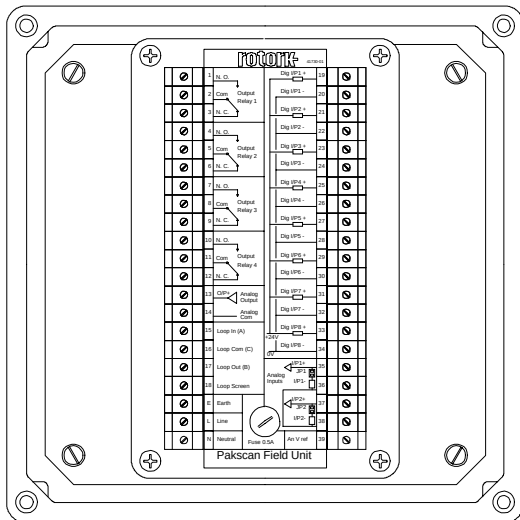
Pakscan

General Purpose Field Control Unit

Weatherproof Box Mounted (WP-PB2)

rotork

Publication: S162E
Date of issue: 02/99
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GENERAL DESCRIPTION

The Pakscan General Purpose Field Control Unit (GPFCU) provides a means of controlling actuators, pumps, motors, solenoid valves, mixers, etc., as well as interfacing digital and analogue information between field process devices and a Pakscan two wire control system. By using a Weatherproof WP-PB2 housing the GPFCU can be field mounted in a safe area and may often be placed close to the device being controlled.

The WT-PB2 enclosure is manufactured in GRP and includes fixtures for use in mounting the box on either a wall or pipe bracket. Cable gland access is allowed for on both sides.

The Pakscan GPFCU is housed in a separate internal enclosure with the equipment terminals outside on its lid. This ensures that during installation and operation the effects of moisture on the electronic components are minimised.

PERFORMANCE SPECIFICATION

Pakscan 2 -Wire Interface

Baud Rate 2400, 1200, 600, 300 or 110
Current 20 mA
Conductors screened twisted pair

8 off Digital Inputs

Isolation mutual galvanic isolation
Input Voltage active $18V < V_i < 38V$
inactive $-0.5V < V_i < 2V$
Pulse input Input 1
Pulse width $> 20mS$
I/P power supply internal 24V at 20 mA max

4 off Digital Outputs

Contacts changeover
Operation fleeting or maintained (normally de-energised)
Voltage range up to 120V
Max load 60W, 125VA, (max 1 A)
Life 10^7 operations at 5W load

2 off Analogue Inputs

Range 0 to 5V, or 4 to 20 mA
Resolution 1.2mV
Thermal stability 100 ppm/°C

1 off Analogue Output

Voltage range 0 to 5V
Resolution 1.2mV
Thermal stability 100 ppm/°C
Load resistance $> 1 k\Omega$

Electrical Supply

Supply 110V ac $\pm 20\%$ or
230V ac $\pm 10\%$ (47-63 Hz)

I/O DESCRIPTION

General Purpose Mode

4 off digital outputs, each with one independently addressable C/O contact rated at 60W, 125VA, (max 1A). All contacts can be either fleeting, (300mS), or maintained (requiring an energise and de-energise command).

1 off analogue output, 0 - 5V, with 1.2mV resolution, i.e. 12 bit accuracy.

8 off independent digital inputs, each requiring a volt free input. Each input can be configured to invert the incoming signal. (Input D1 also acts as a pulse counter, up to 9999, provided that the pulse is greater than 20mS).

The state of the output relays and their action (fleeting or maintained) is reported as are status bits relating to the field unit itself.

2 off analogue inputs sharing a common return, either 4 - 20mA or 0 - 5V, reported as a value between 0% and 100%. Both inputs must be the same, i.e. voltage or current. For voltage inputs JP1 and JP2 must be removed. The default setting is for current inputs with JP1 and JP2 fitted.

Alarms

POWR - Reset (on restoration of power)
WDOG - Watchdog failure
MEMF - Memory failure
COMMS - Communication failure

Actuator Mode

Digital control
Open, Stop, Close, ESD, (ESD option is not available on all actuator types)

Position control
Over range 0% to 100%, (not available on all actuator types)

Digital feedback

The field unit reports the following status bits, (some of the options are not available on all actuator types):
OAS - open limit switch
CAS - closed limit switch
STOP - motor stopped
MRUN - motor running
MRO - motor running in open direction
MRC - motor running in closed direction
EXT - status of an external digital signal, (only available when position control is **not** used).
Further status bits relating to the field unit are also reported, i.e. loopback on, new alarm and alarm.

Analogue feedback

Valve position over range 0% to 100%, (not available on all actuator types)

Alarms

POWR- power on reset (on restoration of power)
WDOG - watchdog failure
MEMF - memory failure
COMMS - communication failure
CNA - local control selected
MREL - monitor relay tripped

THERM - thermostat tripped
LSTOP - local stop selected
(some or all of the above may not be available depending on actuator type).

Derived alarms

SFAIL - motor start or stop failure
VOBS - valve obstruction detected, torque tripped
VJAM - valve stuck detected, torque tripped
MOP - valve moved to open limit manually
MCL - valve moved to closed limit manually
MOPG - valve moved from closed limit manually
MCLG - valve moved from open limit manually
EOT - motor running at end of travel
(some or all of the above may not be available depending on actuator type).

MECHANICAL DESCRIPTION

Enclosure

Outer enclosure glass fibre reinforced polyester with an opaque lid, finished in grey to RAL 7032. The enclosure is suitable for wall mounting or alternately with clamps for 2" pipe mounting. The outer enclosure is weatherproof to IP65-9. The inner enclosure is polycarbonate.

Terminals

Clamping terminals suitable for up to 4.0mm² conductors for power supply, data highway, I/O and earth connections.

Environmental specification

Operating temperature, -30° to +70°C
Storage temperature, -50° to +85°C
Humidity, 5% to 95% R.H. non-condensing
Vibration, 0.75g (0.5Hz to 300Hz)

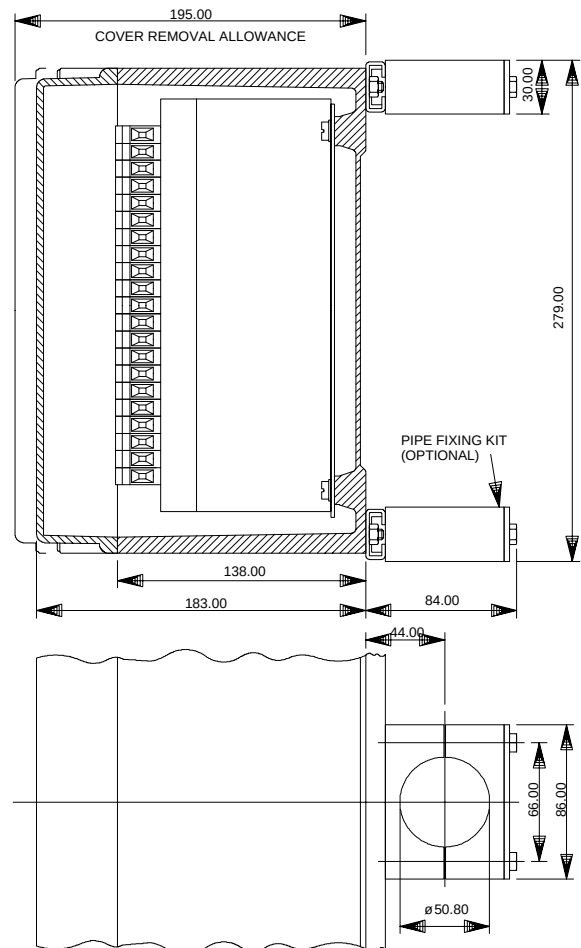
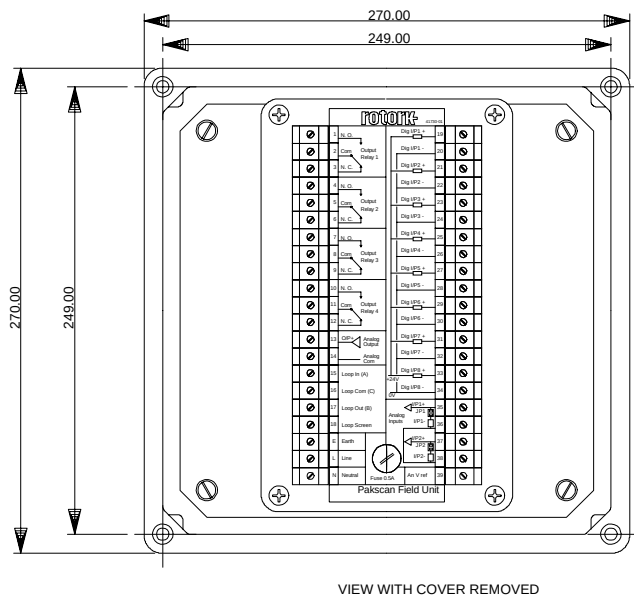
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Ordering Details

With all orders it is necessary to specify the supply voltage for the field unit and the fixing option required.

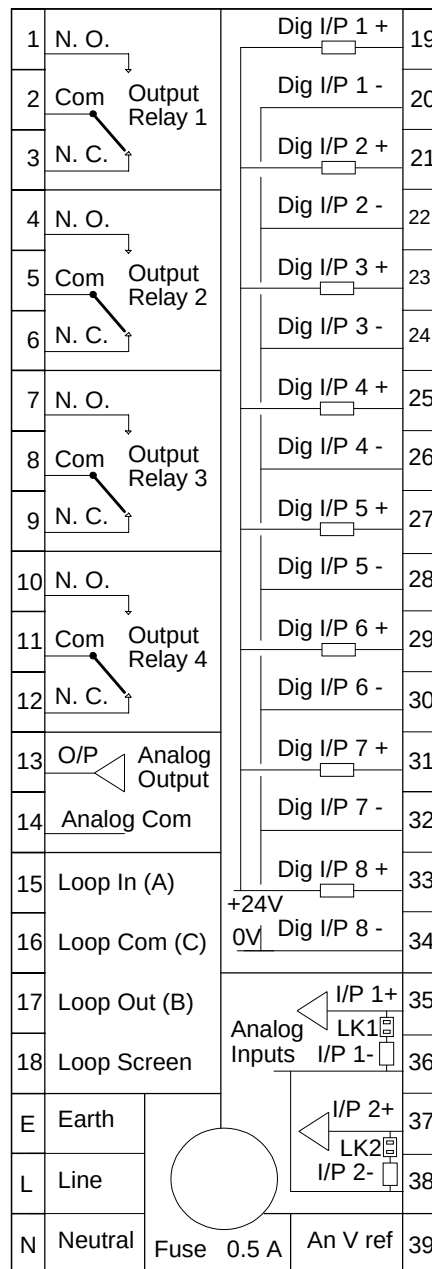
WP - PB2 - X - X

└─ Fixings
0 = no brackets
1 = pipe brackets

└─ Supply Voltage
1 = 110 V ac
2 = 230 V ac

Example:

WP-PB2- 1 - 0
110 V ac supply, no brackets



WP-PB2 connection details

	telephone	telefax		telephone	telefax
AUSTRALIA Ballarat	(053) 381 566	(053) 381 570	KOREA (South) Seoul	(02) 565 4803	(02) 565 4802
CANADA Calgary	(403) 569 9455	(403) 569 9414	MALAYSIA	(03) 519 3093	(03) 519 30998
CANADA Toronto	(905) 602 5665	(905) 602 5669	NETHERLANDS	(010) 414 6911	(010) 414 4750
CHINA Shanghai	(021) 627 7680	(021) 627 7681	RUSSIA Moscow	(503) 2349125	(503) 2349125
CHINA (N and Central)	(10) 646 21617	(10) 646 20713	SAUDI ARABIA	(03) 833 0702	(03) 833 9369
CHINA Beijing	(10) 646 21617	(10) 646 20713	SINGAPORE	457 1233	457 6011
FRANCE Paris	(01) 43111550	(01) 48354254	SOUTH AFRICA	(11) 453 9741	(11) 453 9894
GERMANY Hilden	(02103) 54098	(02103) 54090	SPAIN Bilbao	(94) 676 6011	(94) 676 6018
HONG KONG, S.China	2520 2390	2528 9746	THAILAND bangkok	(02) 272 7165	(02) 272 7167
INDIA Chennai	(044) 625 8494	(044) 625 7108	USA Houston	(713) 782 5888	(713) 782 8524
INDONESIA Jakarta	(21) 580 6764	(21) 581 2757	USA West Coast	(707) 769 4880	(707) 769 4880
ITALY Milan	(02) 457 03300	(02) 457 03301	VENEZUELA Caracas	(02) 263 6533	(014) 250 822