

METRIC
IF IN DOUBT ASK

D46406 Performance

Electrical Data

Measurement range 82°
 Supply voltage 5Vdc ± 0.5Vdc Regulated
 Supply current ≤25mA
 Supply reverse polarity protection Yes
 Short circuit protection output to GND Yes
 Short circuit protection output to supply In 5V regulated mode only
 Over voltage protection Up to 40V (-40 to +60°C)
 Power on settlement <1s
 Resolution 12 Bit (0.025% of measurement range)
 Non-linearity ±0.4%
 Temperature coefficient ±30ppm/°C in 5V regulated supply mode

Output (See Fig 2)

Options Ratiometric analogue
 Direction See Fig 1

Analogue Output Option

Voltage output range Ratiometric output voltage from 4% to 90% (0.2V to 4.50V) (±1%) of VSupply over measurement range
 Monotonic range 0.1V (2%) and 4.75V (95%) nominal
 Load resistance 10KΩ minimum (resistive to GND)
 Output noise ≤1 mVrms
 Input/Output Delay 2.5ms

Mechanical Data

Mechanical angle 360° continuous
 Torque 10 gm cm
 Max. operating speed 3600°/s
 Weight 27g with connector
 Mounting 2 x M4 screws
 Cable exit FDR-25 Sheathed 55A Spec Wire with AMP Econoseal connector fitted (Pin 1 = Output, Pin 2 = V+ Supply, Pin 3 = Ground)
 See Fig 2

Environmental

Operational temperature range -40 to +140°C, 170°C for 72 hours
 Sealing IP68 and IP69K

Tested to:

Storage temperature -55 to +140°C
 Vibration BS EN 60068-2-64; 1995 Sec 8.4 (31.4grms) 20 to 2000Hz random
 Shock 3m drop onto concrete & 2500g
 Life TBD
 Electromagnetic Interference BS EN 61000-4-3 to (100V/m), 80MHz to 1GHz and 1.4GHz to 2.7GHz
 2004/108/EC
 Salt spray BS EN 60068-2-11 Severity 48 Hours
 Fluid Susceptibility Ethylene Glycol
 Brake Fluid
 Engine Oil (Mineral)
 Engine Oil (Synthetic)
 Engine Degreaser
 Screen Wash
 Petroleum Spirit
 Diesel

LH VERSION
OUTPUT INCREASES
WITH ACW ROTATION

RH VERSION
OUTPUT INCREASES
WITH CW ROTATION

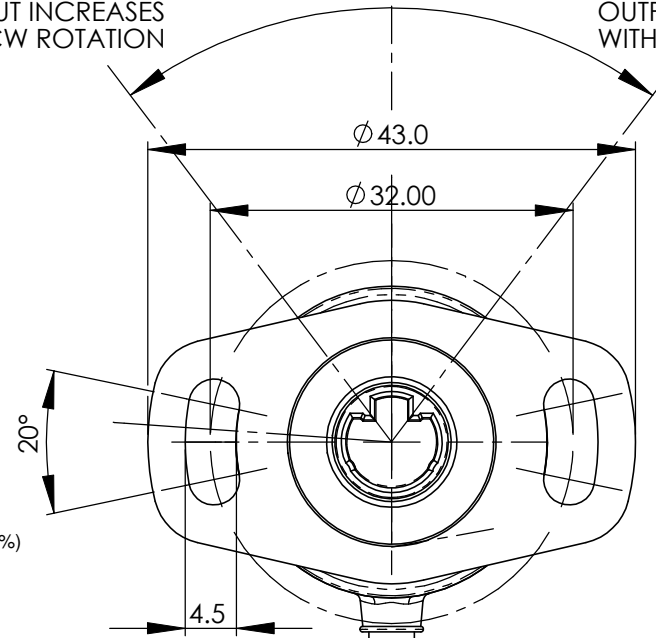


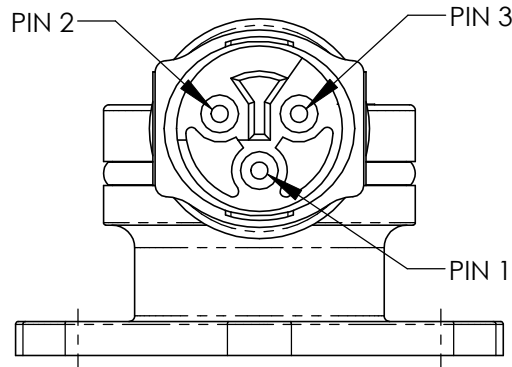
FIG 1

SPEC 55A, 24AWG
DR-25 OUTER JACKET

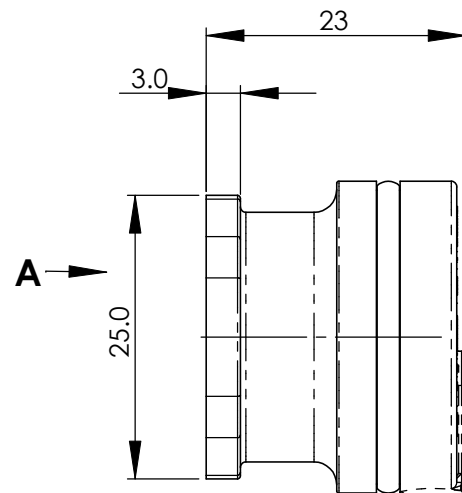
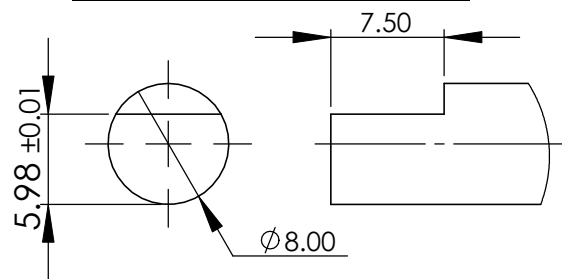
AMP ECONOSEAL
(826885-8)

Wire Connections

Pin 1 = OUTPUT
 Pin 2 = V+ SUPPLY
 Pin 3 = GND



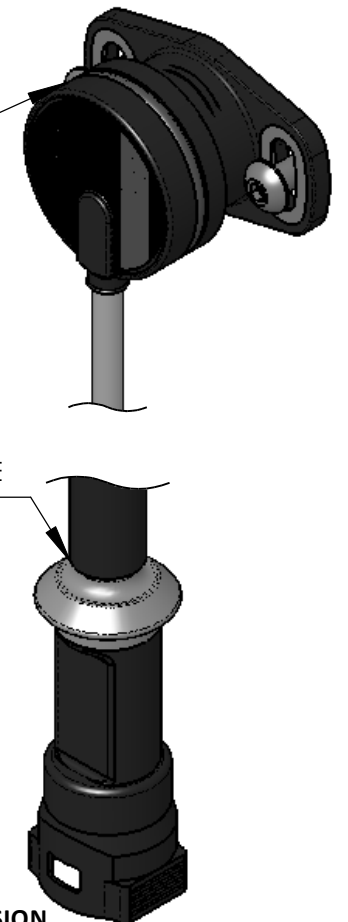
RECOMMENDED MATING DRIVE



A →

320
300

2 OFF M4 x 8 SOCKET
BUTTON HEAD FIXING
SCREWS
(Use 2.5mm Allen Key
torque to 2Nm)



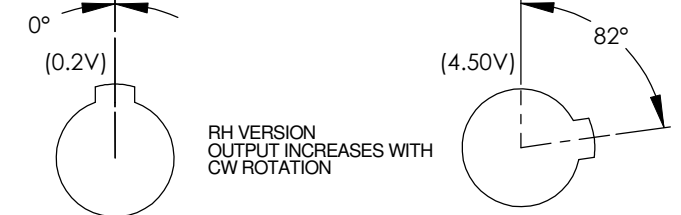
SENSOR IDENT

RED HEAT SHRINK = RIGHT HAND SIDE
 BLUE HEAT SHRINK = LEFT HAND SIDE

FIG 2

RH VERSION

LOOKING ON SENSOR IN DIRECTION ARROW A
AND CABLE FACING DOWN AS SHOWN

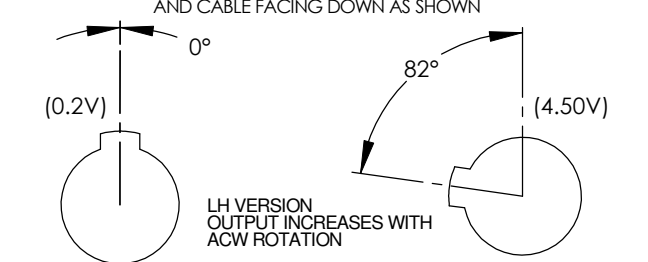


THROTTLE CLOSED

LH VERSION

THROTTLE OPEN

LOOKING ON SENSOR IN DIRECTION ARROW A
AND CABLE FACING DOWN AS SHOWN



THROTTLE CLOSED

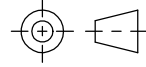
THROTTLE OPEN

D46406/LH = LEFT HAND SIDE (BLUE)
 D46406/RH = RIGHT HAND SIDE (RED)

SCALE

1.5:1

UNLESS STATED



THIRD ANGLE
PROJECTION TO BS 8888

IF CONTROL DIMENSIONS (Kc)
ARE SPECIFIED THEY ARE TO BE
SUBJECT TO 100% INSPECTION OR
STATISTICAL PROCESS CONTROL

MASS (g)

VOL. (mm³)

D No

D46406/MK

FIRST USED ON

REF.
TPS280DP

MATERIAL

BODY - POLYMER
 SHAFT INSERT - POLYMER

FINISH

TOLERANCES: IN-LINE WITH PENNY & GILES STANDARDS 55-301
 SURFACE TEXTURE VALUES IN MICROMETRES (µm)
 TO BS1134:PT2. ALL MACHINED SURFACES TO BE 1.6

ALL SCREW THREADS TO BS3643 PT.2:
 EXTERNAL CLASS: 6g INTERNAL CLASS: 6H

ANGULAR	LINEAR	(MACHINING)	BREAK EDGE
± 1°	0, mm	+/- 0.5 mm	0.05 - 0.15mm
	0,0 mm	+/- 0.2 mm	FILLET RADS
	0,00mm	+/- 0.1mm	0.1 - 0.3mm
	0,000mm	+/- 0.01mm	

UNLESS OTHERWISE STATED

TITLE

THROTTLE POSITION SENSOR
 FOR JENVEY

PENNY + GILES

A3

PART NUMBER:

D46406/MK

SHT 1
 OF
 1 SHTS