



DATA SHEET
RTFE-PDM
POWER SUPPLY DATA MERGER FOR RHOTHOR SMART DEFLECTORS™

NEWSON NV

Table of Contents

1	FEATURES	3
2	DESCRIPTION	3
3	PIN ASSIGNMENT (15 PIN SUB-D SOCKET)	3
4	SPECIFICATION	3
5	REFERENCE DESIGN	4
5.1	CIRCUIT DESIGN 3.3V	4
5.2	CIRCUIT DESIGN 5V	4
6	DIMENSIONS	5

1 FEATURES

- Merges power supply and TTL levelled data signals for connection to smart deflector
- Up to 2 Amp deflector current
- TTL compatible input (TXD) for sending instructions
- TTL compatible output (RXD) for receiving replies
- Sub-D 15 pin female connector to coax SMA adaptor



2 DESCRIPTION

A smart deflector is a fully integrated rotary servo system. A digital regulator tracks applied set point and provides status and actual position tracking. Target set point and status are communicated between control card and deflector over a serial connection running at 10 Mbit/sec. The smart deflector is fitted with a single SMA coax connector used for both power supply and data connection. Modulation electronics are needed to merge data with power supply. The RTFE-PDM front end comprises all necessary electronics for connecting a deflector with logic level transmit and receive data lines.

3 PIN ASSIGNMENT (15 PIN SUB-D SOCKET)

Pin No.	Name	Description
6	TXD	Transmit data (instruction towards deflector)
7	DC0V	Power supply return
8	DC3V3	Power supply modulation electronics
14	RXD	Received data (reply from deflector)
15	DC12V	Power supply deflector
1,2,3,4,5,8,9,10,11,12,13	NC	Reserved, DO NOT CONNECT!

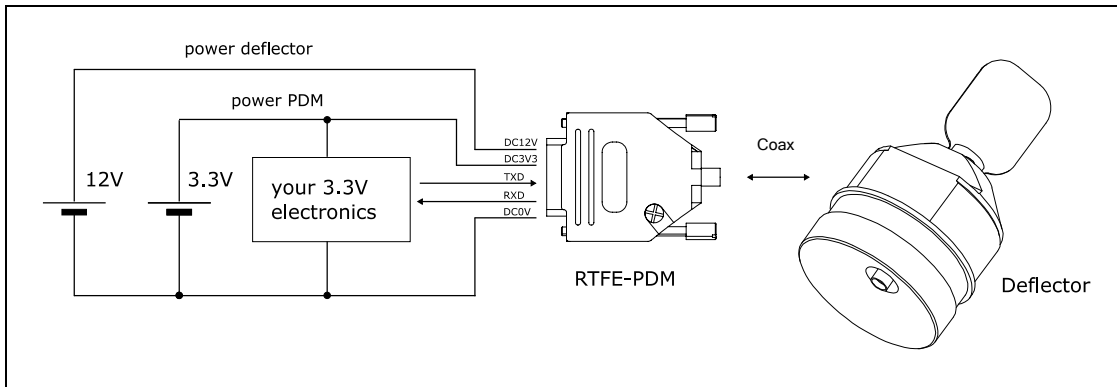
4 SPECIFICATION

Signal	Min	Max	Unit
TXD, high level input voltage	2.3	5.5	V
TXD, low level input voltage	0	1	V
RXD sink/source output current		4	mA
DC3V3 power supply modulation electronics	3	3.6	V
DC3V3 power supply current		50	mA
DC12V power supply deflector	9	13	V
DC12V power supply current		2	A
Length coaxial cable to deflector		5	M
Tightening torque SMA connection	1.0		Nm

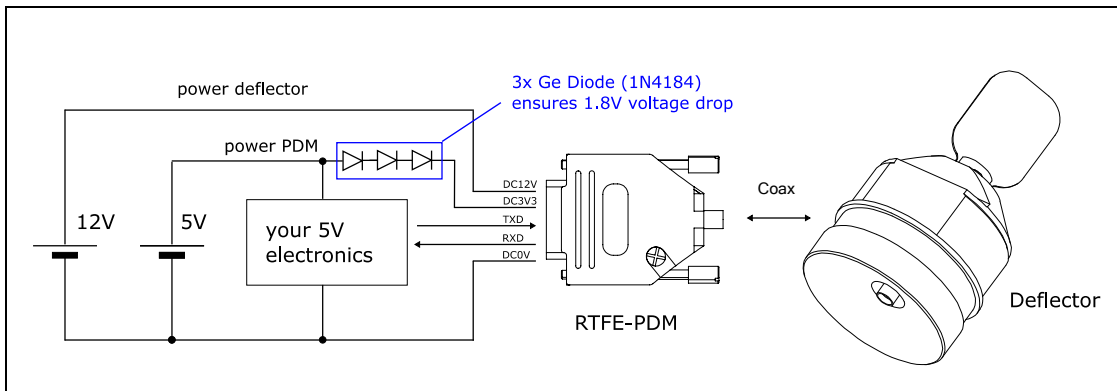
The modulation electronics of the RTFE-PDM are powered by an external 3V3 power supply. This power supply should be the same as the one used to power the control card. To complement information regarding the modulation electronics and power up sequencing, refer to smart deflector data sheet (A3G_RTA) which is available on the Newson website.

5 REFERENCE DESIGN

5.1 CIRCUIT DESIGN 3.3V



5.2 CIRCUIT DESIGN 5V



6 DIMENSIONS

