

Receiver Multicoupler family with redundant amplifier system for the VHF & the low UHF range 30 – 960 MHz.

DESCRIPTION

- Active Receiver multicouplers PRO-DAR (Dual Amplifier RMC) comes with 1 antenna input and 4 or 8 receiver outputs. The PRO-DAR's with 12 or 16 outputs are under development.
- Allows a number of receivers to share the same antenna without interaction and loss of signal.
- Covers the whole frequency range 30 to 960 MHz.
- If only a smaller frequency range is desired, a preselector filter can be built in to prevent possible interference from strong transmitters outside the frequency band of interest. Amphenol Procom offer a wide range of both band selective and narrow-band low-loss filters suitable for preselector use.
- Please refer to the preselector overview and specify frequency range when ordering.
- The build-in ultra-high dynamic range amplifiers ensure outstanding multicoupler linearity and high reject of distortion products.
- Low amplifier noise figure ensures lowest possible S/N deterioration of the received and distributed RF signals.
- Redundant amplifier design with two identical amplifier stages coupled in parallel ensures maximum operational reliability.
- If a fault occurs in one amplifier stage, the amplifier will continue to operate with gain around -6 dB relative to the normal gain providing uninterrupted service with only minor performance deterioration.
- High isolation between receiver outputs ensure insignificant low mutual coupling between the connected receivers.
- Operates on 230 V AC or 115 V AC mains supply or 12 V, 24 V or 48 V DC supply (Depending on type, see ordering designations)
- Galvanically isolated power supply with floating power supply input prevents unwanted ground loops and ensures operation on DC voltage systems with both + and – to ground.
- Power supply backup function provides automatic switching to DC supply if the AC mains supply fails, ensuring uninterrupted service of the multicoupler.
- POWER ON/operating status LED on front.
- Supply voltage/current monitoring alarm circuitry with floating relay switch-over alarm contact. If a fault occurs, in the RF amplifier circuitry, the alarm circuitry immediately toggles the relay to indicate fault condition and change the POWER on/operating status LED from constant green light to flashing red light. If both mains AC supply and DC supply fail, the multicoupler is completely de-energized, the relay will also be toggled to indicate fault condition. The POWER ON / operating status LED will then be off in this situation.
- Mains supply connector: IEC type fitted with noise filter.
- DC power supply connector: Pluggable terminal block/header fitted with noise filter.
- Alarm connector: Pluggable terminal block/header.
- RF connectors: N-female on all ports (other types on request).
- Comes as standard with black powder lacquered front plate
- 19" rack module housing
- PRO-DAR4 & PRO-DAR8: 1HU
- PRO-DAR12 & PRO-DAR16: 2HU (Under development)

Please Note:

Power cable is not included. Must be ordered separately, see Accessories.

EU AND UK DECLARATION OF CONFORMITY

Hereby Amphenol Procom declare that the product type PRO-DAR is in compliance with EU Directive 2014/53/EU and the UK Radio Equipment Regulations 2017 (S.I. 2017 No. 1206). The full text of the Declaration of Conformity is available at:

<https://amphenolprocom.com/images/shop/catalog/pdf-for-catalogues/Declaration-of-Conformity-PRO-DAR.pdf>

MODEL HOUSING

PRO-DAR4-N & PRO-DAR8-N



PRO-DAR8-N - Rear side



PRO-DAR12-N & PRO-DAR16-N



PRO-DAR12-N & PRO-DAR16-N - Rear side

Image
Coming
Soon

SPECIFICATIONS

Electrical		
Model	PRO-DAR4 & PRO-DAR8	PRO-DAR12 & PRO-DAR16 (Ask for availability)
Gain (Input To All Outputs)	2 dB nominal	
Frequency	30 - 960 MHz	
Effective Noise Figure all outputs	< 5 dB	
Gain variance	< ±2.0 dB	
Max. Output Power @ 1 dB Compression (P1dB)	> 10 dBm	
Noise Figure, Amplifier	30 - 520 MHz : < 3.0 dB 520 - 960 MHz : < 3.5 dB	
Output 2. Order Intercept point (OIP2)	> 45 dBm	
Output 3. Order Intercept point (OIP3)	30 - 520 MHz : > 30 dBm 520 - 960 MHz : > 25 dBm	
Impedance	50 Ω	
Input VSWR	≤ 2.0:1	
Output VSWR	≤ 1.5:1	
Max. Input Power (dBm)	23 dBm	
Isolation between outputs	30 - 100 MHz : > 20 dB 100 - 400 MHz : > 27 dB 400 - 960 MHz : > 20 dB	
Input-Output Isolation	> 30 dB	
Power Supply	230 V AC models : (198 to 264 V AC 47 - 63 Hz / Max. 0.16 A) 115 V AC models : (100 to 127 V AC 47 - 63 Hz / Max. 0.32 A)	
DC Supply, 12 V DC types	10.8 to 14.4 V DC / 600 mA	
DC Supply, 24 V DC types	20 to 33 V DC / 600 mA	
DC Supply, 48 V DC types	40 to 60 V DC / 125 mA	
No. of channels	4 or 8	12 or 16
Mechanical		
Power Connector	3-terminal IEC60320-1 C14 (m)	
Connection(s)	N(f) (standard) BNC(f), TNC(f) or SMA(f), please contact for availability	
DC Connector	3-pole Phoenix terminal block/header	
Dimensions	PRO-DAR4 & PRO-DAR8 : 19" x 1HU x 261 mm (482.6 x 44.45 x 261 mm) / (19.02 x 1.75 x 10.28 in.)	PRO-DAR12 & PRO-DAR16 : 19" x 2HU x 261 mm (482.6 x 89.9 x 261 mm) / (19.02 x 3.54 x 10.28 in.)
Weight	PRO-DAR4, PRO-DAR8 : Approx. 3.1 kg. / 6.83 lb.	PRO-DAR12, PRO-DAR16 : Approx. TBD kg. / TBD lb.
Alarm Connector	3-pole Phoenix terminal block/header	
Environmental		
Operating temperature range	-10 °C to +60 °C	
Humidity	< 90% non-condensing	

ORDERING DESIGNATIONS

CONTACT FOR SYSTEM-SPECIFIC PRODUCT NO.

Use the guide below to make the name of the PRO-DAR you would like to buy. Remember to buy the Power cable separately if needed.

Model	No. of outputs	AC Power	DC Power	Antenna Connector	Rx Connector	Number of loads	Preselector filter
PRO-DAR	4 outputs = 4 8 outputs = 8 12 outputs = 12*** 16 outputs = 16***	230V AC = -230 V 115V AC = -115 V	12V DC = /12 V 24V DC = /24 V 48V DC = /48 V	N-female = -N TNC-female = -TNC BNC-female = -BNC SMA-female = -SMA	N-female = /N TNC-female = /TNC BNC-female = /BNC SMA-female = /SMA	No load = blank * One 1W load = -1L Two 1W loads = -2L Three 1W loads = -3L	No filter = blank See tables with preselectors below
Naming Example							
PRO-DAR	8	-230V	/12V	-N	/N	-1L	BPF 118-137-C

Naming Example: PRO-DAR8-230V/12V-N/N-1L BPF 118-137 C

- * Terminating unused ports will secure the electrical performances of the RMC.
- ** "Blank" means sign omitted.
- ***Ask for availability

ACCESSORIES

Model	Product No.
Power Cable EU , with Ground	210002646
Power Cable UK , with Ground	210002647
Power Cable US , with Ground	210002648

LOW-LOSS PRESELECTOR FILTERS FOR PRO-DAR, OVERVIEW

Band selective standard blackbox filters (other filters on request)

TYPE DESIGNATION	FILTER TYPE	PASS BAND FREQUENCY RANGE
BPF 66-88	Band pass	66 - 88 MHz
BPF 88-108	Band pass	88 - 108 MHz
BPF 112-136	Band pass	112 - 136 MHz
BPF 118-137	Band pass	118 - 137 MHz
BPF 118-174	Band pass	118 - 174 MHz
BPF 136-225	Band pass	136 - 225 MHz
BPF 146-174	Band pass	146 - 174 MHz
BPF 225-400	Band pass	225 - 400 MHz
BPF 300-500	Band pass	300 - 500 MHz
BPF 800-1000	Band pass	800 - 1000 MHz
LP 174-FME	Low pass	0 - 174 MHz
HP 380-FME	High pass	380 - 1000 MHz

Steep sided standard BP filters:

TYPE DESIGNATION	FILTER TYPE	PASS BAND FREQUENCY RANGE	STOP BAND FREQUENCY RANGE
PRO-BPF 118-144 XS (Please contact for availability)	Band pass	118 – 144 MHz	0 – 108 MHz and 155 – 1000 MHz
PRO-BPF 225-380 XS (Please contact for availability)	Band pass	225 – 380 MHz	0 – 200 MHz and 410 – 1000 MHz
PRO-DBPF 118-144/225-380 XS (Please contact for availability)	Dual Band pass	118 – 144 MHz and 225 – 380 MHz	0 – 108 MHz, 155 – 200 MHz and 410 – 600 MHz

Narrow band standard BP filters:

TYPE DESIGNATION	FILTER TYPE	CENTER FREQUENCY	-1 dB BANDWIDTH
BPF 4/4-[BW]	Band pass	To be ordered within 66 - 88 MHz	To be specified as 2, 4 or 6 MHz
BPF 3/4	Band pass	To be ordered within 112 - 136 MHz	1.5 MHz
BPF 2/4-[BW]	Band pass	To be ordered within 144 - 175 MHz	To be specified as 2, 4 or 6 MHz
BPF 70/4-HX	Band pass	To be ordered within 380 - 470 MHz	To be ordered within 3 - 15 MHz
BPF 900/4	Band pass	To be ordered within 820 - 960 MHz	Typ. 7 MHz

