



MELCHER™
The Power Partners.

RCM60 Series 60 W DC-DC Converters



The RCM Series converters are Melcher branded power supplies for railway and transportation applications. The input voltage ranges cover all common battery voltages from 12 to 110 V. The output delivers 60 W at 12, 15 or 24 V. The converters are designed for chassis mounting in an enclosed housing.

Options available include - output ORing FET for redundant operation, input fuse and output voltage monitoring (solid state relay contact).

Features

- Ultra-wide input voltage range
- Single output voltage
- Overtemperature, overvoltage, overcurrent and short-circuit protection
- 20 ms interruption time (EN50155 Class S3)
- Low inrush current
- Primary shutdown input
- Conformal coated PCB
- Extremely high efficiency and high power density
- Extremely wide ambient temperature range -40 to 70°C
- Dimensions 50 x 32 x 172 mm (1.97 x 1.26 x 6.77 in)
- Compliant to EN50155, EN50121-3-2, EN61373 and AREMA
- Fire & Smoke inspected according EN45545-2 and NFPA 130
- RoHS Compliant
- 5 year warranty

Safety approved to the latest edition of IEC62368-1 and CSA/UL 62368-1



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Model Selection

Table 1: Standard models

Input voltage					Output		Power	Efficiency ²		Model	Options
$V_{i\ min}^1$ [V]	$V_{i\ min}$ [V]	$V_{i\ cont}$ [V]	$V_{i\ max}$ [V]	$V_{i\ max}^1$ [V]	$V_{o\ nom}$ [V]	$I_{o\ nom}$ [A]	$P_{o\ nom}$ [W]	η_{min} [%]	η_{typ} [%]		
7.2	8	36	40	12	5.0	60	83	84	12RCM60-12 ³	D, Q, F, K	
				15	4.0	60	84	85	12RCM60-15 ³		
				24	2.5	60	84	85	12RCM60-24 ³		
14.4	16.8	137.5	154	12	5.0	60	88	89	XRCM60-12		
				15	4.0	60	88	89	XRCM60-15		
				24	2.5	60	88	89	XRCM60-24		

¹ Short time; see table 2 for details
² Efficiency at $T_A = 25\ ^\circ\text{C}$, $V_{i\ nom}$, $I_{o\ nom}$
³ Contact Bel Power for availability and release date

Part Number Description

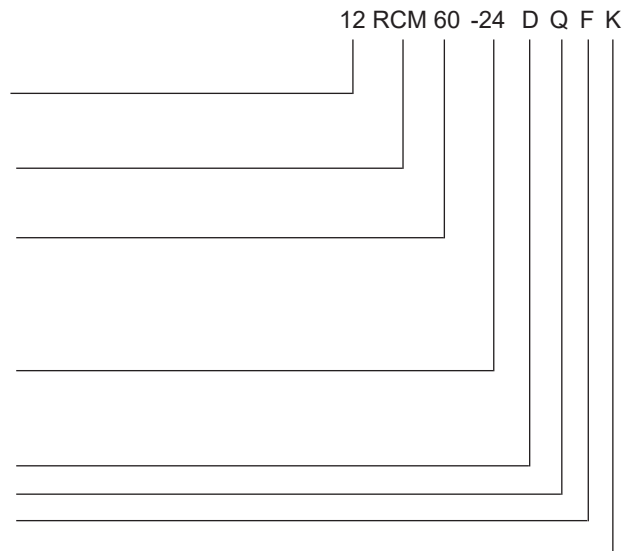
Operating input voltage $V_{i\ cont}$ (continuously):
 8 – 36 VDC 12
 16.8 – 137.5 VDC X

Series RCM

Output power:
 60 W 60

Nominal output voltage:
 12 V -12
 15 V -15
 24 V -24

Auxiliary functions and options:
 Output Voltage Monitor D
 ORing FET Q
 Built-in Fuse F
 Pluggable Connectors K



Note: The sequence of options must follow the order above.
Note: All models are RoHS-compliant for all six substances.

Available combinations of options:
 RCM60-xx (K)
 RCM60-xxD (K)
 RCM60-xxDF (K)
 RCM60-xxDQ (K)
 RCM60-xxDQF (K)

Example: XRCM60-24DQFK: DC-DC converter, input voltage range 16.8 to 137.5 V continuously, output providing 24 V / 2.5 A, monitoring relay, shutdown input, interruption time 20 ms, integrated ORing FET, pluggable connectors, operating ambient temperature $T_A = -40$ to $70\ ^\circ\text{C}$, RoHS-compliant for all six substances.

Product Marking

Type designation, applicable safety approval and recognition marks, CE mark, pin allocation, and product logo. Input voltage range and input current, nominal output voltage and current, degree of protection, batch no., serial no., and data code including production site, version (modification status) and date of production.



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