

MISSION-CRITICAL
INTERCONNECT
SOLUTIONS



Glenair
SIGNATURE SERIES

Space-Grade Hold-Down Release Mechanisms

Proven, Rugged, TRL9 Flight-Heritage Technologies
North American- and European-Made • Worldwide Support



Artist concept of NASA's Juno spacecraft,
exploring Jupiter. Credit NASA/JPL-Caltech

NON-PYROTECHNIC Hold Down and Release Mechanisms

High-reliability, non-explosive (split-spool) HDRMs, separation nuts, and pin pullers/pushers for dependable stowage and release of deployable space systems

Glenair pyrotechnic-free release mechanisms offer quick release time, low shock, relatively low power input, and virtually no temperature sensitivity. HDRM Series includes separation nuts, pin pushers, and pin pullers—direct wired or connectorized—with a broad range of preload carrying capacity. HDRM EU Series designed for ESA applications and standards.

- Pyrotechnic-free alternative (low-shock fuse-wire) for single-event release of deployable space systems—electrical initiation up to 5 amps
- Single-event device, user-serviceable and refurbishable
- Redundant or non-redundant actuation circuit
- Not susceptible to transient and noise (EMI/EMP/ESD/RFI) inputs
- Extended temperature ranges: -150°C to +150°C



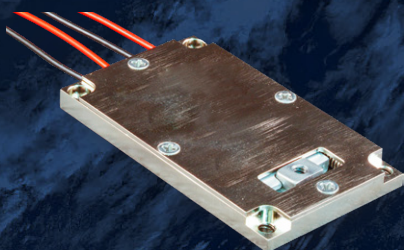
NON-PYROTECHNIC

Hold Down and Release Mechanisms

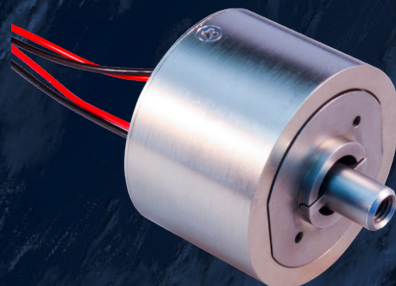
Separation nut, pin puller, and pin pusher configurations with flight heritage



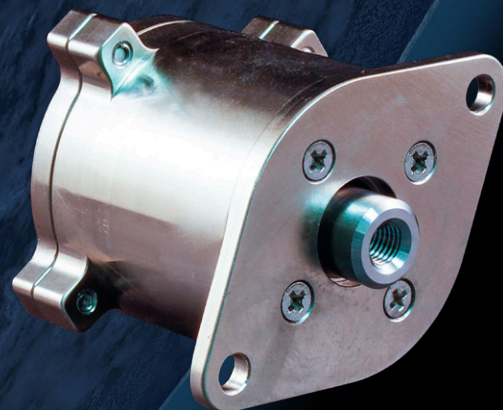
HDRM DUTY CLASSES



Light-Duty HDRM
Redundant circuit,
5 – 75 lb release preload



Medium-Duty HDRM
Redundant circuit,
300 – 4000 lb release preload



Heavy-Duty HDRM
Redundant circuit,
5000 – 20,000 lb release preload

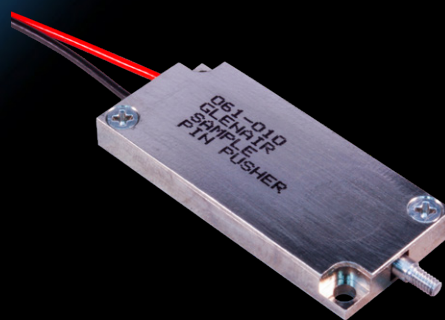
HDRM RELEASE TYPES



Separation nut



Pin puller



Pin pusher

EUROPEAN-MADE HDRM SOLUTIONS IAW ECSS-E-ST-33-01C SPACE MECHANISM STANDARD



Medium-Duty HDRM
Redundant circuit,
1.5 kN release preload



Medium-Duty HDRM
Redundant circuit,
11 kN release preload



Medium-Duty HDRM
Redundant circuit,
18 kN release preload

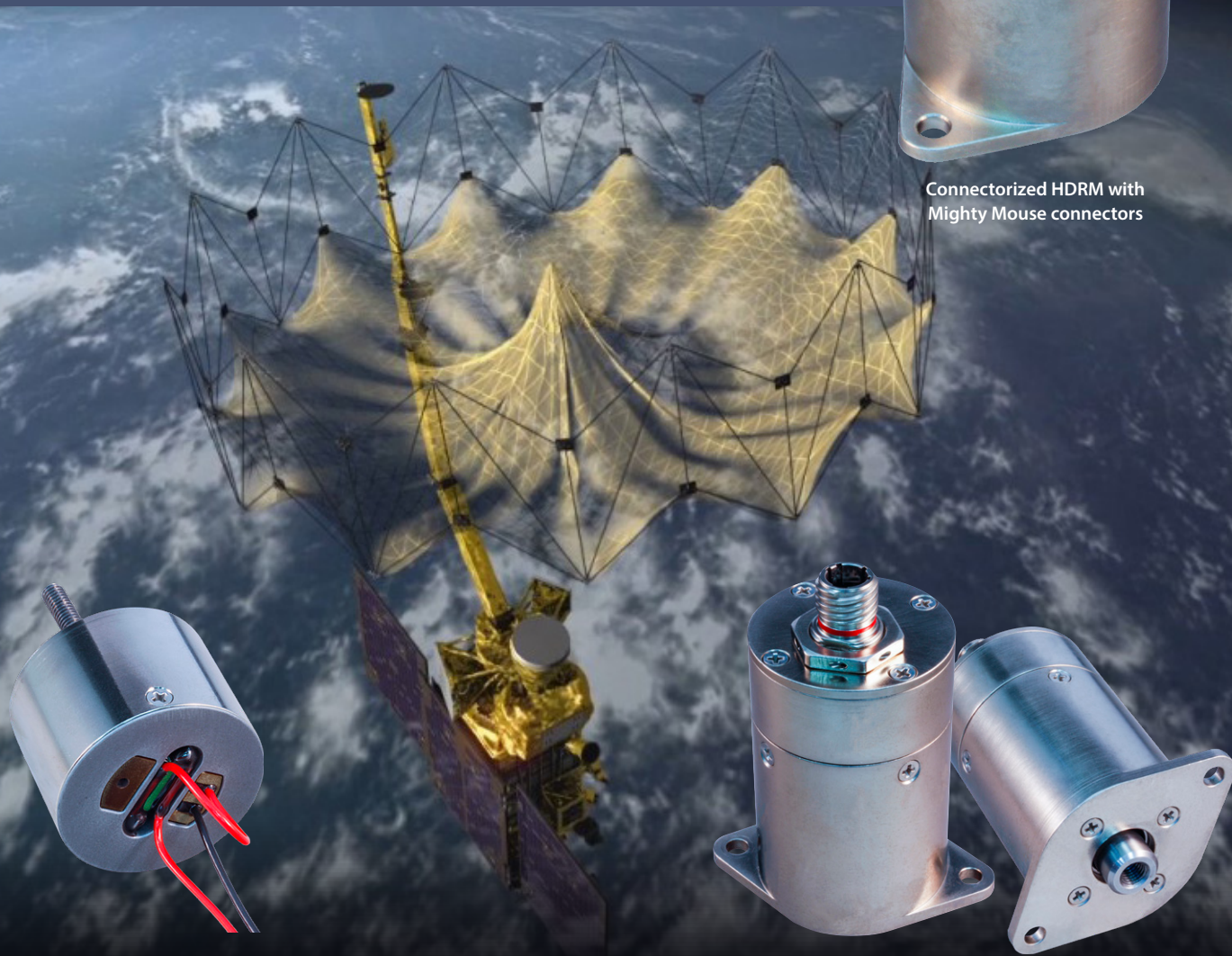
PROVEN FLIGHT HERITAGE

INNOVATION AND CUSTOMIZATION

WORLDWIDE: NASA · ESA · JAXA · Commercial



Connectorized HDRM with
Mighty Mouse connectors

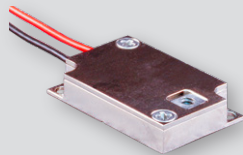


TESTING READINESS LEVEL (TRL) RATINGS

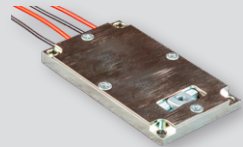
- TRL 1: Basic principles observed and reported
- TRL 2: Technology concept or application formulated
- TRL 3: Experimental and analytical critical function and characteristic proof of concept
- TRL 4: Component or breadboard validation in a laboratory environment
- TRL 5: Component or breadboard validation in a relevant environment
- TRL 6: System or subsystem model or prototype demonstrated in a relevant environment
- TRL 7: System prototype demonstration in an operational environment
- TRL 8: Actual system completed and "flight qualified" through test and demonstration
- TRL 9: Actual system "flight proven" through successful mission operations



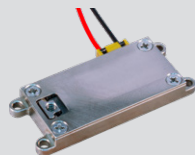
Glenair supplies non-pyrotechnic HDRM space mechanisms optimized for both North American and European space program requirements



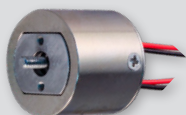
061-002
Light-Duty HDRM
Non-redundant, 20 lb release



061-003
Light-Duty HDRM
Redundant, 30 lb release



061-014
Light-Duty HDRM
Non-redundant, 75 lb release,
side load bearing "SideWinder"



061-007
Medium-Duty HDRM
Redundant, 300 lb release
"LoLa I" (Low Lading)



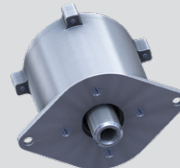
061-006
Medium-Duty HDRM
Redundant, 1000 lb release
"LoLa II" (Low Lading)



061-005
Medium-Duty HDRM
Redundant, 2500 lb release
"LoLa III" (Low Lading)



062-002
Heavy-Duty HDRM
Redundant, 5000lb release



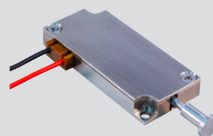
063-001
Heavy-Duty HDRM
Redundant, 8750 lb release



064-001
Heavy-Duty HDRM
Non-redundant, 20,000 lb
release



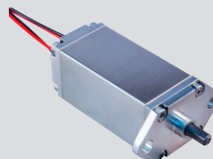
061-010
Light-Duty Pin Pusher
Non-redundant 6 lb push force



061-009
Light-Duty Pin Puller
Non-redundant 18 lb pull force



061-011
Light-Duty Pin Puller
Non-redundant 18 lb pull force



061-013
Medium-Duty Pin Puller
Redundant 50 lb pull force



GSS500-000005
Medium-Duty HDRM
Redundant circuit,
1.5 kN release
preload



GSS500-000001
Medium-Duty HDRM
Redundant circuit,
11 kN release preload



GSS500-000003
Medium-Duty HDRM
Redundant circuit,
18 kN release preload



MISSION-CRITICAL INTERCONNECT SOLUTIONS

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