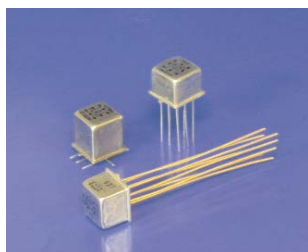


CII High Performance TO-5 Low Signal Relays

- Miniature relays specifically designed for extremes of temperature, shock, vibration, etc.
- Standard, diode suppressed, diode protected and transistor driven models
- Various length pins with a choice of spreader and mounting pads
- High frequency models capable of switching up through 3GHz
- Hermetically sealed enclosures
- Order Catalogs 1309311 and 1309312, "CII Product Guides Volume 1 and Volume 2"
- For MW types, Catalog 1654883, "Microwave Switching, Hermetically Sealed Relays"
- <http://relays.tycoelectronics.com>

Series	Contact Arrang.	Contact Rating	Coil Voltages	Temperature Range	Vibration	Shock	Features	Mil-Spec	RF Switching
1MA	1 Form C	1A	5-26.5VDC	-65°C to +125°C	30 G's	75 G's	Standard Coil	M39016/7 *	1.5 GHz.
1MAD	1 Form C	1A	5-26.5VDC	-65°C to +125°C	30 G's	75 G's	Standard Coil, Diode	M39016/23 *	1.5 GHz.
1MADD	1 Form C	1A	5-26.5VDC	-65°C to +125°C	30 G's	75 G's	Standard Coil, Dual Diode	M39016/24 *	1.5 GHz.
1MAT	1 Form C	1A	5-26.5VDC	-65°C to +125°C	30 G's	75 G's	Standard Coil, Transistor Driven	M28776/5 *	1.5 GHz.
1MS	1 Form C	1A	5-40VDC	-65°C to +125°C	30 G's	75 G's	Sensitive Coil	M39016/10 *	1.5 GHz.
1MSD	1 Form C	1A	5-40VDC	-65°C to +125°C	30 G's	75 G's	Sensitive Coil, Diode	M39016/23 *	1.5 GHz.
1MSDD	1 Form C	1A	5-40VDC	-65°C to +125°C	30 G's	75 G's	Sensitive Coil, Dual Diode	M39016/26 *	1.5 GHz.
1MST	1 Form C	1A	5-40VDC	-65°C to +125°C	30 G's	75 G's	Sensitive Coil, Transistor Driven	M28776/4 *	1.5 GHz.
HM	2 Form C	1A	5-30VDC	-55°C to +85°C	10 G's	30 G's	Standard Coil	Commercial	1 GHz.
HMD	2 Form C	1A	5-30VDC	-55°C to +85°C	10 G's	30 G's	Standard Coil, Diode	Commercial	1 GHz.
HS	2 Form C	1A	5-48VDC	-55°C to +85°C	10 G's	30 G's	Sensitive Coil	Commercial	1 GHz.
HSD	2 Form C	1A	5-48VDC	-55°C to +85°C	10 G's	30 G's	Sensitive Coil, Diode	Commercial	1 GHz.
3SBS	2 Form C	1A	5-26.5VDC	-65°C to +125°C	30 G's	100 G's	Standard Coil, Diode, Dual Diode	Commercial	4 GHz.
3SDS	2 Form C	1A	5-26.5VDC	-40°C to +125°C	30 G's	100 G's	Std. Coil, Diode, Dual Diode, Long Life	Commercial	4 GHz.
MA	2 Form C	1A	5-30VDC	-65°C to +125°C	30 G's	75 G's	Standard Coil	M39016/9 *	1.5 GHz.
MAD	2 Form C	1A	5-26.5VDC	-65°C to +125°C	30 G's	75 G's	Standard Coil, Diode	M39016/15 *	1.5 GHz.
MADD	2 Form C	1A	5-26.5VDC	-65°C to +125°C	30 G's	75 G's	Standard Coil, Dual Diode	M39016/20 *	1.5 GHz.
MAT	2 Form C	1A	5-26.5VDC	-65°C to +125°C	30 G's	75 G's	Standard Coil, Transistor Driven	M28776/1 *	1.5 GHz.
MS	2 Form C	1A	5-48VDC	-65°C to +125°C	30 G's	75 G's	Sensitive Coil	M39016/11 *	1.5 GHz.
MSD	2 Form C	1A	5-48VDC	-65°C to +125°C	30 G's	75 G's	Sensitive Coil, Diode	M39016/16 *	1.5 GHz.
MSDD	2 Form C	1A	5-48VDC	-65°C to +125°C	30 G's	75 G's	Sensitive Coil, Dual Diode	M39016/21 *	1.5 GHz.
MST	2 Form C	1A	5-48VDC	-65°C to +125°C	30 G's	75 G's	Sensitive Coil, Transistor Driven	M28776/3 *	1.5 GHz.
MAV	2 Form C	1A	5-30VDC	-65°C to +125°C	380 G's	150 G's	Standard Coil	M39016/9 design	–
MAVD	2 Form C	1A	5-26.5VDC	-65°C to +125°C	380 G's	150 G's	Standard Coil, Diode	M39016/15 design	–
MAVDD	2 Form C	1A	5-26.5VDC	-65°C to +125°C	380 G's	150 G's	Standard Coil, Dual Diode	M39016/20 design	–
MSV	2 Form C	1A	5-48VDC	-65°C to +125°C	380 G's	150 G's	Sensitive Coil	M39016/11 design	–
MSVD	2 Form C	1A	5-48VDC	-65°C to +125°C	380 G's	150 G's	Sensitive Coil, Diode	M39016/16 design	–
MSVDD	2 Form C	1A	5-48VDC	-65°C to +125°C	380 G's	150 G's	Sensitive Coil, Dual Diode	M39016/21 design	–
MW3	2 Form C	1A	5-26.5VDC	-55°C to +85°C	10 G's	30 G's	Standard Coil or Sensitive Coil	Commercial	3 GHz.
MW3HP	2 Form C	1A	5-26.5VDC	-65°C to +125°C	30 G's	75 G's	Standard Coil or Sensitive Coil	Commercial	3 GHz.

* Commercial-Off-The-Shelf (COTS) versions are also available.

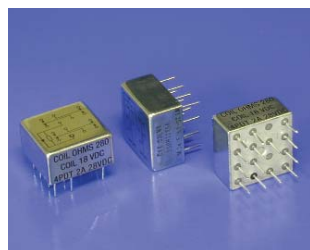


CII High Performance 0.100 Grid Low Signal Relays

- Miniature relays specifically designed for extremes of temperature, shock, vibration, etc.
- Standard, diode suppressed, diode protected and transistor driven models
- Various length pins with a choice of spreader and mounting pads or surface mount terminals
- High frequency models capable of switching up through 3GHz
- Hermetically sealed enclosures
- Order Catalogs 1309311 and 1309312, "CII Product Guides Volume 1 and Volume 2"
- For MW types, Catalog 1654883, "Microwave Switching, Hermetically Sealed Relays"
- <http://relays.tycoelectronics.com>

Series	Contact Arrang.	Contact Rating	Coil Voltages	Temperature Range	Vibration	Shock	Features	Mil-Spec	RF Switching
HC	2 Form C	1A	5-26.5VDC	-55°C to +85°C	10 G's	30 G's	Standard Coil	Commercial	1 GHz.
HCD	2 Form C	1A	5-26.5VDC	-55°C to +85°C	10 G's	30 G's	Standard Coil, Diode	Commercial	1 GHz.
HCS	2 Form C	1A	5-48VDC	-55°C to +85°C	10 G's	30 G's	Sensitive Coil	Commercial	1 GHz.
HCS D	2 Form C	1A	5-48VDC	-55°C to +85°C	10 G's	30 G's	Sensitive Coil, Diode	Commercial	1 GHz.
SHC	2 Form C	1A	5-26.5VDC	-55°C to +85°C	10 G's	30 G's	Standard Coil, Surface Mount	Commercial	1 GHz.
SHCD	2 Form C	1A	5-26.5VDC	-55°C to +85°C	10 G's	30 G's	Std. Coil, Diode, Surface Mount	Commercial	1 GHz.
SHCS	2 Form C	1A	5-48VDC	-55°C to +85°C	10 G's	30 G's	Sensitive Coil, Surface Mount	Commercial	1 GHz.
SHCS D	2 Form C	1A	5-48VDC	-55°C to +85°C	10 G's	30 G's	Sens. Coil, Diode, Surface Mount	Commercial	1 GHz.
MGA	2 Form C	1A	5-26.5VDC	-65°C to +125°C	30 G's	75 G's	Standard Coil	M39016/17 *	1.5 GHz.
MGAD	2 Form C	1A	5-26.5VDC	-65°C to +125°C	30 G's	75 G's	Standard Coil, Diode	M39016/18 *	1.5 GHz.
MGADD	2 Form C	1A	5-26.5VDC	-65°C to +125°C	30 G's	75 G's	Standard Coil, Dual Diode	M39016/19 *	1.5 GHz.
MGAT	2 Form C	1A	5-26.5VDC	-65°C to +125°C	30 G's	75 G's	Standard Coil, Transistor Driven	M28776/6 *	1.5 GHz.
SMGA	2 Form C	1A	5-26.5VDC	-65°C to +125°C	30 G's	75 G's	Standard Coil, Surface Mount	M39016/17 design	1.5 GHz.
SMGAD	2 Form C	1A	5-26.5VDC	-65°C to +125°C	30 G's	75 G's	Std. Coil, Diode, Surface Mount	M39016/18 design	1.5 GHz.
SMGADD	2 Form C	1A	5-26.5VDC	-65°C to +125°C	30 G's	75 G's	Std. Coil, Dual Diode, Surface Mt.	M39016/19 design	1.5 GHz.
MGS	2 Form C	1A	5-48VDC	-65°C to +125°C	30 G's	75 G's	Sensitive Coil	M39016/41 *	1.5 GHz.
MGSD	2 Form C	1A	5-48VDC	-65°C to +125°C	30 G's	75 G's	Sensitive Coil, Diode	M39016/42 *	1.5 GHz.
MGSD D	2 Form C	1A	5-48VDC	-65°C to +125°C	30 G's	75 G's	Sensitive Coil, Dual Diode	M39016/43 *	1.5 GHz.
MGST	2 Form C	1A	5-26.5VDC	-65°C to +125°C	30 G's	75 G's	Sensitive Coil, Transistor Driven	M28776/7 *	1.5 GHz.
SMGS	2 Form C	1A	5-48VDC	-65°C to +125°C	30 G's	75 G's	Sensitive Coil	M39016/41 design	1.5 GHz.
SMGSD	2 Form C	1A	5-48VDC	-65°C to +125°C	30 G's	75 G's	Sensitive Coil, Diode	M39016/42 design	1.5 GHz.
SMGSD D	2 Form C	1A	5-48VDC	-65°C to +125°C	30 G's	75 G's	Sensitive Coil, Dual Diode	M39016/43 design	1.5 GHz.
MW4	2 Form C	1A	5-26.5VDC	-55°C to +85°C	10 G's	30 G's	Standard Coil or Sensitive Coil	Commercial	4 GHz.
MW4HP	2 Form C	1A	5-26.5VDC	-65°C to +125°C	30 G's	100 G's	Standard Coil or Sensitive Coil	Commercial	4 GHz.
MW6	2 Form C	1A	5-26.5VDC	-55°C to +85°C	10 G's	30 G's	Standard Coil or Sensitive Coil	Commercial	6 GHz.
MW6HP	2 Form C	1A	5-26.5VDC	-65°C to +125°C	30 G's	100 G's	Standard Coil or Sensitive Coil	Commercial	6 GHz.

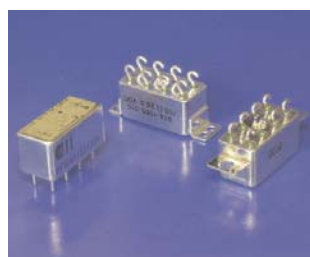
* Commercial-Off-The-Shelf (COTS) versions are also available.



CII High Performance 1/5 Size Low Signal Relays

- Low profile relays specifically designed for extreme temperature, shock, vibration, etc.
- Commercial and military models
- Terminals are arranged on .15" grid
- Available with no mounting brackets, with end brackets or with side brackets
- Non-latching and latching designs
- Hermetically sealed enclosures with choice of straight pins or solder hooks
- Order Catalog 1309312, "CII Product Guide Volume 2"

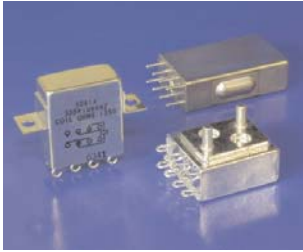
Series	Contact Arrang.	Contact Rating	Coil Voltages	Temperature Range	Vibration	Shock	Features	Mil-Spec	RF Switching
3SBC	2 Form C	2A	5-36VDC	-65°C to +125°C	30 G's	100 G's	Standard Coil, Diode, Dual Diode	M39016/13,37,38	Excellent
3SCC	2 Form C	2A	5-36VDC	-40°C to +125°C	30 G's	100 G's	Standard Coil, Long Life	Commercial	Excellent
3SBH	4 Form C	2A	6-36VDC	-65°C to +125°C	30 G's	100 G's	Standard Coil, Diode, Dual Diode	M39016/14,53,54	-
3SBM	4 Form C	2A	6-26.5VDC	-65°C to +125°C	30 G's	150 G's	Std. Coil, Latching, Diode, Dual Diode	M39016/31,35,36	-
3SDH	4 Form C	2A	6-36VDC	-40°C to +125°C	30 G's	100 G's	Standard Coil, Long Life	Commercial	-



CII High Performance 1/2 Size Crystal Can Relays

- Relays encased in 1/2 size crystal cans, specifically designed for extremes of temperature, shock, vibration, etc.
- Commercial and military models
- Terminals are arranged on .10" grid
- Available with plain case, choice of various mounting brackets or mounting studs
- Non-latching and latching designs
- Hermetically sealed enclosures with choice of straight pins or solder hooks
- Order Catalog 1309311, "CII Product Guide Volume 1"

Series	Contact Arrang.	Contact Rating	Coil Voltages	Temperature Range	Vibration	Shock	Features	Mil-Spec	RF Switching
C	1 Form C	10A	6-26.5VDC	-65°C to +125°C	20 G's	100 G's	Standard Coil	Commercial	-
RFK	1C, 2C	2A	6-26.5VDC	-65°C to +85°C	20 G's	100 G's	Standard Coil, Coax Cables	M39016/33 design	Excellent
HFC	2 Form C	2A	6-26.5VDC	-55°C to +85°C	10 G's	30 G's	Standard Coil	Commercial	-
HFC4A	2 Form C	4A	6-26.5VDC	-55°C to +85°C	10 G's	30 G's	Standard Coil	Commercial	-
HF5AC	2 Form C	5A	6-26.5VDC	-55°C to +85°C	10 G's	30 G's	Standard Coil	Commercial	-
HFD	2 Form C	2A	5-48VDC	-65°C to +125°C	30 G's	100 G's	Standard Coil, Diode	M39016/55	-
HFW	2 Form C	2A	5-48VDC	-65°C to +125°C	30 G's	100 G's	Standard Coil	M39016/6	Excellent
HFW4A	2 Form C	4A	5-48VDC	-65°C to +125°C	30 G's	100 G's	Standard Coil	M39016/6 design	Excellent
HFW5A	2 Form C	5A	5-26.5VDC	-65°C to +125°C	30 G's	100 G's	Standard Coil	M39016/6 design	Excellent
HMB	2 Form C	2A	6-26.5VDC	-65°C to +125°C	30 G's	100 G's	Bifilar Coil	M39016/22	Excellent
HMS	2 Form C	2A	5-36VDC	-65°C to +125°C	20 G's	100 G's	Sensitive Coil	M39016/44	Excellent
LS	2 Form C	2A	5-48VDC	-65°C to +125°C	30 G's	100 G's	Standard Coil, Latching	M39016/45 design	-
LR	4 Form C	2A	5-48VDC	-65°C to +125°C	30 G's	100 G's	Standard Coil, Latching	M39016 design	-
SR	4 Form C	2A	6-26.5VDC	-65°C to +125°C	20 G's	100 G's	Standard Coil	M39016/40	-
SS	6 Form C	2A	6-26.5VDC	-65°C to +125°C	20 G's	100 G's	Standard Coil	M39016 design	-

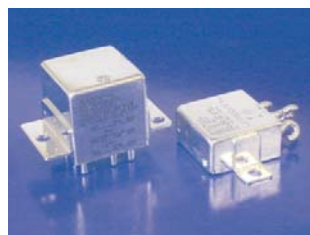


CII High Performance Full Size Crystal Can Relays

- Relays encased in full size crystal cans, specifically designed for extremes of temperature, shock, vibration, etc.
- Commercial and military models
- Terminals are arranged on .10" grid
- Available with plain case, choice of various mounting brackets or mounting studs
- Non-latching and latching designs
- Hermetically sealed enclosures with choice of straight pins or solder hooks
- Order Catalogs 1309311 and 1309312, "CII Product Guides Volume 1 and Volume 2"

Series	Contact Arrang.	Contact Rating	Coil Voltages	Temperature Range	Vibration	Shock	Features	Mil-Spec	RF Switching
RFB	1C, 2C	2A	6-26.5VDC	-65°C to +85°C	20 G's	100 G's	Standard Coil, Coax Cables	M5757 design	Excellent
3SAM	2 Form C	2A	6-24VDC	-65°C to +125°C	30 G's	150 G's	Standard Coil, Bifilar Coil, Latching	M39016/32	—
3SDM	2 Form C	2A	6-24VDC	-65°C to +125°C	30 G's	150 G's	Standard Coil, Latching	M39016 design	—
SF	2 Form C	2A	1.8-40VDC	-65°C to +125°C	15 G's	100 G's	Standard Coil	M5757/13 design	Excellent
FW	2 Form C	3A	6.3-110VDC	-65°C to +125°C	20 G's	100 G's	Standard Coil	M5757/10	Excellent
SF5A	2 Form C	5A	1.8-40VDC	-65°C to +125°C	15 G's	100 G's	Standard Coil	M5757/13 design	Excellent
FW5A	2 Form C	5A	6.3-110VDC	-65°C to +125°C	20 G's	100 G's	Standard Coil	M5757/10 design	Excellent
07	2 Form C	10A	6-120VDC, 115AC	-65°C to +125°C	30 G's	100 G's	Standard Coil, Diode Option	M5757/23 **	—

** 07 series is also qualified to MS 27245 and MS 27247.

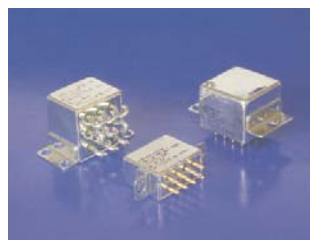


CII High Performance Standard Size Mid-Range Relays

- 10-25A relays specifically designed for extremes of temperature, shock, vibration, etc.
- Balanced force design with permanent magnet drive
- Terminal styles include socket pins and hook solder terminals
- Numerous mounting options
- Hermetically sealed, welded construction
- Commercial and military versions
- Order Catalog 1654761, “Mid-Range Relays For Military/Aerospace Applications”.

Series	Approx. Size	Contact Arrang.	Contact Rating	Coil Voltages	Temperature Range	Vibration **	Shock **	Features	Mil-Spec
FCA-125	1.025" x .525" x 1.125"h	1 Form C	25A	6-48VDC; 28-115VAC	-70°C to +125°C	20 G's	50 G's	Optional Diode	M6106/19
FCA-210	1.025" x .525" x 1.125"h	2 Form C	10A	6-48VDC; 28-115VAC	-70°C to +125°C	20 G's	50 G's	Optional Diode	M83536/9 & 10
FCA-212	1.025" x .525" x 1.125"h	2 Form C	12A	6-48VDC; 28-115VAC	-70°C to +125°C	20 G's	50 G's	Optional Diode	Commercial
FCA-325	1.015" x 1.015" x 1.00"h	3 Form C	25A	6-48VDC; 28-115VAC	-70°C to +125°C	20 G's	50 G's	Optional Diode	M83536/32 & 33
FCA-410	1.015" x 1.015" x 1.00"h	4 Form C	10A	6-48VDC; 28-115VAC	-70°C to +125°C	20 G's	50 G's	Optional Diode	M83536/15 & 16
FCA-610	1.483" x 1.053" x 1.01"h	6 Form C	10A	6-48VDC; 115VAC	-70°C to +125°C	20 G's	50 G's	Optional Diode	M83536/25 & 26

** Vibration and shock specifications vary from model to model within a given series.

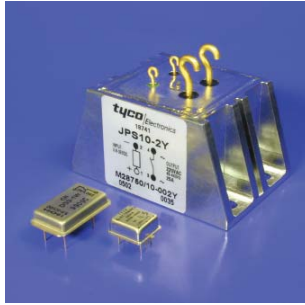


CII High Performance Compact Size Mid-Range Relays

- 5-10A relays specifically designed for extremes of temperature, shock, vibration, etc.
- Balanced force design with permanent magnet drive
- Terminal styles include socket pins and hook solder terminals
- Numerous mounting options
- Hermetically sealed, welded construction
- Commercial and military versions
- Order Catalog 1654761, “Mid-Range Relays For Military/Aerospace Applications”.

Series	Approx. Size	Contact Arrang.	Contact Rating	Coil Voltages	Temperature Range	Vibration **	Shock **	Features	Mil-Spec
FCB-205	.810" x .410" x .640"h	2 Form C	5A	6-48VDC	-70°C to +125°C	30 G's	200 G's	Optional Diode	M83536/1 & 2
FCB-310	.810" x .810" x .640"h	3 Form C	10A	6-48VDC	-70°C to +125°C	30 G's	200 G's	Optional Diode	Commercial
FCB-405	.810" x .810" x .640"h	4 Form C	5A	6-48VDC	-70°C to +125°C	30 G's	200 G's	Optional Diode	M83536/5 & 6

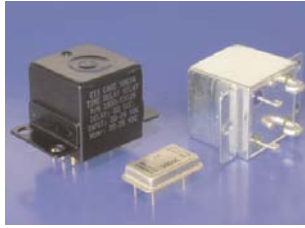
** Vibration and shock specifications vary from model to model within a given series.



CII Solid State Relays and Power Controllers for High Performance Applications

- Robust units perform switching function with solid state components in extremes of temperature, shock and vibration
- Various models have switch ratings ranging from 90mA up to 25A
- AC, DC and bi-directional output
- Available for panel or PC board mounting
- Some types incorporate circuit protection and other functions,
- <http://relays.tycoelectronics.com>

Series	Approx. Size	Switch Arrang.	Current Rating	Output Voltage	Function	Terminals	Features / Options	Mil-Spec
DS13	.56" x .395" x .155"H	1 Form A	2A	60VDC	DC Solid State Relay	PC Board	Short Circuit Protection, Control Status	DSCC Dwg. 90091-002, 4, 6, 8
DS11	.85" x .53" x .19"H	1 Form A	2A	60VDC	DC Solid State Relay	PC Board	Short Circuit Protection, Switch Status, Trip Status	DSCC Dwg. 88062-002, 4, 6, 8
DS9	.89" x .53" x .19"H	1 Form A	1A	250Vrms	AC Solid State Relay	PC Board	—	M28750/9
JPS10	2.41" x 1.57" x 1.3"H	1 Form A	25A	250Vrms	AC Solid State Relay	Solder Hooks	15V pk or 40V pk Zero Crossing	M28750/10
MS18-1006	.463" x .418" x .19"H	1 Form A	2A	80V	DC & Bi-Directional Solid State Relay	PC Board	—	DSCC Dwg. 89116-006
KSR-201	1.0" x .50" x .256"H	1 Form A	2.5A	60VDC	DC Solid State Relay / Power Controller	PC Board	Nuclear Tolerance Tested	—
PS12	2.0" x 1.0" x .90"H	1 Form A	10A	250Vrms	AC Solid State Relay	Screws	—	DSCC Dwg. 86031-001
DS11-1009	.89" x .53" x .190"H	1 Form A	2A	28VDC	DC Solid State Relay	PC Board	—	DSCC Dwg. 88062-008
DS11-1004	.89" x .53" x .190"H	1 Form A	2.1A	60VDC	DC Solid State Relay	PC Board	Short Circuit Protection	—
MS14	.89" x .53" x .190"H	1 Form A	90 & 240mA	100 & 400V	DC & Bi-Directional Solid State Relay	PC Board	—	DSCC Dwg. 87034-001



CII Time Delay Relays for High Performance Applications

- Solid state timing circuits and either electromechanical or solid state output
- Hermetically sealed enclosures
- Most types offer a variety of enclosures and mounting options
- Customized models available with tighter timing tolerance, extended timing range, etc.
- <http://relays.tycoelectronics.com>

Series	Approx. Size	Input Voltage	Output Type	Output Arrang.	Output Rating	Function	Delay Time	Type of Control	Tolerance	Vibration	Shock	Temperature Range
1600	1.25" x 1.00" x 1.656"H	AC or DC	EM Relay	1C, 2C, 3C, 4C	4 - 10A	Delay On Operate	50ms to 600s	Fixed	± 10% or 10ms	20 G's	50 G's	-55°C to +85°C & -55°C to +125°C
1700	1.25" x 1.00" x 1.656"H	AC or DC	EM Relay	1C, 2C, 3C, 4C	4 - 10A	Delay On Operate	50ms to 240s	External Resistor	± 10% or 10ms	20 G's	50 G's	-55°C to +85°C & -55°C to +125°C
2400	.809" x .406" x 1.5"H	DC	EM Relay	2 Form C	2A	Delay On Operate	50ms to 600s	Fixed	± 10% or 10 ms	20 G's	50 G's	-55°C to +85°C & -55°C to +125°C
6001	.920" x .580" x .42"H	DC	Solid State	1 Form A	300mA	Delay On Operate	50ms to 600s	Fixed	± 10%	20 G's	150 G's	-55°C to +125°C
1800	.809" x .406" x .892"H	DC	Solid State	1 Form A	300mA	Delay On Operate	50ms to 600s	Fixed	± 10% or 10ms	20 G's	50 G's	-55°C to +85°C & -55°C to +125°C
1900	.809" x .406" x .892"H	DC	Solid State	1 Form A	300mA	Delay On Operate	50ms to 240s	External Resistor	± 10% or 10ms	20 G's	50 G's	-55°C to +85°C & -55°C to +125°C
4600	1.25" x 1.00" x 2.384"H	AC or DC	EM Relay	1C, 2C, 4C	4 - 10A	Interval	50ms to 600s	Fixed	± 10%	20 G's	50 G's	-55°C to +125°C
4700	1.25" x 1.00" x 2.384"H	AC or DC	EM Relay	1C, 2C, 4C	4 - 10A	Interval	50ms to 240s	External Resistor	± 10%	20 G's	50 G's	-55°C to +125°C
5600	1.25" x 1.00" x 2.50"H	DC	EM Relay	1C, 2C	2 - 10A	Delay On Release	50ms to 600s	Fixed	± 10% or 15ms	20 G's	50 G's	-55°C to +85°C & -55°C to +125°C
5700	1.25" x 1.00" x 2.50"H	DC	EM Relay	1C, 2C	2 - 10A	Delay On Release	50ms to 240s	External Resistor	± 10% or 15 ms	20 G's	50 G's	-55°C to +85°C & -55°C to +125°C



High Voltage Relays for Industrial, Commercial and Military Applications

- Voltage isolation to 70kV
- Current carrying capability to 110A
- Service life to 10 million cycles
- Various contact forms available
- Flange, panel and PC board mounting styles
- Optional coils, mountings and terminals
- Order Catalog 1309313, “KILOVAC Product Guide”

Series	Rated Voltage	Carry Current	Power Switching	RF Ratings	Contact Form	Dielectric
S06CBA	2.0kV	6A	Carry Only	Yes	1 Form A	Vacuum
K45C	2.0kV	15A	Carry Only	Yes	1 Form C	Vacuum
S02DNA	3.0kV	2A	Carry Only	No	1 Form A	Vacuum
HC-5	3.0kV	8A	Make Only	No	1 Form C	SF-6 Gas
HC-3	3.0kV	15A	Yes	Yes	1 Form C	Vacuum
HC-1	3.0kV	25A	Carry Only	Yes	1 Form C	Vacuum
S06FNA	5.0kV	6A	Carry Only	Yes	1 Form A	Vacuum
K41A, B, C	5.0kV	30A	Yes	Yes	1 Form A, 1 Form B, 1 Form C	Vacuum
K41P/R	5.0kV	25A	Carry Only	Yes	1P (SPST Latch), 1R (SPDT Latch)	Vacuum
K40P	5.0kV	35A	Carry Only	Yes	1 Form P (SPST Latch)	Vacuum
KM-13	7.5kV	10A	Make Only	No	2 Form C	SF-6 Gas
KM-17	7.5kV	10A	Make Only	No	2 Form C	SF-6 Gas
S06JNB	8.0kV	6A	Carry Only	Yes	1 Form A	Vacuum
HC-6	8.0kV	8A	Make Only	No	1 Form C	SF-6 Gas
H-18	8.0kV	10A	Yes	Yes	1 Form C	Vacuum
K47A, B	8.0kV	12A	Yes	Yes	1 Form A, 1Form B	Vacuum
HC-4	8.0kV	15A	Yes	No	1 Form C	Vacuum
HC-2	8.0kV	25A	No	No	1 Form C	Vacuum
K44P	8.0kV	50A	No	No	1 Form P (SPST Latch)	Vacuum
S06HBA	9.0kV	6A	Yes	Yes	1 Form A	Vacuum
S05LTA, B	10.0kV	5A	Yes	No	1 Form A, 1 Form B	Vacuum
K81A, B, C	10.0kV	10A	Special	No	1 Form A, 1 Form B, 1 Form C	Vacuum
K43A, B, C	10.0kV	25A	Special	Yes	1 Form A, 1 Form B, 1 Form C	Vacuum
K43R, P	10.0kV	24A	Carry Only	Yes	1R (SPDT Latch), 1P (SPST Latch)	Vacuum
H-14 / H-16	12.0kV	30A	Carry Only	Yes	2 Form C	Vacuum
S05MTA	15.0kV	5A	Carry Only	No	1 Form A	Vacuum
KC-15 / KC-16	15.0kV	12A	Make Only	No	1 Form C	SF-6 Gas
KC-14 / KC-18	15.0kV	15A	Yes	No	1 Form C	Vacuum
H-8	15.0kV	15A	Yes	No	1 Form C	Vacuum
K49P	15.0kV	25A	Yes	Yes	1 Form P (SPST Latch)	Vacuum
K89P	15.0kV	25A	Yes	Yes	1 Form P (SPST Latch)	Vacuum
KC-8 / KC-12	15.0kV	30A	Yes	Yes	1 Form C	Vacuum
H-26	15.0kV	30A	Carry Only	Yes	4 Form C	Vacuum
KC-2 / KC-11	15.0kV	50A	Carry Only	Yes	1 Form C	Vacuum



High Voltage Relays for Industrial, Commercial and Military Applications (Continued)

- Voltage isolation to 70kV
- Current carrying capability to 110A
- Service life to 10 million cycles
- Various contact forms available
- Flange, panel and PC board mounting styles
- Optional coils, mountings and terminals
- Order Catalog 1309313, “KILOVAC Product Guide”

Series	Rated Voltage	Carry Current	Power Switching	RF Ratings	Contact Form	Dielectric
H-19	20.0kV	30A	Special	Yes	2 Form C	Vacuum
KC-38	25.0kV	15A	Make Only	No	1 Form B	SF-6 Gas
K62A, B, C	25.0kV	18A	Special	No	1 Form A, 1 Form B, 1 Form C	Vacuum
H-17	25.0kV	30A	Special	Yes	1 Form C	SF-6 Gas
KC-28	25.0kV	30A	Make Only	No	1 Form A	SF-6 Gas
KC-32	25.0kV	45A	Special	No	1 Form B	Vacuum
KC-30	25.0kV	55A	Carry Only	Yes	1 Form B	Vacuum
KC-22	25.0kV	65A	Special	No	1 Form A	Vacuum
KC-20	25.0kV	110A	Carry Only	Yes	1 Form A	Vacuum
H-23 / H-24	30.0kV	3A	Carry Only	Yes	1 Form A, 1 Form B	Vacuum
K61A, B, C	35.0kV	10A	Make Only	No	1 Form A, 1 Form B, 1 Form C	SF-6 Gas
K60C	35.0kV	10A	Make Only	No	1 Form C	SF-6 Gas
K64C	50.0kV	10A	Make Only	No	1 Form C	SF-6 Gas
H-25	50.0kV	30A	Special	No	1 Form C	Vacuum
K70A, B, C	70.0kV	10A	Make Only	No	1 Form A, 1 Form B, 1 Form C	SF-6 Gas



High Voltage Relays and Contactors for Industrial and Electric Vehicle Applications

- Voltage isolation to 1,800V
- Current carrying capability to 600A
- Offered with various contact forms
- Optional auxiliary contacts
- Panel and PC board mounting styles
- Optional coils, mountings and terminals
- Order Catalog 1309313, “KILOVAC Product Guide”

Series	Rated Voltage	Carry Current	Power Switching	Mounting	Contact Form	Dielectric
EV4	28 - 1,800V	4A	Make Only	PC Board	1 Form A	SF-6 Gas
FM200	480VAC / 48VDC	200A	Yes	Panel	1 Form A through 3 Form C	Air
EV200	12-900V	500A	Yes	Panel	1 Form A	Hydrogen
LEV200	12-900V	500A	Yes	Panel	1 Form A	Hydrogen
EV250A	12-1,800V	500A	Yes	Panel	1 Form A	Hydrogen
EV250A	12-1,800V	500A	Yes	Panel	1 Form B	Hydrogen
EV500	12-1,800V	600A	Yes	Panel	1 Form A	Hydrogen



AC Contactors for Aerospace and Ground Power Applications

- Main contact ratings to 500 amps; arrangements to 4 pole, double throw
- Available with a variety of auxiliary contact arrangements
- Side stable, latching and center off models
- Either hermetically or gasket sealed for panel or plug-in mounting
- Customized models meet specific customer requirements
- Commercial and military types designed for extreme temperature, shock, vibration, etc.
- HARTMAN and KILOVAC brands
- Order Catalog 1309313, “KILOVAC Product Guide” and Catalog 1309314, “HARTMAN Product Brochure”



28Volt DC Contactors for Aerospace and Ground Power Applications

- Main contact ratings to 2,000 amps; arrangements to 4 pole, double throw
- Available with a variety of auxiliary contact arrangements
- Side stable, latching and center off models
- Standard, reverse current and automatic dropout types
- Hermetically or gasket sealed models in panel and bus bar mounting configurations
- Customized types meet specific customer requirements
- Commercial and military types designed for extreme temperature, shock, vibration, etc.
- HARTMAN and KILOVAC brands
- Order Catalog 1309313, “KILOVAC Product Guide” and Catalog 1309314, “HARTMAN Product Brochure”



AC/DC Contactors for Aerospace and Ground Power Applications

- Units can switch both 115VAC and 28VDC
- Main contact ratings to 60 amps; arrangements to 4 pole, double throw
- Available with a variety of auxiliary contact arrangements
- Side stable models
- Panel mount types in hermetically sealed or gasket sealed enclosures
- Customized types meet specific customer requirements
- Commercial and military types designed for extreme temperature, shock, vibration, etc.
- HARTMAN brand
- Order Catalog 1309314, “HARTMAN Product Brochure”



AC/DC High Voltage Contactors for Aerospace and Ground Power Applications

- Some are capable of switching up to 440VAC, others as much as 340VDC
- Main contact ratings to 650 amps; arrangements to 3 pole, double throw
- Available with a variety of auxiliary contact arrangements
- Side stable models
- Panel mount types in hermetically sealed or gasket sealed enclosures
- Customized types meet specific customer requirements
- Commercial and military types designed for extreme temperature, shock, vibration, etc.
- HARTMAN and KILOVAC brands
- Order Catalog 1309313, “KILOVAC Product Guide” and Catalog 1309314, “HARTMAN Product Brochure”



Sensors, Monitors & Protective Relays for Aerospace and Ground Power Applications

- Overcurrent, undercurrent and over/undercurrent sensors and indicators
- Overvoltage, undervoltage and over/undervoltage sensors and monitors
- Phase loss and rotation sensors
- Overfrequency, under frequency and over/underfrequency sensors
- Ground power monitors
- Time delay versions available
- Customized models meet specific customer requirements
- Commercial and military types designed for extreme temperature, shock, vibration, etc.
- HARTMAN and WILMAR brands
- Order Catalog 1309313, “KILOVAC Product Guide” and Catalog 1309314, “HARTMAN Product Brochure”

DC Contactors for Space Applications

- Lightweight construction with hermetically sealed panel mount enclosure
- Main contact ratings of 50 amps at 28VDC or 35VDC
- Main contact arrangements to 2 pole, double throw, double break
- Single pole, double throw auxiliary contacts
- Efficient magnetic latching design with self-deenergizing coil
- Customized types meet specific customer requirements
- Commercial and military types designed for extreme temperature, shock, vibration, etc.
- HARTMAN brand
- Order Catalog 1309314, “HARTMAN Product Brochure”



Plug-in AC Contactors for Aerospace and Ground Power Applications

- Designed for ease of maintenance
- Main contact ratings from 50 amps to 385 amps at 115/200VAC, 400 Hz.
- Main contact arrangements to 3 pole, double throw
- Available with a variety of auxiliary contact arrangements
- Side stable, latching and center off models
- Lightweight construction with gasket sealed enclosure
- Customized models meet specific customer requirements
- Commercial and military types designed for extreme temperature, shock, vibration, etc.
- HARTMAN brand
- Order Catalog 1309314, “HARTMAN Product Brochure”



Power Distribution Systems for Aerospace and Ground Power Applications

- For primary and secondary power distribution
- Modular systems consist of various plug-in line-replaceable modules (LRMs) installed on a panel mounting system or backplane
- LRMs may be contactors, circuit breakers, sensing units, ELCUs, etc.
- Designed as a fault-free zone with no moving parts, panel is intended as a permanent installation on the mother vehicle
- Standard panels utilize actuator and contact assemblies from discrete contactors, bussed together and packaged in one or more enclosures with external connections.
- Optional current/voltage sensing, fuses, circuit breakers, power monitors, etc.
- Save weight over discrete types, reduce OEM labor requirements and ease maintenance
- Customized to meet specific customer requirements
- HARTMAN and KILOVAC brand
- Order Catalog 1309314, “HARTMAN Product Brochure”