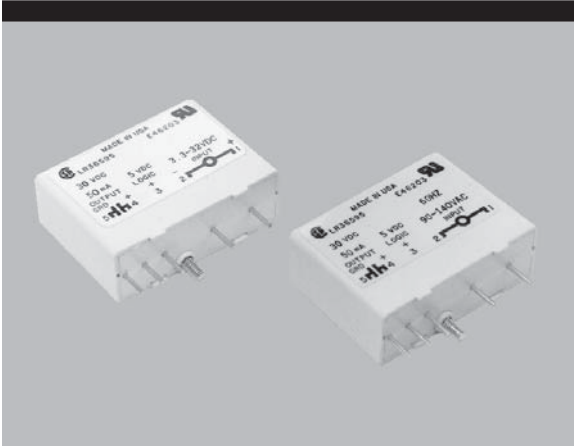
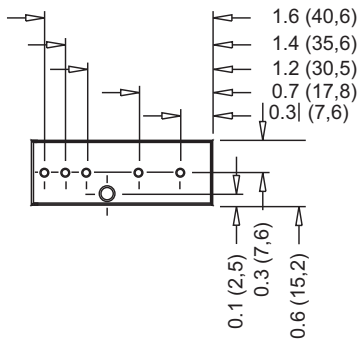
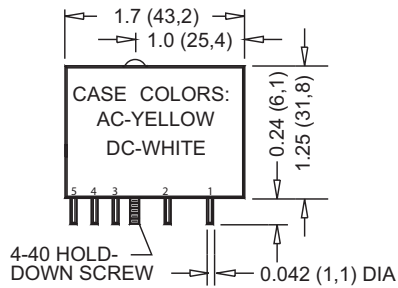


0.6 INCH INPUT MODULES

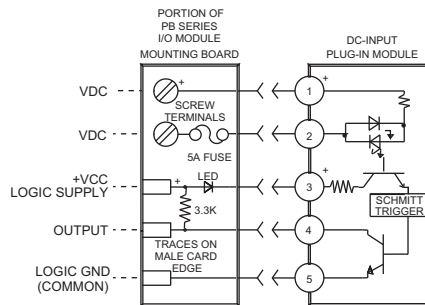
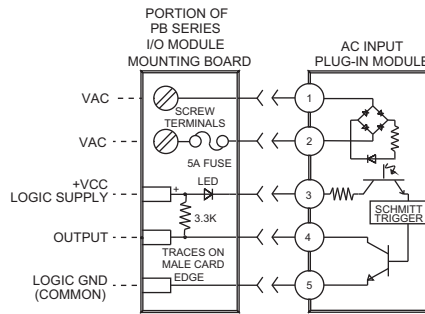


FEATURES:

- CE Compliant
- Plug into Mounting Boards for 0.6" Modules
- AC Inputs for 24 V, 120 V, 240 V
- DC Inputs for 3.3 to 32 V, 10 to 48 V
- UL Recognized (E46203) / CSA Certified (38595)
- 4 kV Optical Isolation
- Open-Collector Output
- Industry Standard Packaging



DIMENSIONS: INCHES (MILLIMETERS)
TOLERANCE: ± 0.020 ($\pm 0,50$)



(EQUIVALENT CIRCUIT DIAGRAMS)

For recommended applications and more information contact:

USA: Sales Support (877) 502-5500 Tech Support (877) 702-7700 FAX (619) 710-8540

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Email: sales@crydom.com WEB SITE: <http://www.crydom.com>

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Holyrood Close, Poole, Dorset BH17 7FJ, Email: intsales@crydom.com.

GERMANY: +49 (0)180 3000 506



0.6 INCH INPUT MODULES

INPUT SPECIFICATIONS: (1)

Model Number	IAC5 IAC24	IAC5A IAC24A	IDC5 IDC24	IDC5F IDC24F	IDC5N IDC24N
Parameter					
Nominal Voltage	120 VAC	240 VAC	5-28 VDC	5-28 VDC	12-48 VDC
Maximum Voltage	140 VAC/VDC	280 VAC/VDC	32 VDC/VAC	32 VDC	48 VDC/VAC
Minimum Voltage	90 VAC/VDC	180 VAC/VDC	3.3 VDC/VAC	4.0 VDC	10 VDC/VAC
Resistance (2) (3)	28 kΩ	75 kΩ	1 kΩ	500 Ω	2.7 kΩ
Maximum Current (4)	6 mArms	5 mArms	34 mA	68 mA	34 mA
Drop-out Current (5)	2.0 mArms	1.5 mArms	1.0 mA	1.0 mA	1.0 mA
Allowable Current/ Voltage for No Output (6)	2.5 mArms 50 VAC/VDC	2.0 mArms 50 VAC/VDC	1.5 mA 2.0 VDC	1.5 mA 2.0 VDC	1.5 mA 4.0 VDC

OUTPUT SPECIFICATIONS: (1)

Model Number	IAC5 IAC5A IDC5 IDC5F IDC5N	IAC24 IAC24A IDC24 IDC24F IDC24N	Units
Parameter			
Nominal Logic Supply Voltage	5.0	24.0	VDC
Maximum Logic Supply Voltage	6.0	30.0	VDC
Minimum Logic Supply Voltage	3.0	20.0	VDC
Maximum Logic Supply Current (7)	16.0	16.0	mA
Maximum Logic Supply Leakage Current (8)	10.0	10.0	μA
Maximum Voltage (9)	30.0	30.0	VDC
Maximum Current (10)	50.0	50.0	mA
Maximum Leakage Current (11)	10.0	10.0	μA
Maximum Voltage Drop (12)	0.2	0.2	VDC

GENERAL SPECIFICATIONS: (1)

Model Number	IAC5, IAC5A, IAC24, IAC24A	IDC5 IDC24	IDC5F IDC24F	IDC5N IDC24N	Units
Parameter					
Operating Temperature Range	-30 to 80	-30 to 80	-30 to 80	-30 to 80	°C
Storage Temperature Range	-40 to 100	-40 to 100	-40 to 100	-40 to 100	°C
Maximum Turn-on Time (13)	20	1.0	0.05	8.0	mSec
Maximum Turn-off Time (13)	20	1.0	0.10	7.0	mSec
Input/Output Isolation Voltage (14)	4000	4000	4000	4000	VAC
Input/Output Capacitance (typical)	8	8	8	8	pF
Line Frequency Range	47 to 63	DC	DC	DC	Hertz
Weight	1.1 oz	1.1 oz	1.1 oz	1.1 oz	

TABLE OF MODEL NUMBER SUFFIXES IDENTIFYING OPTIONAL FEATURES

Suffix	Feature
A	High voltage versions (240 VAC for AC modules).
F	Fast-switching version of DC Modules.
N	Enhanced noise immunity version of DC modules.

Notes:

- (1) Specifications apply to an ambient temperature of -30 to 80°C unless otherwise noted.
- (2) Resistance values for IAC modules are effective impedance values at 25°C.
- (3) Resistance values are +/-10% at 25°C.
- (4) Measured at maximum specified input voltage, 25°C.
- (5) Defined as the maximum current allowed through the module's input to guarantee that the output will switch from "on" to "off." Higher currents may result in the output remaining in the "on" state.
- (6) Defined as the maximum current allowed through the module's input that will not switch the module's output state from "off" to "on."
- (7) With external LED status indicator at maximum specified logic supply voltage and 25°C. 18 mA without external LED status indicator.
- (8) At maximum specified logic voltage and 25°C.
- (9) Maximum allowable applied voltage across open collector output transistor.
- (10) Maximum allowable sinking current through open collector output transistor.
- (11) At maximum output voltage and 25°C.
- (12) At maximum allowable output current and 25°C.
- (13) At nominal logic supply voltage, 25 mA output sinking current, nominal input voltage and 25°C.
- (14) At 25°C for 1 second maximum duration.

For recommended applications and more information contact:

USA: Sales Support (877) 502-5500 **Tech Support** (877) 702-7700 FAX (619) 710-8540

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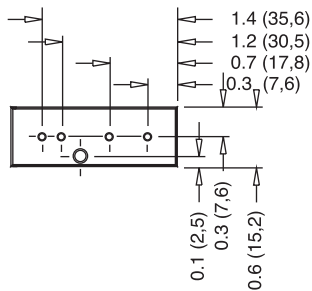
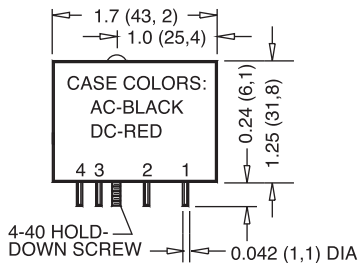
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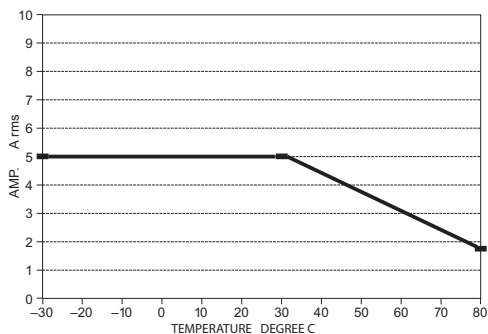
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0.6 INCH OUTPUT MODULES



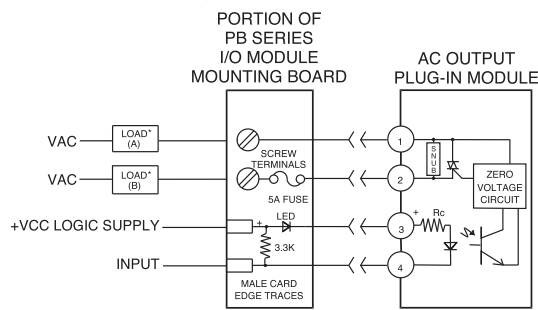
DIMENSIONS: INCHES (MILLIMETERS)
TOLERANCE: ±0.020 (±0,50)

DERATING CURVE FOR OAC5AH ONLY:

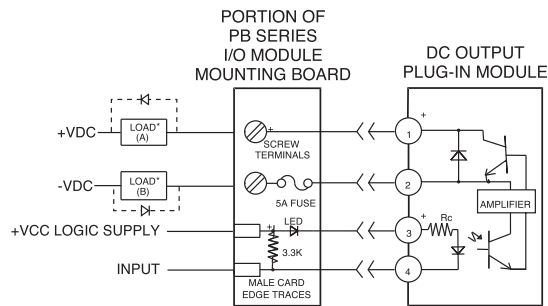


FEATURES:

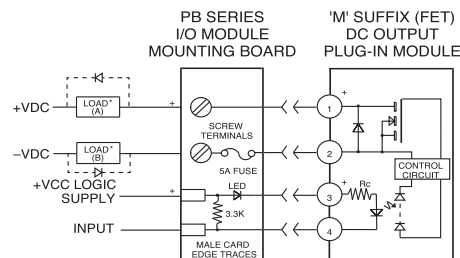
- CE Compliant
- UL Recognized/Horse Power Rated (E46203)/CSA Certified (38595)
- AC Modules have High Current Thyristor with 100 Amp Surge Capability
- Zero or Random Turn-On Available in AC Modules
- Plug into Mounting Boards for 0.6" Modules
- 4 kV Optical Isolation (1500 VAC Optical Isolation for FET DC Output Modules)
- Industry Standard Packaging
- 3.5 Amp AC Modules Provide Extra Switching Capability
- Form "A" Output
- 5.0 Amp AC(OAC5AH) and DC Modules Available



* LOAD MAY BE WIRED IN LOCATION A OR B



*LOAD MAY BE WIRED IN LOCATION A OR B
DC INDUCTIVE LOADS MUST BE DIODE SUPPRESSED TO PREVENT DAMAGE TO THE I/O MODULE.



* LOAD MAY BE WIRED IN LOCATION A OR B
DC INDUCTIVE LOADS MUST BE DIODE SUPPRESSED TO PREVENT DAMAGE TO THE I/O MODULE.

(EQUIVALENT CIRCUIT DIAGRAMS)

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0.6 INCH OUTPUT MODULES

INPUT SPECIFICATIONS: (1)

Model Number	OAC5 OAC5A OAC5AH OAC5AR OAC5R	ODC5 ODC5A ODC5F ODC5MA ODC5MC ODC5ML	OAC24 OAC24A ODC24 ODC24A ODC24F	Units
Nominal Voltage	5.0	5.0	24.0	VDC
Minimum Voltage (2)	2.75	2.75	18.0	VDC
Maximum Voltage	8.0	8.0	32.0	VDC
Drop-Out Voltage	1.0	1.0	1.0	VDC
Maximum Current (3)	20.0	18.0	13.0	mA
Resistance (4)	220	250	2000	Ohms

OUTPUT SPECIFICATIONS: (1)

Model Number	OAC5 OAC5R OAC24	OAC5A OAC5AR OAC24A	OAC5AH	ODC5 ODC24	ODC5A ODC24A	ODC5F ODC24F	ODC5MA	ODC5MC	ODC5ML
Parameter									
Nominal Line Voltage	120 VAC	240 VAC	240 VAC	5-48 V	5-150 V	5-48 V	5-150 V	5-90 V	5-48 V
Minimum Line Voltage	12 VAC	24 VAC	24 VAC	3.0 V	3.0 V	3.0 V	1.0 V	1.0 V	1.0 V
Maximum Line Voltage	140 VAC	280 VAC	280 VAC	60 V	250 V	60 V	200 V	100 V	50 V
Max Off-State Voltage (5)	400 Vpeak	600 Vpeak	600 Vpeak	60 V	250 V	60 V	200 V	100 V	50 V
Max Off-State Leakage (6)	.1 mArms	.1 mArms	.1 mArms	10 µA	10 µA	10 µA	10 µA	10 µA	10 µA
Static Off-State dv/dt (7)	200 V / µsec	200 V / µsec	200 V / µsec	N/A	N/A	N/A	N/A	N/A	N/A
Maximum Rated On-State Current (8)	3.5 Arms	3.5 Arms	5.0 A	3.0 A	1.0 A	3.0 A	3.0 A	5.0 A	5.0 A
Minimum On-State Current	50 mArms	50 mArms	50 mArms	10 mA	10 mA	10 mA	1.0 mA	1.0 mA	1.0 mA
Maximum Surge Current (9)	100 Apeak	100 Apeak	100 Apeak	5.0 A	5.0 A	5.0 A	10 A	10 A	10 A
On-State Voltage Drop or Resistance (10)	1.6 V	1.6 V	1.6 V	1.5 V	1.5 V	1.5 V	0.25 Ω	0.10 Ω	0.05 Ω
H.P. Rating (13)	1/8 H.P.	1/3 H.P.	1/2 H.P.	N/A	N/A	N/A	N/A	N/A	N/A

GENERAL SPECIFICATIONS: (1)

Model Number	OAC5 OAC5A OAC5AH OAC24 OAC24A	OAC5R OAC5AR	ODC5 ODC5A ODC24 ODC24A	ODC5F ODC24F	ODC5MA ODC5MC ODC5ML	Units
Parameter						
Operating Temperature Range	-30 to 80	-30 to 80	-30 to 80	-30 to 80	-30 to 80	°C
Storage Temperature Range	-40 to 100	-40 to 100	-40 to 100	-40 to 100	-40 to 100	°C
Maximum Turn-on Time (11)	8.33	0.1	0.1	0.025	1.0	mSec
Maximum Turn-off Time (11)	8.33	8.33	0.75	0.05	0.05	mSec
Input/Output Isolation Voltage (12)	4000	4000	4000	4000	1500	VAC
Input/Output Capacitance (typical)	8	8	8	8	8	pF
Line Frequency Range	47 to 63	47 to 63	DC	DC	DC	Hertz
Weight	1.1 oz	1.1 oz	1.1 oz	1.1 oz	1.1 oz	

TABLE OF MODEL NUMBER SUFFIXES IDENTIFYING OPTIONAL FEATURES

Suffix	Feature
A	High voltage versions (240 VAC for AC modules, 250 VDC for DC modules).
AH	High voltage AC, 5 Amps.
F	Fast-switching version of ODC modules.
MA	FET output version of DC module, 3.0 A, 200 VDC.
MC	FET output version of DC module, 5.0 A, 100 VDC.
ML	FET output version of DC module, 5.0 A, 50 VDC.
R	Random AC voltage turn-on.

Notes:

- (1) Specifications apply to an ambient temperature of -30 to 80°C unless otherwise noted.
- (2) Without external LED status indicator. Add 1.7 volt for external LED if utilized.
- (3) At nominal input voltage, without external LED status indicator.
- (4) +/-10% at 25°C.
- (5) Maximum 1 minute duration for OAC modules when applied as a DC voltage rather than peak AC voltage.
- (6) At maximum line voltage, 25°C for OAC modules, and 80°C for ODC modules.
- (7) Minimum dv/dt per EIA/NARM RS443, method RS397. dv/dt ratings do not apply to ODC modules.
- (8) At 40°C, derate OAC modules by 58 mA/°C to 80°C; derate ODC, ODCxMC and ODCxML modules by 50 mA/°C to 80°C; derate ODCxMA modules by 30 mA/°C to 80°C. CSA rating of OAC modules is 3.0 Arms at 40°C.
- (9) At 25°C. Maximum duration: 1 AC cycle for OAC modules, 1 second for ODC modules.
- (10) At maximum rated on-state current and 25°C.
- (11) At maximum line voltage, maximum rated output current, nominal input voltage, 25°C. Switching speed of OAC modules based upon 60 Hz line frequency.
- (12) At 25°C for 1 second maximum duration.
- (13) 1/3 H.P. at 240 VAC, 1/8 H.P. at 120 VAC.

For recommended applications and more information contact:

USA: Sales Support (877) 502-5500 **Tech Support** (877) 702-7700 FAX (619) 710-8540
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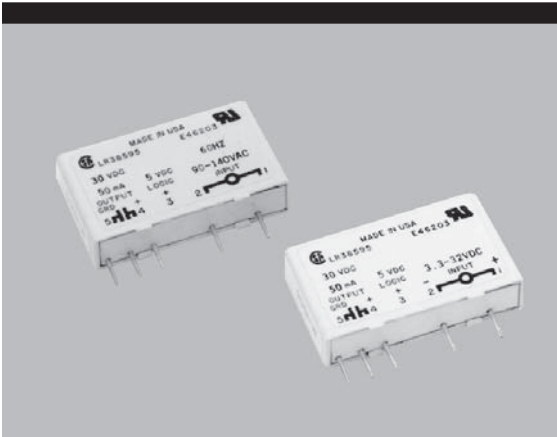
Email: sales@crydom.com **WEB SITE:** http://www.crydom.com

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GERMANY: +49 (0)180 3000 506

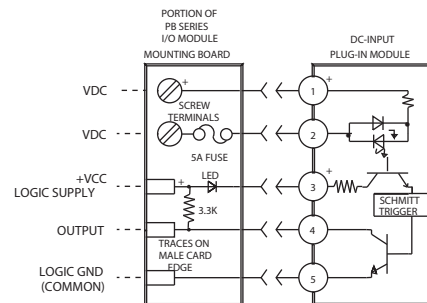
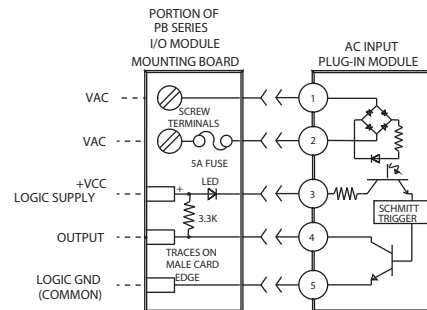
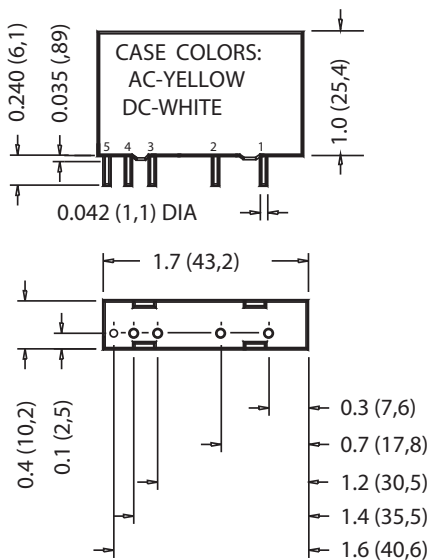


M SERIES INPUT MODULES



FEATURES:

- CE Compliant
- Plug into Mounting Boards for M Series Modules
- AC Inputs for 24 V, 120 V, 240 V
- DC Inputs for 3.3 to 32 V, 10 to 48 V
- UL Recognized (E46203)/CSA Certified (38595)
- 4 kV Optical Isolation
- Open-Collector Output
- Industry Standard Packaging



(EQUIVALENT CIRCUIT DIAGRAMS)

For recommended applications and more information contact:

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M SERIES INPUT MODULES

INPUT SPECIFICATIONS: (1)

Model Number	MIAC5 MIAC24	MIAC5A MIAC24A	MIDC5 MIDC24	MIDC5F	MIDC5N
Parameter					
Nominal Voltage	120 VAC	240 VAC	5-28 VDC	5-28 VDC	12-48 VDC
Maximum Voltage	140 VAC/VDC	280 VAC/VDC	32 VDC/VAC	32 VDC	48 VDC/VAC
Minimum Voltage	90 VAC/VDC	180 VAC/VDC	3.3 VDC/VAC	4.0 VDC	10 VDC/VAC
Resistance (2) (3)	28 kΩ	75 kΩ	1 kΩ	500 Ω	2 kΩ
Maximum Current (4)	5 mArms	5 mArms	34 mA	68 mA	34 mA
Drop-out Current (5)	2.0 mArms	1.5 mArms	1.0 mA	1.0 mA	1.0 mA
Allowable Current/	2.5 mArms	2.0 mArms	1.5 mA	1.5 mA	1.5 mA
Voltage for No Output (6)	50 VAC/VDC	50 VAC/VDC	2.0 VDC	2.0 VDC	4.0 VDC

OUTPUT SPECIFICATIONS: (1)

Model Number	MIAC5 MIAC5A MIDC24 MIDC5 MIDC5F MIDC5N	MIAC24 MIAC24A	Units
Parameter			
Nominal Logic Supply Voltage	5.0	24.0	VDC
Maximum Logic Supply Voltage	6.0	30.0	VDC
Minimum Logic Supply Voltage	3.0	20.0	VDC
Maximum Logic Supply Current (7)	16.0	16.0	mA
Maximum Logic Supply Leakage Current (8)	10.0	10.0	μA
Maximum Voltage (9)	30.0	30.0	VDC
Maximum Current (10)	50.0	50.0	mA
Maximum Leakage (11)	10.0	10.0	μA
Maximum Voltage Drop (12)	0.2	0.2	VDC

GENERAL SPECIFICATIONS: (1)

Model Number	MIAC5, MIAC5A, MIAC24, MIAC24A	MIDC5 MIDC24	MIDC5F	MIDC5N	Units
Parameter					
Operating Temperature Range	-30 to 80	-30 to 80	-30 to 80	-30 to 80	°C
Storage Temperature Range	-40 to 100	-40 to 100	-40 to 100	-40 to 100	°C
Maximum Turn-on Time (13)	20	1.0	0.05	8.0	mSec
Maximum Turn-off Time (13)	20	1.0	0.10	7.0	mSec
Input/Output Isolation Voltage (14)	4000	4000	4000	4000	VAC
Input/Output Capacitance (typical)	8	8	8	8	pF
Line Frequency Range	47 to 63	DC	DC	DC	Hertz
Weight	.65 oz	.65 oz	.65 oz	.65 oz	

TABLE OF MODEL NUMBER SUFFIXES IDENTIFYING OPTIONAL FEATURES

Suffix	Feature
A	High voltage versions (240 VAC for AC modules).
F	Fast-switching version of DC modules.
N	Enhanced noise immunity version of IDC module.

Notes:

- (1) Specifications apply to an ambient temperature of -30 to 80°C unless otherwise noted.
- (2) Resistance values for MIAC modules are effective impedance values at 25°C.
- (3) Resistance values are +/-10% at 25°C.
- (4) Measured at maximum specified input voltage, 25°C.
- (5) Defined as the maximum current allowed through the module's input to guarantee that the output will switch from "on" to "off." Higher currents may result in the output remaining in the "on" state.
- (6) Defined as the maximum current allowed through the module's input that will not switch the module's output state from "off" to "on."
- (7) With external LED status indicator at maximum specified logic supply voltage and 25°C. 18 mA without external LED status indicator.
- (8) At maximum specified logic voltage and 25°C.
- (9) Maximum allowable applied voltage across open collector output transistor.
- (10) Maximum allowable sinking current through open collector output transistor.
- (11) At maximum output voltage and 25°C.
- (12) At maximum allowable output current and 25°C.
- (13) At nominal logic supply voltage, 25 mA output sinking current, nominal input voltage and 25°C.
- (14) At 25°C for 1 second maximum duration.

For recommended applications and more information contact:

USA: Sales Support (877) 502-5500 **Tech Support** (877) 702-7700 FAX (619) 710-8540

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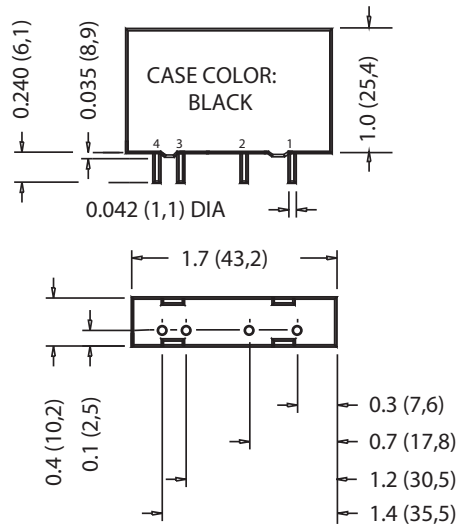
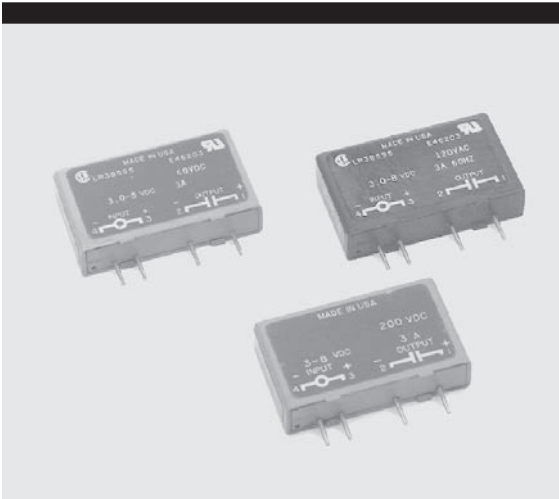
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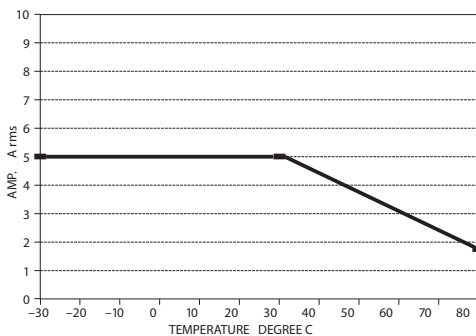
GERMANY: +49 (0)180 3000 506

M SERIES OUTPUT MODULES



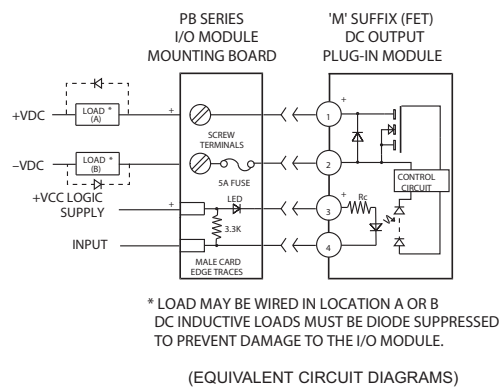
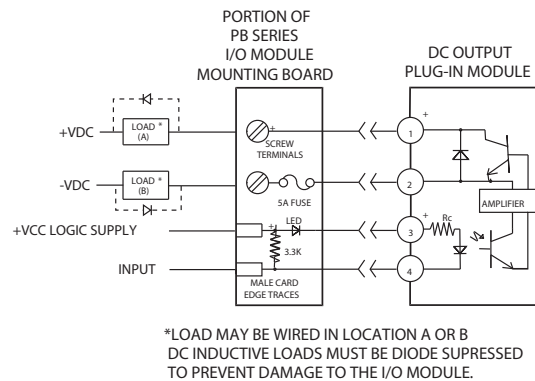
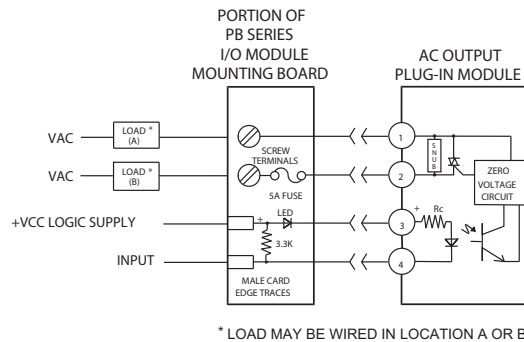
DIMENSIONS: INCHES (MILLIMETERS)
TOLERANCE: ±0.020 (±0,50)

DERATING CURVE FOR MOAC5AH:



FEATURES:

- CE Compliant
- 5.0 Amp AC (MOAC5AH) and DC Modules Available
- UL Recognized/Horse Power Rated (E79183)/CSA Certified (38595)
- AC Modules have High Current Thyristor with 100 Amp Surge Capability
- Zero or Random Turn-On Available in AC Modules
- Plug into Mounting Boards for M Series Modules
- 4 kV Optical Isolation (1500 VAC Optical Isolation for FET DC Output Modules)
- Industry Standard Packaging



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M SERIES OUTPUT MODULES

INPUT SPECIFICATIONS: (1)

Model Number	MOAC5 MOAC5A MOAC5AR MOAC5R MOAC5AH	MODC5 MODC5A MODC5F MODC5MA MODC5MC MODC5ML	MOAC24 MOAC24A MODC24	Units
Nominal Voltage	5.0	5.0	24.0	VDC
Minimum Voltage (2)	2.75	2.75	18.0	VDC
Maximum Voltage	8.0	8.0	32.0	VDC
Drop-Out Voltage	1.0	1.0	1.0	VDC
Maximum Current (3)	20.0	18.0	13.0	mA
Resistance (4)	220	250	2000	Ohms

OUTPUT SPECIFICATIONS: (1)

Model Number	MOAC5 MOAC5R MOAC24	MOAC5A MOAC5AR MOAC24A	MOAC5AH	MODC5 MODC24	MODC5A	MODC5F	MODC5MA	MODC5MC	MODC5ML
Nominal Line Voltage	120 VAC	240 VAC	240 VAC	5-48 V	5-150 V	5-48 V	5-150 V	5-90 V	5-48 V
Minimum Line Voltage	12 VAC	24 VAC	24 VAC	3.0 V	3.0 V	3.0 V	1.0 V	1.0 V	1.0 V
Maximum Line Voltage	140 VAC	280 VAC	280 VAC	60 V	250 V	60 V	200 V	100 V	50 V
Max Off-State Voltage (5)	400 Vpeak	600 Vpeak	600 Vpeak	60 V	250 V	60 V	200 V	100 V	50 V
Max Off-State Leakage (6)	.1 mArms	.1 mArms	.1 mArms	10 µA	10 µA	10 µA	10 µA	10 µA	10 µA
Static Off-State dv/dt (7)	200 V/µsec	200 V/µsec	200 V/µsec	N/A	N/A	N/A	N/A	N/A	N/A
Maximum Rated On-State Current (8)	3.5 Arms	3.5 Arms	5.0 A	3.0 A	1.0 A	3.0 A	3.0 A	5.0 A	5.0 A
Min On-State Current	50 mArms	50 mArms	50 mArms	10 mA	10 mA	10 mA	1.0 mA	1.0 mA	1.0 mA
Max Surge Current (9)	100 Apeak	100 Apeak	100 Apeak	5.0 A	5.0 A	5.0 A	10 A	10 A	10 A
On-State Voltage Drop or Resistance (10)	1.6 V	1.6 V	1.6 V	1.5 V	1.5 V	1.5 V	0.25 Ω	0.10 Ω	0.05 Ω
H.P. Rating (13)	1/8 H.P.	1/3 H.P.	1/2 H.P.	N/A	N/A	N/A	N/A	N/A	N/A

GENERAL SPECIFICATIONS: (1)

Model Number	MOAC5 MOAC5A MOAC5AH MOAC24 MOAC24A	MOAC5R MOAC5AR	MODC5 MODC5A MODC24	MODC5F	MODC5MA MODC5MC	Units
Operating Temperature Range	-30 to 80	-30 to 80	-30 to 80	-30 to 80	-30 to 80	°C
Storage Temperature Range	-40 to 100	-40 to 100	-40 to 100	-40 to 100	-40 to 100	°C
Maximum Turn-on Time (11)	8.33	0.1	0.1	0.025	1.0	mSec
Maximum Turn-off Time (11)	8.33	8.33	0.75	0.05	0.05	mSec
Input/Output Isolation Voltage (12)	4000	4000	4000	4000	1500	VAC
Input/Output Capacitance (typical)	8	8	8	8	8	pF
Line Frequency Range	47 to 63	47 to 63	DC	DC	DC	Hertz
Weight	.65 oz	.65 oz	.65 oz	.65 oz	.65 oz	

TABLE OF MODEL NUMBER SUFFIXES IDENTIFYING OPTIONAL FEATURES

Suffix	Feature
A	High voltage versions (240 VAC for AC modules, 250 VDC for DC modules).
AH	High voltage AC 5 amp
F	Fast-switching version of DC modules.
MA	FET output version of DC module, 3.0 A, 200 VDC.
MC	FET output version of DC module, 5.0 A, 100 VDC.
ML	FET output version of DC module, 5.0 A, 50 VDC.
R	Random AC voltage turn-on.

Notes:

- (1) Specifications apply to an ambient temperature of -30 to 80°C unless otherwise noted.
- (2) Without external LED status indicator. Add 1.7 volt for external LED if utilized.
- (3) At nominal input voltage, without external LED status indicator.
- (4) +/-10% at 25°C.
- (5) Maximum 1 minute duration for MOAC modules when applied as a DC voltage rather than peak AC voltage.
- (6) At maximum line voltage, 25°C for MOAC modules, and 80°C for MODC modules.
- (7) Minimum dv/dt per EIA/NARM RS443, method RS397. dv/dt ratings do not apply to MODC modules.
- (8) At 40°C, derate MOAC modules by 58 mA/°C to 80°C; derate MODC and MODCxMA modules by 50 mA/°C to 80°C; derate MODCxMC and MODCxML modules by 125 mA/°C to 80°C. CSA rating of MOAC modules is 3.0 Arms at 40°C. For MOAC5AH see derating curve.
- (9) At 25°C. Maximum duration: 1 AC cycle for MOAC modules, 1 second for MODC modules.
- (10) At maximum rated on-state current and 25°C.
- (11) At maximum line voltage, maximum rated output current, nominal input voltage, 25°C. Switching speed of MOAC modules based upon 60 Hz line frequency.
- (12) At 25°C for 1 second maximum duration.
- (13) 1/3 H.P. at 240 VAC, 1/8 H.P. at 120 VAC.

For recommended applications and more information contact:

USA: Sales Support (877) 502-5500 **Tech Support (877) 702-7700** FAX (619) 710-8540

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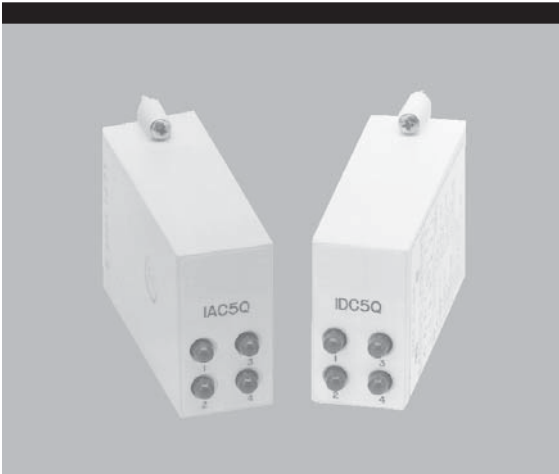
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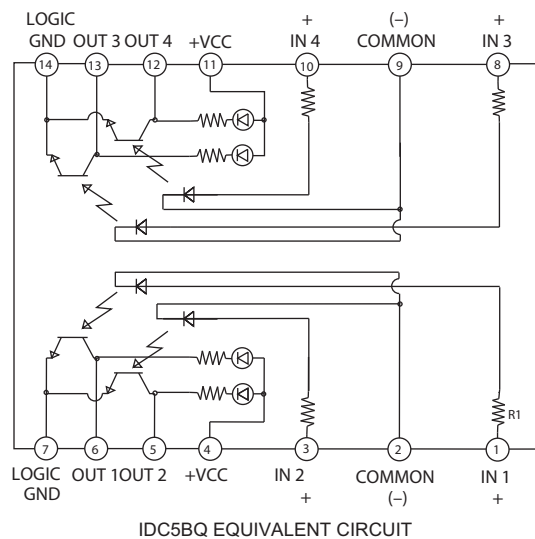
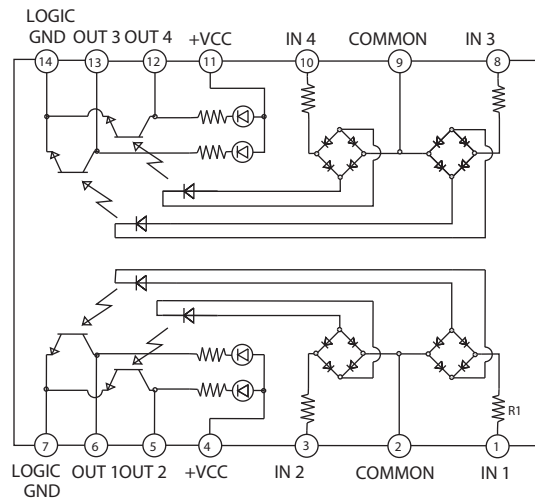
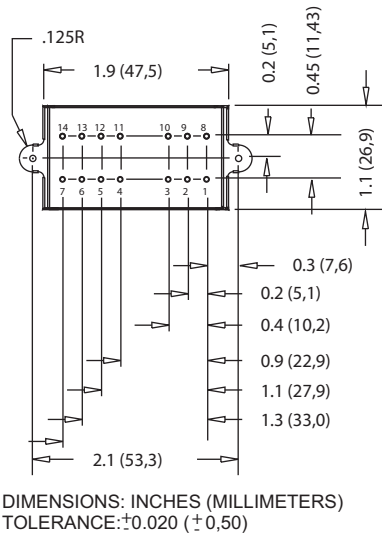
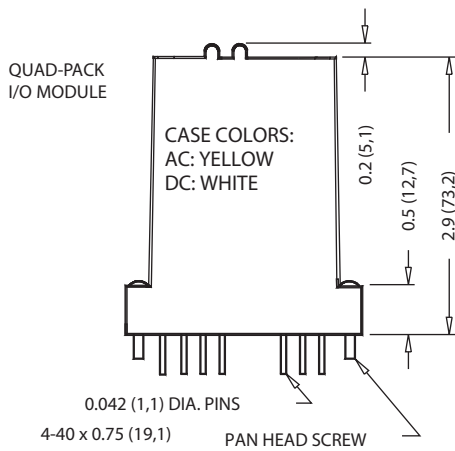


QUAD-PACK INPUT MODULES



FEATURES:

- CE Compliant
- Plug into Mounting Boards for Quad-Pack Modules
- AC Inputs for 24 V, 120 V, 240 V
- DC Inputs for 4 to 32 V, 10 to 60 V
- 4 Input Circuits per Module
- UL Recognized (E46203)/CSA Certified (38595)
- 4 kV Optical Isolation
- Open-Collector Output
- Industry Standard Packaging



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QUAD-PACK INPUT MODULES

INPUT SPECIFICATIONS: (1)

Model Number	IAC5Q	IAC5AQ	IAC5EQ	IDC5Q	IDC5BQ
Parameter					
Nominal Voltage	120 VAC	240 VAC	24 VAC	12-48 VDC	5-28 VDC
Maximum Voltage	140 VAC/VDC	280 VAC/VDC	36 VAC/VDC	60 VDC/VAC	32 VDC
Minimum Voltage	90 VAC/VDC	180 VAC/VDC	18 VAC/VDC	10 VDC/VAC	4.0 VDC
Resistance (2) (3)	28K	75 kΩ	3.3 kΩ	2 kΩ	500 Ω
Maximum Current (4)	6 mArms	5 mArms	10 mArms	34 mA	68 mA
Drop-out Current (5)	2.0 mArms	1.5 mArms	1.0 mArms	1.0 mA	1.0 mA
Allowable Current/	2.5 mArms	2.0 mArms	1.5 mArms	1.5 mA	1.5 mA
Voltage for No Output (6)	50 VAC/VDC	50 VAC/VDC	10 VAC/VDC	4.0 VDC	2.0 VDC

OUTPUT SPECIFICATIONS: (1)

Model Number	IAC5Q IAC5AQ IAC5EQ IDC5Q IDC5BQ	Units
Parameter		
Nominal Logic Supply Voltage	5.0	VDC
Maximum Logic Supply Voltage	6.0	VDC
Minimum Logic Supply Voltage	3.0	VDC
Maximum Logic Supply Current (7)	16.0	mA
Maximum Logic Supply Leakage (8)	10.0	μA
Maximum Voltage (9)	30.0	VDC
Maximum Current (10)	50.0	mA
Maximum Leakage (11)	10.0	μA
Maximum Voltage Drop (12)	0.2	VDC

GENERAL SPECIFICATIONS: (1)

Model Number	IAC5Q, IAC5AQ	IAC5EQ	IDC5Q	IDC5BQ	Units
Parameter					
Operating Temperature Range	-30 to 80	-30 to 80	-30 to 80	-30 to 80	°C
Storage Temperature Range	-40 to 100	-40 to 100	-40 to 100	-40 to 100	°C
Maximum Turn-on Time (13)	20	60	5.0	0.05	mSec
Maximum Turn-off Time (13)	20	30	5.0	0.10	mSec
Input/Output Isolation Voltage (14)	4000	4000	4000	4000	VAC
Input/Output Capacitance (typical)	8	8	8	8	pF
Line Frequency Range	47 to 63	47 to 63	DC	DC	Hertz

TABLE OF MODEL NUMBER SUFFIXES IDENTIFYING OPTIONAL FEATURES

Suffix	Feature
A	High voltage versions (240 VAC for AC modules).
B	Fast switching version of DC modules.
E	Low voltage 24 VAC input for AC modules.
Q	Four-channel quad-pack module.

Notes:

- (1) Specifications apply to an ambient temperature of -30 to 80°C unless otherwise noted.
- (2) Resistance values for IAC Quad Modules are effective impedance values at 25°C.
- (3) Resistance values are +/-10% at 25°C.
- (4) Measured at maximum specified input voltage, 25°C.
- (5) Defined as the maximum current allowed through the module's input to guarantee that the output will switch from "on" to "off." Higher currents may result in the output remaining in the "on" state.
- (6) Defined as the maximum current allowed through the module's input that will not switch the module's output state from "off" to "on."
- (7) With external LED status indicator at maximum specified logic supply voltage and 25°C. 18 mA without external LED status indicator.
- (8) At maximum specified logic voltage and 25°C.
- (9) Maximum allowable applied voltage across open collector output transistor.
- (10) Maximum allowable sinking current through open collector output transistor.
- (11) At maximum output voltage and 25°C.
- (12) At maximum allowable output current and 25°C.
- (13) At nominal logic supply voltage, 25 mA output sinking current, nominal input voltage and 25°C.
- (14) At 25°C for 1 second maximum duration.

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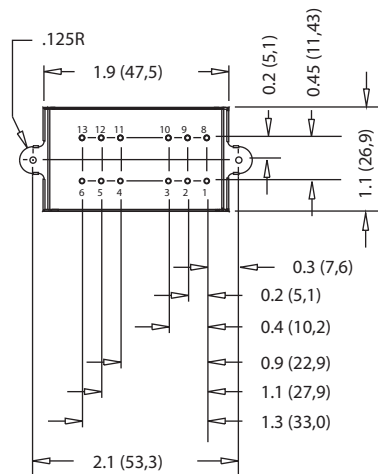
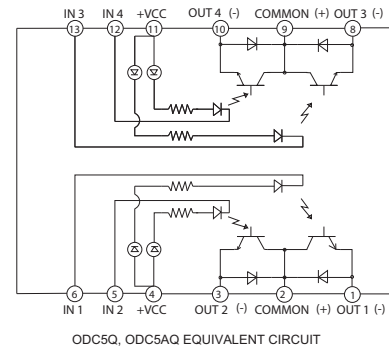
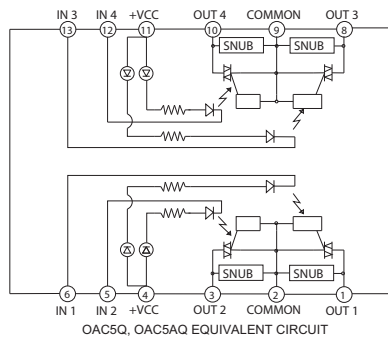
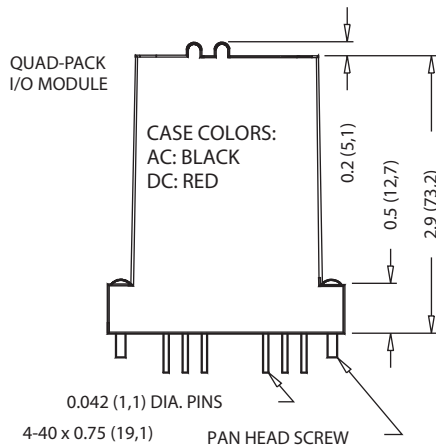


QUAD-PACK OUTPUT MODULES

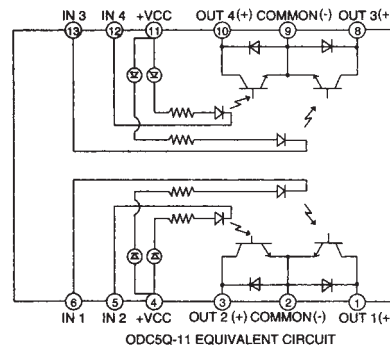


FEATURES:

- CE Compliant
- UL Recognized (E46203)/CSA Certified (38595)
- AC Modules have High Current Thyristor with 100 Amp Surge Capability
- Zero or Random Turn-On Available in AC Modules
- Plug into Mounting Boards for 0.6" Modules
- 4 kV Optical Isolation
- Industry Standard Packaging
- 3.5 Amp AC Modules Provide Extra Switching Capability
- 4 Outputs per Quad-Pack Module



DIMENSIONS: INCHES (MILLIMETERS)
TOLERANCE: ±0.020 (±0,50)



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QUAD-PACK OUTPUT MODULES

INPUT SPECIFICATIONS: (1)

Model Number	OAC5Q OAC5AQ OAC5ARQ OAC5RQ	ODC5Q ODC5Q.11	Units
Nominal Voltage	5.0	5.0	VDC
Minimum Voltage	4.0	4.0	VDC
Maximum Voltage	8.0	8.0	VDC
Drop-Out Voltage	1.0	1.0	VDC
Maximum Current (2)	20.0	18.0	mA
Resistance (3)	220	250	Ohms

OUTPUT SPECIFICATIONS: (1)

Model Number	OAC5Q OAC5RQ	OAC5AQ OAC5ARQ	ODC5Q ODC5Q.11
Nominal Line Voltage	120 VAC	240 VAC	5-48 V
Minimum Line Voltage	12 VAC	24 VAC	3.0 V
Maximum Line Voltage	140 VAC	280 VAC	60 V
Max Off-State Voltage (4)	400 V _{peak}	600 V _{peak}	60 V
Max Off-State Leakage (5)	.1 mArms	.1 mArms	10 µA
Static Off-State dv/dt (6)	200 V/µsec	200 V/µsec	N/A
Maximum Rated On-State Current (7)	3.5 Arms	3.5 Arms	3.0 A
Min On-State Current	50 mArms	50 mArms	10 mA
Max Surge Current (8)	100 A _{peak}	100 A _{peak}	5.0 A
On-State Voltage Drop or Resistance (9)	1.6 V	1.6 V	1.5 V

GENERAL SPECIFICATIONS: (1)

Model Number	OAC5Q OAC5AQ	OAC5RQ OAC5ARQ	ODC5Q ODC5Q.11	Units
Operating Temperature Range	-30 to 80	-30 to 80	-30 to 80	°C
Storage Temperature Range	-40 to 100	-40 to 100	-40 to 100	°C
Maximum Turn-on Time (10)	8.33	0.1	0.1	mSec
Maximum Turn-off Time (10)	8.33	8.33	0.75	mSec
Input/Output Isolation Voltage (11)	4000	4000	4000	VAC
Input/Output Capacitance (typical)	8	8	8	pF
Line Frequency Range	47 to 63	47 to 63	DC	Hertz

TABLE OF MODEL NUMBER SUFFIXES IDENTIFYING OPTIONAL FEATURES

Suffix	Feature
A	High voltage versions (240 VAC for AC modules)
Q	Four-channel Quad-pack module.
R	Random AC voltage turn-on.
-11	Common emitter output version of ODC5Q module.

Notes:

- (1) Specifications apply to each Quad-Pack channel at an ambient temperature of -30 to 80°C unless otherwise noted.
- (2) At nominal input voltage, without external LED status indicator.
- (3) +/-10% at 25°C.
- (4) Maximum 1 minute duration for OACQ modules when applied as a DC voltage rather than peak AC voltage.
- (5) At maximum line voltage, 25°C for OACQ modules, and 80°C for ODCQ modules.
- (6) Minimum dv/dt per EIA/NARM RS443, method RS397. dv/dt ratings do not apply to ODCQ modules.
- (7) At 40°C, derate OACQ modules by 58 mA/°C to 80°C; derate ODCQ modules by 50 mA/°C to 80°C. CSA rating of OACQ modules is 3.0 Arms at 40°C.
- (8) At 25°C. Maximum duration: 1 AC cycle for OACQ modules, 1 second for ODCQ modules.
- (9) At maximum rated on-state current and 25°C.
- (10) At maximum line voltage, maximum rated output current, nominal input voltage, 25°C. Switching speed of OACQ modules based upon 60 Hz line frequency.
- (11) At 25°C for 1 second maximum duration.

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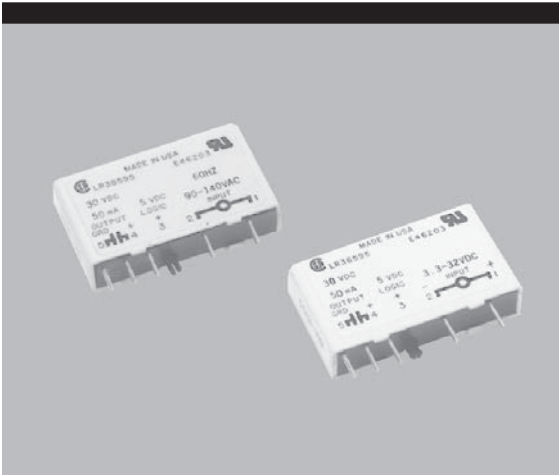
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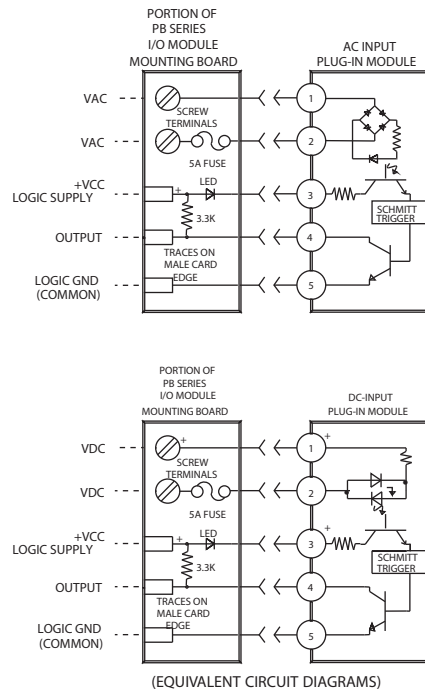
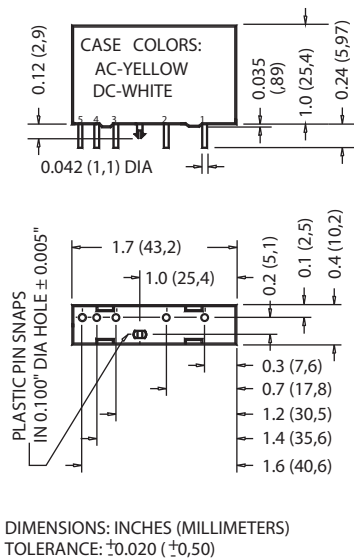


SM SERIES INPUT MODULES



FEATURES:

- CE Compliant
- Plug into Mounting Boards for SM or 0.6" Modules
- AC Inputs for 24 V, 120 V, 240 V
- DC Inputs for 3.3 to 32 V, 10 to 48 V
- UL Recognized (E46203)/CSA Certified (38595)
- 4 kV Optical Isolation
- Open-Collector Output
- Industry Standard Packaging



SM SERIES INPUT MODULES

INPUT SPECIFICATIONS: (1)

Model Number	SMIAC5 SMIAC24	SMIAC5A SMIAC24A	SMIDC5 SMIDC24	SMIDC5F	SMIDC5N
Parameter					
Nominal Voltage	120 VAC	240 VAC	5-28 VDC	5-28 VDC	12-48 VDC
Maximum Voltage	140 VAC/VDC	280 VAC/VDC	32 VDC/VAC	32 VDC	48 VDC/VAC
Minimum Voltage	90 VAC/VDC	180 VAC/VDC	3.3 VDC/VAC	4.0 VDC	10 VDC/VAC
Input Resistance (2) (3)	28 kΩ	75 kΩ	1 kΩ	500 Ω	2 kΩ
Maximum Current (4)	5 mArms	5 mArms	34 mA	68 mA	34 mA
Drop-out Current (5)	2.0 mArms	1.5 mArms	1.0 mA	1.0 mA	1.0 mA
Allowable Current/ Voltage for No Output (6)	2.5 mArms 50 VAC/VDC	2.0 mArms 50 VAC/VDC	1.5 mA 2.0 VDC	1.5 mA 2.0 VDC	1.5 mA 4.0 VDC

OUTPUT SPECIFICATIONS: (1)

Model Number	SMIAC5 SMIAC5A SMIDC5 SMIDC5F SMIDC5N	SMIAC24 SMIAC24A SMIDC24	Units
Parameter			
Nominal Logic Supply Voltage	5.0	24.0	VDC
Maximum Logic Supply Voltage	6.0	30.0	VDC
Minimum Logic Supply Voltage	3.0	20.0	VDC
Maximum Logic Supply Current (7)	16.0	16.0	mA
Maximum Logic Supply Leakage Current (8)	10.0	10.0	μA
Maximum Voltage (9)	30.0	30.0	VDC
Maximum Current (10)	50.0	50.0	mA
Maximum Leakage Current (11)	10.0	10.0	μA
Maximum Voltage Drop (12)	0.2	0.2	VDC

GENERAL SPECIFICATIONS: (1)

Model Number	SMIAC5, SMIAC5A, SMIAC24, SMIAC24A	SMIDC5 SMIDC24	SMIDC5F	SMIDC5N	Units
Parameter					
Operating Temperature Range	-30 to 80	-30 to 80	-30 to 80	-30 to 80	°C
Storage Temperature Range	-40 to 100	-40 to 100	-40 to 100	-40 to 100	°C
Maximum Turn-on Time (13)	20	1.0	0.05	8.0	mSec
Maximum Turn-off Time (13)	20	1.0	0.10	7.0	mSec
Input/Output Isolation Voltage (14)	4000	4000	4000	4000	VAC
Input/Output Capacitance (typical)	8	8	8	8	pF
Line Frequency Range	47 to 63	DC	DC	DC	Hertz
Weight	.6 oz	.6 oz	.6 oz	.6 oz	

TABLE OF MODEL NUMBER SUFFIXES IDENTIFYING OPTIONAL FEATURES

Suffix	Feature
A	High voltage versions (240 VAC for AC modules).
F	Fast-switching version of DC modules.
N	Enhanced noise immunity version of DC modules.

Notes:

- (1) Specifications apply to an ambient temperature of -30 to 80°C unless otherwise noted.
- (2) Resistance values for SMIAC modules are effective impedance values at 25°C.
- (3) Resistance values are +/-10% at 25°C.
- (4) Measured at maximum specified input voltage, 25°C.
- (5) Defined as the maximum current allowed through the module's input to guarantee that the output will switch from "on" to "off." Higher currents may result in the output remaining in the "on" state.
- (6) Defined as the maximum current allowed through the module's input that will not switch the module's output state from "off" to "on."
- (7) With external LED status indicator at maximum specified logic supply voltage and 25°C. 18 mA without external LED status indicator.
- (8) At maximum specified logic voltage and 25°C.
- (9) Maximum allowable applied voltage across open collector output transistor.
- (10) Maximum allowable sinking current through open collector output transistor.
- (11) At maximum output voltage and 25°C.
- (12) At maximum allowable output current and 25°C.
- (13) At nominal logic supply voltage, 25 mA output sinking current, nominal input voltage and 25°C.
- (14) At 25°C for 1 second maximum duration.

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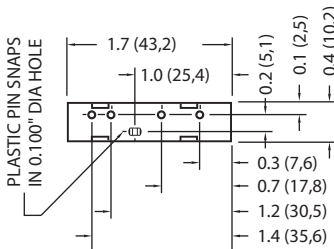
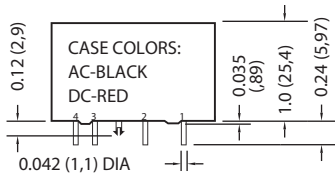


SM SERIES OUTPUT MODULES



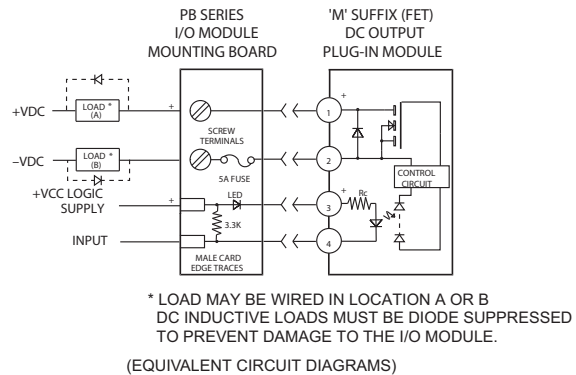
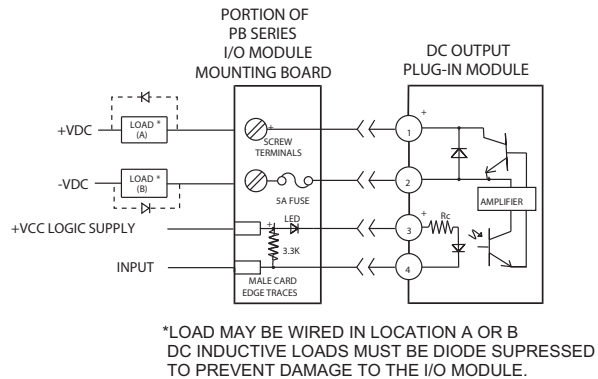
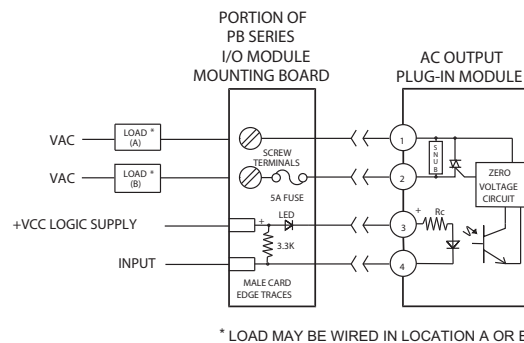
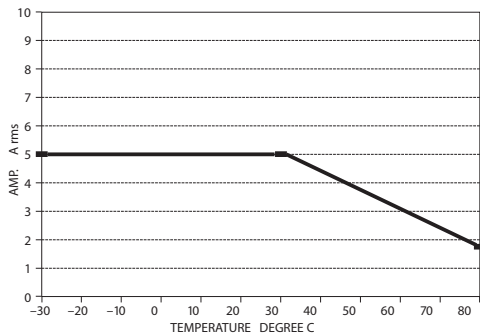
FEATURES:

- CE Compliant
- UL Recognized/Horse Power Rated (E46203)/CSA Certified (38595)
- AC Modules have High Current Thyristor with 100 Amp Surge Capability
- Zero or Random Turn-On Available in AC Modules
- Plug into Mounting Boards for SM or 0.6" Modules
- 4 kV Optical Isolation (1500 VAC Optical Isolation for FET DC Output Modules)
- Industry Standard Packaging
- 3.5 Amp AC Modules Provide Extra Switching Capability
- 5.0 Amp AC (SMOAC5AH) AND DC Modules Available



DIMENSIONS: INCHES (MILLIMETERS)
TOLERANCE: ±0.020 (±0.50)

DERATING CURVE FOR SMOAC5AH ONLY:



For recommended applications and more information contact:

USA: Sales Support (877) 502-5500 Tech Support (877) 702-7700 FAX (619) 710-8540
Crydom Inc., 2320 Paseo de las Americas, Ste. 201, San Diego, CA 92154

Email: sales@crydom.com WEB SITE: <http://www.crydom.com>

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GERMANY: +49 (0)180 3000 506

SM SERIES OUTPUT MODULES

INPUT SPECIFICATIONS: (1)

Model Number	SMOAC5 SMOAC5A SMOAC5AH SMOAC5AR SMOAC5R	SMODC5 SMODC5A SMODC5F SMODC5MA SMODC5MC SMODC5ML	SMOAC24 SMOAC24A SMODC24	Units
Nominal Voltage	5.0	5.0	24.0	VDC
Minimum Voltage (2)	2.75	2.75	18.0	VDC
Maximum Voltage	8.0	8.0	32.0	VDC
Drop-Out Voltage	1.0	1.0	1.0	VDC
Maximum Current (3)	20.0	18.0	13.0	mA
Resistance (4)	220	250	2000	Ohms

OUTPUT SPECIFICATIONS: (1)

Model Number	SMOAC5 SMOAC5R SMOAC24	SMOAC5A SMOAC5AR SMOAC24A	SMOAC5AH	SMODC5 SMODC24	SMODC5A	SMODC5F	SMODC5MA	SMODC5MC	SMODC5ML
Nominal Line Voltage	120 VAC	240 VAC	240 VAC	5-48 V	5-150 V	5-48 V	5-150 V	5-90 V	5-48 V
Minimum Line Voltage	12 VAC	24 VAC	24 VAC	3.0 V	3.0 V	3.0 V	1.0 V	1.0 V	1.0 V
Maximum Line Voltage	140 VAC	280 VAC	280 VAC	60 V	250 V	60 V	200 V	100 V	50 V
Max Off-State Voltage (5)	400 Vpeak	600 Vpeak	600 Vpeak	60 V	250 V	60 V	200 V	100 V	50 V
Max Off-State Leakage (6)	.1 mArms	.1 mArms	.1 mArms	10 µA	10 µA	1.0 mA	10 µA	10 µA	10 µA
Static Off-State dv/dt (7)	200 V/µsec	200 V/µsec	200 V/µsec	N/A	N/A	N/A	N/A	N/A	N/A
Maximum Rated On-State Current (8)	3.5 Arms	3.5 Arms	5.0 A	3.0 A	1.0 A	3.0A	3.0 A	5.0 A	5.0 A
Min On-State Current	50 mArms	50 mArms	50 mArms	10 mA	10 mA	10 mA	1.0 mA	1.0 mA	1.0 mA
Max Surge Current (9)	100 Apeak	100 Apeak	100 Apeak	5.0 A	5.0 A	5.0 A	10 A	10 A	10 A
On-State Voltage Drop or Resistance (10)	1.6 V	1.6 V	1.6 V	1.5 V	1.5 V	1.5 V	0.25 Ω	0.10 Ω	0.05 Ω
H.P. Rating (13)	1/4 H.P.	1/4 H.P.	1/2 H.P.	N/A	N/A	N/A	N/A	N/A	N/A

GENERAL SPECIFICATIONS: (1)

Model Number	SMOAC5 SMOAC5A SMOAC5AH SMOAC24 SMOAC24A	SMOAC5R SMOAC5AR	SMODC5 SMODC5A SMODC24	SMODC5F	SMODC5MA SMODC5MC SMODC5ML	Units
Operating Temperature Range	-30 to 80	-30 to 80	-30 to 80	-30 to 80	-30 to 80	°C
Storage Temperature Range	-40 to 100	-40 to 100	-40 to 100	-40 to 100	-40 to 100	°C
Maximum Turn-on Time (11)	8.33	0.1	0.1	0.025	1.0	mSec
Maximum Turn-off Time (11)	8.33	8.33	0.75	0.05	0.05	mSec
Input/Output Isolation Voltage (12)	4000	4000	4000	4000	1500	VAC
Input/Output Capacitance (typical)	8	8	8	8	8	pF
Line Frequency Range	47 to 63	47 to 63	DC	DC	DC	Hertz
Weight	.65 oz	.65 oz	.65 oz	.65 oz	.65 oz	

TABLE OF MODEL NUMBER SUFFIXES IDENTIFYING OPTIONAL FEATURES

Suffix	Feature
A	High voltage versions (240 VAC for AC modules, 250 VDC for DC modules).
AH	High Voltage AC, 5 A
F	Fast-switching version of DC modules.
MA	FET output version of DC module, 3.0 A, 200 VDC.
MC	FET output version of DC module, 5.0 A, 100 VDC.
ML	FET output version of DC module, 5.0 A, 50 VDC.
R	Random AC voltage turn-on.

Notes:

- (1) Specifications apply to an ambient temperature of -30 to 80°C unless otherwise noted.
- (2) Without external LED status indicator. Add 1.7 volt for external LED if utilized.
- (3) At nominal input voltage, without external LED status indicator.
- (4) +/-10% at 25°C.
- (5) Maximum 1 minute duration for SMOAC modules when applied as a DC voltage rather than peak AC voltage.
- (6) At maximum line voltage, 25°C for SMOAC modules, and 80°C for SMODC modules.
- (7) Minimum dv/dt per EIA/NARM RS443, method RS397. dv/dt ratings do not apply to SMODC modules.
- (8) At 40°C, derate SMOAC modules by 58 mA°C to 80°C; derate SMODC and SMODCxmA modules by 50 mA°C to 80°C; derate SMODCxMC and SMODCxML modules by 125 mA°C to 80°C. CSA rating of SMOAC modules is 3.0 Arms at 40°C. For SMOAC5AH see derating curve.
- (9) At 25°C. Maximum duration: 1 AC cycle for SMOAC modules, 1 second for SMODC modules.
- (10) At maximum rated on-state current and 25°C.
- (11) At maximum line voltage, maximum rated output current, nominal input voltage, 25°C. Switching speed of SMOAC modules based upon 60 Hz line frequency.
- (12) At 25°C for 1 second maximum duration.
- (13) 1/4 H.P. at 240 VAC, 1/8 H.P. at 120 VAC.

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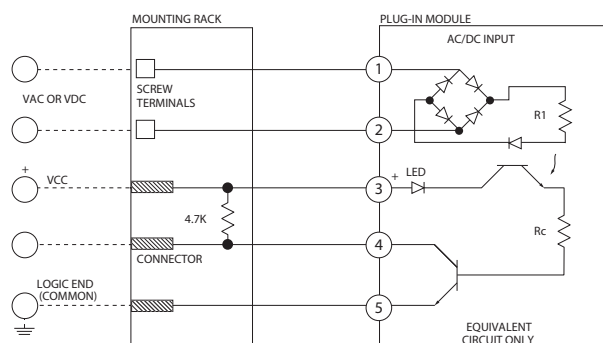
C4 INPUT MODULES



FEATURES:

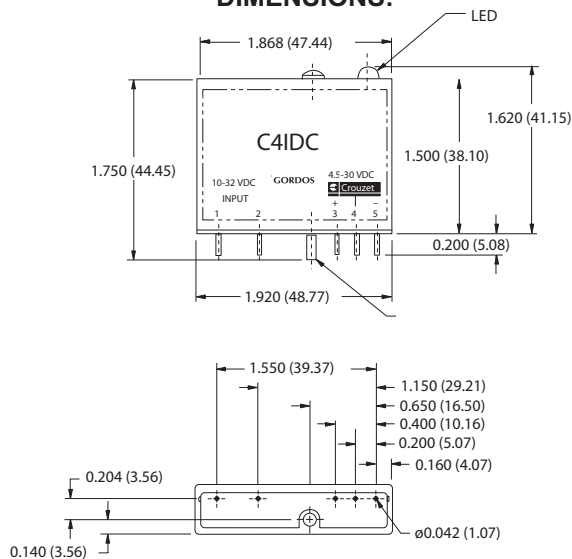
- CE Compliant
- Built-in LED Status Indicator
- Regulated Supply Voltage
- New Industry Standard Packaging
- 4000 VAC Optical Isolation
- AC and DC Inputs
- UL and CSA

SCHEMATIC:



C4 SERIES I/O MODULES
AC/DC INPUT SCHEMATIC

DIMENSIONS:



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C4 INPUT MODULES

SPECIFICATIONS:

INPUT SPECIFICATIONS: (1)

	C4IAC	C4IACA	C4IDC	C4IDCB	C4IDCG	C4IDCK
Nominal Voltage	120 VAC	240 VAC	10-32 VDC	4-16 VDC	35-60 VDC	2.5-16 VDC
Maximum Voltage	140 VAC	280 VAC	32 VDC	16 VDC	60 VDC	16 VDC
Minimum Voltage	90 VAC	140 VAC	10 VDC	4 VDC	35 VDC	2.5 VDC
Resistance (2) (3)	22 kΩ	75 kΩ	2 kΩ	400 Ω	10 kΩ	300 Ω
Maximum Current (4)	14 mA	5 mA	20 mA	40 mA	10 mA	60 mA
Drop out Current (5)	3 mA	1 mA	1.5 mA	2 mA	1 mA	2 mA
Input Allowed for No Output (6)	2.5 mA/50 VAC	.7 mA/50 VAC	1 mA/3 VDC	.7 mA/1 VAC	.7 mA / 7 VDC	.2 mA / 1 VDC
Maximum Turn-on Time (12)	20 ms	20 ms	5 ms	50 μs	10 ms	25 μs
Maximum Turn-off Time (12)	20 ms	20 ms	5 ms	100 μs	10 ms	25 μs

OUTPUT SPECIFICATIONS: (1)

	C4IAC C4IACA C4IDC	C4IDCB C4IDCG C4IDCK
Logic Supply Voltage	4.5 to 30 VDC	
Maximum Logic Supply Voltage	30 VDC	
Minimum Logic Supply Voltage	4.5 VDC	
Maximum Logic Supply Current (7)	25 mA	
Maximum Supply Idle Current (8)	7 mA	
Maximum Current (9)	50 mA	
Maximum Logic Leakage Current (10)	10 μA	
Maximum Output Voltage Drop (11)	0.2 VDC	

GENERAL SPECIFICATION: (1)

Operating Temperature Range	-30 to +80°C
Storage Temperature Range	-40 to +100°C
Input to Output Isolation Voltage (13)	4000 VAC

ORDERING INFORMATION:

PART NUMBER	INPUT	DC OUTPUT LOGIC
C4IAC	90-140 VAC	4.5 to 30 VDC
C4IACA	140-280 VAC	4.5 to 30 VDC
C4IDC	10-32 VDC	4.5 to 30 VDC
C4IDCB	4-16 VDC	4.5 to 30 VDC
C4IDCG	35-60 VDC	4.5 to 30 VDC
C4IDCK	2.5-16 VDC	4.5 to 30 VDC

Notes:

- (1) Specifications apply to an ambient temperature of -30 to 80°C unless otherwise noted.
- (2) Resistance values for C4IAC modules are effective impedance values at 25°C.
- (3) Resistance values are +/-10% at 25°C.
- (4) At max turn-on voltage, TA=25°C
- (5) For on-state condition to off-state condition, TA=25°C. Higher currents may result in the output remaining in the "on" state.
- (6) Defined as the maximum current/voltage allowed through the module's input that will not switch the module's output state from "off" to "on."
- (7) At maximum logic supply voltage and 25°C.
- (8) At maximum specified logic voltage and 25°C.
- (9) Maximum allowable sinking current through open collector output transistor.
- (10) At maximum output voltage and 25°C.
- (11) At maximum allowable output current and 25°C.
- (12) At 15 VDC logic, 30 VDC output, 50 mA, 25°C and nominal input voltage.
- (13) At 25°C for 1 second maximum duration.

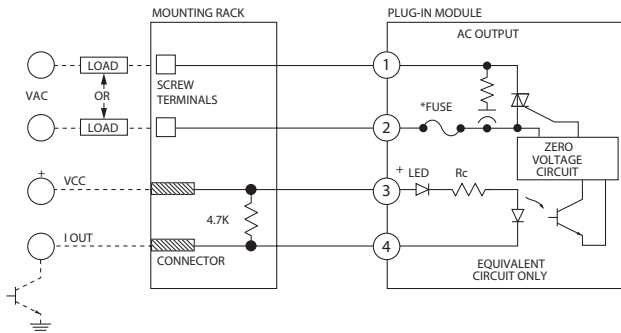
C4 OUTPUT MODULES



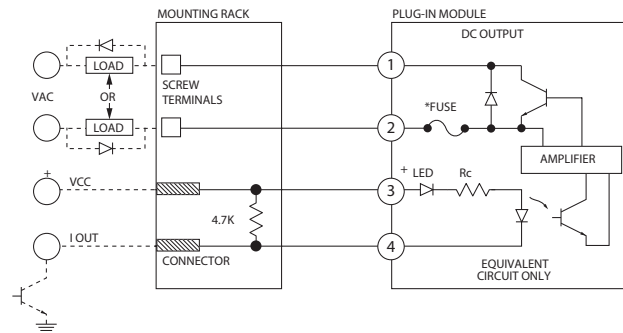
FEATURES:

- CE Compliant
- Built-in LED Status Indicator
- Replacable 2 AG Type Fuse
- New Industry Standard Packaging
- UL and CSA
- 4 to 32 VDC Regulated Input

SCHEMATIC:

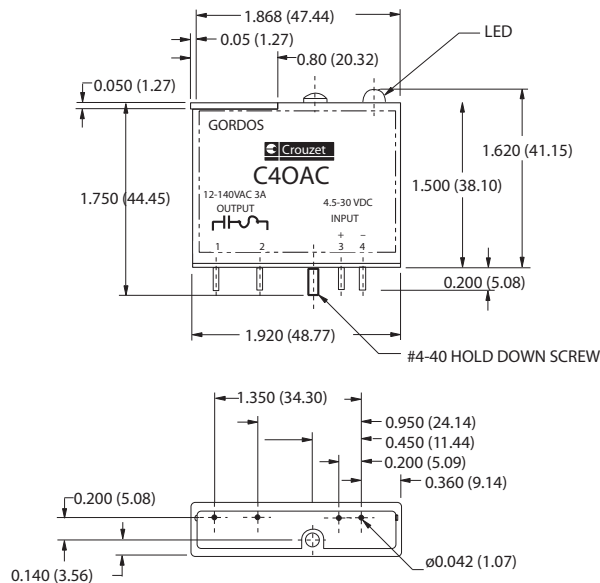


C4 SERIES I/O MODULES
AC OUTPUT SCHEMATIC
* LITTLE FUSE 229003S



C4 SERIES I/O MODULES
DC OUTPUT SCHEMATIC
* LITTLE FUSE 229003S

DIMENSIONS:



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C4 OUTPUT MODULES

SPECIFICATIONS:

INPUT SPECIFICATIONS: (1)

	C4OAC C4OACA	C4OACR C4OACAR	C4ODCA C4ODC
Nominal Voltage	4-32VDC		4-32VDC
Drop-out Voltage	1VDC		1VDC
Maximum Current (2) (3)	22 mA		16 mA
Resistance	Regulated Input		

OUTPUT SPECIFICATIONS: (1)

	C4OAC C4OACR	C4OACA C4OACAR	C4ODC	C4ODCA
Nominal Line Voltage	120 VAC	240 VAC	5-48 VDC	5-150 VDC
Minimum Line Voltage	12 VAC	12 VAC	5 VDC	3 VDC
Maximum Line Voltage	140 VAC	280 VAC	60 VDC	250 VDC
Maximum Off-state Voltage (4)	600 V Peak	600 V Peak	60 VDC	250 VDC
Maximum Off-state Leakage (5)	.1 mA	.1 mA	10 µA	100 µA
Static Off-state dv/dt (6)	200 V / µs	200 V / µs	n/a	n/a
Maximum Output Current (7)	3 A	3 A	3 A	1 A
Minimum Output Current	50 mA	50 mA	10 mA	10 mA
Maximum Surge Current (8)	100 A Peak	100 A Peak	5 A Peak	5 A Peak
On-State Voltage Drop (9)	1.6 V Peak	1.6 V Peak	1.6 VDC	1.6 VDC
HP Rating	1/4 HP	1/4 HP	n/a	n/a

GENERAL SPECIFICATION: (1)

	C4OAC C4OACA	C4OACR C4OACAR	C4ODC C4ODCA	
Operating Temperature Range	-30 to +80	-30 to +80	-30 to +80	C
Storage Temperature Range	-40 to +100	-40 to +100	-40 to +100	C
Maximum Turn-on Time (10)	8.33	0.1	0.05	mSec
Maximum Turn-off Time	8.33	8.33	0.05	mSec
Input to Output Isolation Voltage (11)	4000	4000	4000	VAC
Input/Output Capacitance	4	4	4	pF

ORDERING INFORMATION:

PART NUMBER	INPUT	OUTPUT
C4ODC	4-32VDC	5-60VDC
C4ODCA	4-32VDC	5-250VDC
C4OAC	4-32VDC	12-140VAC
C4OACA	4-32VDC	24-280VAC
C4OACR	4-32VDC	12-140VAC
C4OACAR	4-32VDC	24-280VAC

Notes:

- (1) Specifications apply to an ambient temperature of -30 to 80°C unless otherwise noted.
- (2) At 32 VDC typical.
- (3) 13 mA at 5 VDC for AC output models only.
- (4) Maximum 1 minute duration.
- (5) At maximum rated line voltage, TA=80°C.
- (6) Minimum DV/DT per EIA/NARM RS443, method RS397. DV/DT ratings do not apply to C4ODC.
- (7) Without any external heat sink in still air, TA=45°C, at 40°C derate 40 mA/°C to 80°C.
- (8) At 25°C, maximum duration: 1AC cycle for AC modules, 1 second for DC module.
- (9) At peak rated current.
- (10) Before zero voltage, Vin=4V AC modules only based on 60 Hz. Vin=15V for DC module.
- (11) For 1 second maximum duration TA=25°C.

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**DANGER / PELIGRO / DANGER /GEFAHR / PERICOLO / PERIGO****HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH.**

- Disconnect all power before installing or working with this equipment.
- Verify all connections and replace all covers before turning on power.

Failure to follow these instructions will result in death or serious injury.

RIESGO DE DESCARGA ELECTRICA O EXPLOSION.

- Desconectar todos los suministros de energia a este equipo antes de trabajar con este equipo.
- Verificar todas las conexiones y colocar todas las tapas antes de energizar el equipo.

El incumplimiento de estas instrucciones puede provocar la muerte o lesiones serias.

RISQUE DE DESCARGE ELECTRIQUE OU EXPLOSION

- Eteindre toutes les sources d'énergie de cet appareil avant de travailler dessus de cet appareil
- Vérifier tous connections, et remettre tous couverts en place avant de mettre sous

De non-suivi de ces instructions provoquera la mort ou des lésions sérieuses.

GEFAHR EINES ELEKTRISCHE N SCHLAGES ODER EINER EXPLOSION.

- Stellen Sie jeglichen Strom ab, der dieses Gerät versorgt, bevor Sie an dem Gerät Arbeiten durchführen
- Vor dem Drehen auf Energie alle Anschlüsse überprüfen und alle Abdeckungen ersetzen.

Unterlassung dieser Anweisungen können zum Tode oder zu schweren Verletzungen führen.

RISCHIO DI SCOSSA ELETTRICA O DELL'ESPLOSIONE.

- Spenga tutta l'alimentazione e che fornisce questa apparecchiatura prima del lavorare a questa apparecchiatura
- Verificare tutti i collegamenti e sostituire tutte le coperture prima della rotazione sull'alimentazione

L'omissione di seguire queste istruzioni provocherà la morte o di lesioni serie

RISCO DE DESCARGA ELÉTRICA OU EXPLOÇÃO

- Desconectar o equipamento de toda a energia antes de instalar ou trabalhar com este equipamento
- Verificar todas as conexões e recolocar todas as tampas antes de religar o equipamento

O não cumprimento destas instruções pode levar a morte ou lesões sérias.

ANNEX – ENVIRONMENTAL INFORMATION:

The environmental information disclosed in this annex including the EIP Pollution logo are in compliance with People's Republic of China Electronic Industry Standard SJ/T11364 – 2006, Marking for Control of Pollution Caused by Electronic Information Products.

Part Name	Toxic or hazardous Substance and Elements					
	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent Chromium (Cr (VI))	Polybrominated biphenyls (PBB)	Polybrominated diphenyl ethers (PBDE)
Semiconductor die	X	O	O	O	O	O
Solder	X	O	O	O	O	O

附件 - 环保信息:

此附件所标示的包括电子信息产品污染图标的环保信息符合中华人民共和国电子行业标准 **SJ/T11364 - 2006**, 电子信息产品污染控制标识要求

部件名称	有毒有害物质或元素					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr (VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
半导体芯片	X	O	O	O	O	O
焊接点	X	O	O	O	O	O

