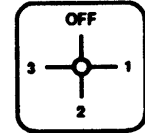


ESCUTCHEON



Brushed Aluminum
with black lettering

1.0 DESCRIPTION: CAM OPERATED AMMETER SWITCH, 4 POSITION (SINGLE POLE WITH 3 CURRENT TRANSFORMERS)

2.0 REQUIREMENTS

- 2.1 NOMINAL VOLTAGE: 600V UL/CSA
- 2.2 AMPERE RATING: 16 A UL/CSA (RESISTIVE OR LOW INDUCTIVE LOADS)
- 2.3 MAX WIRE GAGE: #12 AWG

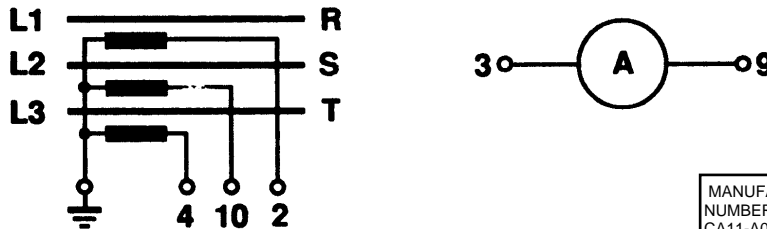
3.0 QUALITY ASSURANCE AT A-B: FUNCTIONAL

4.0 VENDOR MODIFICATIONS: A-B SHALL BE NOTIFIED OF ANY CHANGES IN MATERIALS OR PROCESSES WHICH COULD AFFECT THE PERFORMANCE, RELIABILITY OR PHYSICAL CHARACTERISTICS OF THIS DEVICE.

5.0 PACKAGING

SHIPPING CONTAINERS MUST BE MARKED WITH MANUFACTURER'S NAME AND PART NUMBER.

CONNECTION DIAGRAM
3Ø - 3 WIRE



PART NO.	CHG. LTR.
-01	A

MANUFACTURER PART NUMBER
CA11-A048-620FT2-S0C G221

REFERENCES		ROTARY SWITCH		WAS		
REVISION	DIMENSIONS APPLY BEFORE SURFACE TREATMENT			ALLEN-BRADLEY A ROCKWELL INTERNATIONAL COMPANY MILWAUKEE, WISCONSIN		
RELEASE	(DIMENSIONS IN INCHES) TOLERANCES UNLESS OTHERWISE SPECIFIED					
1 50514-89	2 PLACE DECIMAL (.XX) ± 02	DR. C. PLUCKHAN	DATE 12-9-89			SHEET 1 OF 1
	3 PLACE DECIMAL (.XXX) ± 005	CHKD.	DATE			DWG. SIZE A
REFER. BOOK	ANGLES ±	APPD. <i>NFA</i>	DATE 12-12-89	25135-011		

Switch features:

- S0 (48x48mm) Front element size (can be changed by mountings and optional extras)
- Terminal screws accessible laterally (resp. from above and below for -V mountings)
- Designed for vertical wiring (resp. horizontal for -V mountings: e.g. VE-V, FS1-V)
- Larger clearance & creepage distances (to increase the Rated Insulation Voltage to 600V for UL/Canada)
- Finger-proof terminals (IP20)

Approvals:

Approved	Confirms to requirements	No listing required
CSA, CUL, CULUS, GOST, UL	BS EN, CH, D, FI, IEC, N, ÖVE, S, VDE	

BS EN...BS EN 60947 - British Standards Institution, **CH**...Schweizerischer Elektrotechnischer Verein, **CSA**...Canadian Standards Association, **CUL**...Canadian National Standards - Listed, **CULUS**...Canadian National and United States Standards - Listed, **CUR**...Canadian National Standards - Recognized, **CURUS**...Canadian National and United States Standards - Recognized, **D**...Danmarks Elektriske Materielkontrol, **FI**...Sähkötarjastuskeskus, **GOST**...GOST, **IEC**...IEC 60947 - International Electrical Commission (IEC) Recommendation, **N**...Norges Elektriske Materielkontrol, **ÖVE**...Österreichischer Verband für Elektrotechnik, **S**...Svenska Elektriska Materielkontrollanstalten, **UL**...United States Standards - Listed, **UR**...United States Standards - Recognized, **VDE**...VDE 0660 - Verband Deutscher Elektrotechniker

AC-Values:

IEC 60947-3, EN 60947-3, VDE 0660 part 107:

Rated Operational Voltage U _e		690V	1)
Rated Insulation Voltage U _i		690V	1)
Rated Thermal Current I _u /I _{th}		20A	2)
Rated Operational Current I _e			
AC-15 Switching of control devices, contactors, valves etc.		220V-240V: 5A	2)
		380V-440V: 4A	2)
AC-20A No-load operation		20A	2)
AC-21A Switching of resistive loads, including moderate overloads			
For switching of power >1kW		20A	2)
AC-22A Switching of combined resistive or low inductive loads including moderate overloads		220V-500V: 20A	2)
		660V-690V: 20A	2)
Rated Utilization Category			
AC-2 Slip ring motor starting, reversing and plugging, star-delta starting 3 phase, 3 pole		220V-240V: 4kW	2)
		380V-440V: 7.5kW	2)
		500V-500V: 10kW	2)
		660V-690V: 10kW	2)
AC-3 Direct-on-line starting, star-delta starting			
3 phase, 3 pole		220V-240V: 3kW	2)
		380V-440V: 5.5kW	2)
		500V-500V: 5.5kW	2)
		660V-690V: 5.5kW	2)
1 phase, 2 pole		110V-120V: 0.6kW	2)
		220V-240V: 2.2kW	2)
		380V-440V: 3kW	2)
AC-4 Direct-on-line starting, reversing, plugging and inching			
3 phase, 3 pole		220V-240V: 0.55kW	2)
		380V-440V: 1.5kW	2)
		500V-500V: 1.5kW	2)
		660V-690V: 1.5kW	2)
1 phase, 2 pole		110V-120V: 0.3kW	2)
		220V-240V: 0.75kW	2)
		380V-440V: 1.5kW	2)
AC-23A Frequent switching of motors or other high inductive loads			
3 phase, 3 pole		220V-240V: 3.7kW	2)
		380V-440V: 7.5kW	2)
		500V-500V: 7.5kW	2)
		660V-690V: 7.5kW	2)
1 phase, 2 pole		110V-120V: 0.75kW	2)
		220V-240V: 2.5kW	2)
		380V-440V: 3.7kW	2)

1)...IEC 60947-3, EN 60947-3, VDE 0660 part 107 - Valid for lines with grounded common neutral termination, overvoltage category III, Other values on request.

2)...IEC 60947-3, EN 60947-3, VDE 0660 part 107

UL/Canada:

Rated Voltage	600V	1)
Rated Insulation Voltage Ui	600V	1)
Rated Thermal Current	20/16A (second value for CSA)	1)
Ampere Rating - Resistive or low inductive loads		
For switching of power >1kW	20/16A (second value for CSA)	1)
Ratings		
Standard motor load, DOL Rating (similar AC-3)		
3 phase, 3 pole	110V-120V: 1.5HP 220V-240V: 3HP 440V-480V: 5HP 550V-600V: 5HP	2) 2) 2) 2)
1 phase, 2 pole	110V-120V: 0.5HP 220V-240V: 1HP 277V-277V: 2HP 440V-480V: 2HP 550V-600V: 2HP	2) 2) 2) 2) 2)
Heavy motor Load-reversing (similar AC-4)		
3 phase, 3 pole	110V-120V: 0.5HP 220V-240V: 1HP 440V-600V: 3HP	2) 2) 2)
1 phase, 2 pole	110V-120V: 0.17HP 220V-240V: 0.5HP 277V-277V: 0.6HP	2) 2) 2)
Pilot Duty, Heavy	600VAC	1)

1)...UL/Canada - Refer to International Standards and Approvals

2)...UL/Canada

DC-Values:

Resistive loads (T<=1ms)

Number of series contact(s)							DC-switching capacity
1	2	3	4	5	6	8	
440V	660V						0.27A
220V	440V	660V					0.4A
110V	220V	330V	440V	550V	660V		1A
48V	95V	140V	190V	240V	290V	350V	12A
24V	48V	70V	95V	120V	145V	190V	20A
60V	120V	180V	240V	300V	360V	450V	4.5A

Inductive load (T=50ms)

Number of series contact(s)							DC-switching capacity
1	2	3	4	5	6	8	
110V	220V	330V	440V	550V	660V		0.4A
60V	120V	180V	240V	300V	360V	450V	1A
24V	48V	70V	95V	120V	145V	190V	12A
48V	95V	140V	190V	240V	290V	350V	2A
30V	60V	90V	120V	150V	180V	240V	5A

General:

Minimum Voltage	20V	
Rated Impulse Withstand Voltage Uimp	6kV	1)
Short Circuit Protection		
Max. fuse size (gL/gG-characteristic)	25A	
Rated short-time withstand current (1s-current)	140A	
Ambient Temperature of Stages (for switches with electro-mechanical accessories refer to optional extra)		
open at 100% Iu/Ith	55°C during 24 hours with peaks up to 60°C	
enclosed at 100% Ithe	35°C during 24 hours with peaks up to 40°C	
Terminal lead material	copper wires only	
Max. Permissible Wire Gage		
Single-core or stranded wire	2x2.5mm ²	

Flexible wire	2xAWG 12 2x2.5mm ² 2xAWG 14
Flexible wire with sleeving in accordance with DIN 46228	2x2.5mm ²

1)...IEC 60947-3, EN 60947-3, VDE 0660 part 107 - Valid for lines with grounded common neutral termination, overvoltage category III, Other values on request.