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Data sheet US2:88HUGP2MG

	Reduced voltage pump panel, Two step part winding, Size 3, 230V 3-phase motor voltage, Solid-state overload relay, OLR amp range 25-100A, 190-220/220-240V 50/60Hz coil, 150A circuit breaker, HOA Sel Sw. <(>&<)> Start P.B., Enclosure NEMA type 3/3R, Weather proof outdoor use
product brand name	Class 88
design of the product	Reduced voltage pump panel with MCP - Two step part winding
special product feature	ESP200 overload relay
General technical data	
weight [lb]	168 lb
Height x Width x Depth [in]	55 × 28 × 11 in
touch protection against electrical shock	NA for enclosed products
installation altitude [ft] at height above sea level maximum	6560 ft
ambient temperature [°F]	
● during storage	-22 ... +149 °F
● during operation	-4 ... +104 °F
ambient temperature	
● during storage	-30 ... +65 °C
● during operation	-20 ... +40 °C
country of origin	USA
Horsepower ratings	
yielded mechanical performance [hp] for 3-phase AC motor	
● at 200/208 V rated value	0 hp
● at 220/230 V rated value	50 hp
● at 460/480 V rated value	0 hp
● at 575/600 V rated value	0 hp
Contactor	
size of contactor	NEMA controller size 3
number of NO contacts for main contacts	3
operating voltage for main current circuit at AC at 60 Hz maximum	230 V
operational current at AC at 600 V rated value	90 A
mechanical service life (operating cycles) of the main contacts typical	5000000
Auxiliary contact	
number of NC contacts at contactor for auxiliary contacts	0
number of NO contacts at contactor for auxiliary contacts	1
number of total auxiliary contacts maximum	7
contact rating of auxiliary contacts of contactor according to UL	10A@600VAC (A600), 2.5A@300VDC (Q300)
Coil	
type of voltage of the control supply voltage	AC
control supply voltage	
● at DC rated value	0 ... 0 V
● at AC at 50 Hz rated value	190 ... 220 V
● at AC at 60 Hz rated value	220 ... 240 V
holding power at AC minimum	14 W
apparent pick-up power of magnet coil at AC	310 VA
apparent holding power of magnet coil at AC	26 VA
operating range factor control supply voltage rated value of magnet coil	0.85 ... 1.1
percental drop-out voltage of magnet coil related to the input voltage	50 %
ON-delay time	26 ... 41 ms
OFF-delay time	14 ... 19 ms
Overload relay	

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product function	
● overload protection	Yes
● phase failure detection	Yes
● asymmetry detection	Yes
● ground fault detection	Yes
● test function	Yes
● external reset	Yes
reset function	Manual, automatic and remote
trip class	CLASS 5 / 10 (factory set) / 20 / 30
adjustable current response value current of the current-dependent overload release	25 ... 100 A
tripping time at phase-loss maximum	3 s
relative repeat accuracy	1 %
product feature protective coating on printed-circuit board	Yes
number of NC contacts of auxiliary contacts of overload relay	1
number of NO contacts of auxiliary contacts of overload relay	1
operational current of auxiliary contacts of overload relay	
● at AC at 600 V	5 A
● at DC at 250 V	1 A
contact rating of auxiliary contacts of overload relay according to UL	5A@600VAC (B600), 1A@250VDC (R300)
insulation voltage (Ui)	
● with single-phase operation at AC rated value	600 V
● with multi-phase operation at AC rated value	300 V
Enclosure	
degree of protection NEMA rating of the enclosure	NEMA 3/3R
design of the housing	Weather proof for outdoor use
Circuit Breaker	
type of the motor protection	Motor circuit protector (magnetic trip only)
operational current of motor circuit breaker rated value	150 A
adjustable current response value current of instantaneous short-circuit trip unit	800 ... 1500 A
Mounting/wiring	
mounting position	Vertical
fastening method	Surface mounting and installation
type of electrical connection for supply voltage line-side	Box lug
type of connectable conductor cross-sections at line-side for AWG cables single or multi-stranded	1x (6 AWG ... 350 Kcmil) or 1x (4 AWG ... 350 Kcmil)
temperature of the conductor for supply maximum permissible	75 °C
material of the conductor for supply	AL or CU
type of electrical connection for load-side outgoing feeder	Box lug
tightening torque [lbf·in] for load-side outgoing feeder	120 ... 120 lbf·in
type of connectable conductor cross-sections for AWG cables for load-side outgoing feeder single or multi-stranded	1x (14 ... 2/0 AWG)
temperature of the conductor for load-side outgoing feeder maximum permissible	75 °C
material of the conductor for load-side outgoing feeder	AL or CU
type of electrical connection of magnet coil	Screw-type terminals
tightening torque [lbf·in] at magnet coil	5 ... 12 lbf·in
type of connectable conductor cross-sections of magnet coil for AWG cables single or multi-stranded	2x (16 ... 12 AWG)
temperature of the conductor at magnet coil maximum permissible	75 °C
material of the conductor at magnet coil	CU
type of electrical connection at contactor for auxiliary contacts	Screw-type terminals
tightening torque [lbf·in] at contactor for auxiliary contacts	10 ... 15 lbf·in
type of connectable conductor cross-sections at contactor for AWG cables for auxiliary contacts single or multi-stranded	1x (12 AWG), 2x (16 ... 14 AWG), 2x (18 ... 16 AWG)
temperature of the conductor at contactor for auxiliary contacts maximum permissible	75 °C
material of the conductor at contactor for auxiliary contacts	CU
type of electrical connection at overload relay for auxiliary contacts	Screw-type terminals
tightening torque [lbf·in] at overload relay for auxiliary contacts	7 ... 10 lbf·in

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type of connectable conductor cross-sections at overload relay for AWG cables for auxiliary contacts single or multi-stranded	2x (20 ... 14 AWG)
temperature of the conductor at overload relay for auxiliary contacts maximum permissible	75 °C
material of the conductor at overload relay for auxiliary contacts	CU
Short-circuit current rating	
design of the short-circuit trip	Instantaneous trip circuit breaker
maximum short-circuit current breaking capacity (Icu)	
● at 240 V	100 kA
● at 480 V	100 kA
● at 600 V	25 kA
certificate of suitability	NEMA ICS 2; UL 508; CSA 22.2, No.14
Further information	

Industrial Controls - Product Overview (Catalogs, Brochures,…)
www.usa.siemens.com/iccatalog
Industry Mall (Online ordering system)
https://mall.industry.siemens.com/mall/en/us/Catalog/product?mlfb=US2:88HUGP2MG
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
https://support.industry.siemens.com/cs/US/en/ps/US2:88HUGP2MG
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=US2:88HUGP2MG&lang=en
Certificates/approvals
https://support.industry.siemens.com/cs/US/en/ps/US2:88HUGP2MG/certificate

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