SIEMENS

US2:73HR320FA **Data sheet**

> Enclosed soft starter, Controller 3RW40461BB14, Std. duty rating 25HP @230V, Std. duty current rating 73A Control voltage 110-230 AC/DC Enclosure NEMA type 12, Dust/drip proof for indoors



Figure similar

product brand name design of the product special product feature

Class 73

Enclosed soft starter

Control transformer, built-in overload relay and bypass contactor included.

General technical data

weight [lb]

Height x Width x Depth [in]

touch protection against electrical shock

installation altitude [ft] at height above sea level maximum ambient temperature [°F]

- during storage
- during operation

ambient temperature

- during storage
- · during operation

country of origin

57 lb

 $25 \times 18 \times 13$ in

NA for enclosed products

6560 ft

-22 ... +149 °F

-4 ... +104 °F

-30 ... +65 °C

-20 ... +40 °C

USA

Power and control electronics

manufacturer's article number of soft starter

number of poles for main current circuit

design of power semiconductors (thyristors) for soft starter

operating range factor supply voltage rated value

operating range factor of control voltage rated value

operating condition for standard duty operating condition for severe duty

3RW40461BB14

2 controlled phases

0.85 ... 1.1

0.85 ... 1.1

Class 10 standard duty (350% of motor FLA for 10 seconds)

Features and functions

ramp-up (soft starting)/ramp-down (soft stop)

starting voltage [%]

stopping voltage [%]

voltage ramp

ramp-up time ramp-down time

torque control

adjustable current limitation

creep speed in both directions of rotation

pump ramp down

integrated bypass contact system external isolation contactor

intrinsic device protection overload protection

trip class

Yes

40 ... 100 %

40 ... 100 %

Yes

0 ... 20 s

0 ... 20 s

Nο Yes

No

No

Yes Yes

Yes

CLASS 5 / 15 / 20

reset function	Manual, automatic and remote
thermistor motor protection	No
inside-delta circuit	No
breakaway pulse	No
DC braking	No
combined braking	No
motor heating	No
configuration of control input 1	ON / OFF
configuration of control input 2	NA
configuration of control input 3	NA
configuration of control input 4	NA
configuration of relay output 1	ON / RUN
configuration of relay output 2	BYPASSED
configuration of relay output 3	OVERLOAD / FAILURE
configuration of relay output 4	NA
display version	4 LEDs
operating measured value display	No
product extension optional human machine interface	No
module	
type of communication optional	None
error logbook	No
event list	No
slave pointer function	No
trace function	No
	1
number of parameter sets	
engineering software (Soft Starter ES)	No
disconnector functionality	No
Contactor	
size of contactor	NA
Coil	
type of voltage of the control supply voltage	AC/DC
3,4 3	
control supply voltage	
control supply voltage	110 230 V
at DC rated value	110 230 V
at DC rated valueat AC at 50 Hz rated value	110 230 V
 at DC rated value at AC at 50 Hz rated value at AC at 60 Hz rated value 	
 at DC rated value at AC at 50 Hz rated value at AC at 60 Hz rated value Enclosure	110 230 V 110 230 V
 at DC rated value at AC at 50 Hz rated value at AC at 60 Hz rated value Enclosure degree of protection NEMA rating	110 230 V
 at DC rated value at AC at 50 Hz rated value at AC at 60 Hz rated value Enclosure	110 230 V 110 230 V 12 NEMA Type 12
 at DC rated value at AC at 50 Hz rated value at AC at 60 Hz rated value Enclosure degree of protection NEMA rating	110 230 V 110 230 V
 at DC rated value at AC at 50 Hz rated value at AC at 60 Hz rated value Enclosure degree of protection NEMA rating degree of protection NEMA rating of the enclosure	110 230 V 110 230 V 12 NEMA Type 12
 at DC rated value at AC at 50 Hz rated value at AC at 60 Hz rated value Enclosure degree of protection NEMA rating degree of protection NEMA rating of the enclosure design of the housing type of cooling	110 230 V 110 230 V 12 NEMA Type 12 dustproof and drip-proof for indoor use
at DC rated value at AC at 50 Hz rated value at AC at 60 Hz rated value Enclosure degree of protection NEMA rating degree of protection NEMA rating of the enclosure design of the housing type of cooling Mounting/wiring	110 230 V 110 230 V 12 NEMA Type 12 dustproof and drip-proof for indoor use None
at DC rated value at AC at 50 Hz rated value at AC at 60 Hz rated value Enclosure degree of protection NEMA rating degree of protection NEMA rating of the enclosure design of the housing type of cooling Mounting/wiring mounting position	110 230 V 110 230 V 12 NEMA Type 12 dustproof and drip-proof for indoor use None Vertical
 at DC rated value at AC at 50 Hz rated value at AC at 60 Hz rated value Enclosure degree of protection NEMA rating degree of protection NEMA rating of the enclosure design of the housing type of cooling Mounting/wiring mounting position fastening method 	110 230 V 110 230 V 12 NEMA Type 12 dustproof and drip-proof for indoor use None Vertical Surface mounting and installation
at DC rated value at AC at 50 Hz rated value at AC at 60 Hz rated value Enclosure degree of protection NEMA rating degree of protection NEMA rating of the enclosure design of the housing type of cooling Mounting/wiring mounting position fastening method wire length between motor starter and motor maximum	110 230 V 110 230 V 12 NEMA Type 12 dustproof and drip-proof for indoor use None Vertical Surface mounting and installation 300 m
at DC rated value at AC at 50 Hz rated value at AC at 60 Hz rated value Enclosure degree of protection NEMA rating degree of protection NEMA rating of the enclosure design of the housing type of cooling Mounting/wiring mounting position fastening method wire length between motor starter and motor maximum type of electrical connection for supply voltage line-side	110 230 V 110 230 V 12 NEMA Type 12 dustproof and drip-proof for indoor use None Vertical Surface mounting and installation 300 m Box lug
at DC rated value at AC at 50 Hz rated value at AC at 60 Hz rated value Enclosure degree of protection NEMA rating degree of protection NEMA rating of the enclosure design of the housing type of cooling Mounting/wiring mounting position fastening method wire length between motor starter and motor maximum type of connectable conductor cross-sections at line-side	110 230 V 110 230 V 12 NEMA Type 12 dustproof and drip-proof for indoor use None Vertical Surface mounting and installation 300 m
at DC rated value at AC at 50 Hz rated value at AC at 60 Hz rated value Enclosure degree of protection NEMA rating degree of protection NEMA rating of the enclosure design of the housing type of cooling Mounting/wiring mounting position fastening method wire length between motor starter and motor maximum type of electrical connection for supply voltage line-side type of connectable conductor cross-sections at line-side at AWG cables single or multi-stranded	110 230 V 110 230 V 12 NEMA Type 12 dustproof and drip-proof for indoor use None Vertical Surface mounting and installation 300 m Box lug 2/0 14 AWG
at DC rated value at AC at 50 Hz rated value at AC at 60 Hz rated value Enclosure degree of protection NEMA rating degree of protection NEMA rating of the enclosure design of the housing type of cooling Mounting/wiring mounting position fastening method wire length between motor starter and motor maximum type of electrical connection for supply voltage line-side type of connectable conductor cross-sections at line-side at AWG cables single or multi-stranded temperature of the conductor for supply maximum	110 230 V 110 230 V 12 NEMA Type 12 dustproof and drip-proof for indoor use None Vertical Surface mounting and installation 300 m Box lug
at DC rated value at AC at 50 Hz rated value at AC at 60 Hz rated value Enclosure degree of protection NEMA rating degree of protection NEMA rating of the enclosure design of the housing type of cooling Mounting/wiring mounting position fastening method wire length between motor starter and motor maximum type of electrical connection for supply voltage line-side type of connectable conductor cross-sections at line-side at AWG cables single or multi-stranded temperature of the conductor for supply maximum permissible	110 230 V 110 230 V 12 NEMA Type 12 dustproof and drip-proof for indoor use None Vertical Surface mounting and installation 300 m Box lug 2/0 14 AWG
at DC rated value at AC at 50 Hz rated value at AC at 60 Hz rated value Enclosure degree of protection NEMA rating degree of protection NEMA rating of the enclosure design of the housing type of cooling Mounting/wiring mounting position fastening method wire length between motor starter and motor maximum type of electrical connection for supply voltage line-side type of connectable conductor cross-sections at line-side at AWG cables single or multi-stranded temperature of the conductor for supply maximum permissible material of the conductor for supply	110 230 V 110 230 V 12 NEMA Type 12 dustproof and drip-proof for indoor use None Vertical Surface mounting and installation 300 m Box lug 2/0 14 AWG 75 °C CU
at DC rated value at AC at 50 Hz rated value at AC at 60 Hz rated value Enclosure degree of protection NEMA rating degree of protection NEMA rating of the enclosure design of the housing type of cooling Mounting/wiring mounting position fastening method wire length between motor starter and motor maximum type of electrical connection for supply voltage line-side type of connectable conductor cross-sections at line-side at AWG cables single or multi-stranded temperature of the conductor for supply maximum permissible material of the conductor for supply type of electrical connection for load-side outgoing feeder	110 230 V 110 230 V 12 NEMA Type 12 dustproof and drip-proof for indoor use None Vertical Surface mounting and installation 300 m Box lug 2/0 14 AWG 75 °C CU Box lug
at DC rated value at AC at 50 Hz rated value at AC at 60 Hz rated value tenclosure degree of protection NEMA rating degree of protection NEMA rating of the enclosure design of the housing type of cooling Mounting/wiring mounting position fastening method wire length between motor starter and motor maximum type of electrical connection for supply voltage line-side type of connectable conductor cross-sections at line-side at AWG cables single or multi-stranded temperature of the conductor for supply maximum permissible material of the conductor for supply type of electrical connection for load-side outgoing feeder tightening torque [lbf·in] for load-side outgoing feeder	110 230 V 110 230 V 12 NEMA Type 12 dustproof and drip-proof for indoor use None Vertical Surface mounting and installation 300 m Box lug 2/0 14 AWG 75 °C CU Box lug 58 58 lbf·in
at DC rated value at AC at 50 Hz rated value at AC at 60 Hz rated value tenclosure degree of protection NEMA rating degree of protection NEMA rating of the enclosure design of the housing type of cooling Mounting/wiring mounting position fastening method wire length between motor starter and motor maximum type of electrical connection for supply voltage line-side type of connectable conductor cross-sections at line-side at AWG cables single or multi-stranded temperature of the conductor for supply maximum permissible material of the conductor for supply type of electrical connection for load-side outgoing feeder tightening torque [lbf·in] for load-side outgoing feeder type of connectable conductor cross-sections at AWG	110 230 V 110 230 V 12 NEMA Type 12 dustproof and drip-proof for indoor use None Vertical Surface mounting and installation 300 m Box lug 2/0 14 AWG 75 °C CU Box lug 58 58 lbf·in 3x (10 1/0 AWG) (front only) or 2x (10 1/0 AWG) (back only) or 1x
 at DC rated value at AC at 50 Hz rated value at AC at 60 Hz rated value Enclosure degree of protection NEMA rating degree of protection NEMA rating of the enclosure design of the housing type of cooling Mounting/wiring mounting position fastening method wire length between motor starter and motor maximum type of electrical connection for supply voltage line-side type of connectable conductor cross-sections at line-side at AWG cables single or multi-stranded temperature of the conductor for supply maximum permissible material of the conductor for supply type of electrical connection for load-side outgoing feeder tightening torque [lbf·in] for load-side outgoing feeder type of connectable conductor cross-sections at AWG cables for load-side outgoing feeder single or multi-	110 230 V 110 230 V 12 NEMA Type 12 dustproof and drip-proof for indoor use None Vertical Surface mounting and installation 300 m Box lug 2/0 14 AWG 75 °C CU Box lug 58 58 lbf·in
 at DC rated value at AC at 50 Hz rated value at AC at 60 Hz rated value Enclosure degree of protection NEMA rating degree of protection NEMA rating of the enclosure design of the housing type of cooling Mounting/wiring mounting position fastening method wire length between motor starter and motor maximum type of electrical connection for supply voltage line-side type of connectable conductor cross-sections at line-side at AWG cables single or multi-stranded temperature of the conductor for supply maximum permissible material of the conductor for supply type of electrical connection for load-side outgoing feeder tightening torque [lbf·in] for load-side outgoing feeder type of connectable conductor cross-sections at AWG cables for load-side outgoing feeder single or multi-stranded	110 230 V 110 230 V 12 NEMA Type 12 dustproof and drip-proof for indoor use None Vertical Surface mounting and installation 300 m Box lug 2/0 14 AWG 75 °C CU Box lug 58 58 lbf·in 3x (10 1/0 AWG) (front only) or 2x (10 1/0 AWG) (back only) or 1x (10 2/0 AWG) (both front & back)
 at DC rated value at AC at 50 Hz rated value at AC at 60 Hz rated value Enclosure degree of protection NEMA rating degree of protection NEMA rating of the enclosure design of the housing type of cooling Mounting/wiring mounting position fastening method wire length between motor starter and motor maximum type of electrical connection for supply voltage line-side type of connectable conductor cross-sections at line-side at AWG cables single or multi-stranded temperature of the conductor for supply maximum permissible material of the conductor for supply type of electrical connection for load-side outgoing feeder tightening torque [lbf·in] for load-side outgoing feeder type of connectable conductor cross-sections at AWG cables for load-side outgoing feeder single or multi-stranded temperature of the conductor for load-side outgoing feeder	110 230 V 110 230 V 12 NEMA Type 12 dustproof and drip-proof for indoor use None Vertical Surface mounting and installation 300 m Box lug 2/0 14 AWG 75 °C CU Box lug 58 58 lbf·in 3x (10 1/0 AWG) (front only) or 2x (10 1/0 AWG) (back only) or 1x
 at DC rated value at AC at 50 Hz rated value at AC at 60 Hz rated value Enclosure degree of protection NEMA rating degree of protection NEMA rating of the enclosure design of the housing type of cooling Mounting/wiring mounting position fastening method wire length between motor starter and motor maximum type of electrical connection for supply voltage line-side type of connectable conductor cross-sections at line-side at AWG cables single or multi-stranded temperature of the conductor for supply maximum permissible material of the conductor for supply type of electrical connection for load-side outgoing feeder tightening torque [lbf·in] for load-side outgoing feeder type of connectable conductor cross-sections at AWG cables for load-side outgoing feeder single or multi-stranded temperature of the conductor for load-side outgoing feeder maximum permissible	110 230 V 110 230 V 110 230 V 12 NEMA Type 12 dustproof and drip-proof for indoor use None Vertical Surface mounting and installation 300 m Box lug 2/0 14 AWG 75 °C CU Box lug 58 58 lbf·in 3x (10 1/0 AWG) (front only) or 2x (10 1/0 AWG) (back only) or 1x (10 2/0 AWG) (both front & back)
 at DC rated value at AC at 50 Hz rated value at AC at 60 Hz rated value Enclosure degree of protection NEMA rating degree of protection NEMA rating of the enclosure design of the housing type of cooling Mounting/wiring mounting position fastening method wire length between motor starter and motor maximum type of electrical connection for supply voltage line-side type of connectable conductor cross-sections at line-side at AWG cables single or multi-stranded temperature of the conductor for supply maximum permissible material of the conductor for load-side outgoing feeder tightening torque [lbf·in] for load-side outgoing feeder type of connectable conductor cross-sections at AWG cables for load-side outgoing feeder stranded temperature of the conductor for load-side outgoing feeder maximum permissible material of the conductor for load-side outgoing feeder maximum permissible material of the conductor for load-side outgoing feeder	110 230 V 110 230 V 110 230 V 12 NEMA Type 12 dustproof and drip-proof for indoor use None Vertical Surface mounting and installation 300 m Box lug 2/0 14 AWG 75 °C CU Box lug 58 58 lbf·in 3x (10 1/0 AWG) (front only) or 2x (10 1/0 AWG) (back only) or 1x (10 2/0 AWG) (both front & back) 75 °C CU
 at DC rated value at AC at 50 Hz rated value at AC at 60 Hz rated value Enclosure degree of protection NEMA rating degree of protection NEMA rating of the enclosure design of the housing type of cooling Mounting/wiring mounting position fastening method wire length between motor starter and motor maximum type of electrical connection for supply voltage line-side type of connectable conductor cross-sections at line-side at AWG cables single or multi-stranded temperature of the conductor for supply maximum permissible material of the conductor for supply type of electrical connection for load-side outgoing feeder tightening torque [lbf-in] for load-side outgoing feeder type of connectable conductor cross-sections at AWG cables for load-side outgoing feeder stranded temperature of the conductor for load-side outgoing feeder maximum permissible material of the conductor for load-side outgoing feeder maximum permissible material of the conductor for load-side outgoing feeder type of electrical connection for auxiliary and control circuit	110 230 V 110 230 V 110 230 V 12 NEMA Type 12 dustproof and drip-proof for indoor use None Vertical Surface mounting and installation 300 m Box lug 2/0 14 AWG 75 °C CU Box lug 58 58 lbf·in 3x (10 1/0 AWG) (front only) or 2x (10 1/0 AWG) (back only) or 1x (10 2/0 AWG) (both front & back) 75 °C CU screw-type terminals
 at DC rated value at AC at 50 Hz rated value at AC at 60 Hz rated value Enclosure degree of protection NEMA rating degree of protection NEMA rating of the enclosure design of the housing type of cooling Mounting/wiring mounting position fastening method wire length between motor starter and motor maximum type of electrical connection for supply voltage line-side type of connectable conductor cross-sections at line-side at AWG cables single or multi-stranded temperature of the conductor for supply maximum permissible material of the conductor for supply type of electrical connection for load-side outgoing feeder tightening torque [lbf·in] for load-side outgoing feeder type of connectable conductor cross-sections at AWG cables for load-side outgoing feeder stranded temperature of the conductor for load-side outgoing feeder maximum permissible material of the conductor for load-side outgoing feeder type of electrical connection for auxiliary and control circuit tightening torque [lbf·in] for auxiliary and control contacts	110 230 V 110 230 V 110 230 V 12 NEMA Type 12 dustproof and drip-proof for indoor use None Vertical Surface mounting and installation 300 m Box lug 2/0 14 AWG 75 °C CU Box lug 58 58 lbf·in 3x (10 1/0 AWG) (front only) or 2x (10 1/0 AWG) (back only) or 1x (10 2/0 AWG) (both front & back) 75 °C CU
 at DC rated value at AC at 50 Hz rated value at AC at 60 Hz rated value Enclosure degree of protection NEMA rating degree of protection NEMA rating of the enclosure design of the housing type of cooling Mounting/wiring mounting position fastening method wire length between motor starter and motor maximum type of electrical connection for supply voltage line-side type of connectable conductor cross-sections at line-side at AWG cables single or multi-stranded temperature of the conductor for supply maximum permissible material of the conductor for supply type of electrical connection for load-side outgoing feeder type of connectable conductor cross-sections at AWG cables for load-side outgoing feeder type of connectable conductor cross-sections at AWG cables for load-side outgoing feeder single or multi-stranded temperature of the conductor for load-side outgoing feeder maximum permissible material of the conductor for load-side outgoing feeder type of electrical connection for auxiliary and control circuit tightening torque [lbf-in] for auxiliary and control contacts with screw-type terminals	110 230 V 110 230 V 110 230 V 12 NEMA Type 12 dustproof and drip-proof for indoor use None Vertical Surface mounting and installation 300 m Box lug 2/0 14 AWG 75 °C CU Box lug 58 58 lbf·in 3x (10 1/0 AWG) (front only) or 2x (10 1/0 AWG) (back only) or 1x (10 2/0 AWG) (both front & back) 75 °C CU screw-type terminals 7 10 lbf·in
 at DC rated value at AC at 50 Hz rated value at AC at 60 Hz rated value Enclosure degree of protection NEMA rating degree of protection NEMA rating of the enclosure design of the housing type of cooling Mounting/wiring mounting position fastening method wire length between motor starter and motor maximum type of electrical connection for supply voltage line-side type of connectable conductor cross-sections at line-side at AWG cables single or multi-stranded temperature of the conductor for supply maximum permissible material of the conductor for supply type of electrical connection for load-side outgoing feeder tightening torque [lbf-in] for load-side outgoing feeder type of connectable conductor cross-sections at AWG cables for load-side outgoing feeder single or multi-stranded temperature of the conductor for load-side outgoing feeder maximum permissible material of the conductor for load-side outgoing feeder type of electrical connection for auxiliary and control circuit tightening torque [lbf-in] for auxiliary and control contacts with screw-type terminals temperature of the conductor for auxiliary and control	110 230 V 110 230 V 110 230 V 12 NEMA Type 12 dustproof and drip-proof for indoor use None Vertical Surface mounting and installation 300 m Box lug 2/0 14 AWG 75 °C CU Box lug 58 58 lbf·in 3x (10 1/0 AWG) (front only) or 2x (10 1/0 AWG) (back only) or 1x (10 2/0 AWG) (both front & back) 75 °C CU screw-type terminals
 at DC rated value at AC at 50 Hz rated value at AC at 60 Hz rated value Enclosure degree of protection NEMA rating degree of protection NEMA rating of the enclosure design of the housing type of cooling Mounting/wiring mounting position fastening method wire length between motor starter and motor maximum type of electrical connection for supply voltage line-side type of connectable conductor cross-sections at line-side at AWG cables single or multi-stranded temperature of the conductor for supply maximum permissible material of the conductor for supply type of electrical connection for load-side outgoing feeder tightening torque [lbf-in] for load-side outgoing feeder type of connectable conductor cross-sections at AWG cables for load-side outgoing feeder single or multi-stranded temperature of the conductor for load-side outgoing feeder maximum permissible material of the conductor for load-side outgoing feeder type of electrical connection for auxiliary and control circuit tightening torque [lbf-in] for auxiliary and control contacts with screw-type terminals	110 230 V 110 230 V 110 230 V 12 NEMA Type 12 dustproof and drip-proof for indoor use None Vertical Surface mounting and installation 300 m Box lug 2/0 14 AWG 75 °C CU Box lug 58 58 lbf·in 3x (10 1/0 AWG) (front only) or 2x (10 1/0 AWG) (back only) or 1x (10 2/0 AWG) (both front & back) 75 °C CU screw-type terminals 7 10 lbf·in

Short-circuit current rating	
design of the fuse link for short-circuit protection of the main circuit required	10kA@600V (Class H or K); 100kA@600V (Class R or J)
design of the short-circuit trip	Thermal magnetic circuit breaker
maximum short-circuit current breaking capacity (Icu)	
• at 240 V	42 kA
● at 480 V	42 kA
● at 600 V	0 kA
certificate of suitability	NEMA ICS 2; UL 508A

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=US2:73HR320FA

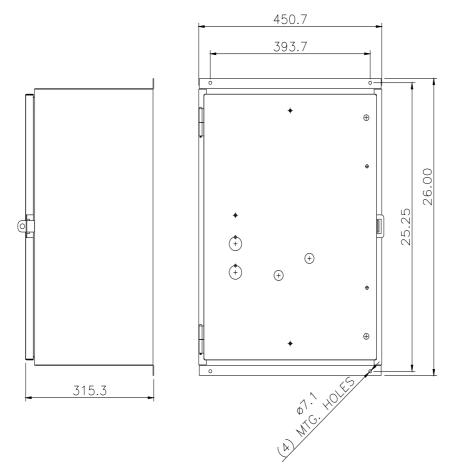
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

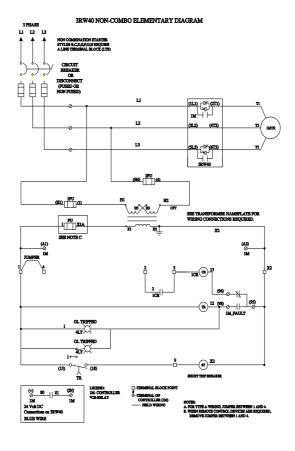
https://support.industry.siemens.com/cs/US/en/ps/US2:73HR320FA

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=US2:73HR320FA&lang=en

Certificates/approvals

https://support.industry.siemens.com/cs/US/en/ps/US2:73HR320FA/certificate





D69015H36

last modified: 1/25/2022 🖸