



Product designation Solid state relay Product type designation HSUB HSUB HSUB HSUB HSUB Product type designation HSUB Provphase HSUB Provphase Provphas				Car Car
Product type designation HS2B Type Input characteristics Total Control Voltage S.3.32VDC Operating voltage limits Operating voltage pick-up Qreating voltage Qrop-out Qreating voltage V 3 Input current at minmax voltage WA 1013 Input towerse voltage WA 12280 Switching-on Half cycle max Switching-off YAC 12280 Switching voltage YAC 12280 Rated operating voltage YAC 12280 Rated operating voltage YAC 12280 Blocking voltage YAC 12280 Poperational frequency (minmax) Hz 4565 Rated operating current AC-51 (resistive load) at 40°C A 25 Rated operating current AC-51 (resistive load) at 55°C A 25 Rated operating current AC-51 (resistive load) at 55°C A 25 Rated operating current AC-51 (resistive load) at 55°C X 25 Rated operating current AC	Product designation			Solid state relay
Type	-			•
Control voltage Control terminals Conductor section connectable (load terminals) with 1 or 2 wires minmax Control voltage Control voltage Control voltage Control terminals Contr	· · · · · · · · · · · · · · · · · · ·			Two-phase
Operating voltage limits	Input characteristics			
Operating voltage pick-up Operating voltage drop-out V V S 2	Control voltage			332VDC
Input current at minmax voltage Operating voltage drop-out V 2 Input reverse voltage x 32 Operating times Witching-on Half cycle max Switching-off Half cycle max Output characteristics VEX 12280 Switching mode VAC 12280 Rated operating voltage VAC 12280 Blocking voltage VAC 12280 Operational frequency (minmax) Hz 4565 Rated operating current AC-51 (resistive load) at 40°C A 25 Rated operating current AC-51 (resistive load) at 55°C A 21 Heatsink for use at 40°C and 55°C at rated current AC-51 K/W 40.3 Non repetitive surge peak on state current t=10ms A 250 Noff state leakage current mA 1 On state output voltage drop V 1.6 Critical rate of rise of off-state voltage dv/dt V/ys 500 Input - Output to metal base V 2500 Izt A2s 340 Termin	Operating voltage limits			
Input current at minmax voltage		Operating voltage pick-up	V	3
Input reverse voltage		Operating voltage drop-out	V	2
Operating times Half cycle max Switching-off Half cycle max Output characteristics Zero crossing Rated operating voltage VAC 12280 Blocking voltage V 600 Operational frequency (minmax) Hz 4565 Rated operating current AC-51 (resistive load) at 40°C A 25 Rated operating current AC-51 (resistive load) at 55°C A 21 Hetatsink for use at 40°C and 55°C at rated current AC-51 K/W ≤0.3 Operational current min A 0.05 Non repetitive surge peak on state current t=10ms A 250 Off state leakage current mA 1 On state output voltage drop V 1.6 Critical rate of rise of off-state voltage dv/dt V/µs 500 Input - Output to metal base V 2500 121 A25 Control terminals Type Faston 4.8x0.8 Conductor section connectable (control terminals) with 1 or 2 wires minmax n° 1614 (Faston lug) Load terminals Type Faston 6.3x0.8 Conductor section connectable (load terminals) with 1 or 2 wires minmax n° 1610 (Faston lug) Load terminals Flexible c/w	Input current at minmax voltage		mA	1013
Switching-on Half cycle max between the control terminals Half cycle max between the control terminals Switching-off Half cycle max between the control terminals Switching mode Zero crossing Rated operating voltage VAC 12280 Blocking voltage VAC 12280 Blocking voltage VAC 12280 Operational frequency (minmax) Hz 4565 Rated operating current AC-51 (resistive load) at 55°C A 25 Rated operating current AC-51 (resistive load) at 55°C A 21 Heatsink for use at 40°C and 55°C at rated current AC-51 K/W ≤0.3 Operational current min A 0.05 Non repetitive surge peak on state current t=10ms A 250 Non repetitive surge peak on state current t=10ms A 250 Off state leakage current mA 1 4 On state output voltage drop V 4.00 V 4000 Input - Output to metal base V 2500 V 2500 V 2500 V 2500 V	Input reverse voltage		V	32
Switching-off Half cycle max Output characteristics Seric crossing Rated operating voltage VAC 12280 Blocking voltage VAC 600 Operational frequency (minmax) Hz 4565 Rated operating current AC-51 (resistive load) at 40°C A 25 Rated operating current AC-51 (resistive load) at 55°C A 21 Heatsink for use at 40°C and 55°C at rated current AC-51 K/W ≤0.3 Operational current min A 0.05 Non repetitive surge peak on state current t=10ms A 250 Off state leakage current mA 1 On state output voltage drop V 1.6 Critical rate of rise of off-state voltage dv/dt V/µs 500 Input - Output to metal base V 2500 Izt A2s 340 Terminal characteristics Type Faston 4.8x0.8 Conductor section connectable (control terminals) with 1 or 2 wires minmax AWG stranded n° 1614 (Faston lug) Load terminals Type Faston 6.3x0.8 </td <td>Operating times</td> <td></td> <td></td> <td></td>	Operating times			
Output characteristics Switching mode Zero crossing Rated operating voltage VAC 12280 Blocking voltage V 600 Operational frequency (minmax) Hz 4565 Rated operating current AC-51 (resistive load) at 40°C A 25 Rated operating current AC-51 (resistive load) at 55°C A 21 Heatsink for use at 40°C and 55°C at rated current AC-51 K/W ≤0.3 Operational current min A 0.05 Non repetitive surge peak on state current t=10ms A 250 Non repetitive surge peak on state current t=10ms A 250 Off state leakage current mA 1 On state output voltage drop V 1.6 Critical rate of rise of off-state voltage dv/dt V/µs 500 Input - Output isolation V 4000 Input - Output to metal base V 2500 I2t A2s 340 Control terminals Type Faston 4.8x0.8 Conductor section connectable (control terminals) with 1 or 2 wires minmax Type	Switching-on			Half cycle max
Switching mode Zero crossing Rated operating voltage VAC 12280 Blocking voltage V 600 Operational frequency (minmax) Hz 4565 Rated operating current AC-51 (resistive load) at 40°C A 25 Rated operating current AC-51 (resistive load) at 55°C A 21 Heatsink for use at 40°C and 55°C at rated current AC-51 K/W 50.3 Operational current min A 0.05 Non repetitive surge peak on state current t=10ms A 250 Off state leakage current mA 1 On state output voltage drop V 1.6 Critical rate of rise of off-state voltage dv/dt V/µs 500 Input - Output isolation V 4000 Input - Output to metal base V 2500 I2t A2s 340 Terminal characteristics Control terminals Type Faston 4.8x0.8 Conductor section connectable (control terminals) with 1 or 2 wires minmax AWG stranded n° 1614 (Faston lug)	Switching-off			Half cycle max
Rated operating voltage VAC 12280 Blocking voltage V 600 Operational frequency (minmax) Hz 4565 Rated operating current AC-51 (resistive load) at 40°C A 25 Rated operating current AC-51 (resistive load) at 55°C A 21 Heatsink for use at 40°C and 55°C at rated current AC-51 K/W ≤0.3 Operational current min A 0.05 Non repetitive surge peak on state current t=10ms A 250 Off state leakage current mA 1 On state output voltage drop V 1.6 Critical rate of rise of off-state voltage dv/dt V/μs 500 Input - Output isolation V 4000 Input - Output for metal base V 2500 12t A2s 340 Terminal characteristics Conductor section connectable (control terminals) with 1 or 2 wires minmax Type Faston 4.8x0.8 Conductor section connectable (load terminals) with 1 or 2 wires minmax AWG stranded n° 1614 (Faston lug) Ingl	Output characteristics			
Blocking voltage	Switching mode			Zero crossing
Page 20 Paston al frequency (minmax) Hz 4565 Rated operating current AC-51 (resistive load) at 40°C A 25 Rated operating current AC-51 (resistive load) at 55°C A 21 Heatsink for use at 40°C and 55°C at rated current AC-51 K/W ≤0.3 Operational current min A 0.05 Non repetitive surge peak on state current t=10ms A 250 Off state leakage current mA 1 On state output voltage drop V 1.6 Critical rate of rise of off-state voltage dv/dt V/µs 500 Input - Output isolation V 4000 Input - Output to metal base V 2500 I2t A2s 340 Terminal characteristics Type Faston 4.8x0.8 Conductor section connectable (control terminals) with 1 or 2 wires minmax AWG stranded n° 1614 (Faston lug) Load terminals Type Faston 6.3x0.8 Conductor section connectable (load terminals) with 1 or 2 wires minmax AWG stranded N° 1614 (Faston lug) Load terminals Type Faston 6.3x0.8 Conductor section connectable (load terminals) with 1 or 2 wires minmax AWG stranded N° 1610 (Faston lug) O756 (Faston lug) O75.	Rated operating voltage		VAC	12280
Rated operating current AC-51 (resistive load) at 40°C A 25 Rated operating current AC-51 (resistive load) at 55°C A 21 Heatsink for use at 40°C and 55°C at rated current AC-51 K/W ≤0.3 Operational current min A 0.05 Non repetitive surge peak on state current t=10ms A 250 Off state leakage current mA 1 On state output voltage drop V 1.6 Critical rate of rise of off-state voltage dv/dt V/µs 500 Input - Output isolation V 4000 Input - Output to metal base V 2500 I2t A2s 340 Terminal characteristics Type Faston 4.8x0.8 Control terminals Type Faston 4.8x0.8 Conductor section connectable (control terminals) with 1 or 2 wires minmax a 1614 (Faston lug) Load terminals Type Faston 6.3x0.8 Conductor section connectable (load terminals) with 1 or 2 wires minmax AWG stranded n° 1610 (Faston lug) Load terminals Flexible c/w insulated spade lug	Blocking voltage		V	600
Rated operating current AC-51 (resistive load) at 40°C A 25 Rated operating current AC-51 (resistive load) at 55°C A 21 Heatsink for use at 40°C and 55°C at rated current AC-51 K/W ≤0.3 Operational current min A 0.05 Non repetitive surge peak on state current t=10ms A 250 Off state leakage current mA 1 On state output voltage drop V 1.6 Critical rate of rise of off-state voltage dv/dt V/µs 500 Input - Output isolation V 4000 Input - Output to metal base V 2500 I2t A2s 340 Terminal characteristics Type Faston 4.8x0.8 Conductor section connectable (control terminals) with 1 or 2 wires minmax a 1614 (Faston lug) Load terminals Type Faston 6.3x0.8 Conductor section connectable (load terminals) with 1 or 2 wires minmax AWG stranded n° 1610 (Faston lug) Load terminals Flexible c/w insulated spade lug nm2 1610 (Faston lug) Operating position	Operational frequency (minmax)		Hz	4565
Heatsink for use at 40°C and 55°C at rated current AC-51 K/W ≤0.3 Operational current min A 0.05 Non repetitive surge peak on state current t=10ms A 250 Off state leakage current mA 1 On state output voltage drop V 1.6 Critical rate of rise of off-state voltage dv/dt V/µs 500 Input - Output isolation V 4000 Input - Output to metal base V 2500 I2t A2s 340 Terminal characteristics Control terminals Type Faston 4.8x0.8 Conductor section connectable (control terminals) with 1 or 2 wires minmax AWG stranded Plug mm2 1614 (Faston lug) 0.756 (Faston lug) Load terminals Type Faston 6.3x0.8 Conductor section connectable (load terminals) with 1 or 2 wires minmax AWG stranded n° 1610 (Faston lug) 0.756 (Faston lug) Conductor section connectable (load terminals) with 1 or 2 wires minmax AWG stranded n° 1610 (Faston lug) 0.756 (Faston lug) Conductor section connectable (load terminals) with 1 or 2 wires minmax AWG stranded n° 1610 (Faston lug) 0.756 (Faston lug) AWG stranded n° anches man allowable wm2 210 (Faston lug) Operating position allowable Any			Α	25
Operational current min A 0.05 Non repetitive surge peak on state current t=10ms A 250 Off state leakage current mA 1 On state output voltage drop V 1.6 Critical rate of rise of off-state voltage dv/dt V/μs 500 Input - Output isolation V 4000 Input - Output to metal base V 2500 I2t A2s 340 Terminal characteristics Control terminals Type Faston 4.8x0.8 Conductor section connectable (control terminals) with 1 or 2 wires minmax a WG stranded n° 1614 (Faston lug) Load terminals Type Faston 6.3x0.8 Conductor section connectable (load terminals) with 1 or 2 wires minmax AWG stranded n° 1610 (Faston lug) Load terminals Type Faston 6.3x0.8 Conductor section connectable (load terminals) with 1 or 2 wires minmax AWG stranded n° 1610 (Faston lug) Operating position allowable Any	Rated operating current AC-51 (resistive load) at 55°C		Α	21
Non repetitive surge peak on state current t=10ms	Heatsink for use at 40°C and 55°C at rated current AC-51		K/W	≤0.3
Off state leakage current mA 1 On state output voltage drop V 1.6 Critical rate of rise of off-state voltage dv/dt V/µs 500 Input - Output isolation V 4000 Input - Output to metal base V 2500 I2t A2s 340 Terminal characteristics Control terminals Type Faston 4.8x0.8 Conductor section connectable (control terminals) with 1 or 2 wires minmax aWG stranded n° 1614 (Faston lug) Load terminals Type Faston 6.3x0.8 Conductor section connectable (load terminals) with 1 or 2 wires minmax Type Faston 6.3x0.8 Conductor section connectable (load terminals) with 1 or 2 wires minmax n° 1610 (Faston lug) Flexible c/w insulated spade lug n° 1610 (Faston lug) Operating position allowable Any	Operational current min		Α	0.05
Off state leakage current mA 1 On state output voltage drop V 1.6 Critical rate of rise of off-state voltage dv/dt V/µs 500 Input - Output isolation V 4000 Input - Output to metal base V 2500 I2t A2s 340 Terminal characteristics Control terminals Type Faston 4.8x0.8 Conductor section connectable (control terminals) with 1 or 2 wires minmax aWG stranded n° 1614 (Faston lug) Load terminals Type Faston 6.3x0.8 Conductor section connectable (load terminals) with 1 or 2 wires minmax Type Faston 6.3x0.8 Conductor section connectable (load terminals) with 1 or 2 wires minmax n° 1610 (Faston lug) Flexible c/w insulated spade lug n° 1610 (Faston lug) Operating position allowable Any	Non repetitive surge peak on state current t=10ms		Α	250
On state output voltage drop Critical rate of rise of off-state voltage dv/dt Input - Output isolation Input - Output to metal base It is is is is input - Output to metal base It is is is input - Output to metal base It is is is is input - Output to metal base It is is is is is is input - Output to metal base It is is is is is is is input - Output to metal base It is			mA	1
Critical rate of rise of off-state voltage dv/dt V/µs 500 Input - Output isolation V 4000 Input - Output to metal base V 2500 I2t A2s 340 Terminal characteristics Control terminals Type Faston 4.8x0.8 Conductor section connectable (control terminals) with 1 or 2 wires minmax AWG stranded n° 1614 (Faston lug) Flexible c/w insulated spade lug mm2 0.756 (Faston lug) Load terminals Type Faston 6.3x0.8 Conductor section connectable (load terminals) with 1 or 2 wires minmax AWG stranded n° 1614 (Faston lug) 0.756 (Faston lug) 0.756 (Faston lug) Flexible c/w insulated spade lug mm2 0.756 (Faston lug) AWG stranded n° 1610 (Faston lug) 0.756 (Faston lug) AWG stranded n° 1610 (Faston lug) ANG stranded lug mm2 0.756 (Faston lug)			V	1.6
Input - Output isolation Input - Output to metal base I2t A2s 340 Terminal characteristics Control terminals Conductor section connectable (control terminals) with 1 or 2 wires minmax AWG stranded Flexible c/w insulated spade lug Any			V/µs	500
Input - Output to metal base V 2500 I2t A2s 340 Terminal characteristics Control terminals Type Faston 4.8x0.8 Conductor section connectable (control terminals) with 1 or 2 wires minmax AWG stranded n° 1614 (Faston lug) 0.756 (Faston lug) Load terminals Type Faston 6.3x0.8 Conductor section connectable (load terminals) with 1 or 2 wires minmax AWG stranded n° 1610 (Faston lug) Type Faston 6.3x0.8 Conductor section connectable (load terminals) with 1 or 2 wires minmax AWG stranded n° 1610 (Faston lug) 0.756 (Faston lug) 0.756 (Faston lug) 0.756 (Faston lug) Any				4000
Terminal characteristics Control terminals Conductor section connectable (control terminals) with 1 or 2 wires minmax AWG stranded n° 1614 (Faston lug) Flexible c/w insulated spade lug mm2 0.756 (Faston lug) Load terminals Conductor section connectable (load terminals) with 1 or 2 wires minmax AWG stranded n° 1610 (Faston lug) Flexible c/w insulated spade lug mm2 1610 (Faston lug) Flexible c/w insulated spade lug mm2 0.756 (Faston lug) Operating position Any			V	
Terminal characteristicsControl terminalsTypeFaston 4.8x0.8Conductor section connectable (control terminals) with 1 or 2 wires minmaxAWG strandedn°1614 (Faston lug)AWG strandedn°1614 (Faston lug)Load terminalsTypeFaston 6.3x0.8Conductor section connectable (load terminals) with 1 or 2 wires minmaxTypeFaston 6.3x0.8AWG strandedn°1610 (Faston lug)Flexible c/w insulated spade lugmm20.756 (Faston lug)Operating positionallowableAny			A2s	
Control terminals Conductor section connectable (control terminals) with 1 or 2 wires minmax AWG stranded n° 1614 (Faston lug) Flexible c/w insulated spade lug mm2 0.756 (Faston lug) Load terminals Conductor section connectable (load terminals) with 1 or 2 wires minmax AWG stranded n° 1610 (Faston lug) AWG stranded n° 1610 (Faston lug) Flexible c/w insulated spade lug mm2 0.756 (Faston lug) Operating position Any	Terminal characteristics			
Conductor section connectable (control terminals) with 1 or 2 wires minmax AWG stranded n° liug) Flexible c/w insulated spade lug mm2 Load terminals Type Faston 6.3x0.8 Conductor section connectable (load terminals) with 1 or 2 wires minmax AWG stranded n° liug) Flexible c/w insulated spade lug mm2 AWG stranded n° liug) Flexible c/w insulated spade lug mm2 Operating position Any			Type	Faston 4.8x0.8
AWG stranded n° lug) Flexible c/w insulated spade lug mm2 0.756 (Faston lug) Load terminals Type Faston 6.3x0.8 Conductor section connectable (load terminals) with 1 or 2 wires minmax AWG stranded n° 1610 (Faston lug) Flexible c/w insulated spade lug mm2 0.756 (Faston lug) Operating position allowable Any	Conductor section connectable (control terminals) with 1 or 2	wires minmax		
Flexible c/w insulated spade lug mm2 0.756 (Faston lug) Load terminals Type Faston 6.3x0.8 Conductor section connectable (load terminals) with 1 or 2 wires minmax AWG stranded n° 1610 (Faston lug) Flexible c/w insulated spade lug mm2 0.756 (Faston 6.3x0.8) AWG stranded n° 1610 (Faston lug) Operating position allowable Any	, , , , , , , , , , , , , , , , , , ,		n°	
Load terminalsTypeFaston 6.3x0.8Conductor section connectable (load terminals) with 1 or 2 wires minmaxAWG strandedn°1610 (Faston lug)Flexible c/w insulated spade lugmm20.756 (Faston lug)Operating positionallowableAny	Fie	exible c/w insulated spade lug	mm2	0.756 (Faston
Conductor section connectable (load terminals) with 1 or 2 wires minmax AWG stranded n° 1610 (Faston lug) Flexible c/w insulated spade lug mm2 0.756 (Faston lug) Operating position allowable Any	Load terminals		Type	
AWG stranded n° lug) Flexible c/w insulated spade lug mm2 0.756 (Faston lug) Operating position allowable Any		res minmax		-
Plexible c/w insulated spade lug mm2 0.756 (Faston lug) Operating position allowable Any	, ,		n°	
allowable Any	Fle	exible c/w insulated spade lug	mm2	0.756 (Faston
·	Operating position			
·		allowable		Any
	Fixing			•



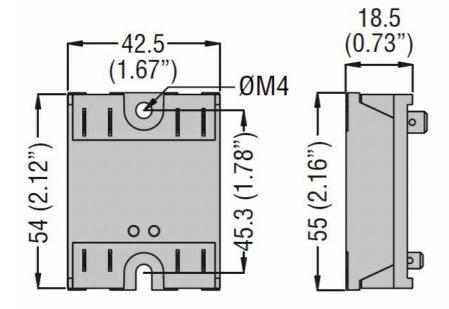
ENERGY AND AUTOMATION

Ambient conditions

Temperature

Operating temperature				
	min	°C	-40	
	max	°C	+90	
Storage temperature				
	min	°C	-40	
	max	°C	+100	

Dimensions



Certifications and compliance

Certifications

IEC/EN/BS 60947-4-2 IEC/EN/BS 60947-4-3 IEC/EN/BS 62314

IEC/EN/BS 6335-1

Compliance

CSA cURus VDE

ETIM classification

EC000066 - Power contactor, AC switching