

IS580 Hydraulic Servo Drive

High-performance hydraulic servo drive

Closed-loop pressure and flow control

Features & functions

- Dedicated servo drive for plastic injection molding machine
- Built-in multi pump configuration
- Servo drive for PMSM
- Closed loop FVC control
- Start-up torque
 - 180% at 0 Hz for FVC
- Simplified parameter for easy start up
- Flexible programmable I/Os
- Comprehensive trip diagnostics
- Output frequency 300 Hz
- Communications (optional):
 - Modbus-RTU
 - CANlink/ CANopen
 - PROFIBUS-DP

Wide operating voltage
Three-phases 380 to 480 Vac
11 to 160 kW
Three-phase 220 Vac, 5.5~80 kW

Operation in high ambient temperature $\leq 50^{\circ}\text{C}$
Note: If operating above 40°C derating is required

Enhanced reliability with conformal coating, protection against humidity and dust pollution

Compact size



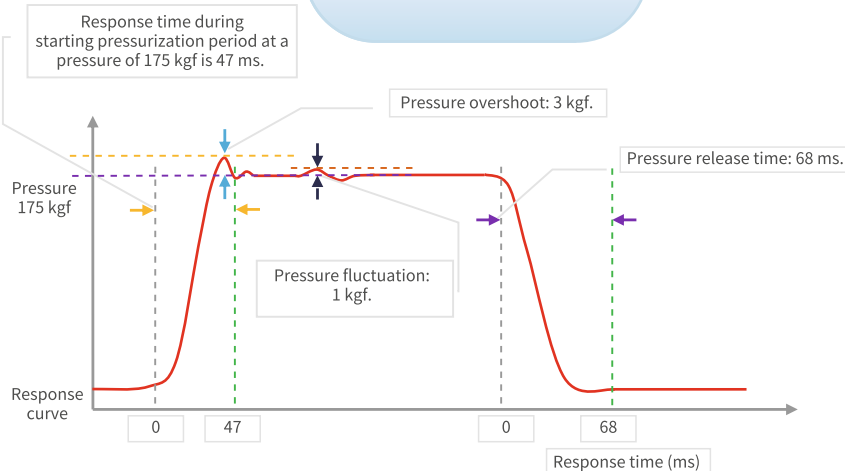
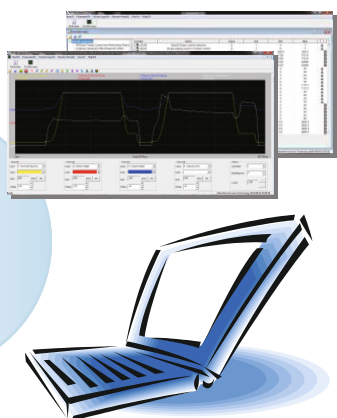
Internal DC reactor.
Complies with EN 61800-3 category C2
(with external EMC filter)

External AC output reactor (du/dt Filter)-(Optional)



Optimized pressure and flow control algorithm

PC-based software: simplified start-up & backup^{*1}



^{*1} 1 PC comms kit is required (optional accessory)

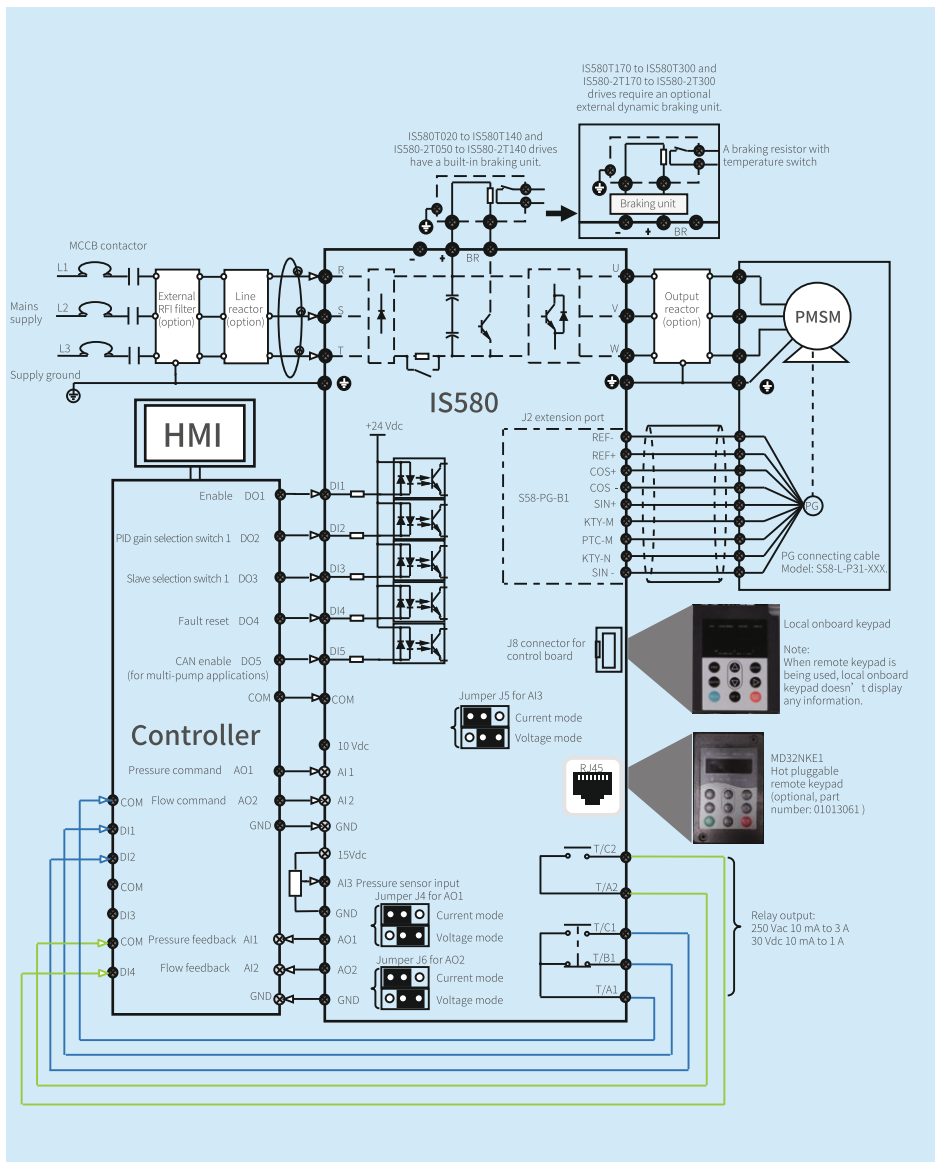
General specifications

Voltage class		Three-phase 380 to 480 Vac												
Drive model: IS580Txxx-R1-INT		020	030	035	040	050	070	080	100	140	170	210	250	300
Frame size		T5				T6		T7		T8			T9	
Drive input	Rated input voltage	Three-phase 380 to 480 Vac -15% to +10%												
	Rated input current [A]	36.3	45.1	49.5	59	57	69	89	106	139	164	196	240	287
	Power capacity [kVA]	30	39	45	54	52	63	81	97	127	150	179	220	263
	Rated input frequency	50/60 Hz ±5%												
Drive output	Applicable motor [kW]	11	15	18.5	22	30	37	45	55	75	90	110	132	160
	Output current [A]*1	25	32	37	45	60	75	91	112	150	176	210	253	304
	Default carrier frequency, [kHz]	6	6	4	4	4	4	4	3	2	2	2	2	2
	Overload capacity	150% for 60 s & 180% for 2 s												
	Max. output voltage	Three-phase 380 Vac to 480 Vac (proportional to input voltage)												
	Max. output frequency	300 Hz												
Braking resistor	Recommended power [kW]	0.8	1.0	1.3	1.5	2.5	3.7	4.5	5.5	7.5	9	5.5 × 2	6.5 × 2	16
	Recommended resistance [Ω]	43	32	25	22	16	16	16	16	12	8	12 × 2	8 × 2	2.5
Braking unit		Built-in									MDBUN-60-5T x 2	MDBUN-60-5T x 2	MDBUN-90-5T x 2	MDBUN-90-5T x 2
DC reactor		Built-in												
Enclosure		IP 20												

Voltage class		Three-phase 220 Vac							
Drive model: IS580-2Txxx-R1-INT		050	070	080	100	140	170	210	300
Frame size		T6		T7		T8			T9
Drive input	Rated input voltage	Three-phase 220 Vac -15% to +10%							
	Rated input current [A]	57	69	89	106	139	164	196	287
	Power capacity [kVA]	27	32	42	49	64	75	90	132
	Rated input frequency	50/60 Hz ±5%							
Drive output	Applicable motor [kW]	15	18.5	22	30	37	45	55	80
	Output current [A] ⁺¹	60	75	91	112	150	176	210	304
	Default carrier frequency [kHz]	4	4	4	4	3	2	2	2
	Overload capacity	150% for 60 s & 180% for 2 s							
	Max. output voltage	Three-phase 220 Vac (proportional to input voltage)							
	Max. output frequency	300 Hz							
Braking resistor	Recommended power [kW]	2.5	3.7	4.5	5.5	7.5	9	11	8 × 2
	Recommended resistance [Ω]	8	8	8	6	6	4	4	6 × 2
Braking unit		Built-in					MDBUN-90-2T	MDBUN-90-2T	MDBUN-60-2T x 2
DC reactor		Built-in							
Enclosure		IP 20							

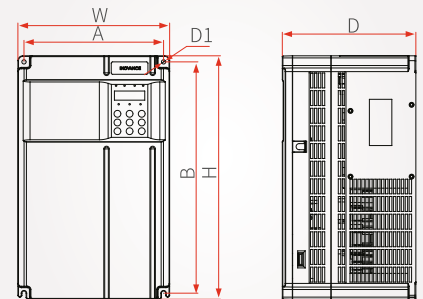
*1 Rated output current at default carrier switching frequency.

Typical Wiring Diagram

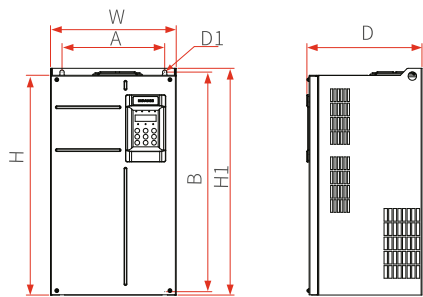


Dimensions

IS580T020-R1-INT to IS580T070-R1-INT and IS580-2T050-R1-INT to IS580-2T070-R1-INT (plastic housing)



IS580T080-R1-INT to IS580T300-R1-INT and IS580-2T080-R1-INT to IS580-2T300-R1-INT (sheet metal housing)



Servo drive model	Frame size	Dimensions (mm)							Mass (kg)
		A	B	H	H1	W	D	D1	
IS580T020-R1-INT, IS580T030-R1-INT, IS580T035-R1-INT, IS580T040-R1-INT, IS580T050-R1-INT, IS580-2T050-R1-INT	T5	195	335	350	/	210	192	Ø6	9.1
IS580T070-R1-INT, IS580-2T070-R1-INT	T6	230	380	400	/	250	220	Ø7	17.5
IS580T080-R1-INT, IS580-2T080-R1-INT	T7	245	523	525	542	300	275	Ø10	35
IS580T100-R1-INT, IS580-2T100-R1-INT	T7	245	523	525	542	300	275	Ø10	35
IS580T140-R1-INT, IS580T170-R1-INT, IS580-2T140-R1-INT, IS580-2T170-R1-INT, IS580T210-R1-INT, IS580-2T210-R1-INT	T8	270	560	554	580	338	315	Ø10	51.5
IS580T250-R1-INT, IS580T300-R1-INT, IS580-2T300-R1-INT	T9	320	890	874	915	400	320	Ø10	85

Accessories list

Category	Model	Function description	Part No.
Braking unit	MDBUN	External braking unit for IS580T170-R1-INT/IS580-2T170-R1-INT and above.	--
Keypad	MD32NKE1	Remote LED keypad.	01013061
Fieldbus	MD38CAN1	CANlink / CANopen communications card	01013100
	MD38DP2	PROFIBUS-DP communications card	01013144
	MD38TX1	Modbus communications card	01013112
PG card	S58-PG-B1	Resolver PG card for IS580 drive, including PTC and KTY interface.	01320001
	MD38PGMD	Multifunctional encoder card, 5V differential encoder A+,A-,B+,B-, Z+,Z-, emulated output 1:1, 500 kHz, terminal connector, no PTC or KTY	01013147
PC comms kit	MDPCKIT02	Kit for connection with a personal computer, to be used with PC software tools	01040071

Adapted PG cards & cables

Servo drive model	ISMG motor model	PG card model	PG card part no.	Resolver cable (xx: length in meters)	Cable serial no.
IS580 series servo drive	ISMG1-xxx-xxxF	S58-PG-B1	98020630	S58-L-P30-xx	15040341~15040343(3/6/15m)
	ISMG2-xxx-xxxF				
	ISMG1-xxx-xxxFA			S58-L-P31-xx	15040570~15040574(3/6/8/12/15m)
	ISMG2-xxx-xxxFA				

Extension card installation

