

4-8. Engine Control & Monitoring Equipments for Remote(Auto)Starting/Stopping

4-8-1. Engine Control

Parts Name	Q'ty/Eng.	Supply	Location	Specifications
Control System	1	M	E	Control Air of 0.69~0.98MPa(7~10kgf/cm ²) And Electric (DC24V)Operation
Eng. Speed Sensor	1	M	E	Magnetic Pickup
Speed Detector (Speed Relay)	1	M	Control Panel	•Low speed(14) :Set.:200min ⁻¹ for signal of Start-up and Blocking of Alarm together with 30 sec delay •Over speed "12" Set.:112~115% of rated speed for Signal of Safety Stop
Magnetic Valve for Engine Start	1	M	E	Open & Eng. Starting Function at Energizing DC9~32V(DC12V,0.85A), Rating : 1min.
Magnetic Valve for Eng. Stop(for Safety)	1	M	E	Open & Eng. Stopping Function at Energizing DC24V,0.38A,Rating : Continuous
Magnetic Valve for Eng. Stop(for Control)	1	M	E	Open & Eng. Stopping Function at Energizing DC24V,0.38A, Rating : Continuous
Switch for Stop Handle of Engine	1	M	E	Switch OFF at Stop Position for Reset of Safety Stop & Stand-by
Switch for Control Position	1	M	E	Select for Remote/Auto-Engine Side
Switch for Turning Cover	1	M	E	Switch ON at Close for Stand-by
Control Panel		S	H	

4-8-2. Engine Safety Stop

Over Speed	1	M	Control Panel	Operated at 112~115% of rated speed by Over Speed Signal(12) of above Speed Relay
Lub. Oil Press. Low	1	M	E	Press. switch Abnormal ON $\leq$ 0.30MPa
Jacket Water High Temp.	1	M	E	Temp. switch Abnormal ON $\geq$ 100 °C

4-9. Monitoring Equipments

Parts Name	Q'ty/Eng.	Gauges fitted on Eng.		Alarm or Remote display	
		Specifications	Q'ty/Eng.	Specifications	
Tachometer	1	Mechanical (0~1500min ⁻¹)			
Kind of Press. Gauge		Bourdon tube, Size: ϕ 60 Glycerin filled Type			
Lub. Oil at Eng. inlet	1	Scale : 0~1.0 MPa Normal: 0.39~0.44MPa(4~4.5k)	1	Sensor4~20mA(0~1.0MPa) Alarm $\leq$ 0.35MPa	
Prim. LO at Eng. inlet	-	Above Press. Gauge is available Normal:0.02~0.15MPa(0.2~1.5k)	1	Press. switch for Alarm Abnormal OFF $\leq$ 0.02MPa	
Lub. Oil at T/C inlet	1	Scale : 0~1.0 MPa Normal:0.25~0.44MPa(2.5~4.5k)	1	Press. switch for Alarm Abnormal OFF $\leq$ 0.25MPa	
Fuel Oil at Eng. inlet	1	Scale : 0~2.0 MPa Normal:0.39~0.44MPa(4.0~4.5k)			
Fresh Water (H.T.) at Eng. inlet	1	Scale : 0~0.6 MPa Normal:0.14~0.29MPa(1.5~3.0k)	1	Sensor 4~20mA(0~0.6MPa) Alarm $\leq$ 0.13MPa	
Fresh Water (L.T.) at Eng. inlet	1	Scale : 0~0.6 MPa Normal:0.04+ α (etc.)MPa(0.4+ α)k	1	Sensor 4~20mA(0~0.6MPa) Alarm $\leq$ 0.13MPa	
Boost Air at Eng. inlet	1	Scale : 0~0.4 MPa Normal: Depend on load	-		
Start. Air at Eng. inlet	1	Scale : 0~2.5 MPa Normal:0.7~1.0MPa(7~10k)	1	Press. Switch for Alarm Abnormal OFF $\leq$ 0.66MPa	
Control Air at Eng. inlet	-	Normal:0.69~0.98MPa	1	Press. switch for Alarm Abnormal OFF $\leq$ 0.66MPa	